GATEWAY TECHNICAL COLLEGE

2016-2017 College Catalog

choose Gateway.

I am pleased to welcome you to our Red Hawk family. Gateway Technical College has a rich and proud history of service to students throughout the tri-county region. With over 65 associate degrees and 100 diplomas and certificates Gateway has many pathways to a prosperous career.

Gateway students are valued community leaders. Our United Student Government provides Gateway students a voice in their education. Service learning programs are embedded into many programs and open doors for international exchange opportunities. Student professional organizations rank high in student engagement. Guest speakers, industry tours and state/national competition bring additional value to classroom instruction.

Gateway faculty and staff are some of the best in their respective industries. Small class sizes, innovative labs and state-of-the-art technology create a positive learning environment.

Comprehensive student services, libraries, peer tutoring, support systems and academic services for all students highlight our commitment to your success.

Our goal is to make your Gateway experience as unique and special as you are.

Welcome to the Red Hawk tradition of individual success building community success.

Respectfully,

Bryan D. Albrecht, Ed.D.
President and CEO
Gateway Technical College

Gateway Technical College
District Board of Trustees through June, 2016

The Gateway Technical College District is governed by a nine-member board of trustees representing the communities served by the three-county district, which is comprised of two employer members, two employee members, one elected official, one school district administrator, and three additional members. Members are appointed by the chairpersons of the Kenosha, Racine, and Walworth County Boards of Supervisors, and serve staggered three-year terms.

The Gateway Board's monthly meetings are open to the public. Information on their meetings can be found at **gtc.edu/board**.

Ram Bhatia
Racine County

William Duncan
Walworth County

Ronald J. Frederick
Kenosha County

Susan Greenfield
Racine County

Gary Olsen
Walworth County

Bethany Ormseth
Kenosha County

R. Scott Pierce
Kenosha County

Roger Zacharias
Kenosha County

Pamela Zenner-Richards
Racine County

SOME ASSEMBLY
REQUIRED...
Snap-on

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Information is subject to change and reflects material of record as of March 1, 2016. Updated information will be posted to appropriate locations on Gateway's website **gtc.edu**. Published by the Marketing & Communications Department, Gateway Technical College—Spring 2016.

Accommodations: If you need special accommodations, please contact Gateway's Disability Support Services department:

Elkhorn Campus/Burlington Center: 262.741.8420
Kenosha Campus: 262.564.2006
Racine Campus: 262.619.6216

Deaf/Hard of Hearing Services:
Office: 262.564.2564 (Voice)
Cell/Text: 262.960.1931
Wisconsin Relay System: 711
Email: sadowskil@gtc.edu

Atención: Si usted necesita asistencia en español, favor de llamar a: Maria Abrego 262.741.8318, Maria Perez, 262.564.2388, or Rosalva Santana, 262.619.6612.

WISCONSIN TECHNICAL COLLEGE SYSTEM
we are futuremakers
wistechcolleges.org

CNC Production Technician p. 66

EMT–Paramedic p. 98

Veterinary Technician p. 196

Surgical Technology p. 188

Campuses and Centers

Gateway's campuses and advanced technology centers are equipped to provide students with state-of-the-art learning opportunities. The three full-service campuses in Elkhorn, Kenosha, and Racine are home to Learning Success Centers, Follett Bookstores, libraries, and Student Services Centers. Get a sneak-peak of Gateway's facilities by taking a virtual tour at **gtc.edu/virtualtour**.

Burlington Center
496 McCanna Pkwy.
Burlington, WI 53105-3623

Center for Bioscience and Information Technology
3520 - 30th Avenue
Kenosha, WI 53144-1690

Elkhorn Campus
400 County Road H
Elkhorn, WI 53121-2046

HERO Center
380 McCanna Pkwy.
Burlington, WI 53105-3622

Horizon Center for Transportation Technology
4940 - 88th Avenue (Highway H)
Kenosha, WI 53144-7467

Kenosha Campus
3520 - 30th Avenue
Kenosha, WI 53144-1690

LakeView Advanced Technology Center
9449 - 88th Avenue (Highway H)
Pleasant Prairie, WI 53158-2216

Racine Campus
1001 South Main Street
Racine, WI 53403-1582

SC Johnson iMET Center
2320 Renaissance Blvd.
Sturtevant, WI 53177-1763

Administration Center
3520 - 30th Avenue
Kenosha, WI 53144-1690

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Wisconsin Relay System: 711

gtc.edu

Gateway—Your Community's Technical College

Gateway Technical College provides quality technical education to the residents of its District, which is comprised of the Southeastern Wisconsin counties of Kenosha, Racine and Walworth.

Gateway is one of 16 technical college districts which comprise the Wisconsin Technical College System. Gateway is a taxpayer-supported institution of postsecondary education, offering more than 60 degree and diploma programs, as well as nearly 50 certificate programs. Gateway provides you with almost limitless alternatives for your educational and employment future.

Associate of Applied Science Degrees and Technical Diplomas are awarded upon successful completion of individual program requirements. Advanced Technical Certificates allow those with a degree and/or work experience to gain advanced training in specialties related to their field of employment. Gateway Certificates allow students to earn concentrated credits in targeted fields, often on their way to a degree, which can be marketed to a future employer.

Gateway also provides opportunities for high school students to begin their college education early through such efforts as Youth Options, transcripted credit, dual enrollment and boot camps. Many students engage in these opportunities to earn college credits while still in high school, allowing them complete their college education quicker, get into their career sooner and save money.

In addition, a wide variety of Adult Continuing Education (ACE) noncredit classes, workshops, and seminars are offered to assist Gateway District residents in expanding and augmenting occupational skills, or personal enrichment.

Core Abilities

We believe students need both technical knowledge and skills and core abilities in order to succeed in careers and in life. Our nine core abilities are the general attitudes and skills essential for every successful graduate. Our faculty promotes the development of these core abilities through learning experiences in all Gateway Technical College courses. We continually assess our students' learning in these areas to improve the general components of a Gateway Technical College education.

1. Act responsibly.
2. Communicate clearly and effectively.
3. Demonstrate essential computer skills.
4. Demonstrate essential mathematical skills.
5. Develop job-seeking skills.
6. Respect self and others as members of a diverse society.
7. Think critically and creatively.
8. Work cooperatively.
9. Value learning.

Gateway operates under a strategic plan called Vision 3.2.1 which stands for 3 counties, 2 goals, 1 vision. Collectively Gateway strives to meet the needs of each of the over 25,000 students that attend our college.

Mission Statement

We collaborate to ensure economic growth and viability by providing education, training, leadership, and technological resources to meet the changing needs of students, employers, and communities.

Our Vision

We are the community technical college of choice for academic achievement, occupational advancement, and personal development.

Values

At Gateway Technical College, we value:

- diversity of individuals and perspectives.
- a positive climate for working and learning.
- innovation and risk-taking.
- honest and ethical behavior.
- quality and excellence in education.

General Education Philosophy

We believe students need general education skills in order to succeed in career and life. Recognizing this fundamental importance, the college requires general studies coursework in all programs of 45 credits or more. General education gives students effective communication, mathematics, scientific thinking, and global social skills.

WISCONSIN TECHNICAL COLLEGE SYSTEM
MEMBER COLLEGE

A Century of Making Futures

Gateway Technical College laid the cornerstone of career training when Racine Continuation School began classes Nov. 3, 1911 as the first compulsory, publicly funded school in Wisconsin—and, in doing so, also became the first in America.

Gateway continues to provide students with education and training to pave the way for their career and their future, serving its communities and providing the spark for economic development.

In June of 1911, the Legislature passed a groundbreaking law calling for the creation of compulsory continuation schools in all cities of more than 5,000 and Racine was the first to open. A year later, Kenosha Continuation School opened its doors, located in the auditorium of Frank School with an enrollment of 295.

Continuation schools at their birth were places where students could "continue" their education part-time if they chose to leave school at age 14. Educators at the time said these teens age 14 to 17 were falling through the cracks between education and work. They were not required to go to school, and many left—but did not have the skills to find jobs.

Enrollment in vocational schools—as they were then called—increased in the 1920s and the makeup of its students broadened. In addition to teens, World War I veterans returning home also enrolled in the schools, fueled in part by the opportunities created by the Soldiers Education Bonus Act.

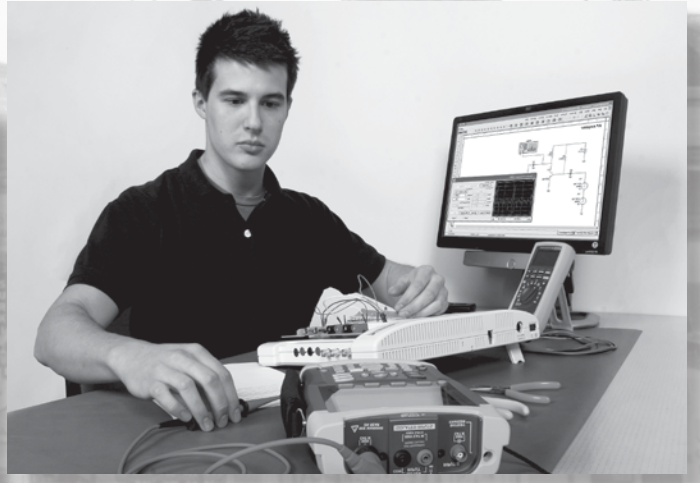
The makeup of vocational schools in the 1930s took on a new direction because of new legislation and the Depression. The Legislature passed a school attendance law in 1933 that kept most youth in high school until age 18 or graduation—so vocational schools continued to move toward training post-high school adults. A lack of jobs also kept students in school longer, prompting school officials to turn training more to adults.

Wartime impacted vocational education again. The threat of World War II prompted vocational schools to train workers for defense jobs in specialized trade courses like pilot training and ground aeronautics. By January 1942, the Racine Vocational School was operating 24 hours a day.

By the 1950s, the boom of veterans enrolling into Kenosha and Racine declined, and the schools began offering more adult short-term day programs in home economics and business. Officials increasingly began to look at another educational delivery change to ensure that vocational schools met their full potential to serve students and their communities.

Their decision to begin offering associate-degree programs in 1959, beginning with business education, transformed Gateway into what it is today—an institution of higher learning.

Walworth County joined the Kenosha vocational



district in 1968 and a building constructed there three years later. Kenosha Technical Institute and the Racine Technical Institute officially merged, along with the Walworth County campus into the Kenosha-Racine-Walworth vocational, technical and adult educational District 6 in April 1971. July 20, 1972, members of the board voted to change the district's name to Gateway Technical Institute. Its name changed to Gateway Technical College in the mid-1980s.

By 1972, Gateway was offering several different one- and two-year diplomas as well as associate degrees. Gateway continued to provide new and innovative programs to meet the needs of industry and its students in the 1980s and 1990s. Programs developed during this time included Composite Manufacturing Technology, Desktop Publishing, Legal Secretary and Technical Communications. Gateway also worked to forge transfer agreements with four-year colleges, giving its graduates even more career and educational opportunities.

The college, from 1990s to present, continued providing innovative means to deliver education by offering courses in new and emerging careers. The college built technology centers dedicated to providing training and instruction in highly technical career fields in Sturtevant, Kenosha and Burlington.

Gateway also ramped up the number of program transfer agreements with four-year colleges throughout Wisconsin and in other states, providing added educational options to Gateway students.

Gateway continues to be a state and national leader in offering "green" and sustainable career training and providing training opportunities for the jobs of tomorrow. Educational leaders from other countries increasingly visit Gateway in hopes of duplicating its innovative practices in manufacturing, green careers and automotive technology at their own college.

Gateway partners with area businesses to provide state-of-the-art facilities and equipment to give students real-world training in leading-edge technology. These partnerships, innovative training and the college's quality practices to prepare its students for their careers, have received state, national and even international awards and recognition.

In February, 2016, Gateway—with generous support from the business community—set a new cornerstone for future generations. At a seminal event anchored by a letter from the President of the United States and a combined $700,000 gift from SC Johnson, along with Fisk Johnson, Chairman and CEO of SC Johnson, Gateway President and CEO Dr. Bryan Albrecht announced the Gateway Promise. The Gateway Promise guarantees greater access and affordability for all high school graduates who meet the eligibility criteria.

For more than 105 years, Gateway has provided opportunities for its students to create their futures through a number of career paths.

SHELBY
FDP

Accreditation and Memberships

Accreditation

Gateway Technical College is fully accredited by the Higher Learning Commission.

The Wisconsin Technical College System board has authorized Gateway as a self-governing district. Associate of Applied Science degrees, technical diplomas, advanced technical certificates, and adult high school diplomas are granted.

All Gateway campuses and centers in Kenosha, Racine, and Walworth counties are approved by the Higher Learning Commission. Higher Learning Commission, 30 North LaSalle Street, Suite 2400, Chicago IL 60602-2504, phone 312-263-0456. **higherlearningcommission.org**.

The Wisconsin Technical College System Board has authorized Gateway Technical College to grant the Associate of Applied Science degree in two-year programs. Technical diplomas are granted for one- and two-semester programs and for some multiple year programs of study. Advanced Technical Certificates are awarded in occupational content areas. Wisconsin Technical College System Board, 310 Price Place, P.O. Box 7874, Madison WI 53707, phone 608-266-1207.

- The Aeronautics—Pilot Training program has earned Federal Aviation Administration recognition as both an FAR Part 141 Flight School and an Airway Science Program. Federal Aviation Administration, Flight Standards District Office, 4915 S. Howell Ave., Milwaukee WI 53207, phone 262-747-5531.
- The Business and Information Technology division is accredited by the Accreditation Council for Business Schools and Programs and has been granted the accreditation status of approval. ACBSP, 11520 West 119th Street, Overland Park, KS 66213, phone 913-339-9356.
- The Dental Assistant program is accredited by the Commission on Dental Accreditation and has been granted the accreditation status of approval. The Commission is a specialized accrediting body recognized by the Commission on Recognition of Postsecondary Accreditation and by the United States Department of Education. Commission on Dental Accreditation, American Dental Association, 211 E. Chicago Ave., Chicago IL 60611, phone 312-440-2719.
- The Health Information Technology program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education, 233 N. Michigan Ave., Suite 2150, Chicago IL 60601, phone 312-233-1100.
- The Associate Degree Nursing program at Gateway Technical College is fully accredited by the National League for Nursing Accrediting Commission, Inc., 3343 Peachtree Rd. NE, Suite 500, Atlanta GA 30326, phone 404-975-5000, **nlnac.org**.
- The Medical Assistant program is fully accredited by the Commission of Allied Health Education and Programs (CAAHEP), on recommendation of the Curriculum Review Board of the American Association of Medical Assistants Endowment (AAMAE). Commission on Accreditation of Allied Health Education Program, 35 East Wacker Drive, Suite 1970, Chicago IL 60601, phone 312-553-9355.
- The Nursing Assistant program is fully approved by the Wisconsin Department of Health and Family Services (HFS), Bureau of Quality Assurance, 2917 International Lane, Suite 300, Madison WI 53704, phone 608-243-2019, or **dhfs.state.wi.us**.
- The Physical Therapist Assistant program is fully accredited by the Commission on Accreditation in Physical Therapy Education of American Physical Therapy Association, 1111 N. Fairfax Street, Alexandria VA 22314, phone 703-706-3245.
- The Surgical Technology program is fully accredited by the Commission on Accreditation of Allied Health Education Programs, 33 East Wacker Drive, Suite 1970, Chicago IL 60601, phone 312-553-9355.

Memberships

American Association for Women in Community Colleges
American Association of Community Colleges
American Association of Collegiate Registrars & Admission Officers
American Association of University Women
American College & University Presidents Climate Commission
American Library Association
Association for Career & Technical Education
Association for the Advancement of Sustainability in Higher Education
Association of Community College Trustees
Association of Veterans Education Certifying Officials
Business Educational Partnership Group, Inc.
Business Industry Consulting Services International Incorporated
Chair Academy
College Board
Community College Business Officers
Council of North Central Two-year Colleges
Council for Opportunity in Education
Council for Resource Development
Higher Learning Commission
International Society for Technology in Education
Instructional Technology Council
League for Innovation
Library Council of SE Wisconsin, Inc.
Mid-America Association of Educational Opportunity Program Personnel
Midwest Institute for International Intercultural Education
National Association of Educational Procurement
National Association of State Directors of Career and Technical Education Consortium
National Association of Student Financial Aid Administration
National Association of Veterans Program Administration
National Business Incubation Association
National Career Pathways Network
National Coalition of Advanced Technology Centers
National Coalition of Certification Centers
National Community College Hispanic Council
National Council for Marketing & Public Relations
National Council for Workforce Education
National Society of Leadership and Success
Second Nature
Small Business Development Center
Southeast Wisconsin Education Consortium, Inc.
Tempo International
Wisconsin Association for Career and Technical Education
Wisconsin Association of Public Purchasers
Wisconsin Broadcasters Association
Wisconsin Business Incubation Association
Wisconsin Campus Compact
Wisconsin Educational Media & Technology Association
Wisconsin Library Association
Wisconsin Solar Energy Association
Wisconsin Student Government
Wisconsin Women in Higher Education Leadership

2016–2017 Academic Calendar

Special Notices

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take more than seven years to complete.

Tuition and material fees are determined by the Board of the Wisconsin Technical College System. Fees are set by the first week in April and are available on WebAdvisor.

Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

Curriculum in this publication is effective for the 2016-2017 academic year. Information was accurate as of March 1, 2016. Gateway reserves the right to modify course content.

The most current program and curriculum information are available at **gtc.edu**. Contact any Student Services Center with questions.

1-800-247-7122

Wisconsin Relay System: 711

sscontactcenter@gtc.edu

Elkhorn Campus
400 County Road H
Elkhorn, WI 53121-2046

Kenosha Campus
3520 30th Avenue
Kenosha, WI 53144-1690

Racine Campus
1001 S. Main Street
Racine, WI 53403-1582

Summer 2016 (May 9 through August 20)

May 9	First day of summer semester
May 30	Holiday—college closed
July 4	Holiday—college closed
August 20	Last day of summer semester

Fall 2016 (September 6 through December 17)

September 5	Holiday—college closed
September 6	First day of fall semester
September 21	Employee Learning Day—no classes
November 24 – 27	Holiday—college closed
December 17	Last day of fall semester
December 24–January 1	Winter recess—college closed

Spring 2017 (January 9 through April 22)

January 9	First day of spring semester
January 16	Martin Luther King, Jr. Day—no classes
April 14-17	Holiday—college closed
April 22	Last day of spring semester
May 16 (tentative)	Commencement

General Information

Bookstores

The Follett Bookstores at Gateway offer a complete selection of new, used, digital and rental textbooks, schools supplies, school-related software and clothing. While it is not mandatory to do so, you may find it advantageous and convenient to purchase the necessary supplies from the Follett Bookstore at each campus. You may also purchase course materials online using **eFollett.com** and have them sent to a home address or pick them up at one of the campus bookstores. Students may also sell their textbooks back to the bookstore - book value is determined by condition and store need. Be sure to bring your course schedule and ID to the bookstore when purchasing and selling books for courses.

Bookstore Refund Policy

New or used textbooks may be returned for refund or exchange within seven (7) calendar days from the start of courses. Short-term and interim courses have two (2) calendar days from start of the course. All refunds or exchanges require:

- Books to be in purchased condition; shrink wrapped materials and sealed CDs or access codes that are not opened, exposed or used.
- Customer to provide original dated cash register receipt.

Your refund will be processed in the currency it was purchased. For example, if you purchased your books/supplies with cash, a cash refund will be given. If you purchased your books/supplies with your financial aid authorization, your refund will be credited to your student account and refunded directly to you.

All other store purchases may be returned within thirty (30) days for refund or exchange, provided they are in purchased condition and with dated cash register receipt. Special orders may require payment at time of order and are not eligible for refund. Any electronic devices purchased from the bookstore are non-returnable if the package is opened including; computers, calculators, headphones, etc.

For hours, sale dates and promotion details visit **gtc.edu/bookstore** or contact your local store:

Elkhorn: 262-741-8108
Racine: 262-619-6866
Kenosha: 262-564-2246

Library

Libraries are located on the Elkhorn, Kenosha, and Racine campuses and online 24/7 at **gtc.edu/library**. The libraries support the academic, career and professional needs of the students, instructors and staff. Each of the campus libraries has an extensive collection of electronic, print and multimedia resources, group and quiet study areas, computers and printers, wi-fi, and staff to assist you with your research and information needs. Library hours, policies, services, and resources are available at the library webpage: **gtc.edu/library**. Stop by. We look forward to seeing you in our libraries.

Admissions

The Gateway District provides an equitable process for admitting individuals to Gateway programs which is consistent with Chapters 38 and 118 of the Wisconsin Statutes and TCS 10 of the Wisconsin Administrative Code that govern the Wisconsin Technical College System. Applications and related materials are reviewed on a first-come, first-served basis.

The laws pertaining to Family Educational Rights and Privacy Act rights (FERPA) begin at the time of matriculation. A student is defined as one who has been accepted to a program and/or enrolled in a course.

Priority Admissions Dates

While Gateway welcomes your application any time of year, we do offer priority dates. Applicants completing their application files by January 1 for Summer semester, July 1 for Fall semester, and November 1 for Spring semester enrollment are guaranteed program admission by the beginning of the semester.

Student Types

Degree-seeking Students

Degree-seeking students are individuals who are accepted to a specific postsecondary program with the intent of graduating. Application, application fee, placement testing, official high school transcripts and any other identified admission requirements must be completed for program admission.

Non-degree-seeking Students

Non-degree seeking students are individuals who are attending Gateway with no intention of completing a program.These individuals may enroll in courses for which all prerequisites have been met. Placement testing may be required depending on the course(s) selected. Students seeking this status do not need to complete an application for admission and may register beginning the first day of open registration. Students accepted as non-degree seeking students are not eligible for federal financial aid.

Guest Students

Guest students are individuals who are accepted to Gateway for the purpose of transferring credits back to the college or university they are currently attending. These individuals should complete the guest student application and return it to Gateway's Admissions Office with the appropriate required signatures or ACT/SAT scores. Gateway Technical College does not offer financial aid to guest students. Guest students must work with their home institution to develop a consortium agreement with Gateway to utilize financial aid at the home institution.

Acceptance Status

Full Acceptance Status

For individuals who have met all program admission requirements.

Remedial Acceptance Status

For individuals who have met all program admission requirements and for whom placement scores indicate remediation is required.

Conditional Acceptance Status

For individuals who are required to verify high school or GED graduation for admission to their program. A conditional acceptance may apply for students who have completed their junior year of high school or at least half of their GED testing (passed 3 of 5 GED tests). To be accepted conditionally, all other admission requirements for the program must be met. Conditionally accepted students may register with newly accepted students for their first semester at Gateway. The receipt of official verification of the secondary credential or equivalent must be met prior to the start of the student's second semester.

The official date of program acceptance is the date Admissions receives official transcripts verifying high school or GED completion. Students accepted conditionally are not eligible for financial aid until the semester following the date Gateway has received official verification of completion of the secondary credential.

Placement Testing

All individuals applying for admission to Gateway's postsecondary educational programs must take a

placement assessment to assist in the appropriate placement in coursework. All applicants must meet the current placement test requirements for admission and courses.

Individuals not seeking program admission who wish to take a college course(s) may be required to take a placement test for courses with a placement score prerequisite. When individuals with a documented disability are required to test, reasonable accommodations will be provided pursuant to state and federal regulations.

Admission of Transfer Students

Students who want to transfer credits from another college or university to Gateway Technical College must be accepted to a postsecondary program and submit official transcripts to any Student Services Center. Official transcripts are defined as transcripts sent directly to Gateway from the issuing institution, by a recognized electronic transcript service or hand delivered by the student if the transcripts remain unopened in the issuing school's sealed envelope. Official transcripts must have the issuing institution's seal and appropriate official's signature to be accepted. Please also see the section on credit for prior learning.

Admission of High School Age Students

Compulsory School Attendance (118.15)

§118.15 Contracts are exemptions to the requirements of compulsory attendance. Students qualify for these contracts under varying circumstances. Requirements for school districts also vary.

1. Upon the child's request of the school board and with the written approval of the child's parent or guardian, any child who is 16 years of age or over and a child at risk, as defined in § 118.153 (1) (a), may attend, in lieu of high school or on a part-time basis, a technical college if the child and his or her parent or guardian agree, in writing, that the child will participate in a program leading to the child's high school graduation. The district board of the technical college district in which the child resides shall admit the child.
2. Upon the child's request and with written approval of the child's parent or guardian, any child who is 17 years of age or over may be excused by the school board from regular school attendance if the child and his or her parent or guardian agree, in writing, that the child will participate in a program or curriculum modification under par. (d) leading to the child's high school graduation or leading to a high school equivalency diploma (HSED).

   Prior to a child's admission to a program leading to the child's high school graduation or a high school equivalency program under 1 or 2, the child, his or her parent or guardian, the school board and a representative of the high school equivalency program or program leading to the child's high school graduation shall enter into a written agreement. The written agreement shall state the services to be provided, the time period needed to complete the high school equivalency or program leading to the child's high school graduation and how the performance of the pupil will be monitored. The agreement shall be monitored by the school board on a regular basis, but in no case shall the agreement be monitored less frequently than once per semester. If the school board determines that a child is not complying with the agreement, the school board shall notify the child, his or her parent or guardian and the high school equivalency program or program leading to the child's high school graduation that the agreement may be modified or suspended in 30 days.
3. Upon the child's request, and with the written approval of parent or legal guardian, a child 17 years of age or older shall be excused by the school board from regular attendance if the child began a program leading to a High School Equivalency Diploma (HSED) in a secured correctional facility, a secured child caring institution, secured detention facility, or a juvenile portion of a county jail, and the parent or guardian agree that the child will continue to participate in the HSED program. The child must have passed at least one of the four content areas of the General Educational Development tests.

Children at risk of not graduating from high school are defined as pupils in grades 5 to 12 who are at risk of not graduating from high school because they are dropouts, or are two or more of the following:

1. One or more years behind their age group in the number of credits attained.
2. Two or more years behind their age group in basic skills levels.
3. Habitual truants, as defined in § 118.16 (1) (a).
4. Parents.
5. Adjudicated delinquents
6. Eighth grade pupils whose score in each subject area on the examination administered under § 118.30 (1m) (am) 1 was below the basic level, 8th grade pupils who failed the examination under § 118.30 and 8th grade pupils who failed to be promoted to 9th grade.

Dropout means a child who ceased to attend school, does not attend public or private School, technical college or home-based private educational program on a full-time basis, has not graduated from high school and does not have an acceptable excuse under § 118.15 (1) (b) to (d) or (3).

Participants attending Gateway under a 118.15 contract for the High School Equivalency Program must complete all HSED requirements prior to taking GED tests.

Voluntary Attendance of Youth Sixteen (16) Years or Older

Any child who is the age of sixteen (16) years or older is eligible to apply to a Gateway postsecondary program if all of the following apply:

- Gateway agrees to admit the individual.
- The individual satisfies the other requirements for admission under s.38.22(1), Technical College Admission Requirements.
- The individual has the written permission of his or her parents or legal guardian.
- The individual will not be attending Gateway during the hours of normal school day established under s.119.18(7) or 120.12(15).
- The attendance is not a fulfillment of the student's compulsory school attendance requirement.
- The student attends at the regular tuition rate charged adult students.
- Individuals taking course(s) solely for Gateway program credit shall pay their own tuition and fees, books, and other associated costs.associated costs.

Home Schooled Students

Any pupil who is under a Home School agreement with the Wisconsin Department of Public Instruction and requests educational services

from Gateway shall first seek assistance from the public school system. Home schooled students may attend Gateway at the regular tuition rate charged adult students, provided the attendance is outside of their designated home school schedule and is not counted toward fulfillment of their Home School attendance or completion requirements.

Youth Options Program

Any public school pupil may enroll at Gateway for the purpose of taking one or more courses if they satisfy the following:

1. The pupil has completed 10th grade.
2. The pupil is not defined as At Risk.
3. The pupil is not attending Gateway under Compulsory Attendance.
4. The pupil has the written approval of the pupil's parent or guardian.
5. The pupil has notified the school district of his or her intent to attend Gateway Technical College asoutlined in 118.55(7r).

The pupil shall be admitted in the Gateway course(s) if he or she meets the requirements and prerequisites of the course, and if space is available only after admitting to the course all individuals applying for admission to the course. Youth Options students are eligible to enroll beginning the first day of open registration.

After Gateway admits the pupil, the secondary school board shall be notified in writing within thirty (30) days after the course(s) begins. If the pupil is approved for high school and Gateway program credit, Gateway shall charge the secondary school board the actual cost of resident tuition, course fees, and books. The payment for Youth Options students with a disability attending Gateway shall be adjusted to reflect the cost of any special services required for the pupil.

Adding or Withdrawing from a Program

Students are responsible for keeping demographic and program of study information updated on their records. Students' programs along with personal information are listed in WebAdvisor or Student Planning. It is important to keep this information updated so students receive important program information and notifications.

Students who wish to withdraw from their programs should do so through WebAdvisor. Students also have the option to complete a program withdrawal form available at **gtc.edu/forms** and submit the form to any Student Services Center. To add a program students must complete a program add form available at **gtc.edu/forms** and submit the form to any Student Services Center. Students will be required to complete all coursework outlined on the curriculum sheet that corresponds to the academic year they were accepted into the program.

To encourage academic progress toward graduation, Gateway limits the number of programs students may pursue to three. Students applying to more than three programs, excluding internal and Advanced Technical Certificates, must seek approval from the program dean before the additional application is accepted.

Active Program Status

Students who are not enrolled for two consecutive academic years and who are not taking college-level courses toward their degree will be deactivated from their program(s). To be reinstated, students must reapply to the program by completing a new Application for Admission at **gtc.edu/apply**. Applicants who are reapplying much meet the programs current admission and graduation requirements. The new date of program admission will be considered the official date of acceptance. *Note: Withdrawal from a program does not imply withdrawal from courses. See Student Services staff for course withdrawal information.*

Note: Students who are actively petitioning in designated health programs will not be deactivated.

Readmission of Students Activated for Military Service

Students who are forced to withdraw from their educational program due to military deployment shall be readmitted to the program with their original acceptance date.

High Demand Programs/Petitioning

Some programs have a greater number of students than available core course seats. For such programs, Gateway Technical College utilizes a petition process where a post-admission process is used to select accepted students for upcoming core course seats. As directed by TCS 10, students selected via the petition process are chosen based on Gateway District residency at time of acceptance into their program. First priority is given to in-district residency then Wisconsin non-district residency, followed by non-Wisconsin residents. In addition to residency, students will also be selected based on date of program acceptance. Applicants who change their minds regarding program enrollment or have their application/program status deactivated and want to return to the program will need to reapply and meet current admission requirements. They will be selected based on the most recent program acceptance date, not the original acceptance date.

The time element prior to selection for and enrollment in core courses varies by program and is not predictable. Further information about specific program petitioning is available at **gtc.edu/student-services/admissions/what-petitioning.** Gateway must be informed of all address changes and changes for telephone or cell phone numbers. If the College does not have updated information, the result could be program deactivation or bypassing the student for openings in a program's core courses.

Residency Qualifications

Gateway determines whether students are eligible for in-state tuition and petition selection per Administrative Code TCS 10.03. This policy is applicable to all courses whether credit, noncredit, English Language Learner (ELL) or Adult Basic Education (ABE). Determination of Wisconsin residency is based on where the student permanently resides and holds legal bona fide residence. Students must demonstrate the intent to permanently reside in Wisconsin and may not be charged in-state rates if their purpose of residing in Wisconsin is for educational purposes. A person who enters and remains in the state principally to obtain an education is presumed to continue to reside outside the state and the presumption continues in effect until rebutted by clear and convincing evidence of residence in the state through the Residency Determination process. A visa is a permit granted to persons legally residing outside the United States (U.S.) to enter the U.S. for a specified period of time with the intent of returning to their home country. Therefore, students on visas cannot be considered Wisconsin residents for tuition purposes.

Any person who is a resident of Wisconsin/the Gateway district at the beginning of any semester for which the person makes application, is a resident of the state/Gateway district for admission and fees purposes. Any resident of the state who has maintained a permanent residence within the district prior to application at Gateway is a Gateway district resident for admission priority.

Prior to the beginning of any semester or session for which admission is applied, a person may petition the district admissions office for a reconsideration of a residence determination based on changed circumstances. Upon receipt of such petition, the district official charged with residence determinations shall issue a written decision within 30 days of receipt of the request.

Applicants/students who wish to have their residency status reviewed should complete the Wisconsin/Gateway Technical College District Residency Verification form a **gtc.edu/forms** and supply corresponding, supporting documentations. All residency verifications must be done prior to the start of the semester in which the applicant/student attends. If verification is received after the start of the term, the new residency status will be effective at the start of the next semester.

Remission of Nonresident Fees for Out-of-state Residents Including Au Pairs (Out-of-state Fee Waiver)

WTCS Administrative code allows for Gateway to remit the out-of-state fees for individuals who are considered out-of-state, who can demonstrate financial need, and who demonstrate the ability to benefit from their educational experience. Au pairs are eligible for remission of out-of-state fees for up to six (6) credits or the equivalent. Additional credits/courses beyond those approved for remission are at the out-of-state rate. Remission of nonresident fees is limited and granted to those eligible on a first-come, first-served basis. Remission applications are submitted on an academic year basis. To apply, complete the Remission of Nonresident Fees application available at **gtc.edu/forms.** Registration will be at the out-of-state rate until remission is approved. Students approved for fee remission are responsible for the payment of any in-state fees (and out-of-state fees, if applicable) that are incurred.

International Students

Gateway Technical College is authorized to issue I-20's for students attending under F-1 and M-1 visas; however, enrollment of foreign students in the educational programs at Gateway will be based upon space availability unless there is a Contract for Service (C-150) which provides for completely dedicated courses at full cost recovery. Gateway is not authorized to issue I-20's to students for study of the English language or for programs considered high demand. International students are not considered Wisconsin residents and are required to pay tuition equal to the out-of-state rate.

Conditions for Admission

- Enrollment in technical diploma or associate degree programs that have no waiting period, waiting list, or other restrictions.
- Verification of financial resources covering the cost of education.
- Completion of all necessary International Student Admission requirements.
- If transferring, demonstration of good standing in academics, conduct, and have no debt at the sending institution(s).
- Sufficient proficiency in English to enable the student to benefit from instruction. Evidence of English proficiency may be TOEFL or IELTS scores that meet Gateway's minimum requirements.

Procedure

An international student seeking to be admitted to Gateway Technical College shall:

1. Submit a completed application with application fee.
2. Complete International Student admission documents:
   - Declaration of Financial Resources or certification of finances documenting funds to cover education for the length of the program.
   - International Student Questionnaire/ Emergency Contact form
   - Transfer Clearance form (if transferring from another U.S. school)
3. TOEFL score of 500+, 180 (CBT) or 64 (IBT) or earned a score of 5 or higher on the IELTS or written documentation that the applicant is from an approved English-speaking country. A list of countries which are excluded from the TOEFL testing can be found at **gtc.edu/student-services/admissions/international-students**
4. Submit official evaluation of high school and/or college transcripts. Evaluations must be provided directly from the recognized, educational evaluation service.
5. All first semester students are required to pay an initial down payment of $2400 before/at the date of orientation. This $2400 goes towards your overall semester charge for tuition and fees. The only exceptions are:
   - students attending under Section 38.14(3) of the Wisconsin Statutes where Gateway has entered into a Contract for Service with a foreign government or business not operating in Wisconsin.
   - students qualifying as eligible for Nonresident Fee Remission:
     - those enrolling under Administrative Bulletin 04-03, Exchange Agreements with Foreign Educational Institutions.
     - those who meet the requirements to qualify as Needy and Worthy under Administrative Bulletin AB 04-02. An international student who qualifies for needy and worthy status will have his/her deposit returned.
6. Upon completion of all above admission requirements, an I-20 will be issued to the student.
7. When the student arrives, he/she will be required to submit a copy of his or her visa, take the placement test, and complete an Agreement of Attendance and Program Completion. An International Student Processing Fee, $75, will be posted to the student's account once their application is complete. The fee is to be paid prior to the start of classes.

International students interested in applying for admission should contact the Primary Designated School Official, Director of College Access, Admissions, and Testing in Student Services for further information. Additional information and all forms are available at **gtc.edu/student-services/admissions/international-students**

Please note that due to enrollment restrictions, international student applicants should view the list of programs available to them on our website.

Reciprocity Agreements with the College of Lake County (CLC) and McHenry Community College (MHCC)

Through an agreement between Gateway Technical College and CLC and MHCC, students may be able to attend approved programs in their neighboring state at the in-state rate. Students participating under the terms of these agreements must be accepted to an Associate Degree, Technical Diploma, or Certificate approved by the receiving college under the agreement. These students are not considered district residents for petition selection purposes. Illinois students interested in this option should contact the appropriate official at the college in their home county. Gateway Technical College district

residents should contact the Admissions Office at Gateway Technical College. Individual courses, and transfer programs are not covered by this agreement. For further information regarding our current agreements please visit, **gtc.edu/student-services/admissions/cooperative-reciprocal-agreements.**

Reciprocity Agreement with Minnesota

Wisconsin has a reciprocal agreement with Minnesota. Individuals from Minnesota who wish to attend Gateway may do so at in-state tuition rates by completing a Residency Determination Verification form and submitting MN residency verification (same as for WI). These students are not considered residents for petition selection purposes.

Academic Advising

Gateway Technical College offers a staff of highly trained and experienced Academic Advisors in each program area. Academic Advisors are available to provide new and continuing students with information about academic programs, curriculum requirements, and assist students with course selection. Academic Advisors are the primary contact for students regarding all things academic planning (registering, dropping/adding courses, transferring to another program or school, withdrawing, or any other matter of an academic nature).

We strongly encourage all new students to meet with the Academic Advisor for their program prior to beginning coursework. To a new student, the advisor is the primary source of academic advice, college preparation, and assistance in interpreting placement test results, providing an overview of their program, and helping complete an initial course schedule. To the continuing student, the advisor is able to update students on their progress in their program, review graduation requirements, and provide encouragement, guidance, and referrals as needed. Advisors are available to guide students at any time during their educational experience at the college. They are available by appointment or at various walk-in opportunities in the Student Services Center on each campus.

Role of the Student in Advising

It is the responsibility of the student to consult an Academic Advisor regarding academic information and concerns that may affect the student's academic progress. While Gateway's Academic Advisors are here to guide and assist students towards completion of their program, it is ultimately each student's responsibility to fulfill his/her degree requirements. New and continuing students who have remedial requirements, less than 24 credits, or do not meet the standards for good academic standing should work with their Academic Advisor. Continuing students with 24 or more credits that are in good academic standing should transition to working with a faculty advisor but always have access to their Academic Advisor as well. Students may set up an appointment at 1-800-247-7122.

Role of the Faculty Advisor

Faculty members from each program serve as faculty advisors to continuing students who have completed all remedial requirements and 24 or more credits toward a diploma or associate degree program. Faculty advisors are available during faculty office hours throughout the year and help plan course schedules during faculty advising days, which are scheduled prior to the beginning of each registration period.

Registration

Registration Information

Registration is the process of enrolling in courses. Dates, hours, and instructions for registration are available each semester through WebAdvisor. Academic advising will be provided by faculty and academic advisors.

- Students must be officially registered to attend class.
- Students must be officially registered in order to receive credit for class(es).
- Students who have a debt greater than $200 will not be able to register for a class until the account balance is at $200 or less. Students who have any outstanding debt will not be able to receive their transcript or diploma.

Registration Requirements

To register for classes, students must:

- register via WebAdvisor or submit a completed registration form to any Student Services Center.
- make any necessary payment or payment arrangements.
- not have an outstanding financial obligation of more than $200 to the College.
- have met class pre-requisites and be accepted to the program, if applicable.

Priority Registration

Students who are accepted to a postsecondary program are eligible to register during the priority registration period. A continuing program student is given a priority registration date based upon the number of credits the student has completed. Newly admitted program students may register during New Program Student Registration. Students not accepted into a postsecondary program register during the open registration period. Students attending Gateway Technical College under the Youth Options program register during the open registration period regardless of whether or not they have been accepted into a postsecondary program.

Service Member Priority Registration

Wisconsin Assembly Bill 201 gives priority registration to eligible service members attending a Wisconsin technical college. Eligible service members include those who have served or who are serving on active duty under honorable conditions. In accordance with the law, Gateway Technical College allows eligible service members (not including dependents) to register one day prior to their standard registration date.

Prerequisites and Corequisites

A prerequisite is a required course which must be successfully completed before a student can register for an advanced course. Most courses require a minimum D- grade to be earned in the pre-requisite. However, some courses require a higher minimum grade. Please see course description information for prerequisite requirements. A co-requisite is a class which must be completed prior to or at the same time as the selected course. Students should become familiar with the prerequisite and corequisite requirements of their program courses. Prerequisite and corequisites are identified on curriculum sheets. Not following these requirements can result in the need for extra semesters of work to complete graduation requirements. A student who feels they have work experience or training which may qualify for enrolment in an advanced course, should discuss the situation with their academic advisor.

Repeating a Course

If a student wishes to repeat a course they must register in person at a Student Services Center, specifying on their registration form which course they are registering to repeat.

Electives

Elective credits may enable students to take courses in addition to those specified in their

program's curriculum. Elective courses may be chosen from the wide variety of classes offered each semester. Students in associate degree programs should be sure that their electives are at the associate degree level. Students should check with their faculty advisor or an academic advisor on the selection of elective credits.

Changes in Registration

Changes to students' schedules may be made via WebAdvisor or in person at any Student Services Center. If using WebAdvisor, review "My Class Schedule" after conducting your transaction to verify that you are registered for the correct classes. A student wanting a third party to complete any transaction on their behalf must provide the third party with the signed document. The third party must provide photo identification for himself/herself, along with their phone number, relationship to the student and a signature.

Financial Aid Census Date

The actual amount of financial aid funding a student is eligible to receive will be determined based on the fundable number of credits in which the student is enrolled and attending on the Census Date (the 14th calendar day of each semester at Gateway). After this date:

- adjustments will not be made for additional enrollment
- award may be recalculated for classes with no attendance and/or,
- a repayment may be charged for all or a portion of funds received

Gateway highly encourages students to register for all classes for a semester prior to the Census Date.

No-shows

If a student does not attend class, they are not eligible to receive financial aid for the class. If an instructor drops a student from the class they are teaching, due to the student being a 'no show' or having poor attendance, there is no refund of tuition and fees; however, the Financial Aid office is required to adjust aid based on actual credits.

Adding a Class

A student may add a class through the third class hour of the course without instructor approval, provided the class capacity has not been reached and all registration requirements have been met. Accelerated, internet and blended classes require instructor approval when adding a class on or after the start date. After the third class hour of the course has elapsed, the student must obtain a Petition to Register Late form available at **gtc.edu/forms** or in any Student Services Center. An email generated by the student from his/her Gateway email account and instructor response with approval may be used in lieu of the petition. After obtaining the signature/approval of the instructor, the student must officially add the class in any Student Services Center. Class capacity may not be exceeded. The student is responsible for any and all missed course work, materials, and assignments. Refunds for students who enter a class late and subsequently drop will be calculated based upon the start date of the class, not the date the student registered for the class. A student who does not register for a class is not eligible to receive credit for the class. Financial aid awards will not be adjusted if adding a class after the Census date.

Students may not attend a class unless they are officially registered for the course.

Dropping a Class

A drop is student initiated. A student may drop a class without a grade up until 20% of the class meeting times have elapsed. In order to drop a class, a student must complete a drop via WebAdvisor or submit a completed Drop Form in any Student Services Center. The drop process is not complete until WebAdvisor processes the drop (confirm by viewing "My Class Schedule") or the Drop Form is received and processed by the Student Services Center. Nonattendance or notifying the instructor that the student will not be attending does NOT constitute a drop. When a student registers for a class, the student owes the corresponding tuition and fees. Students who plan to drop a class should do so immediately. A single day can make a significant difference in the amount of the refund. Drop deadlines are printed on a student's class schedule and are strictly enforced. For information regarding refunds, please see "Refund Policy" in "Paying for College" section of this handbook. A student who is a financial aid recipient should be aware that dropping a class may affect his or her financial aid award and account balance with the college. If a class is dropped, the financial aid award will be recalculated based on the remaining eligible credits. Dropped classes will be monitored throughout the entire semester. Dropped classes are considered course attempts, and are used to calculate satisfactory academic progress for financial aid purposes. If students have questions on how dropping a class may affect their financial aid award, they should contact a Student Finance Specialist prior to dropping the class.

Withdrawing from a Class

Withdrawals occur after the refund period; there are no refunds for withdrawn classes. A student may withdraw from a course without an academic penalty up until 80 percent of the class time has elapsed. A student withdraws from classes by completing a Withdrawal Form for each class and submitting it in any Student Services Center. A grade of 'W' will be recorded on the student academic record. A student who stops attending a class after the refund period without withdrawing receives an F grade. Withdrawing from a class(es) may affect the student's financial aid award. Withdrawn classes are considered course attempts and are used to calculate satisfactory academic progress for financial aid purposes.

Note: Withdrawal from classes does not imply withdrawal from the academic program. To withdraw from a program, access Withdraw from a Program in WebAdvisor. Program withdrawal forms can be found at ***gtc.edu/forms.***

Class Cancellations

Gateway reserves the right to cancel any scheduled class. Refunds are issued for cancelled classes. The student is encouraged to work with their academic advisor in making alternative class selections.

Combining Class Sections

Gateway reserves the right to combine class sections as a result of insufficient enrollments. If this occurs, every effort will be made to notify the student prior to the start of the class. The student's class schedule can be viewed on WebAdvisor at "My Class Schedule."

Auditing a Course

At times a student may wish to attend a class without receiving a grade or credit. To do so, the student must register to audit the course. The tuition and fees are the same, whether the student is auditing the course or taking it for credit. Information regarding the fee exception for senior citizens auditing postsecondary courses follows. A student must officially change his or her audit status within the first 20 percent of class. At the completion of the course, the student will receive a grade of AU (audit). A student who is auditing a course may not change his or her enrollment in the class to credit seeking or vice versa after the first 20 percent of the class has passed.

Senior Citizen Audits of Postsecondary Courses

Wisconsin residents, 60 years of age or older on the start date of the class, may audit an associate degree or technical diploma course without paying the tuition portion of the class fee, provided space is available. This is a significantly reduced rate. Only non-tuition fees, such as material, activity, and other miscellaneous fees will be charged. Forms for requesting a senior citizen audit are available in any Student Services Center. If a senior citizen wants credit for the course, regular registration procedures and charges apply. The regular audit rules apply to changing status from credit-seeking to audit and vice versa.

Senior Citizens and ACE Classes

Wisconsin citizens 62 years of age or older on the start date of the class may take Adult Continuing Education (ACE) classes at a significantly reduced rate. A student in this category is not charged tuition for the class, only non-tuition fees, such as material, activity, and other miscellaneous fees will be charged. Please contact Student Services for information.

Student Enrollment Status

Student enrollment status is determined by the number of credit hours for which a student is registered. A full-time student is defined as one who is enrolled in 12 or more credit hours in a semester. A part-time student is defined as one who is enrolled in less than 12 credit hours in a semester. Enrollment verifications reflect the student's enrollment status at the time the verification is completed.

Paying for College

Gateway Technical College believes that the opportunity for a college education should be within the reach of all interested individuals. To that end, Gateway offers a variety of payment options. Payment options include cash, check, MasterCard, Visa, financial aid, authorizations and a student payment plan. A payment option must be in place by published deadlines. Out-of-state students pay additional tuition charges (see Residency Qualifications for more information). Students are ultimately responsible for the payment of tuition, fees, and books.

Financial Aid and Eligibility

Financial aid is financial assistance to help students meet their educational costs. The Gateway Technical College Financial Aid Office administers a comprehensive program of federal, state and college grants, work-study and loan programs to provide assistance to students in funding their education. Gateway uses the Free Application for Federal Student Aid (FAFSA) to determine if a student is eligible for federal grants, student and parent loans, work-study, and state grants. The FAFSA is available at **fafsa.ed.gov.**

Financial aid is made available to students who are eligible according to specific state and federal regulations. All eligible students must:

- Be accepted to an aid-eligible program before an award can be determined.
- Be a U.S. citizen, a National, or a permanent resident of the United States.
- Demonstrate financial need as determined by Gateway's Financial Aid Office through the Financial Aid Application (FAFSA) process.
- Not be in default on any educational loan, or demonstrate an unwillingness to repay any educational loan and/or owe any overpayment to Gateway Technical College or the U.S.Department of Education.
- Be in compliance with Selective Service regulations.
- Be enrolled in at least half-time status to receive most types of financial aid.
- Maintain Financial Aid Satisfactory Academic Progress (SAP) as defined by Gateway's Financial Aid Office.
- Must participate in Loan Entrance/Exit Counseling if award includes loans.
- Only receive aid at one college per semester.

There are three major types of aid available to Gateway students. They include:

- Grants (do not have to be repaid unless a student stop attending. See information on Return of Title IV funds)
- Student Loans (must be repaid)
- Student Employment (for students who work and earn money to help pay for college)

Information about the specific types of grants, loans, and student employment available may be obtained at **gtc.edu/financialaid**. Financial aid information may be subject to change at any time due to change in federal, state, or sponsoring agency regulations.

Financial Aid Communications

Communication in regards to the processing of the Free Application for Federal Student Aid (FAFSA) and any resulting financial aid award/eligibility information will be sent to the Gateway Technical College student email and the "My Documents" section of WebAdvisor. It is the responsibility of every student applying for or receiving aid to check both of these locations on a regular basis throughout the academic year to ensure that all relevant financial aid requirements and deadlines are met in a timely manner. This includes periods when school is not in session as changes to student eligibility may occur during these times, such as when final grades are issued after the end of the semester. Failure to check student email and the "My Documents" section of WebAdvisor on a regular basis could result in the delayed receipt of important information regarding financial aid requirements and the loss of financial aid eligibility.

If a student is awarded funds through the Federal Student Aid program at Gateway Technical College, an award letter will be made available in the "Financial Aid Award Letter" section of WebAdvisor. Students may view or print your letter at this location. If a student requires assistance viewing and/or printing their letter they may visit the nearest Student Services location for assistance. The Financial Aid Office does not print or mail award letters to students, parents or third parties.

Census Date (Date of Record)

In accordance with federal regulations, the Financial Aid Office will recalculate federal, state and institutional awards based on the enrollment status as of the published census date. The census date is set by the college and is the 14th calendar day of each semester. Official census dates for the current academic year can be found at **gtc.edu/important-dates.** On this day, the college takes a "snapshot" of all students' enrollment which becomes the "official enrollment" that is used for both state reporting and financial aid eligibility.

After this date:

- Adjustments will not be made for additional enrollment.
- Award may be recalculated for courses with no attendance.
- If classes are cancelled or if a course is dropped that has not started; Students may owe repayment.

- Students enrolled only in remedial/ developmental coursework are not eligible to receive aid.

Classes that students are enrolled in and attending as of census date will determine the amount of financial aid they receive. If a student is enrolled and attending less than full time as of the census date, awarded aid will likely be less than what was reported in an initial award letter or email. This difference is because students are initially awarded based on the expectation of full time enrollment. Financial aid is then adjusted after the census date to reflect students' actual enrollment.

Gateway highly encourages students to register for all courses (including late classes) for a semester prior to the census date.

Consortium Agreements

In certain circumstances, Federal Regulations allow a degree-seeking student to receive Federal Student Financial Aid from a HOME school (the school where students are seeking their degree) while also studying at a VISITING school. This is referred to as a consortium agreement. Please note, it is illegal to receive aid from more than one institution for the same period of attendance.

To receive financial aid as a student attending Gateway as a HOME school but taking courses at a VISITING school, a student must complete a Gateway Technical College Consortium Agreement Form. This form is available on the gtc.edu/forms webpage. Students taking courses at Gateway who are enrolled at a different HOME school need to complete that school's Consortium Agreement process.

Please note that a consortium agreement will not hold courses for a student or allow for the direct transfer of financial aid funds to the VISITING school. Students must make satisfactory payment arrangements with the VISITING school to secure enrollment. Students will subsequently receive financial aid funds from the HOME school at a later date.

Financial Aid Satisfactory Academic Progress (SAP) Policy

The Federal Student Aid program requires that schools maintain Satisfactory Academic Progress policies in order to ensure that students are progressing successfully through their programs as a condition of receiving financial aid. Students' complete Gateway Technical College academic record is used to determine if each student meets the Satisfactory Academic Progress criteria as outlined in this document. All credits attempted at or transferred to Gateway Technical College, including those attempted without the use of financial aid, are included.

Each student's financial aid status is calculated upon receipt of their Free Application for Federal Student Aid (FAFSA), as well as at the end of each semester if a student has submitted a FAFSA and attempted coursework. Students that have not met the Satisfactory Academic Progress Criteria as outlined in this document are notified via their student email account and WebAdvisor.

For complete website information related to Gateway Technical College's Satisfactory Academic Progress Policy please visit **gtc.edu/student-services/financial-aid.**

This policy is subject to change at any time should Department of Education Federal regulations require it.

Satisfactory Academic Progress Criteria

To maintain financial aid eligibility, students must meet all Satisfactory Academic Progress criteria as outlined below:

- Minimum 2.0 term Grade Point Average (GPA)
- Minimum 67% term completion rate (also known as Pace) 67% = credits completed divided by credits attempted
- Minimum 2.0 cumulative Grade Point Average (GPA) - Cumulative GPA is calculated on all credits attempted at Gateway
- Minimum 67% cumulative completion rate (all credits completed at Gateway and transferred to Gateway divided by total credits attempted)

Unlike a student's academic GPA and/or completion rate, all attempted coursework is used in calculations involving Satisfactory Academic Progress. This means that courses with a final grade of F, U, W, WF, WP, or I, as well as a final status of NG (no grade) are included in these calculations as non-completions with zero grade points (this is the same as receiving a final grade of "F" in a course). All Repeats (R) are included as the final grade or status that was earned for each attempt. The academic GPA and/or completion rate shown on WebAdvisor may not match your GPA and/or completion rate as calculated for Satisfactory Academic Progress purposes due to these differences.

Financial Aid Statuses

Financial Aid Warning

Students failing to meet the Satisfactory Academic Progress criteria listed above will automatically be placed in Financial Aid Warning status. Students in Financial Aid Warning status remain eligible to receive financial aid. Students in Financial Aid Warning status are not restricted in the number of credits they may take, but must meet all four Satisfactory Academic Progress criteria as outlined above in all future terms to avoid being placed in Suspension – Need Appeal (SNA) status.

Suspension—Need Appeal (SNA)

Students in Financial Aid Warning status who fail to meet all Satisfactory Academic Progress criteria will be placed in Suspension – Need Appeal (SNA) status. Students in Suspension –Need Appeal status may file a SAP Appeal/Plan and appeal to have their aid eligibility reinstated. Students choosing not to file a SAP Appeal/Plan must meet all Satisfactory Academic Standing criteria listed in this document in order to be eligible to receive any further financial aid.

Approved Appeal/Plan (AP)

Students who submit the SAP Appeal/Plan and are approved must follow the terms of their approved SAP Appeal/Plan. This would include:

- Achieving a minimum 2.0 term Grade Point Average (GPA) in all future terms
- Achieving a minimum 67% term completion rate (also known as Pace) in all future terms. 67% = credits completed divided by credits attempted
- Taking only courses required to complete the current active program listed on the SAP Appeal/Plan form
- Any and all other criteria as outlined on the SAP Appeal/Plan Form
- Students can only be on an approved SAP Appeal Plan once. Students are not allowed to appeal a Financial Aid Suspension more than once

Students in Approved Appeal/Plan status are strongly encouraged to meet with their program advisor to ensure that they are only taking required coursework. Students in Approved Appeal/Plan status that do not meet all of the criteria outlined above will be placed in Financial Aid Suspension (FAS) status.

Financial Aid Suspension (FAS)

Students are placed in Financial Aid Suspension (FAS) status if:

- The student has completed a SAP Appeal/Plan and it has been denied.
- The student has had his or her SAP Appeal/Plan approved, but did not meet the terms specified by the approved SAP Appeal/Plan.
- They have exceeded the maximum duration of financial aid eligibility (150% Rule) as outlined below.

Students in Financial Aid Suspension (FAS) status are not eligible to receive financial aid and are not eligible to appeal.

Students in Financial Aid Suspension (FAS) status may regain financial aid eligibility if they complete financial aid eligible coursework with alternate funding sources and meet all Satisfactory Academic Progress criteria. Students that meet this criteria will be sent the SAP Reinstatement Form via student email and will be eligible to receive aid once the form is processed by the Financial Aid Office. Students that have had their financial aid eligibility reinstated as a result of the SAP Reinstatement Form being processed and do not meet all Satisfactory Academic Progress criteria in any subsequent term will immediately be placed back in Financial Aid Suspension (FAS) status.

Students exceeding the maximum duration of financial aid eligibility (150% Rule) as outlined below cannot regain financial aid eligibility regardless of academic performance.

Duration of Financial Aid Eligibility - Meeting the 150% Rule (M150%)

Students that can no longer graduate by the time they have attempted 150% of the published credits for their current active program, as listed on their program requirement sheet, will immediately become ineligible for financial aid and will be placed in Financial Aid Suspension (FAS) status.

All credits that a student has transferred to Gateway Technical College, as well all credits attempted at Gateway Technical College count toward the 150%. All attempted credits are included in this calculation regardless of:

- Program status
- Program(s) being pursued
- Financial Aid received/not received
- Length of time since the credits were attempted

The maximum duration of financial aid eligibility is calculated by taking the number of credits required to complete your current active program requiring the most credits and multiplying by 150% (1.5). For example, a program requiring 70 credits to complete would have a maximum duration of eligibility of 105 credits. This is because 70 Credits x 150% (1.5) = A maximum of 105 credits.

The maximum duration of eligibility for students active in more than one program is calculated using the active program requiring the most credits to complete. It is not calculated on the basis of multiple programs.

Students who meet or exceed the M150% limit for a certificate or technical program who are subsequently accepted into a larger associate program must notify the Financial Aid Office to have financial aid eligibility reassessed under the SAP policy. Students that remain in the M150% status as of the census date for a given semester are ineligible to receive aid for that semester.

Required credit for program	150 percent of that program's credit
70	105
69	104
68	102
67	101
66	99
64	96
61	92
44	66
33	50
32	48
28	42
27	41
17	26

Students exceeding the allowable 150% of their current program will be placed in Financial Aid Suspension (FAS) status at the end of the semester in which the 150% limit is reached. The 150% status cannot be appealed. At this time all future aid will be cancelled at Gateway Technical College. Students on financial aid suspension are still allowed to take classes at Gateway Technical College by paying for the classes with alternative resources (payment plan, scholarships, Veterans Affairs benefits, etc.).

Financial Aid Disbursement and Eligibility Policy

If a student receives federal and/or state funding, his/her funds will be applied to their student account. Students are able to charge certain expenses to this account. Expenses include tuition, fees, and bookstore charges. After courses begin and a student's attendance is verified on the census date, Gateway will apply a financial aid award to their student account. If an award exceeds expenses, a refund representing the proceeds of those funds will be applied to the student's Gateway Plus Card. Financial aid awards are based on enrollment levels. Enrollment level changes will prompt a change in aid funds and a new award notification will be sent to the student. Awards may be viewed on WebAdvisor. All student loans are processed in two disbursements each term. Please check the important date's calendar online for more information: **gtc.edu/student-services/financial-aid/important-dates**.

Federal regulations now require Gateway Technical College to make multiple disbursements of student loans each semester. If you are receiving loan funds, this means half of your loan funds for each eligible semester will be applied to your student account on the first disbursement date and the second half of your loan funds for the semester will be applied to your student account on the second disbursement date. This change does not apply to grant disbursements.

Please take this adjustment into account when making financial plans. If you are due a refund of loan funds after any remaining balance due to Gateway is paid, you will either:

- Receive a portion of your refund on the first disbursement date and then a second and final portion of your refund on the second disbursement date if the first disbursement of your loan funds is enough to cover all remaining charges at Gateway and a refundable balance exists after the first disbursement is made.

OR

- Receive a refund on the second disbursement date if the first disbursement of loan funds was not enough to cover all remaining charges at Gateway.

The timing of refunds and the dollar amount of refunds are dictated by each student's particular balance due and financial aid award. Please review the award amounts provided on WebAdvisor compared to the charges on your account to determine the timing and dollar amounts of any refunds. As multiple loan disbursements are a federal requirement, no exceptions can be made to the timing of disbursements for any reason.

Please view the **Important Dates** section to view disbursement dates for each semester.

Grants—Eligibility

Federal Pell Grant

Students must be enrolled in a minimum of one (1) undergraduate level credit in order to be eligible for the Federal Pell Grant. Depending on a student's Expected Family Contribution (EFC) students may not be eligible for the Pell grant. Please check with a Student Finance Specialist for more information.

Student awards are initially based on full time enrollment (12 credits) for the full academic year. The amount of Federal Pell Grant a student receives is based on the student's actual enrollment status at the census date. Due to this, after the census date, awards are recalculated to reflect student's actual enrollment status. Pell eligibility is based on enrollment, Estimated Family Contribution (EFC) and/or Cost of Attendance (COA).

Federal Work Study

Students must qualify for Federal Work-Study and be enrolled in at least one (1) undergraduate level credit. If an award letter includes a federal work study award, students have the option to find a job and begin working. Students also have the option to not take advantage of this program; in this case all FWS funds will be forfeited. Monies are paid based on hours worked. Total monies earned cannot exceed the amount stated on the financial aid award. If you have not been awarded federal work study and are interested, contact your local Student Service Center to see if you are eligible.

State Grants

Student must be enrolled in a minimum of six (6) credits at the time of disbursement to be eligible for state grants. Due to limited state funds it is recommended that students apply for financial aid before April 1st for maximum eligibility.

Loans—Eligibility

Federal Student Loans

Students must be enrolled in a minimum of six (6) credits at the time of disbursement to be eligible for student loans.

Students who have not previously received a loan from Gateway Technical College and are requesting a loan must complete Direct Loan Entrance Counseling and sign a Direct Loan Master Promissory Note (MPN). If you do not complete Direct Loan Entrance Counseling and sign a Direct Loan Master Promissory Note, your loan funds will not be applied to your account.

Students may complete the Federal Direct Loan Entrance Counseling and sign a Direct Loan Master Promissory Note on the Department of Education website at www.studentloans.gov. Please note, students requesting additional Federal Direct Unsibized Stafford Loans must complete the Awareness Counseling Guide on the **studentloans.gov** website.

Students requesting a loan disbursement from a previous term will undergo a review of loan requirements by the financial aid office in order to verify funding eligibility. Loans from a prior award year will not be considered for disbursement.

Federal Parent PLUS Loans

Dependent students must be enrolled in a minimum of six (6) credits at the time of disbursement.

Eligibility for federal financial aid must first be determined for dependent students before consideration of Parent PLUS Loans. Students may complete a FAFSA at fafsa.gov. Parent and dependent students must be U.S. citizens or eligible noncitizens, and cannot be in default or owe an overpayment on federal grants. Parent credit history will be checked. If PLUS loan is denied, students may be considered for additional unsubsidized loans.

Please note, any eligible Direct Parent Plus Loan amounts in excess of tuition, fees and books will be refunded to a parent through the student's Gateway Plus Card. Students and parents will be required to sign a Parent Plus Excess Loan Refund Authorization Form. This form will be emailed to the students Gateway email account when required. If a parent has questions regarding the Parent Plus Excess Loan Refund Authorization Form they can contact the Financial Aid Office.

Private Loans

Student must be enrolled in a minimum of one (1) credit at the time of disbursement. Any other requirements set by the private loan originator must also be met in order to receive a disbursement.

Eligibility for federal financial aid must first be determined by completing a FAFSA at fafsa.gov before consideration of private loans will be made. Gateway reserves the right to deny certification of the loan.

Purchase or Rental of Textbooks Using Financial Aid Funds

Gateway Technical College believes that being prepared for classes is essential. To ensure students are ready, students who have a financial aid award in place on Web Advisor may use their funds to purchase or rent their textbooks and supplies from our partner, Follett Bookstores.

The amount of funds a student will have available to use at the bookstore each term will be the difference between what a student has been awarded for financial aid minus the cost of their classes. Funds will be available 24 hours after your financial aid award has been posted to WebAdvisor.

- Bookstore authorization dates can be referenced on the Important Dates page of the Gateway Technical College Financial Aid website.
- To purchase or rent in person, bring a photo ID and a copy of your schedule to the bookstore on campus during the bookstore authorization dates. Let them know you would like to charge your purchase to your financial aid when you check out.
- To purchase or rent online, visit eFollett.com during the bookstore authorization dates and select the items to be purchased and/or rented. Proceed to the Checkout area and enter all the required information. You will be taken to the Payment Methods screen and here is where to indicate that you would like to pay using Financial Aid.

Students who are Pell Grant-eligible may wish to purchase their books from an alternate source. To do this, the student has the right to request an early disbursement of a portion of their Pell Grant.

- The maximum early disbursement allowed will be calculated by subtracting the cost of tuition and fees from the amount of Pell Grant awarded for that term as of the date the request is being reviewed. If the cost of tuition and fees is more than the award an early disbursal will not be granted.
- The early disbursement will also be limited to the book component of the student's cost of attendance as determined by Gateway's Financial Aid Office.
- If this early disbursement is granted, the student will not have any funds available through Follett Bookstore for that term. If a student already purchased books using their financial aid at Follett, they are no longer eligible for the early disbursement.
- A student may request the early disbursement on a per-term basis by contacting a Student Finance Specialist and asking for an Early Pell Disbursement form. The form must be completed and returned to a Student Finance Specialist at

Gateway by the first day of the term that the disbursement is being requested.

- Students must sign up for **saltmoney.org** and complete at least one SALT module if they have not already done so. This must be completed by the time the Early Pell Disbursement form is submitted. If a module is not completed on the day the Early Pell Disbursement form is reviewed it will be automatically rejected.

Gateway Plus Card

All eligible financial aid students will have the option to receive a Gateway Plus card. Financial aid disbursements are sent electronically to the Gateway Plus Card at the end of business on the published refund date) and processed according to the choice indicated by the student. When the student activates the card successfully, the student may choose to have funds applied directly to the card or have funds electronically transferred to a bank account designated by the student. This card is good for five years and it is the responsibility of the student to retain this card. The card will be mailed to your address on file at Gateway Technical College once requested. If you have lost your card, a fee is required when a replacement card is requested. Please contact Student Services to find out more about ordering your replacement card.

Drops with a 100 Percent Refund

If a class is taken off your schedule and you are not charged for the class, your financial aid will be recalculated with the remaining eligible credits on your schedule. Dropped classes will be monitored throughout the entire semester.

No-shows

If you never attend class, you are not eligible to receive financial aid for the class. In a situation where an instructor drops a student from the class they are teaching, due to the student being a 'no show', there is no refund on tuition; however, Financial Aid is required to adjust aid based on actual credits.

If you intend to drop a course, you must drop the course via WebAdvisor or submit a class add/drop form in any Students Services Center so that you can be officially dropped from the class. Do not simply stop attending class.

Return of Federal Financial Aid Funds

If you withdraw or drop out of Gateway Technical College class(es) prior to completing 60% of the semester, you will be required to return some of the federal financial aid that was disbursed to you. The amount of aid you could keep is proportional with the amount of time you attended class(es) to the total days in the semester. Failure to attend any classes would mean a 100% return of all aid. Gateway is also required to repay to the federal aid funds a proportional part of your tuition that was originally paid with federal aid. The student is required to repay these funds to Gateway Technical College. Any return of tuition will go to the following funds in priority order: (1) Federal Direct Loan (unsubsidized), (2) Federal Direct Loan (subsidized), (3) PLUS Loan, (4) PELL Grant, (5) SEOG Grant, (6) TIP Grant. When aid is returned, the student will owe a balance to Gateway. Payments should be made via WebAdvisor or in any Student Services Center. Students who do not repay a debt as a result of this calculation may be reported to the Department of Education and may be prohibited from receiving Title IV funds at other colleges. In addition, students who have a Title IV debt may not receive an official transcript. Students are reminded to follow the withdrawal procedures outlined in this handbook so that a correct calculation can be made.

Gateway Foundation Scholarships

Students can help keep their education more affordable by applying for a Gateway Foundation Scholarship. Annually Gateway Foundation awards scholarships to eligible students ranging from $300 to $1,000 or more. During the continuing student scholarship application period, students are encouraged to go to the Foundation Web page and click on the link for "Scholarship Application." To go to the Gateway Foundation online application, use the following link: **gtc.edu/foundationscholarships.** The application period will open at the end of August and close in October. For more information about Gateway Foundation Scholarships visit gtc.edu/foundation-and-alumni-association.

Established in 1977, Gateway Technical College Foundation secures resources from the community to support, promote, and facilitate the educational activities of Gateway Technical College. As one of its activities, the Foundation raises funds to provide assistance to Gateway students who wish to enhance their lives through education and training. Annually, Gateway Technical College Foundation, Inc. awards scholarships and grants to students. These awards are made possible through the generosity of individuals, businesses, and organizations in southeast Wisconsin who recognize the need to assist in providing funds for students eager to embark on the path to their future. To learn more about the Foundation, please visit us online at: **gtc.edu/foundation-and-alumni-association.**

Veterans Administration (VA) Educational Benefits

Gateway Technical College is approved by the Wisconsin State Approving Agency and the Federal Department of Veterans Affairs to provide training to veterans, active service members, survivors, spouses and their dependents.. You can get more information about VA Education Benefits by meeting with a Student Finance Specialist (School Certifying Official) or by contacting your local County Veterans Service Officer (CVSO). If you are planning to use veterans education benefits at Gateway please follow these steps:

1. You can visit any Student Services Center or call 1-800-247-7122 to schedule an initial consultation with a Student Finance Specialist.
2. A Student Finance Specialist will guide students through the benefit and enrollment processes at Gateway Technical College. The Veteran may be asked to provide documentation during or after the initial meeting, i.e. Certificate of Eligibility, DD214, NOBE, KICKER, as applicable to you.
3. Complete admissions process and be accepted into an approved program of study.
4. All Veterans must supply the college with their military transcripts.
5. After a student registers for classes (each term), please submit a VA-Education Benefit Request Form (VA-EBRF).
6. You may also be eligible for grant funding. Please complete your Free Application for Federal Student Aid by visiting **fafsa.ed.gov.**
7. Make sure you check your Gateway Student e-mail and Web Advisor account regularly for important updates regarding your VA Benefits.

Additional information about Veteran's education benefits can be found at **gtc.edu/va**. For specific eligibility requirements, you may also call the VA Regional Processing Office (Federal Benefits) at 1-888-442-4551, or your local County Veteran Service Office (State Benefits) located in your

county. To find your local County Veteran Service Officer (CVSO) please go to the following link and click on your county of residence to display your designated CVSO: **http://wicvso.org/locate-your-cvso/**

VA Standards of Progress for Federal VA Education Benefits (Chapters 30, 31, 33, 35, 1606, 1607)

Students receiving Federal VA Educational Benefits are required to maintain Satisfactory Academic Progress (SAP) in order to continue receiving benefits. The standards of progress for Gateway students receiving VA Educational Benefits are as follows:

- If a student receiving Federal VA Education Benefits receives less than a 2.0 term GPA and/or completed less than 67% of the courses attempted they will be placed into a Veteran Benefit Warning status. Students are eligible to continue receiving VA Benefits while on warning.
- If a student receives less than a 2.0 term GPA and/or less than 67% term completion rate for any term after being placed into Warning status, then the student will be required to complete a VA Success Plan.
    - An email will be sent to the students Gateway Student Email to notify them that they need to complete the VA Success Plan along with a link to the form.
- If the VA Success Plan is approved, then the student would be placed in a Probation Status and would be eligible to continue receiving VA Education Benefits.
- If the VA Success Plan is denied, then the student would be placed in a Suspension Status. The student would no longer be eligible for VA Education Benefits until they regain Satisfactory Academic Progress.
- To reestablish Satisfactory Academic Progress, the student must accumulate a minimum of six (6) credits (or equivalent in program's measured clock hours) with a minimum 2.0 term GPA.
- If the student meets the requirements listed above to reestablish Satisfactory Academic Progress, then they will be able to regain their Federal VA Education Benefits.
    - The student is required to notify Gateway Technical College that they have met the criteria to regain their benefits by submitting a Veterans Education Benefit Request Form (VA-EBRF) for the term they would like to use their benefits for. This form can be found by going to the following link: **gtc.edu/forms**
- If the student fails to achieve the necessary criteria to regain benefits, then the benefits will be curtailed until satisfactory progress, as defined previously is achieved.

For the most up-to-date information on academic standards of progress for students using Veteran Education Benefits visit **gtc.edu/va.**

Federal VA Education Benefit Programs

There are many benefits available to advance the education and skills of veterans and service members and their spouses and dependents. The following are Federal Educational Benefit programs administered through Gateway Technical College:

- Post 9/11 GI Bill (Chapter 33)
- Montgomery GI Bill - Active Duty (Chapter 30)
- Montgomery GI Bill - Selected Reserve (Chapter 1606)
- Reserve Education Assistance (REAP) (Chapter 1607)
- VA Vocational Rehabilitation for Veterans with Service Connected Disabilities (Chapter 31)
- Dependents Educational Assistance (Chapter 35)

For more information regarding the benefits listed above please visit: **benefits.va.gov/gibill/education_programs.asp** or call the VA at 1-888-442-4551.

Wisconsin Department of Veterans Affairs (WDVA) Education Benefits

Wisconsin Veterans Education Reimbursement Grant Program (VetEd):

Eligible Wisconsin veterans attending college can receive up to 100 percent reimbursement of the cost of tuition and material fees after successful completion of full-time or part-time coursework. Individuals eligible for Wisconsin GI Bill benefits must apply for and use those benefits in order to be eligible for VetEd reimbursement.

Guard and Reserve Tuition Programs:

- Wisconsin Army and Air National Guard members attending Gateway Technical College can receive 100% reimbursement of tuition costs excluding fees with the Wisconsin National Guard Tuition Grant. Limits on this program are set by the Wisconsin Department of Military Affairs. Complete eligibility and application forms are available from the student's Army or Air National Guard unit or at **http://dma.wi.gov/dma.**
- Army, Air Force and Marine Reserve Tuition Assistance Program: Please check with your unit Educational Officer for details on these programs.

WDVA Retraining Grant

This grant is for recently unemployed or underemployed veterans who demonstrate a financial need while being retrained for employment. The program must be completed within two years. This is a grant, not a loan, and does not have to be repaid. The applicant may not receive a retraining grant and another WDVA education grant for the same period.

- The maximum grant is $3,000 per year, for a maximum of two years.
- Complete eligibility requirements and application forms for the WDVA benefits are available through your local County Veteran Service Office. Please be mindful of the application deadlines for WDVA benefits.

Wisconsin GI Bill

- The Wisconsin G.I. Bill (WI GI Bill) provides a full waiver ("remission") of tuition and fees for eligible veterans, spouses or dependents for up to eight full-time semesters or 128 credits at any University of Wisconsin System (UWS) or Wisconsin Technical College System (WTCS) institution.
- Please note that activity fees, miscellaneous fees, and book costs are not covered by the WI GI Bill.
- The tuition remission will not be applied until the college has received approval from the WDVA regarding a student's eligibility for the WI GI Bill along with all required supplemental documentation. Students are responsible for meeting all payment deadlines. Additional information is available at **wisvets.com/WisGIBill.**
- Any student using the Wisconsin GI Bill whether it be the veteran, spouse, or dependent of a veteran, must maintain at least a 2.0 cumulative GPA or higher in order to remain eligible for Wisconsin GI benefits.

- If the cumulative GPA falls below 2.0 at the end of the term, the student may still enroll the following term; however, the student will not be able to use the WI GI Bill benefit at this time.
- To regain WI GI Bill eligibility, the student must achieve a cumulative GPA of 2.0 or higher and then complete a VA Education Benefit Request Form for the following term for certification to be reviewed.

Payment Options

As a student, you may use one of the following options to pay for your tuition/fee charges. A payment option must be in place by the published payment option deadline to prevent being dropped from ALL active classes for nonpayment.

Option 1: PAY FEES IN FULL by credit card via WebAdvisor **(gtc.edu/webadvisor** | select "Make a Payment") or by cash, check or credit card in any Student Services Center. Partial payments may be made on your account until the payment option deadline. Your account must be paid in full by the deadline or have a combination of self-payment and other funding sources

Option 2: PROVIDE AN AUTHORIZATION from a third party (company/employer/agency) to cover tuition/fees or be awarded financial aid by payment option deadline.

Option 3: ENROLL IN STUDENT PAYMENT PLAN via WebAdvisor or in any Student Services Center by the payment plan enrollment deadline.

Student Payment Plan

The Student Payment Plan is available for Summer 2016 from April 4, 2016 thru May 13, 2016; for Fall 2016 from August 1, 2016 thru September 9, 2016 and Spring 2017 from November 14, 2016 thru January 13, 2017 Enroll in the payment plan via WebAdvisor or in any Student Services Center.

The following outlines the Student Payment Plan requirements:

- Student must be enrolled in 3 or more credits. (Not available for noncredit students or to students only registered in Certified Nursing Assistant or WEDD courses.)
- A deposit of 25% of eligible tuition/fees plus a $25 nonrefundable processing fee is required at time of enrolling on the Payment Plan. Any partial payments made toward tuition for the semester prior to enrolling on the payment plan may be applied to the required 25% deposit. Partial payments do not enroll you in the Payment Plan; the student must officially enroll on the plan.
- A maximum of $3,000 is allowed on payment plan after required deposit is made. Any charges over the maximum must be paid in full at time of enrollment on plan.
- Three (3) installment payments are due during the semester for which the payment plan is initiated. Due dates are published in the student handbook, on Gateway's website and on the Payment Plan form. Students receive a bill, which is sent to the current address on file. Payments are due by scheduled due dates without exception, even in the event a bill is not received by the student.
- A late fee of $45.00 will be assessed if scheduled payments for the Payment Plan are received after the due date.
- There is no grace period beyond the due date for payment before a late fee is assessed.
- There is no grace period beyond the due date for payment before a late fee is assessed.
- The student will not be dropped from classes and will be responsible for payment of all fees.

Debts Owed to Gateway

In accordance with the Gateway Technical College Board of Trustees policy, a hold will be placed on a student's account for any debt owed to the college of more than $200. Students with a debt of $200 or less can register for courses and services. However, until all outstanding debts to Gateway are resolved, access to records will be restricted. Students with a balance will not have access to transcripts or diplomas. Student may owe debts to Gateway which are related to registration, financial aid, library, returned checks or for other miscellaneous reasons. Student's debts are retained on his/her record until cleared.

Students with debts will have their accounts sent to a collection agency and to the Wisconsin Department of Revenue. All collection fees are the student's responsibility.

Debts owed to Gateway are educational debt and therefore seen as educational loan if not paid prior to the end of the term.

Your student account is considered by Gateway, a non-profit institution of higher learning, to be an educational loan made to you to assist in financing your education, and therefore is not dischargeable under the United States Bankruptcy Code. The outstanding balance due on your loan is subject to finance charges as established in the current Gateway student handbook and Gateway has the right to recover any collection and/or litigation costs incurred in the collection of any amount due.

Students receiving financial aid may be eligible to take advantage of the Prior Debt Process to assist with paying prior debts a student has with Gateway. Access the Prior Debt Process via WebAdvisor.

Refund Policy

Refunds for Cancelled Classes

A student is entitled to a full refund of all tuition and fees paid for a class if Gateway Technical College cancels the class.

Refunds for Dropped Classes

Refund Schedule			
Drop	Before the first class meeting	Last Refund Drop Date column on the front side of student's class schedule	100% Refund
Drop	1–10% of class meetings elapsed	Last Refund Drop Date column on the front side of student's class schedule	80% Refund
Drop	11–20% of class meeting elapsed	Last Refund Drop Date column on the front side of student's class schedule	60% Refund
Withdrawal	21–80% of class meetings elapsed	Contact Student Services for withdrawal dates, instructions, and information	No Refund
Non-attendance/ Instructor Drops	Definition: Student doesn't attend or discontinues attendance without completing and submitting drop or withdrawal paperwork.		No Refund

No Refund for Instructor Drops

A student who registers for a class but who fails to attend, or stops attending during the refund period without dropping, may be dropped by the instructor. As an instructor drop is administrative and not student initiated, the student is not eligible to receive a refund.

No Refund for Withdrawals

No refund is made when a student withdraws from a class. Students withdraw from classes after the refund period has ended; i.e., after 20% of the class meeting times have elapsed.

Active Duty

The college will provide a full refund of tuition and fees to students enlisted in the military prior to the term start and called into active service during the term. Deployment documentation is required.

Tuition and fee refunds will be first directed to repay federal financial aid. In some cases, Gateway will be required to utilize a portion of the tuition and fee refund to reduce the student's loan debt. Gateway will repay the college and student portion of federal grants. The student will then receive a refund check in the mail.

Account Adjustments

Refunds will be applied to any outstanding balance the student has at the College. If the student account is:

Paid in Full -The refund will be mailed to the student's current address. No cash refunds.

Payment Plan Account - Any refund will be credited toward the balance owed. The amount due on subsequent statements will reflect the adjustment in fees. The refund percentage is based upon the total cost of the courses; it is not a percentage refund of the payments the student has made.

Paid by Sponsorship/Agency/Company - The tuition charges billed to the third party will be reduced. No refund will be issued.

Paid/Partially Paid by Financial Aid - The Financial Aid award/disbursement will reflect adjustments due to dropped classes.

Nonattendance -No refund is made to students who do not attend or discontinue attendance without completing a drop via WebAdvisor or submitting drop paperwork or who do not complete and submit withdrawal paperwork. Refund would be based on outline Refund Schedule.

Student Account Appeals

Students are responsible for payment of tuition and fee charges for all classes in which they register, however in the event that a student encounters extenuating circumstances that have unexpectedly impacted their ability to attend and/or complete registered courses, the student may request an appeal to potentially reduce tuition and fee charges. Please note that bookstore charges cannot be appealed. A student that wishes to submit a Student Account Appeal should meet with a Student Finance Specialist to discuss their situation and obtain the Student Account Appeal form.

Academic Information and Student Records

Gateway Technical College Credentials

Associate Degrees, Technical Diplomas, and Advanced Technical Certificates

The Gateway Technical College District Board has the authority to grant associate of applied science degrees, technical diplomas, and advanced technical certificates to graduates of occupational programs approved by the Wisconsin Technical College System Board. Students must apply to the AAS or technical diploma programs and submit an application for graduation to graduate.

Gateway Certificates

The Gateway Technical College District Board may award District certificates to students who complete a specific course or group of courses. Certificates are designed to help students gain entry level employment in specialized areas or to qualify for occupational advancement. Students must apply to the certificate program and apply for certificate completion to receive a certificate.

Adult High School Diploma

Gateway's Adult High School program is designed for people eighteen years and older who want to obtain their high school diploma. Public school districts in Kenosha, Racine, and Walworth counties cooperate in this program (subject to approval from your local high school). Students enrolled in associate degree or technical diploma classes may also receive high school credit for those classes. An Adult High School academic advisor in Student Services can give you more information on obtaining a high school diploma through Gateway. Note: Students dually enrolled in adult high school and postsecondary courses are not eligible for financial aid.

General Education Development (GED®)

Students can earn their GED by passing the official GED Testing Service tests. Subjects include Language Arts (RLA Reasoning through Language Arts), Math, Science and Social Studies. Prior to testing, students must complete an orientation (course 890-721) through the Adult Learning Center. GED instructors can pretest in all four testing subject areas. Practice tests are available in selected subject areas. GED teaching strategies include small group instruction, computer-assisted learning, self-guided exercises and assignments, and one-on-one tutoring. Non-resident fees may apply.

High School Equivalency Diploma (HSED)

An HSED may be completed in several ways. Many students decide to complete their HSED through GED testing and completion of Health, Civics, Career Awareness, and Employability Skills. An HSED may also be obtained through the completion of high school credits, postsecondary credits, or competencies. Students may also be eligible to receive an HSED if they have been granted a diploma from a foreign country. Students interested in pursuing an HSED should have their official high school transcripts sent to Gateway Admissions Office for review. All HSED participants must take an orientation (890-721) prior to starting the HSED program. Nonresident fees may apply.

English Language Learner Program (ELL)

ELL is designed to prepare students whose first language is other than English to speak and understand the English language. Students will improve their speaking and listening, grammar and writing, and reading and vocabulary skills and learn about health, community, government, consumer education, and employability skills. Large and small group instruction, computer-assisted learning, and self-guided exercises and assignments are utilized. Free to Wisconsin residents.

Student Name

The name on a student's record is the official name which will be displayed on college documents, transcripts, and diplomas. Name changes will only be completed upon presentation of a legal document supporting the change. Requests for name changes may be submitted to any Student Services Center.

Social Security Number Policy

Social Security numbers are used to identify student records. A student's failure to prove a

SSN may delay processing. All Gateway students who are applying for financial aid are required to provide their Social Security number. A Social Security number is critical to state and federal reporting and the financial aid process. The Social Security number is protected by the Family Educational Rights and Privacy Act (FERPA) and is not considered directory information and therefore will not be released to a third party. The Internal Revenue Service allows some postsecondary students to claim an education income tax credit on their taxes. In order to claim this credit, the student's Social Security number must be on file at the college so the student's enrollment can be reported to the IRS. The college will make a 1098T form available to the student electronically. This will document the student's SSN on file and the post secondary enrollment information. For tax credit eligibility information, consult your tax professional. The Internal Revenue Service requires that Gateway provide 1098T forms annually to post-secondary students.

Student ID Number

Every student will have a system-generated ID number that will appear on his or her schedule and most Gateway correspondence. This number is not considered directory information, and will not be released to a third party. It is important that students know their student ID number.

Curriculum Sheets

Curriculum sheets detail current course requirements and course descriptions in a student's program. A student must fulfill the requirements of the curriculum sheet for the academic year for which they were accepted to that program in order to graduate from that program. At any time a student may elect to follow the most recent program curriculum, but may not move to a previous sheet. Useful information concerning possible job opportunities at entry and advanced levels is listed on the back of the sheet. Curriculum sheets can be obtained at gtc.edu or in any Student Services Center.

Academic Standards

Academic and Program Standards—Academic and program standards are developed and are available to all students.

Continuous Student Enrollment (Policy J-110)—Academic programs at Gateway undergo frequent changes to keep programs current with demands in technology and accreditation criteria. Generally, students are allowed to graduate following the program curriculum sheet in place at the time of the student's initial program acceptance. Because of frequent program changes and the length of time taken by students to meet graduation requirements, the following policies will govern which curriculum sheet will be used to define a student's graduation requirements:

1. The college does, after two (2) years of non-continuous enrollment, require the student to follow the most recent program curriculum in order to graduate.
2. The College reserves the right to place a seven (7) year limitation on accepting courses for graduation. Some programs have more stringent age requirements on course age for courses that are pre-requisites to program courses.
3. At any time, a student may elect to follow the most recent program curriculum.
4. The College reserves the right to establish course substitutions when courses are inactivated to meet program curriculum requirements.

Grading System

Complete information regarding Gateway's grading system including credits, grading, grade changes, student records, grade point average (GPA), mid-term grades, academic progress, Provost Honors, and Dean's List can be found in Gateway's Student Handbook and on Gateway's website at **gtc.edu/handbook.**

Attendance

Gateway recognizes the importance of attendance in the learning process but does not believe that attendance in and of itself constitutes learning. Instructors will document in their course syllabi fair and reasonable attendance policies for their classes based on their subject matter, delivery methods, learning activities, student audience, external regulations, College and departmental guidelines, and employer expectations in their field of instruction. Students are responsible for reading and understanding each class attendance policy and for learning any material covered during an absence.

To be eligible to receive financial aid funding for class(es) students must be attending all class(es) prior to the established Census Date.

Credit for Prior Learning

Transfer Credits From Another Institution

A student must be accepted to a postsecondary program at Gateway before transfer credits will be evaluated. Courses completed at a regionally accredited institution are evaluated to determine transferability. Coursework completed at an institution which is not regionally accredited may be evaluated through the credit for prior learning process to determine what proficiency credit may be granted. Gateway must have official transcripts on file before transfer credits are evaluated. Official transcripts are defined as transcripts sent directly to Gateway from the issuing institution, by a recognized electronic transcript service or hand-delivered by the student if the transcripts remain unopened in the issuing school's sealed envelope. Official transcripts must have the issuing school's seal and appropriate official's signature to be accepted. Official transcripts remain the property of Gateway Technical College and cannot be returned. Gateway Technical cannot provide students with copies of their transcripts from other institutions. Students requiring copies of transcripts from other institutions they have attended must obtain them directly from those institutions. A minimum grade of C is required for courses to be accepted in transfer. Courses with a grade of C- or below will not be accepted.

The Assistant Registrar for Transfer Credit and Registration will evaluate the transcripts working in collaboration with course instructors and academic deans as necessary to determine course transfer credit.

College Level Examination

College-level proficiency credit will be granted for knowledge validated by the Advanced Placement (AP) program, College Level Examination Program (CLEP) and Dantes Subject Standardized Test (DSST). Please refer to Gateway's website for a list of accepted exams. Students must meet minimum score requirements to be awarded credit. A minimum score of 3 is required for AP exams, a minimum score of 50 is required for CLEP exams and minimum scores on DSST exams vary by exam.

Some examinations may require additional competence tests before credit can be granted. An official transcript, score report, or equivalent documents issued by the external agency, must be submitted before credit can be granted.

Military Evaluation

Credit may be granted upon review of an official military transcript from Joint Services Transcript (JST) which may be requested at **jst.doded.mil**. Transcripts should be submitted to the Assistant Registrar for Transfer Credit and Evaluation. Guidelines established by the American Council on Education (ACE) are considered in addition to referrals to specific departments when deemed necessary. The Assistant Registrar for Transfer Credit and Registration will evaluate the transcripts

working in collaboration with the academic departments as necessary to determine course transfer credit.

Articulation for High School Students

Through an agreement with area high schools, Gateway awards credits for certain approved courses taken at the high school level. Students must enroll in Gateway within 27 months of high school graduation and have earned a B or better in the high school course. It is also possible for qualified high school students to enroll in a higher level Gateway course with the consent of the academic advisor. High school students should speak with their high school guidance counselors regarding these opportunities.

Prior Learning Assessment

A student must be active in an associate degree or technical diploma program at Gateway to be eligible to apply for prior learning assessment. Prior learning assessment recognizes prior learning through the awarding of academic proficiency credit. Credit or its equivalent is awarded for learning, with consideration given for work experience. Students with prior learning experience may be able to pass prior learning assessment tests and earn credits toward their diploma or degree from Gateway. Prior learning assessment fees are charged and are not covered by financial aid. No student is allowed to apply for prior learning assessment for a course which they are failing or for which they have received a letter grade on their official transcript including A through F grades, incomplete or withdrawal grades.

The prior learning assessment option should be considered by students who have:

- extensive high school coursework which is not covered under a Tech Prep agreement.
- broad work experience supported by training and seminars with content similar to Gateway courses.
- courses from other institutions which are not regionally accredited.
- diploma courses not directly transferable to Associate Degree programs.
- completion of noncredit coursework, self study or other nontraditional education or training.

Prior learning assessment may be available through the following processes.

1. **Credit by Examination**
   Proficiency credit may be granted to students who demonstrate course competencies through the satisfactory completion of college developed written tests for specified courses. Contact the Assistant Registrar of Transfer Credit and Registration for information.
2. **Credit by Demonstration**
   Proficiency credit may be granted to students who demonstrate course competencies through the satisfactory completion of college developed demonstrative performance tests for specified courses. Exams are not available for all courses. Contact the Assistant Registrar of Transfer Credit and Registration for Information.
3. **Evaluation of Experience**
   Proficiency credit may be granted to students who demonstrate course competencies through portfolio presentations demonstrating mastery of skills or competencies. Portfolio presentations are not available for all courses. There are specific courses for which proficiency credit may be granted through portfolio presentations. Contact the Assistant Registrar of Transfer Credit and Registration for information.

Graduation

Complete information regarding graduation from Gateway Technical College including graduation requirements, computation of GPA for graduation, application for graduation, graduation with honors, Provost Honors program at graduation, commencement ceremony and transcripts can be found in Gateway's Student Handbook and on Gateway's website at **gtc.edu/handbook.**

Student Rights and Responsibilities

Gateway is dedicated to helping students identify and achieve realistic goals through excellent educational opportunities. The administration and staff of the College promote responsible participation and high achievement as goals for our students. As a Gateway Technical College student, you should be aware of and accept responsibility as an active, contributing member of the College. This section explains policies and procedures identifying student rights and responsibilities. Gateway Technical College believes that all students have responsibilities in the areas of governance, services, and conduct.

Additional information on policies such as; student use of services, student code of conduct, student due process, restraining orders and order of protection and computer, networking and information resources can be found in Gateway's Student Handbook and on Gateway's website at **gtc.edu/handbook.**

Federal Family Educational Rights and Privacy Act (FERPA)

Notification of Rights

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. FERPA rights begin when a student registers for a course or at the point of admission to a program. These rights include:

(1) The right to inspect and review the student's education records within 45 days of the day the College receives a request for access. A student should submit to the Registrar a written, signed request that identifies the record(s) the student wishes to inspect. The registrar will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the registrar, that official shall advise the student of the correct official to whom the request should be addressed.

(2) The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA.

A student who wishes to ask the college to amend a record should write the College official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed. If the College decides not to amend the record as requested, the College will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

(3) The right to provide written consent before the College discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent.

The College discloses education records without a student's prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by the College in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the College has contracted as its agent to provide a service instead of using College employees or officials (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the College.

(4) The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5901

Notification of Directory Information

Gateway Technical College complies with the provisions of FERPA. Prior written consent from a student must be obtained before information may be disclosed by Gateway Technical College to third parties, unless the information or the individual or group making the request is exempted by the policy and the Family Educational Rights and Privacy Act of 1974. Such exemptions are made for the following:

1. Request from Gateway Technical College faculty and staff with a legitimate need to know.
2. Request in accordance with a lawful subpoena or court order.
3. Request from representatives of agencies or organizations from which the student is receiving or has received financial aid.
4. Request from officials of other postsecondary educational institutions to which the student has applied for admission.
5. Request from other persons or agencies specifically exempted from the prior consent requirement by the Act. This includes certain federal and state officials of the District accrediting agencies, etc.
6. Requests for directory information, which includes the following categories:

-Name
-Hometown
-Date of birth
-Program of enrollment (major field of study) and number of credits for which currently or formerly enrolled
-Participation in officially recognized activities
-Dates of attendance (including enrollment status, classification, and year, matriculation, and withdrawal dates)
-Candidacy for graduation
-Degrees and awards/honors received (type of degree and date granted)
-Most recent previous educational agency or institution attended

The student may elect to have directory information held confidential. When this option is exercised, the only information that will be released by Gateway, other than exemptions 1 through 5, is confirmation that a student is or has been enrolled at Gateway.

If you elect to allow the release of directory information, such release will be limited to those requests perceived to be in the best interest of the student; e.g., requests from parents, friends, relatives, prospective employers, or licensing agencies seeking to confirm certain information, societies, news releases, programs, etc. All other inquiries will be limited to confirmation that a student is or was previously enrolled at Gateway.

Gateway Technical College assumes no responsibility or liability for the accuracy of judgment as to whether or not a release of directory information is in the best interest of a student. Likewise, Gateway will assume no responsibility for contacting students who have elected to stipulate directory information as confidential for the subsequent permission to release any information. If you elect to have directory information held confidential, please complete a form which is available at any Student Services office.

Enrollment Policy

Students will be considered enrolled in a class upon registration and provided they remain registered, if they have:

- paid the required tuition and fees
- entered into a standardized payment plan agreement with the District or
- have been awarded financial aid or have a third-party payer authorization/contract on file with Gateway guaranteeing payment of the tuition and fees.

Any student who has an outstanding debt greater than $200 with the College will not be allowed to register until the debt has been reduced to $200 or less. Students, who believe they should not be held responsible for charges to their account due to extenuating circumstances, must follow Student Account Appeals Procedures. This policy will be effective in reference to debts incurred after January 1, 1992.

Student Religious Accommodations

Policy

In compliance with Wisconsin Administrative Code, Gateway Technical College will make reasonable accommodation of a student's religious beliefs. A student may request reasonable accommodation from his/her instructor with regard to examinations and other academic requirements. The student request must be in writing and submitted to the instructor five (5) working days prior to the date(s) of the anticipated absence. Instructors will provide a means by which a student can perform the make-up examination or other academic requirements in a timely manner without penalty.

Additional information regarding this policy can be found in Gateway's Student Handbook and on Gateway's website at **gtc.edu/handbook**.

Student Right-to-know Reporting

Policy

Gateway will maintain and disclose student program completion and graduation rates in compliance with the Student-Right-To-Know and Campus Security Act.

Procedure

- Information on completion and graduation rates of all technical diploma or associate degree-seeking full-time students will be collected.
- This information as well as Campus Security Information will be made available through appropriate College publications, on the Gateway Technical College website (gtc.edu), and to prospective students upon request.(gtc.edu), and to prospective students upon request.
- This information will be available before prospective students enroll or enter into any financial obligation with the College.

Drug-free Environment

Any student who engages in an activity, on District premises or at a District-sponsored event, that constitutes a violation of State of Wisconsin Uniform Controlled Substances Act shall be subject to nonacademic misconduct disciplinary sanctions. In determining the appropriate sanction, the College president, or designee, shall consider those penalties, including suspension and expulsion, that will contribute most effectively to maintaining a College environment free from controlled substances.

In keeping with local, state, and federal laws, Gateway Technical College prohibits the pos session, use, or distribution of drugs and alcohol by students while on College property or when involved in any College sponsored activity. If a student has a drug or alcohol problem, we highly recommend that they seek assistance from the Student Services office.

Tobacco-free Environment—Policy E-155

Gateway Technical College is strongly committed to maintaining and improving the health and well-being of all employees and customers. It is, therefore, Gateway's policy that employees have the right to work in an environment free of the hazards of tobacco smoke.

Use of tobacco and smoking is prohibited on all Gateway campuses, which includes but is not limited to the following: 1) all buildings, grounds, sidewalks, streets, parking lots and structures. 2) All Gateway owned and leased vehicles. 3) All personal vehicles on Gateway property.

This policy applies to all devices including electronic cigarettes, e-cigarettes, or personal vaporizers that are alternatives to smoking tobacco products.

Failure to comply with this policy will be dealt with through the college's disciplinary procedures. Students, staff, visitors and tenants who breach the policy will be asked to stop smoking and will be asked to leave the premises if they fail to comply with this request. All breaches of this policy will be recorded in writing.

Conceal Carry

In an effort to provide a safe learning and working environment, Gateway Technical College has initiated a policy prohibiting anyone from bringing a weapon inside any college building. Gateway bans all weapons inside college facilities which includes – but is not limited to – such items as knives and firearms.

Persons storing weapons within their own vehicles parked on college owned, leased, or operated lots or grounds must:

- Conceal the weapon from open view of persons moving in or around the vehicle.
- If a firearm, unload the weapon.
- If a firearm, store the weapon in a secured (locked) case or install a locked trigger guard.

Affirmative Action / Equal Opportunity—Policy H-110

The Gateway Technical College District will be fair and impartial in all its relations with its students, employees, and applicants for employment without regard to race, color, national origin, ancestry, creed, religion, political affiliation, marital status, parental status, pregnancy, family or medical leave, disability, age, gender, sexual orientation, arrest record or conviction record, retaliation, union or non-union affiliation, membership in the National Guard, state defense force or any reserve component of the military forces of the U.S. or Wisconsin.

Any questions concerning Affirmative Action contact:

Jacqueline Morris, Director Staffing
District Affirmative Action Officer,
Titles VI, VII, & IX
3520 30th Avenue, Kenosha, WI 53144
(262) 564-3032 • (262) 960-1931 (text)
(262) 564-2838 FAX
email: morrisj@gtc.edu
Wisconsin Relay System: 711

Any questions concerning Titles VI, VII & IX contact:

Debbie Miller, Director Human Resources
Equal Employment Opportunity Officer,
Titles VI, VII & IX
3520 30th Avenue, Kenosha, WI 53144
(262) 564-3220 • (262) 960-1931 (text)
(262) 564-2838 FAX
email: millerd@gtc.edu
Wisconsin Relay System: 711

Additional information regarding this policy can be found in Gateway's Student Handbook and on Gateway's website at **gtc.edu/handbook**.

Discrimination, Sexual Harassment & Sexual Misconduct Complaint Procedure – Policy H-120

Procedure

The following steps will be followed by Gateway Technical College in response to discrimination allegations and/or sexual harassment and misconduct.

1. A formal investigation of the allegations will be conducted by designated Investigators.
2. Trained Investigator(s) assigned to the complaint.
3. Investigator(s) will meet individually with the Complainant and the Respondent to explain their rights, resources, and responsibilities.
4. Investigator(s) will interview complainant to clarify and acquire additional relevant information necessary to proceed.
5. Investigator will interview the respondent and appropriate witnesses.
6. Investigator(s) will acquire additional relevant information such as written documents, text messages, photos, academic records, email, voice mail, etc.
7. The determination of discrimination and/or sexual misconduct will be based on the preponderance of evidence standard.
8. The college will reference appropriate disciplinary procedures when there is a violation finding. Investigators will prepare a report capturing a summary of the information, summary of findings of fact and analysis, resulting conclusion, and recommended remedial action to be shared with the EEO/Title IX Officer for review and approval.
9. If there is a finding of discrimination, sexual misconduct, or sexual harassment, the college will implement appropriate disciplinary procedures.

Additional information regarding this policy can be found in Gateway's Student Handbook and on Gateway's website at **gtc.edu/handbook**.

Sexual Assault, Misconduct, and Harassment Policy – Policy H-140 Policy

Gateway Technical College (Gateway) prohibits rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence and domestic violence. This policy applies to all

students, employees, contractors, and visitors of the college.

Sexually violent acts, termed sexual misconduct by Gateway, are violations of the Gateway Student Code of Conduct, Administrative Procedures and College Practices Manual, and can be crimes as well. Sexual misconduct includes, but is not limited to non-consensual sexual intercourse, non-consensual sexual contact, sexual exploitation, interpersonal relationship violence, sex/gender-based stalking and sexual harassment. While Gateway utilizes different standards and definitions than the State of Wisconsin statutes, sexual misconduct often overlaps with crimes of rape, sexual assault, sexual harassment, stalking, retaliation, dating violence and domestic violence. For further information, please visit **gtc.edu/safety-security/title-ix.**

Anyone wishing to officially report such an incident may do so by filing a Maxient Report found at **gtc.edu/security** or by contacting Debbie Miller, Title IX Officer at 262/564-3220. Anyone with knowledge about sexual misconduct or gender-based violence or the crimes of rape, sexual assault, sexual harassment, stalking, dating violence or domestic violence is encouraged to report it immediately.

Gateway will investigate such claims promptly and thoroughly. If, for any reason, an individual wishes to complain or inquire regarding sexual misconduct, but feels it would not be appropriate to raise such issues with the Gateway Title IX Officer, the individual may inquire or complain to any dean of Campus Affairs or any officer of Gateway at the level of vice president or above, and such inquiries or complaints will receive a prompt and thorough investigation. If harassment is established, Gateway will discipline the offender. Disciplinary action for violations of this policy can range from verbal or written warnings, up to and including immediate termination from employment or expulsion from Gateway for serious or repeated violations.

Additional information regarding this policy can be found in Gateway's Student Handbook and on Gateway's website at **gtc.edu/handbook.**

Reasonable Accommodations—Policy H-150

Equal Opportunities for Americans with Disabilities

Gateway Technical College is committed to providing equal employment opportunities as well as professional, courteous service for persons with disabilities, through reasonable accommodation, as governed by the Americans with Disabilities Act (ADA) of 1990. Reasonable accommodations shall be provided in a timely and cost-effective manner upon self identification, verification and an analysis of solutions. Immediate supervisors, in conjunction with the facilities managers shall have the authority to make reasonable accommodations for applicants or employees which do not exceed $500 and are totally within the work station or work site of the individual.

Additional information regarding this policy can be found in Gateway's Student Handbook and on Gateway's website at **gtc.edu/handbook**

Credit Transfer to Four-Year (Articulation)

While all Gateway programs develop skills for employment, students are encouraged to pursue continuing education opportunities upon completion of Gateway programs. This may include involvement in professional associations, company-provided workshops or updates, professional development, etc., as well as continuation of formal education.

To meet the need for lifelong education in our increasingly demanding and technical workplace, a growing number of Gateway Technical College students have successfully continued their education at a variety of institutions of higher learning. Cooperating institutions determine the number and ways in which credits may be transferred and used towards further degree completion. Detailed course descriptions, transcripts detailing work completed, student records of individual programs, and assistance from Student Services Centers may facilitate this process.

Students are advised to check with the admission departments at the institutions where the students may eventually wish to transfer credits, as well as with Gateway's Student Services Center, to determine current arrangements. Graduates interested in transferability of credits earned through an associate degree program should contact a Gateway academic advisor for specific information.

Articulation Agreements with Institutions of Higher Learning

Gateway Technical College is connected with a number of postsecondary institutions within the state and nationally. Gateway currently articulates with 43 colleges and universities allowing students to transition from Gateway Technical College to another institution in a smooth and seamless manner. Students can take advantage of online learning opportunities from many higher education partners to transfer their credits and complete bachelor's degrees without leaving the Gateway campus. In addition, Upper Iowa University has an articulation agreement that allows Upper Iowa University to teach courses leading towards a bachelor's degree in several program areas at Gateway's Elkhorn and Racine campuses and the Burlington Center.

Gateway Technical College has articulation agreements with the following institutions of higher learning.

Alverno College
Aurora University–George Williams College
Capella University
Cardinal Stritch University
Carroll University
Carthage College
College of Lake County
Columbia College
Concordia University Wisconsin
DeVry Institute of Technology
Embry-Riddle Aeronautical University
Franklin University
Lakeland College
Marian College
Marquette University
McHenry County College
Milwaukee School of Engineering
Mount Mary College
Pennsylvania College of Technology
Ottawa University
Robert Morris College
Silver Lake College
Southern Illinois University/Carbondale
St. Cloud State University
Trinity International University
University of Phoenix
University of Wisconsin System Colleges–see JACAP Agreed Statement
University of Wisconsin–Eau Claire
University of Wisconsin–Green Bay
University of Wisconsin–LaCrosse
University of Wisconsin–Madison
University of Wisconsin–Milwaukee
University of Wisconsin–Oshkosh
University of Wisconsin–Parkside
University of Wisconsin–Platteville
University of Wisconsin–River Falls
University of Wisconsin–Stevens Point
University of Wisconsin–Stout
University of Wisconsin–Superior
University of Wisconsin–Whitewater
Upper Iowa University
Utah Valley State College
Viterbo College.

Additional information can be found at **gtc.edu/transfer.**

JACAP Agreed Statement

UW/Technical College System Uniform Policy Statement On Credit Transfer

- Students enrolled in the Wisconsin Technical College System who wish to continue their education in the UW System may be eligible to transfer credits toward their bachelor's degree in the following ways:
- Students enrolled in the Associate of Arts/ Science program at Madison Area Technical College, Milwaukee Area Technical College, or Nicolet Area Technical College may transfer up to 72 credits toward their degree.
- Students who have successfully completed an Associate of Applied Arts/Science Degree in the Technical College System are eligible to transfer up to 30 credits of General Studies coursework, depending on the UW institution.
- Students who have successfully completed an Associate of Applied Arts/Science Degree may be eligible to transfer certain technical support and/or occupational credits when there is a direct relationship between a Technical College Associate Degree program and a program offered at a University of Wisconsin System institution.
- Students transferring from the Technical College System may earn credit by earning appropriate scores on national standardized examinations (e.g., College Level Examination program) or on examinations developed by the University of Wisconsin System transfer institution.

For more information about these transfer opportunities, students should consult with their Technical College advisors or the Admissions Office at a University of Wisconsin System institution.

UNIVERSITY OF WISCONSIN
PARKSIDE

General Studies Transfer Certificate

Transfer agreement between Gateway Technical College and University of Wisconsin—Parkside.

Gateway students who complete the certificate's 30-credit program of study comprised of general studies courses can apply those credits toward the liberal arts requirements for their UW–Parkside baccalaureate degree.

Students will be dually admitted to Gateway and UW-Parkside and may be eligible for financial aid through UW–Parkside for this certificate.

gtc.edu/genstudiescert

For more information and to apply, contact a Gateway New Student Specialist.

GATEWAY TECHNICAL COLLEGE

Through an agreement between Gateway Technical College and College of Lake County and McHenry Community College, students may be able to attend approved programs in their neighboring state at in-state rate. Gateway Technical College district residents interested in participating should contact Gateway's Admissions department. Illinois residents interested in this option should contact the appropriate official at the college in their home county.

Gateway Programs Available to McHenry County Residents

Aeronautics – Pilot Training (A.A.S.)*
Alcohol and Other Drug Abuse (Internal Certificate)
Automated Manufacturing Systems Technology (A.A.S.)
Air Conditioning, Heating & Refrigeration Technology (A.A.S)
Barber Technologist (Diploma)*
Civil Engineering Technology-Freshwater Resources (A.A.S)
Civil Engineering Technology-Highway Technology (A.A.S.)
Cosmetology (Diploma)*
Dental Assistant (Diploma)*
Geospatial Surveying Technician (A.A.S.)
Human Service Associate (A.A.S.)
Interior Design (A.A.S.)
Medical Assistant (Diploma)*
Surgical Technology (A.A.S.)*

McHenry Programs Available to Gateway Residents

Construction Management (A.A.S)
EMT–Ambulance (Certificate)
Fitness Instructor Training (Certificate)
Health and Fitness Education (A.A.S)
Manufacturing Management (A.A.S.)
Occupational Therapy Assistant (A.A.S)*
Warehousing and Distribution (Certificate)

Gateway Programs Available to Lake County Residents

Aeronautics—Pilot Training (A.A.S.)*
Automated Manufacturing Systems Technology (A.A.S.)
Barber Technologist (Diploma)*
Cosmetology (Diploma)*
Dental Assistant (Diploma)*
Diesel Equipment Mechanic (Diploma)
Diesel Equipment Technology (A.A.S.)
Electro-Mechanical Technology (A.A.S.)
Graphic Communications (A.A.S.)
Health Unit Coordinator (Diploma)*
Industrial/Mobile Hydraulic Mechanic (Certificate)
Interior Design (A.A.S.)
LPN Bridge to ADN (A.A.S.)*

Lake County Programs Available to Gateway Residents

Automotive Collision Repair (A.A.S. and Certificate)
Electrician Apprenticeship (A.A.S.)
Health and Wellness Promotion (A.A.S.)
Health and Wellness Promotion – Personal Training (Certificate)
Health and Wellness Promotion – Wellness Coaching (Certificate)
Laser/Photonics/Optics (Certificate)
Laser/Photonics/Optics – Applied Lasers (Certificate)
Laser/Photonics/Optics – Biophotonics (Certificate)
Machine Tool Trades (A.A.S.)
Mechatronics (Certificate)
Medical Imaging (A.A.S.)
Medical Imaging-Magnetic Resonance Imaging (Certificate)
Medical Imaging-Computed Tomography (Certificate)
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**High demand programs—space is limited.*

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Special Notices

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take more than seven years to complete.

Tuition and material fees are determined by the Board of the Wisconsin Technical College System. Please consult the Gateway website **gtc.edu** for exact fee amounts.

Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

Course materials listed in this catalog were effective for the 2016–2017 academic year.

Course descriptions are merely general summaries of various courses which may be offered at Gateway Technical College during the 2016–2017 academic year. Gateway reserves the right to modify course content at any time and to cancel any tentatively scheduled course due to low enrollment. Course descriptions were accurate as of March 1, 2016. Some courses offered by Gateway Technical College require successful completion, concurrent enrollment, or waiver.

Some courses offered by Gateway Technical College have enrollment which is restricted to persons formally accepted for admission into specific programs.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Finance	**Career Pathway ►** Accounting	**ACCOUNTING** **(10-101-1)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		101-100	*	Accounting Program Orientation		1	1-0
		101-114	*	Accounting Principles		4	3-2
		101-143	*	Payroll Accounting		2	1-2
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 2 & 4)	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 2)	3	3-0
		804-123	OR	Math with Business Applications	Prereq: 834-109 (See Note 2)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 2)	5	5-0
Semester 2		101-104	*	Income Tax Accounting		4	3-2
		101-121	*	Intermediate Accounting I	Prereq:101-114 Coreq:101-100; 804-115 OR 804-123; 103-143 OR 103-102	4	3-2
		101-106	*	Accounting Spreadsheet Apps.	Prereq: 101-112 or 101-114; 103-143 OR 103-102	3	2-2
		101-154	*	Accounting Software Applications	Prereq: 101-112 or 101-114	2	1-2
		102-160	*	Business Law		3	3-0
		809-195		Economics			
		809-143	OR	Microeconomics	Prereq: 838-105 (See Note 2)	3	3-0
		809-144		Macroeconomics			
Semester 3		101-122	*	Intermediate Accounting II	Prereq: 101-121	4	3-2
		101-131	*	Management Accounting	Prereq: 101-121	4	3-2
		801-196	OR	Oral/Interpersonal Communication	Prereq: 838-105 (See Note 2)	3	3-0
		801-198		Speech			
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 2 & 5)	3	3-0
Semester 4		101-105	*	Accounting Career Readiness	Prereq: 101-131	2	1-2
		101-103	OR	Internship for Accounting	Prereq: Instructor Consent	2	1-0-0-4
		102-138		BIZ Internship	Prereq: Instructor Consent	3	0-6
		101-155	*	Financial Analysis/Management	Prereq: 101-106; Coreq: 101-122	3	2-2
		101-107	*	Accounting Capstone	(See Note 1)	3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-172	OR	Diversity Studies, Introduction to	Prereq: 838-105 (See Note 2)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 2 & 5)		
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		101-162 Acctg Serving the Public Interest (3 Cr)			101-164 Non-Profit Acctg Software Apps (3 Cr)		
		101-159 Income Tax Accounting II (3 Cr)			101-163 Triple Bottom Line Accounting (3 Cr)		
		102-122 Investments (3 Cr)			114-101 Personal Financial Planning (3 Cr)		
					Minimum Program Total Credits Required	***69***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**ACCOUNTING** **(10-101-1)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Finance	Accounting	

PROGRAM DESCRIPTION

Accounting covers the principles of accounting, including budgeting, financial analysis, cost accounting, tax preparation, and other commercial aspects. Students are taught to interpret figures and what they actually mean to the company or organization. Entry level jobs for the accounting graduate include junior or assistant accountant, bookkeeper, cost accountant, property accountant, and payroll accountant. If taken full-time, this is a two-year course of study.

PROGRAM LEARNING OUTCOMES

Graduates of the Accounting Associate Degree Program should be able to:

1. Compile, setup and compute basic financial ratios from annual report information and use the data to individually analyze the financial position of a public company.
2. Demonstrate the use of a commercial software package.
3. Prepare basic payroll journal entries, related reports, and filings.
4. Use commonly accepted cost accounting methods.
5. Demonstrate comprehensive knowledge of the accounting cycle and application of Generally Accepted Accounting Principles.
6. Prepare basic individual income tax returns.
7. Demonstrate applied employability skills in the accounting field.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. 101-107 has prerequisites of 101-104, 101-122,101-131, 101-143 & 101-154 and a corequisite of 101-155.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Formerly 103-199, PC Basics/Microsoft Office.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Finance	**Career Pathway ►** Accounting	**ACCOUNTING ASSISTANT** **(31-101-1)** *Technical Diploma* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		101-114	*	Accounting Principles		4	3-2
		101-143	*	Payroll Accounting		2	1-2
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 2 & 4)	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 2)	3	3-0
		804-123		Math with Business Applications	Prereq: 834-109 (See Note 2)	3	3-0
Semester 2		101-104	*	Income Tax Accounting		4	3-2
		101-106	*	Accounting Spreadsheet Apps.	Prereq: 101-112 or 101-114; 103-143 OR 103-102	3	2-2
		101-154	*	Accounting Software Applications	Prereq: 101-112 or 101-114	2	1-2
		102-160	*	Business Law		3	3-0
		809-195		Economics	Prereq: 838-105 (See Note 2)	3	3-0
					Minimum Program Total Credits Required	***30***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 10-101-1 Accounting program
can earn their associate degree by completing an additional 39 credits. Please see your academic advisor for details.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**ACCOUNTING ASSISTANT** **(31-101-1)** *Technical Diploma* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Finance	Accounting	

PROGRAM DESCRIPTION

Students who complete this one year certificate will be able to compute, classify and record accounting information to keep financial records complete. They will proficiently be able to perform any routine calculating, posting and verifying duties primary to maintaining accurate financial records. Additionally, students will be able to perform general office duties including filing and handling routine correspondence to employees, customers and vendors. Students who complete this technical diploma will be able to obtain employment as an office manager, accounting clerk, bookkeeper, accounting assistant, or accounting associate.

PROGRAM LEARNING OUTCOMES

Graduates of the Accounting Assistant Program should be able to:

1. Demonstrate the use of a commercial software package.
2. Prepare basic payroll journal entries, related reports and filings.
3. Demonstrate comprehensive knowledge of the accounting cycle and application of Generally Accepted Accounting Principles.
4. Prepare basic individual income tax returns.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 30 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	**ADMINISTRATIVE PROFESSIONAL** **(10-106-6)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Business Management & Administration	Administrative Services	

ΔSuggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		103-109		Windows Operating Sys. & Con.		1	.5-1
		106-011	*	Records Management		1	1-0
		106-137	*	Keyboarding Applications		3	1-4
		106-178	*	Business Proofreading & Editing		2	2-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		801-196		Oral / Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		804-123		Math with Business Applications	Prereq: 834-109 (See Note 1)	3	3-0
Semester 2		101-112	***OR***	Accounting for Business		3	3-0
		101-114		Accounting Principles		4	3-2
		103-110		Microsoft PowerPoint		1	.5-1
		106-010	*	Publication Design for Business	Prereq: 106-137	2	1-2
		106-012	*	Spreadsheet/DB for Business I	Prereq: 106-137	3	2-2
		106-014	*	Word Processing for Business I	Prereq: 106-137	2	1-2
		106-119	*	Professional Development		2	2-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
		106-019		Admin. Services Intern I	Prereq: 106-137; Coreq:106-119	1	.5-0-0-2
Semester 3		103-111		Microsoft PowerPoint II		1	.5-1
		106-006	*	Business Communication Skills	Prereq: 106-137; 106-178; 801-136	3	2-2
		106-013	*	Spreadsheet/DB for Business II	Prereq: 106-012	3	2-2
		106-015	*	Word Processing for Business II	Prereq: 106-014	2	1-2
		106-190	*	Administrative Office Procedures	Prereq: 106-012	3	2-2
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 4		106-020	*__OR__	Admin. Services Internship II	Prereq: 106-137; 106-119	1	.5-0-0-2
		102-138		BIZ Internship	Prereq: Instructor Consent	3	0-6
		106-007	*	Business Software Solutions	Prereq: 106-013	2	1-2
		106-008	*	Emerging Business Trends & Tech.		2	1-2
		106-009	*	Meetings/Planning		1	.5-1
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-195 809-143 809-144	***OR***	Economics Microeconomics Macroeconomics	Prereq. 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

101-106 Accounting Spreadsheet Apps (3 Cr)
101-143 Payroll Accounting (2 Cr)
106-127 Skill Building I (1 Cr)
106-016 Principles of Customer Service (3 Cr)
101-154 Accounting Software Applications (2 Cr)
196-164 Personal Skills for Supervisors (3 Cr)
196-191 Supervision (3 Cr)
106-018 Customer Service Management (3 Cr)

ΔCourses may be taken out of suggested sequence as long as requisites have been met.

Minimum Program Total Credits Required ***66***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**ADMINISTRATIVE PROFESSIONAL** **(10-106-6)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Business Management & Administration	Administrative Services	

PROGRAM DESCRIPTION

The Administrative Professional program prepares individuals to perform administrative and office support activities. Students will develop skills in word processing, spreadsheets, presentation software, filing/records management, and production of business documents. Extensive software skills are acquired, as well as Internet research abilities and oral and written communication skills. Professional development training includes ethics, group interaction, problem-solving, self-awareness, and professionalism.

PROGRAM LEARNING OUTCOMES

Graduates of the Administrative Professional Associate Degree Program should be able to:

1. Demonstrate effective workplace communications.
2. Apply technology skills to business and administrative tasks.
3. Perform routine administrative procedures.
4. Manage administrative projects.
5. Maintain internal and external relationships.
6. Model professionalism in the workplace.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 66 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	ADVANCED EMT (30-531-6) *Technical Diploma* Most Courses Offered at HERO Center
	911 Law, Public Safety, Corrections & Security	Emergency and Fire Management Services	

Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
531-327	Advanced EMT	Prereq: 531-326 & Department Consent (See Note 1)	4	4-2-0-4
		Minimum Program Total Credits Required	***4***	

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ADVANCED EMT (30-531-6) *Technical Diploma* Most Courses Offered at HERO Center
	Public Safety, Corrections & Security	Emergency and Fire Management Services	

PROGRAM DESCRIPTION

If you currently hold a State of Wisconsin licensure as an Emergency Medical Technician (EMT), you can pursue additional training in intravenous access, fluid and medication administration, clinical decision making skills, and patient assessment at this advanced level. Upon completion of the didactic, lab, and clinical components of this program, the participant will be eligible for testing and credentialing through the National Registry of Emergency Medical Technicians®.

PROGRAM LEARNING OUTCOMES

Graduates of the Advanced EMT Technical Diploma Program should be able to:

1. Understand the legal liabilities and requirements of professional conduct to operate as an Advanced EMT as outlined in HSS 110 of the Wisconsin Administrative Code.
2. Perform a successful assessment, treatment plan, and packaging for both a trauma and medical patient.
3. Perform cardiac arrest management and airway management of the adult and pediatric patient.
4. Demonstrates the ability to interact with patients in a compassionate and professional manner.
5. Understand and demonstrate safe practice in the administration of approved medications via the enteral and parenteral routes.
6. Integrate the appropriate use of intravenous fluids, and demonstrate safe administration of medication in the treatment of adult and pediatric patients.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application ($30 fee).
2. Students must submit a current CPR certification.
3. Students must have current Wisconsin EMS licensure.
4. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 4 credits with an average of 2.0 or above.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A valid Wisconsin EMT license will be accepted in place of 531-326.
2. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	AERONAUTICS – PILOT TRAINING (10-402-1)
GATEWAY TECHNICAL COLLEGE	Transportation, Distribution & Logistics	Transportation Operations	*Associate of Applied Science Degree* Most Courses Offered at Horizon Center

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		402-129	*	Aviation / Introduction		3	2-2
		402-139	*	Aero Science – Engine/ Structure/ System		3	3-0
		402-140C	*	Flight Private Pilot A	Prereq: Inst. Consent Coreq: 402-129	1	0-2
		402-140D	*	Flight Private Pilot B	Prereq: 402-140C & Inst. Consent	2	0-4
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-113		College Technical Math 1A	Prereq: 834-110 (See Note 1)	3	3-0
Semester 2		402-136	*	Aero Science – Aviation Weather		3	2-2
		402-137	*	Aero Science – Instrument	Prereq: 402-140 OR 402-140D	3	2-2
		402-171	*	Professional Piloting I	Prereq: 402-140 OR 402-140D Coreq: 402-137	2	0-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 7)	3	3-0
Semester 3		402-133	*	Aero Science – Commercial	Prereq: 402-140 OR 402-140D	3	2-2
		402-135	*	Aero Science – Aerophysics/Aerodynamics		3	3-0
		402-173	*	Professional Piloting II	Prereq: 402-171	2	0-4
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 7)	3	3-0
Semester 4		402-120		Aero Decision Making	Coreq: 402-177; 402-138	2	1-2
		402-122		Aircraft Systems – Advanced	Prereq: 402-139	3	3-0
		402-138	*	Aero Science – Aviation Safety		3	3-0
		402-175	*	Professional Piloting III	Prereq: 402-173 Coreq: 402-133	2	0-4
		402-177	*	Professional Piloting IV	Coreq: 402-175	2	0-4
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

402-166 Aeronautics Skill Development (1 Cr)
402-145 Flight-Certified Flight Instructor (2 Cr)
402-146 Flight Certified Instructor Instrument (1 Cr)
402-150 Internship-Flight (3 Cr)
402-134 Aero Science Cert Flight Instructor Airplane (2 Cr)
402-131 Aero Science-Fund/Inst (2 Cr)

Minimum Program Total Credits Required 64

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	AERONAUTICS – PILOT TRAINING (10-402-1) Associate of Applied Science Degree Most Courses Offered at Horizon Center
	Transportation, Distribution & Logistics	Transportation Operations	

PROGRAM DESCRIPTION

Aeronautics-Pilot Training develops the skills and knowledge, through academic and practical application, necessary for an entry-level career as a professional pilot. Required aircraft training and electives include commercial certificate with single engine, multi-engine, and instrument ratings, and certified flight instructor certificate with single engine, multi-engine, and instrument ratings. Actual licensing is dependent upon successful completion by the individual student.

PROGRAM LEARNING OUTCOMES

Graduates of the Aeronautics-Pilot Training Associate Degree Program should be able to:

1. Hold Federal Aviation Administration (FAA) certification as Commercial Pilot for single and multi-engine land airplanes with an instrument rating.
2. Have an awareness of safety and possess aeronautical decision making skills for facing planned as well as unplanned in-flight scenarios.
3. Have a thorough working knowledge of the Federal Aviation Regulations (FAR's) and appropriate operating practices as contained in the Aeronautical Information Manual (AIM).
4. Incorporate effective communication skills in a two pilot crew environment.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, and writing skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 64 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Students must maintain a 2.0 GPA in Aviation Core courses (402 courses) to continue with flight training.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. A student supplied tablet computer is required for all flight courses. Please contact the department prior to purchasing a tablet for the minimum specification sheet.
5. A valid FAA 3rd class (or higher) medical certificate is required prior to beginning any flight course.
6. Proof of U.S. Citizenship or TSA approval required prior to beginning any flight course.
7. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Aeronautics - Pilot Training Associate Degree Program Course Costs **

*In-State Rates current until April 30, 2016 - ** Does not include books or other supplies*

Number	Course Title	Credits	Tuition	Check Rides	Flight Fees	Total Course Cost	Lec	Lab	SE Flight	ME Flight	AATD	Disc	Total
402-129	Aviation/Introduction	3	$ 594.96	N/A	N/A	$ 594.96	36	36	N/A	N/A	N/A	N/A	72
402-139	Aero Science - Engine/Structure/System	3	$ 423.96	N/A	N/A	$ 423.96	54	N/A	N/A	N/A	N/A	N/A	54
402-140C	Flight Private Pilot A	1	$ 198.32	N/A	$ 2,246.67	$ 2,444.99	N/A	N/A	13.5	N/A	6	11	30.5
402-140D	Flight Private Pilot B	2	$ 396.64	N/A	$ 6,400.87	$ 6,797.51	N/A	N/A	41.5	N/A	4	19	64.5
402-136	Aero Science - Aviation Weather	3	$ 423.96	N/A	N/A	$ 423.96	36	36	N/A	N/A	N/A	N/A	72
402-137	Aero Science - Instrument	3	$ 594.96	N/A	N/A	$ 594.96	36	36	N/A	N/A	N/A	N/A	72
402-171	Professional Piloting I	2	$ 396.64	$ 410.00	$ 5,192.02	$ 5,998.66	N/A	N/A	N/A	12	31.5	38.5	82
402-133	Aero Science - Commercial	3	$ 594.96	N/A	N/A	$ 594.96	36	36	N/A	N/A	N/A	N/A	72
402-135	Aero Science - Aerophysics/Aerodynamics	3	$ 423.96	N/A	N/A	$ 423.96	54	N/A	N/A	N/A	N/A	N/A	54
402-173	Professional Piloting II	2	$ 396.64	$ 410.00	$ 6,174.58	$ 6,981.22	N/A	N/A	40	N/A	4	18.5	62.5
402-120	Aero Decision Making	2	$ 396.64	N/A	$ 262.50	$ 659.14	18	36	N/A	N/A	N/A	N/A	54
402-122	Aircraft Systems - Advanced	3	$ 423.96	N/A	N/A	$ 423.96	54	N/A	N/A	N/A	N/A	N/A	54
402-138	Aero Science - Aviation Safety	3	$ 423.96	N/A	N/A	$ 423.96	54	N/A	N/A	N/A	N/A	N/A	54
402-175	Professional Piloting III	2	$ 396.64	$ 410.00	$ 11,865.72	$ 12,672.36	N/A	N/A	26	23	3	12	64
402-177	Professional Piloting IV	2	$ 396.64	$ 820.00	$ 8,723.02	$ 9,939.66	N/A	N/A	31	11	8.5	23	73.5
Total		**37**				**$ 49,398.22**	**378**	**180**	**152**	**46**	**57**	**122**	**935**

Aeronautics - Pilot Training Associate Degree Hours

Associate Degree - Flight Instructor Option

FALSE		37	Classes listed above	$ 49,398.22
General Education (7 classes)		21	Internet sections will increase cost	$2,967.72
Required Electives (see below)				

Number	Course Title	Credits	Tuition	Check Rides	Flight Fees	Total Course Cost	Lec	Lab	SE Flight	ME Flight	AATD	Disc	Total
402-131	Aero Science-Fundamentals/Instruction	2	$ 396.64	N/A	N/A	$ 396.64	18	36	N/A	N/A	N/A	N/A	54
402-134	Aero Science Certified Flight Instructor Airplane	2	$ 396.64	N/A	N/A	$ 396.64	18	36	N/A	N/A	N/A	N/A	54
402-145	Flight Certified Flight Instructor	2	$ 396.64	$ 820.00	$ 8,027.71	$ 8,424.35	N/A	N/A	12.5	15	6	44.5	78
Total		**64**				**$ 61,583.57**	**36**	**72**	**12.5**	**15**	**6**	**44.5**	**186**

Aeronautics - Pilot Training Flight Instructor Option Associate Degree Hours

Associate Degree - Commercial Option

Program Classes Total	37	Classes listed above	$ 49,398.22
General Education (7 classes)	21	Internet sections will increase cost	$2,967.72
Electives (Any associate degree level courses)	6	** Cost & hours will vary**	$847.92
Total	**64**		**$ 53,213.86**

Aeronautics: Pilot Training Associate Degree Course Costs (per 38 C.F.R 29.9505) as required by the Department of Veterans Affairs.

Aeronautics - Pilot Training

Effective 2016/2017	Career Cluster ►	Career Pathway ►	AIR CONDITIONING, HEATING & REFRIGERATION TECHNOLOGY (10-601-1A)
	Architecture & Construction	Construction	*Associate of Applied Science Degree* **Most Courses Offered at Kenosha Campus**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 1 & 5)	3	2-2
		601-110	*	Air Condition Fundamentals		3	3-0
		601-111	*	Workplace Fundamentals		1	0-2
		601-116	*	Mechanical Fundamentals		3	1-4
		605-107		Fundamentals of Electricity/Electronics		3	1-4
		804-107		College Mathematics	Prereq: 834-109 (See Notes 1 & 4)	3	3-0
Semester 2		601-121	*	Heating Systems	Prereq: 601-110	3	2-2
		601-128	*	Electrical Controls & Systems	Prereq: 605-107	3	1-4
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		801-196		Oral / Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Semester 3		601-129	*	HVAC Systems	Prereq: 601-110; 601-116	3	1-4
		601-131	§*	Heating Systems Applications	Prereq: 601-121	3	1-4
		601-133	*	Refrigeration Fundamentals		3	2-2
		601-147	*	Control Circuit Applications	Prereq: 601-128	3	1-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Semester 4		601-130	*	HVAC Blueprint Reading		2	1-2
		601-143	§*	Refrigeration Applications	Prereq: 601-110; 601-116; 601-133	3	1-4
		601-145	*	Electronic Energy Management	Prereq: 601-147; 103-143	3	1-4
		601-148	*	HVAC Electrical Troubleshooting/Repair	Prereq: 601-147; 103-143	3	1-4
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives: 442-101 Welding Basics (1 Cr); 601-114 Power Plant Op Engineer (4 Cr); 806-128 Descriptive Physics (3 Cr)					
					Minimum Program Total Credits Required	***69***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	AIR CONDITIONING, HEATING & REFRIGERATION TECHNOLOGY (10-601-1A)
	Architecture & Construction	Construction	*Associate of Applied Science Degree* Most Courses Offered at Kenosha Campus

PROGRAM DESCRIPTION

Air Conditioning, Heating, & Refrigeration Technology develops the skills and knowledge necessary for state and federal certification. Theory and practical hands-on experience in the troubleshooting, repair, and installation of residential and commercial HVAC/R systems are emphasized. Students will practice on modern and advanced equipment, incorporating microprocessor controls, and building automation technology. Topics covered during lecture and lab hours include complete heating, air conditioning and refrigeration systems, how components interact, and total system performance. Refrigerant handling certification is encouraged and is dependent upon successful completion by the individual student.

PROGRAM LEARNING OUTCOMES

Graduates of the HVAC Associate Degree Program should be able to:

1. Install HVAC/R components
2. Service HVAC/R systems
3. Troubleshoot HVAC/R systems
4. Evaluate HVAC/R system designs

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these Major courses.
3. §Students who take 601-113 (Facility Operating Engineer LP) and 601-117 (Facility Operating Engineer HP) may omit these courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Formerly 804-106, Intro to College Math.
5. Formerly 103-199, PC Basics/Microsoft Office.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ARCHITECTURAL – STRUCTURAL ENGINEERING TECHNICIAN (10-614-6)
	Architecture & Construction	Design & Pre-Construction	*Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		607-103	*	Introduction to Civil Engineering & Architecture		2	1-2
		607-104	*	Building Material & Construction Method		3	2-2
		607-170	*	AutoCAD for Construction Sciences		2	1-2
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Semester 2		607-102	*	Conflict Resolution in CET		2	1-2
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
		607-132	*	Structural Mechanics	Prereq: 804-114 OR 804-115	3	2-2
		607-136	*	Construction Project Management		2	1-2
		607-187	*	3D CAD: Digital Terrain Modeling		2	1-2
		614-150	*	3D CAD: Building Information Modeling		2	1-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Summer		607-169	*	Surveying Basics	Prereq: 834-110 (See Note 1)	2	1-2
Semester 3		607-143	*	Structural Design Concrete and Steel	Prereq: 607-132	3	2-2
		614-140	*	Mechanical Systems for Buildings	Prereq: 607-104	3	2-2
		614-108	*	Residential Code		1	.5-1
		614-110	*	Architectural Drafting – Residential	Prereq: 614-150 Coreq: 614-108	3	1-4
		607-128	*	Construction Estimating	Prereq: 607-104	3	2-2
		806-154		General Physics 1	Prereq: 804-115	4	3-2
Semester 4		614-114	*	Commercial Code		2	1-2
		614-115	*	Architectural Drafting – Commercial	Prereq: 614-110 Coreq: 614-114	3	1-4
		614-123	*	Capstone: Architectural Structural Tech	Prereq: Inst. Cons.; Coreq: 614-115	1	1-0
		614-107	*	Residential and Commercial Inspection	Prereq: 614-108; Coreq: 614-114	3	1-4
		614-138	*	3D Modeling and Virtualization	Prereq: 614-150; 607-187	1	0-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		607-117 Geographical Information Systems (2 Cr)			607-154 Sewer and Water (2 Cr)		
		607-119 Civil Technology/Internship (1 Cr)			304-155 Principles of Interior Design (4 Cr)		

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Minimum Total Program Credits Required 70

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ARCHITECTURAL – STRUCTURAL ENGINEERING TECHNICIAN (10-614-6)
	Architecture & Construction	Design & Pre-Construction	*Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

PROGRAM DESCRIPTION

Architectural-Structural Engineering Technician focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see Note 6). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The second year focuses on aspects specific to buildings, both design and structural components. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a four year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of architecture.

PROGRAM LEARNING OUTCOMES

Graduates of Architectural-Structural Engineering Tech should be able to:

1. Develop Construction Documents
2. Evaluate Building Materials
3. Develop building designs
4. Integrate building systems
5. Develop site plans

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *A 2.0 (“C”) or above for these specific major core courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to enrollment in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
4. Classes offered at Elkhorn Campus via NODAL delivery. See www.gtc.edu for details.
5. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Geospatial Surveying Technician, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Manufacturing	**Career Pathway ►** Manufacturing Production Process Development	**AUTOMATED MANUFACTURING SYSTEMS TECHNOLOGY** **(10-628-3)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn Campus and Lakeview Center**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		605-113	*	DC/AC I		3	2-2
		612-102	*	Pneumatics/Hydraulics, Introduction		3	2-2
		628-109	*	Mechanical Skills for Technicians		3	1-4
		620-103	*	Intro to Industrial Controls	Coreq: 605-113	4	2-4
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
Semester 2		628-125	*	Quality for Automated Manufacturing		3	2-2
		628-100	*	Automated Manufacturing Concepts/Intro		2	0-4
		628-110	*+	CNC/CAM Programming		3	1-4
		806-154		General Physics 1	Prereq: 804-115	4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 3		442-102	*	Introduction to Welding		2	0-4
		620-140	*	Programmable Controllers	Prereq: 620-103	2	1-2
		890-103		Employability Skills		2	1-2
		628-111	*	Computer Assisted Programming/Robot and FMS		3	1-4
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 4		606-126	*	AutoCAD, Introduction	(See Note 4)	2	0-4
		620-120	*	Feedback & Control Systems	Prereq: 605-113	2	1-2
		620-145	*	Programmable Logic Controllers – Advanced	Prereq: 620-140	3	1-4
		628-112	*	Computer Aided Manufacturing, Advanced	Prereq: 628-111; Coreq: 620-145	3	1-4
		605-133	*	Industrial Data Communications	Prereq: 605-113 or 605-107	3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		606-127 CAD Intermediate (2 Cr)			612-115 Hydraulics / Advanced (3 Cr)		
		606-128 CAD Solids (2 Cr)			620-111 Intro to Solid State Circuits (4 Cr)		
		628-108 Field Experience (2 Cr)					
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**AUTOMATED MANUFACTURING SYSTEMS TECHNOLOGY** **(10-628-3)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn Campus and Lakeview Center**
	Manufacturing	Manufacturing Production Process Development	

PROGRAM DESCRIPTION

Automated Manufacturing Systems Technology is designed to train technicians who can work in a factory which has a high level of automation. Emphasis is placed on automated systems, including production systems, material handling systems, and supervisory control systems. Training objectives will focus on system implementation, application, operation, and installation. The education is broad-based and multi-disciplinary and includes an understanding of electrical, electronic, electromechanical, and mechanical components, plus micro-processors, computers, inventory, and quality control.

PROGRAM LEARNING OUTCOMES

Graduates of the Automated Manufacturing Systems Technology Associate Degree Program should be able to:

1. Demonstrate knowledge of electricity, electronics, hydraulics and pneumatics.
2. Demonstrate a knowledge of sensor utilization for measuring flow, pressure, speed, voltage, current, torque, force, temperature, etc.
3. Demonstrate an understanding of PLC programming and program design.
4. Demonstrate proper use and operation of hand tools.
5. Analyze design solutions for electromechanical machines and devices as a team.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. Student may take 606-128 CAD-Solidworks (2 Cr) in place of this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Transportation, Distribution & Logistics	**Career Pathway ►** Facility & Mobile Equipment Maintenance	**AUTOMOTIVE MAINTENANCE TECHNICIAN** (31-404-3) *Technical Diploma* **Most Courses Offered at Horizon Center**

Δ*Suggested Sequence*	√	*Course Number*		*Course Title*	*Requisites*	*Credits*	*Hrs/Wk Lec - Lab*
Semester 1		602-122	*	Auto IT for Transportation		2	1-2
		602-107	*	Auto Service Fundamentals	Prereq: 602-122	2	1-2
		602-104	*	Brake Systems	Prereq: 602-107; 122	3	2-2
		602-124	*	Steering & Suspension Systems	Prereq: 602-107; 122	3	2-2
		804-107		College Mathematics	Prereq: 834-109 (See Note 1 & 5)	3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		602-125	*	Electrical & Electronic Systems 1	Prereq: 602-107; 122; Coreq: 804-107	2	1-2
		602-127	*	Electrical & Electronic Systems 2	Prereq: 602-125; Coreq: 801-136	3	2-2
		602-196	*	Climate Control Systems	Prereq: 602-127	3	2-2
		602-103	*	Engine Repair 1	Prereq: 602-107; 122	2	1-2
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
					Minimum Program Total Credits Required	***32***	

Δ*Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 10-602-3 Automotive Technology program can earn their associate degree by completing an additional 38 credits. Please see your academic advisor for details.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$3,900	$4,940	Automotive Service Technicians and Mechanics (49-3023)

Effective 2016/2017	Career Cluster ►	Career Pathway ►	AUTOMOTIVE MAINTENANCE TECHNICIAN (31-404-3) *Technical Diploma* **Most Courses Offered at Horizon Center**
	Transportation, Distribution & Logistics	Facility & Mobile Equipment Maintenance	

PROGRAM DESCRIPTION

Automotive Maintenance Technician gives an overview of essential servicing techniques, including the testing, repairing, and rebuilding of basic automotive systems. Graduates of this program have the skills necessary for entry-level employment at automotive repair facilities and retail service centers or to pursue an Associate of Applied Science degree in a two-year automotive program. The student will be prepared to take up to four ASE tests in the following areas: brakes, suspension and steering, heating and air conditioning, and electrical systems. Special emphasis will be placed on mechanical relationships and basic engine performance. Students will be able to apply the techniques learned in lectures in an automotive shop laboratory setting. This will be accomplished in a simulated work environment.

PROGRAM LEARNING OUTCOMES

Graduates of the Auto Maintenance Technician Technical Diploma Program should be able to:

1. Diagnose, service, and repair Suspension and Steering systems of light duty vehicles.
2. Diagnose, service, and repair Brake systems of light duty vehicles.
3. Diagnose, service, and repair Heating, Ventilating and Air Conditioning systems of light duty vehicles.
4. Diagnose and service Gasoline Engines of light duty vehicles.
5. Service Engine Performance related systems of light duty vehicles.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 32 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are needed, allow at least 90 days.
3. A student supplied tablet computer is required for all 602 courses. Please contact the department prior to purchasing a computer for the minimum specification sheet.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. Formerly 804-106, Intro to College Math.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	AUTOMOTIVE TECHNOLOGY (10-602-3) *Associate of Applied Science* Most Courses Offered at Horizon Center
	Transportation, Distribution & Logistics	Facility & Mobile Equipment Maintenance	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		602-122	*	Auto IT for Transportation		2	1-2
		602-107	*	Auto Service Fundamentals	Prereq: 602-122	2	1-2
		602-104	*	Brake Systems	Prereq: 602-107; 122	3	2-2
		602-124	*	Steering & Suspension Systems	Prereq: 602-107; 122	3	2-2
		804-107		College Mathematics	Prereq: 834-109 (See Note 1)	3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		602-125	*	Electrical & Electronic Systems 1	Prereq: 602-107; 122; Coreq: 804-107	2	1-2
		602-127	*	Electrical & Electronic Systems 2	Prereq: 602-125; Coreq: 801-136	3	2-2
		602-196	*	Climate Control Systems	Prereq: 602-127	3	2-2
		602-103	*	Engine Repair 1	Prereq: 602-107; 122	2	1-2
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
		801-196		Oral / Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
Semester 3		602-197	*	Engine Performance 1	Prereq: 602-103; 127; Coreq: 801-136	3	2-2
		602-121	*	Auto Instrumentation & Testing	Prereq: 602-197	4	3-2
		602-128	*	Electrical & Electronic Systems 3	Prereq: 602-127	3	2-2
		602-149	*	Manual Drive Train & Axles	Prereq: 602-107; 122	4	2-4
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Semester 4		602-195	*	Advanced Chassis Systems	Prereq: 602-104; 124; 127; Coreq: 801-136	2	2-0
		602-123	*	Engine Repair 2	Prereq: 602-103; Coreq: 801-197	3	1-4
		602-109	*	Auto Transmission/Transaxle	Prereq: 602-127	4	2-4
		602-198	*	Engine Performance 2	Prereq: 602-197	4	3-2
		602-120	*	Auto Service Simulation	Prereq: 602-104; 121; 123; 124; 128; 196; 198	2	0-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0

Minimum Program Total Credits Required 70

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	AUTOMOTIVE TECHNOLOGY (10-602-3)
	Transportation, Distribution & Logistics	Facility & Mobile Equipment Maintenance	*Associate of Applied Science* Most Courses Offered at Horizon Center

PROGRAM DESCRIPTION

Automotive Technology is a two-year repair and maintenance curriculum, totaling over 1,800 hours of automotive instruction. Students desiring to become entry-level line technicians at automotive dealerships or independent repair facilities will be prepared for ASE Master Certification in all areas of automotive mechanical repairs. Students will become competent in engine performance, engine repair, manual and automatic drive lines, transmissions and transaxles, electrical systems, and electronics, using a simulated work environment on vehicles.

PROGRAM LEARNING OUTCOMES

Graduates of the Automotive Technology Associate Degree Program should be able to:

1. Demonstrate professionalism appropriate to the auto service industry.
2. Perform diagnosis, service and repair of automotive internal combustion engines.
3. Perform diagnosis, service and repair of automotive automatic transmission / transaxle systems.
4. Perform diagnosis, service and repair of automotive manual drive train and axles systems.
5. Perform diagnosis, service and repair of automotive steering and suspension steering systems.
6. Perform diagnosis, service and repair of automotive brake systems.
7. Perform diagnosis, service and repair of auto electrical/electronic systems.
8. Perform diagnosis, service and repair of automotive heating and air conditioning systems.
9. Perform diagnosis, service and repair of automotive engine performance systems.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to Enrollment. See an advisor for details.
2. A student supplied tablet computer is required for all 602 courses. Please contact the department prior to purchasing a computer for the minimum specification sheet.
3. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval.)
5. Formerly 804-106, Intro to College Math.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	BARBER TECHNOLOGIST (30-502-5) *Technical Diploma* Most Courses Offered at Kenosha Campus
	Human Services	Personal Care Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		502-736	*	Barber Industry	Prereq: Instructor Consent	2	4-0
		502-742	*	Intro to Barbering	Prereq: Instructor Consent	1	2-0
		502-738	*	Basic Haircutting		2	2-2
		502-735	*	Advanced Haircutting	Prereq: 502-738	2	2-2
		502-741	*	Hairstyling		2	2-2
		502-740	*	Hair Color		2	2-2
		502-743	*	Shaving		2	2-2
		502-739	*	Chemical Texturing		2	2-2
Semester 2		502-730	*	Client Services 1	Prereq: 502-736; 742; 738; 735; 741; 740; 743; 739 & Instructor Consent	2	0-0-6
		502-731	*	Client Services 2	Prereq: 502-736; 742; 738; 735; 741; 740; 743; 739 & Instructor Consent	2	0-0-6
		502-732	*	Client Services 3	Prereq: 502-736; 742; 738; 735; 741; 740; 743; 739 & Instructor Consent	2	0-0-6
		502-733	*	Client Services 4	Prereq: 502-736; 742; 738; 735; 741; 740; 743; 739 & Instructor Consent	2	0-0-6
		502-734	*	Client Services 5	Prereq: 502-736; 742; 738; 735; 741; 740; 743; 739 & Instructor Consent	2	0-0-6
					Minimum Program Total Credits Required	***25***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$2,000	$4,020	Barbers (39-5011)

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**BARBER TECHNOLOGIST** **(30-502-5)** *Technical Diploma* **Most Courses Offered at Kenosha Campus**
	Human Services	Personal Care Services	

PROGRAM DESCRIPTION

The *Barber Technologist* program offers a variety of courses such as Haircutting, Shaving, Styling, Color, Chemical Texture Services, and Male Facials. In addition to barber ownership or barber management, one can choose from positions in sales, advertising, research, and education. The possibilities are unlimited and so is the income potential. The *Barber Technologist* program is a two-semester program consisting of 1,080 hours of instruction.

PROGRAM LEARNING OUTCOMES

Graduates of the Barber Technologist Technical Diploma Program should be able to:

1. Apply safety and sanitation procedures.
2. Adhere to the current Wisconsin Administrative Codes and Statutes for barbers.
3. Demonstrate interpersonal skills for success.
4. Identify hair and scalp disorders.
5. Perform haircutting services.
6. Demonstrate shaving and other facial removal techniques.
7. Perform male facial procedures.
8. Perform texture services.
9. Perform hair color services.
10. Demonstrate hairstyling and finishing techniques.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.
4. Students must complete a functional ability form verifying that they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 25 credits with a minimum of 2.0 or above.
2. *Minimum of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. This is a high-demand program with limited openings.
4. This program requires two semesters to complete 1,080 hours on a full-time basis.
5. Students are required to purchase regulation uniforms.
6. Supplies and materials are required for this program. All must be purchased prior to beginning the first day of program.
7. Students must be 18 years of age or a high school graduate to take the state licensure exam.
8. Students must complete all classroom portions of instruction before beginning any of the client services courses.
9. All new students must attend a mandatory orientation prior to registering for courses.

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Business Management & Administration	**Career Pathway ►** General Management	**BUSINESS MANAGEMENT** **(10-102-3)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		196-129	*	Management Orientation		1	.5-1
		101-114		Accounting Principles		4	3-2
		OR					
		101-112	*	Accounting for Business &	*(Take 101-114 OR 101-112 & 103-103)*	3	3-0
		103-103		Excel II		1	.5-1
		102-137	*	Business / Intro to		3	3-0
		102-160	*	Business Law		3	3-0
		103-143	*	Computers for Professionals	Prereq: 103-142 (See Notes 1 & 3)	3	2-2
		801-198		Speech			
		801-196	***OR***	Oral/Interpersonal Communications	Prereq: 838-105 (See Note 1)	3	3-0
Semester 2		104-101	*	Marketing Principles		3	3-0
		104-104	*	Selling Principles		3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-123	***OR***	Math with Business Applications	Prereq: 834-109 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 3		104-105	*	Promotion Principles		3	3-0
		105-106		Business Communications			2-2
		801-197	*OR	Technical Reporting	Prereq: 801-136	3	3-0
		196-190	*	Leadership Development		3	3-0
		196-191	*	Supervision		3	3-0
		809-172		Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		102-186		Business Management Internship	Prereq: Instructor Consent		1-0-0-8
		102-138	*OR	BIZ Internship	Prereq: Instructor Consent	3	0-6
		806-112		Principles of Sustainability	Prereq: 838-105 (See Note 1)		3-0
		102-196	*	Business Decision Management	Prereq: 101-114 OR 101-112 & 103-103; 104-101	4	3-2
		102-121	*	Credit Management	Prereq: 804-123	3	3-0
		809-166		Ethics: Theory & Applications, Intro	Prereq: 838-105 (See Note 1)	3	3-0
		809-195		Economics			
		809-144	***OR***	Macroeconomics	Prereq: 838-105 (See Note 1)	3	3-0

Electives

Take 6 elective credits. Any associate degree level course may be taken as an elective. — ***6***

Suggested Electives:

- 104-170 Business Purchasing (3 Cr)
- 104-194 International Marketing (3 Cr)
- 196-189 Team Building / Problem Solving (3 Cr)
- 103-103 Excel II (1 Cr)
- 196-193 Human Resource Management (3 Cr)
- 809-143 Microeconomics (3 Cr)
- 809-144 Macroeconomics (3 Cr)

Minimum Program Total Credits Required — ***69***

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**BUSINESS MANAGEMENT** **(10-102-3)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Business Management & Administration	General Management	

PROGRAM DESCRIPTION

Business Management is designed to provide a broad background in management theory, human resource management and behavior, accounting, marketing, and business decision making. Students learn how to effectively plan, organize, direct, and evaluate business functions essential to efficient and productive business organizations. Graduates will have the business knowledge and skills to prepare them for a management trainee, assistant, manager, or team leader position in a wide cross-section of business, government, and not-for-profit sectors of our economy.

PROGRAM LEARNING OUTCOMES

Graduates of the Business Management Associate Degree Program should be able to:

1. Plan the operations of a business.
2. Organize resources to achieve the goals of the organization.
3. Direct individuals and/or processes to meet organizational goals.
4. Control business processes.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).
3. Formerly 103-199, PC Basics/Microsoft Office.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly.
2. Communicate clearly and effectively.
3. Demonstrate essential computer skills.
4. Demonstrate essential mathematical skills.
5. Develop job seeking skills.
6. Respect themselves and others as members of a diverse community.
7. Think critically and creatively.
8. Work cooperatively.
9. Value learning.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	**BUSINESS SERVICES MANAGER** **(31-102-5)** *Technical Diploma* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Business Management & Administration	General Management	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		196-129	*	Management Orientation		1	.5-1
		101-114	*	Accounting Principles		4	3-2
		102-137	*	Business / Intro to		3	3-0
		102-160	*	Business Law		3	3-0
		103-143	*	Computers for Professionals	Prereq: 103-142 (See Notes 1 & 3)	3	2-2
Semester 2		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
		104-101	*	Marketing Principles		3	3-0
		104-104	*	Selling Principles		3	3-0
		104-105	*	Promotion Principles		3	3-0
		196-191	*	Supervision		3	3-0

Minimum Program Total Credits Required 29

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Student who are interested in continuing into the 10-102-3 Business Management program can earn their Associate degree by completing an additional 40 credits. Please see your academic advisor for details.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**BUSINESS SERVICES MANAGER** **(31-102-5)** *Technical Diploma* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Business Management & Administration	General Management	

PROGRAM DESCRIPTION

The focus of the business Services manager diploma is to provide the learner with knowledge in the major functional areas of a business including law, accounting, information technology, and marketing. Students will develop competence in the business functions of planning organizing, directing and controlling. Graduates will be prepared to supervise the work of office administrative, or customer service employees to ensure adherence to quality standards, deadlines, and proper procedures, and will be equipped to implement corporate or departmental policies, procedures, and service standards in conjunction with management.

PROGRAM LEARNING OUTCOMES

Graduates of the Business Services Manager Technical Diploma Program should be able to:

1. Plan the operations of a business across functional areas.
2. Organize resources to achieve the goals of the organization.
3. Direct individuals and/or processes to meet organizational goals.
4. Control business processes.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 29 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).
3. Formerly 103-199, PC Basics/Microsoft Office.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly.
2. Communicate clearly and effectively.
3. Demonstrate essential computer skills.
4. Demonstrate essential mathematical skills.
5. Develop job seeking skills.
6. Respect themselves and others as members of a diverse community.
7. Think critically and creatively.
8. Work cooperatively.
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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CIVIL ENGINEERING TECHNOLOGY – FRESH WATER RESOURCES (10-607-9)
	Science, Technology, Engineering & Mathematics	Engineering & Technology	*Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		607-103	*	Introduction to Civil Engineering & Architecture		2	1-2
		607-104	*	Building Material & Construction Method		3	2-2
		607-170	*	AutoCAD for Construction Sciences		2	1-2
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Semester 2		607-102	*	Conflict Resolution in CET		2	1-2
		607-132	*	Structural Mechanics	Prereq: 804-114 OR 804-115	3	2-2
		607-136	*	Construction Project Management		2	1-2
		607-187	*	3D CAD: Digital Terrain Modeling		2	1-2
		614-150	*	3D CAD: Building Information Modeling		2	1-2
		806-102	*	Environmental Chemistry	Prereq: 804-107	4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Summer		607-169	*	Land Surveying Basics	Prereq: 834-110 (See Note 1)	2	1-2
Semester 3		607-117	*	Geographical Information Systems I		2	1-2
		607-181	*	Hydrology and Conservation		2	2-0
		607-182	*	Sampling and Testing	Prereq: 806-102	2	1-2
		607-183	*	Fresh Water Treatment	Prereq: 806-102	3	2-2
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
		806-154		General Physics 1	Prereq: 804-115	4	3-2
Semester 4		607-154	*	Sewer and Water Systems		2	2-0
		607-167	*	Capstone: CET-Freshwater Resources	Prereq: Inst. Consent	1	1-0
		607-184	*	Environmental Impact		2	2-0
		607-185	*	Waste Water Treatment		3	2-2
		607-186	*	Erosion Control	Prereq: 806-102	2	1-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

607-139 Material Testing and Inspections (4 Cr)
607-119 Civil Technology/Internship (1 Cr)
614-114 Commercial Code (2 Cr)
607-129 Future Trends (2 Cr)

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Minimum Program Total Credits Required ***70***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CIVIL ENGINEERING TECHNOLOGY – FRESH WATER RESOURCES (10-607-9) *Associate of Applied Science Degree* Most Courses Offered at iMET Center
	Science, Technology, Engineering & Mathematics	Engineering & Technology	

PROGRAM DESCRIPTION

Civil Engineering Technology - Fresh Water Resources focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see Note 6). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The 2nd year focuses on aspects specific to fresh water, from rainfall to testing to cleaning. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a 4 year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of Fresh Water Resources.

PROGRAM LEARNING OUTCOMES

Graduates of the Fresh Water Resources Program should be able to:

1. Develop 3D computer models, maps, and drawings based on field measurements..
2. Develop a hydrograph model.
3. Develop a surface/groundwater water storage model. Differentiate between the various areas and functions within the profession.
4. Exhibit proper sampling and testing skills.
5. Design storm systems to meet given design requirements.
6. Develop an Erosion Control Plan.
7. Develop a plan to treat freshwater.
8. Develop a plan to treat wastewater.
9. Develop Environmental Reports exhibiting proper and clear documentation and reporting skills.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 Credits with an average of 2.0 or above.
2. *A 2.0 ("C") or above for these specific major core courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to enrollment in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
4. Classes offered at Elkhorn Campus via NODAL delivery. See www.gtc.edu for details.
5. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Geospatial Surveying Technician, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CIVIL ENGINEERING TECHNOLOGY-HIGHWAY TECHNOLOGY (10-607-4)
	Science, Technology, Engineering & Mathematics	Engineering & Technology	*Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		607-103	*	Introduction to Civil Engineering & Architecture		2	1-2
		607-104	*	Building Material & Construction Method		3	2-2
		607-170	*	AutoCAD for Construction Science		2	1-2
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Semester 2		607-102	*	Conflict Resolution in CET		2	1-2
		607-139	*	Material Testing and Inspection	Prereq: 607-104	4	2-4
		607-132	*	Structural Mechanics	Prereq: 804-114 OR 804-115	3	2-2
		607-136	*	Construction Project Management		2	1-2
		607-187	*	3D CAD: Digital Terrain Modeling		2	1-2
		614-150	*	3D CAD: Building Information Modeling		2	1-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Summer		607-169	*	Surveying Basics	Prereq: 834-110 (See Note 1)	2	1-2
Semester 3		607-117	*	Geographical Information Systems I		2	1-2
		607-127	*	Civil Engineering Drafting		3	1-4
		607-173	*	Surveying Fundamentals	Prereq: 607-169	3	1-4
		806-154		General Physics 1	Prereq: 804-115	4	3-2
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
		607-128	*	Construction Estimating	Prereq: 607-104	3	2-2
Semester 4		607-150	*	Survey Construction/ Route/ Highway	Prereq; 607-173	4	2-4
		614-138	*	3:D Modeling and Virtulaization	Prereq: 614-150; 607-187	1	0-2
		607-154	*	Sewer and Water Systems		2	2-0
		607-166	*	Capstone: CET-Highway Technology	Prereq: Inst. Cons. Coreq: 607-154	1	1-0
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

607-174 Land Surveying – Data Processing (2 Cr)
607-143 Struct Design Concrete and Steel (3 Cr)
607-119 Civil Technology/Internship (1 Cr)
607-129 Future Trends-Civil/Architecture (2 Cr)

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Minimum Program Total Credits Required ***70***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CIVIL ENGINEERING TECHNOLOGY-HIGHWAY TECHNOLOGY (10-607-4)
	Science, Technology, Engineering & Mathematics	Engineering & Technology	*Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

PROGRAM DESCRIPTION

Civil Engineering Technology – Highway Technology focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see Note 6). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The 2nd year focuses on aspects specific to Highway and Public Works. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a four year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of Highway Technology.

PROGRAM LEARNING OUTCOMES

Graduates of the Civil Engineering Technology Program should be able to:

1. Utilize graphic techniques to produce engineering drawings.
2. Conduct standardized field and laboratory testing on civil engineering materials.
3. Utilize modern surveying methods for land measurements and/or construction layout.
4. Estimate material quantities and costs for civil engineering projects.
5. Utilize geometric elements to develop corridors.
6. Design storm systems to meet given design requirements.
7. Determine forces and stresses in elementary structural systems.
8. Employ productivity software to solve technical problems.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must submit official high school, GED, or HSED transcript.
3. Students must complete reading, writing, and math skills placement assessments.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *A 2.0 (“C”) or above for these specific major core courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to enrollment in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
4. Classes offered at Elkhorn Campus via NODAL delivery. See www.gtc.edu for details.
5. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Geospatial Surveying Technician, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CNC PRODUCTION TECHNICIAN (31-444-2) *Technical Diploma* Most Courses Offered at Racine and Elkhorn Campuses
	Manufacturing	Production	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		444-331	*	CNC Machining Technology	Coreq: 444-337	3	3-3
		444-337	*	Fund. of Blueprint and Shop Safety		3	4-2
		444-338	*	Fund. of CNC Machine Application	Coreq: 444-337	4	4-4
		444-339	*	Gauging and Quality Control		3	4-2
		801-302		Speaking Principles		1	2-0
		804-370		Mathematics I, Applied	Prereq: 854-760 (See Note 1)	2	4-0
Semester 2		421-316	*	Blueprint Reading, Advanced	Prereq: 444-337	2	2-2
		444-333	*	Fund. of CNC Turning Applications	Prereq: 444-331 Coreq: 421-316; 804-371	3	2-4
		444-334	*	Fund. Of CNC Milling Applications	Prereq: 444-331 Coreq: 421-316; 804-371	3	2-4
		444-335	*	CNC Lathe Set-Up	Coreq: 444-333	3	2-4
		444-336	*	CNC Mill Set-Up	Coreq: 444-334	3	2-4
		801-301		Writing Principles	Prereq: 851-756 (See Note 1)	1	2-0
		804-371		Mathematics II, Applied	Prereq: 804-370	1	2-0

Minimum Program Total Credits Required ***32***

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 31-444-3 CNC Programmer program can earn their technical diploma by completing an additional 12 credits. Please see your academic advisor for details.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$370	$5,400	$875	8.0%	Numerical Tool & Process Control Programmer (51-4012) & CNC Machine Tool Operators (51-4011)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.
[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CNC PRODUCTION TECHNICIAN (31-444-2) *Technical Diploma* Most Courses Offered at Racine and Elkhorn Campuses
	Manufacturing	Production	

PROGRAM DESCRIPTION

CNC Production Technician is a well rounded approach to becoming a CNC Technician. We teach the skills necessary for students to become qualified set-up technicians. Students are taught the basics of G-Code programming, proper M-Code usage, and the required steps to efficiently set fixture and tool offsets. Students create their own CNC programs and DNC to the proper machine tool. An excellent overall knowledge of CNC Controls is achieved by working on several different brand name controls. Overall, students will be proficient at programming, set-up, operation, editing, and part inspection.

PROGRAM LEARNING OUTCOMES

Graduates of the CNC Production Technician Technical Diploma Program should be able to:

1. Apply basic safety practices in the machine shop.
2. Interpret industrial/engineering drawings.
3. Apply precision measuring methods to part inspection.
4. Perform basic machine tool equipment set-up and operation.
5. Perform programming, set-up, and operations of CNC machine tools.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 32 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses (marked Z-87) are required in labs. If prescription glasses are needed, allow a minimum of 90 days.
3. A hand calculator capable of trigonometric functions is required for 804-370; the cost is approximately $25.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CNC PROGRAMMER (31-444-3) Technical Diploma Most Courses Offered at Racine and Elkhorn Campuses
	Manufacturing	Production	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		444-331	*	CNC Machining Technology	Coreq: 444-337	3	3-3
		444-337	*	Fund. of Blueprint and Shop Safety		3	4-2
		444-338	*	Fund. of CNC Machine Application	Coreq: 444-337	4	4-4
		444-339	*	Gauging and Quality Control		3	4-2
		801-302		Speaking Principles		1	2-0
		804-370		Mathematics I, Applied	Prereq: 854-760 (See Note 1)	2	4-0
Semester 2		421-316	*	Blueprint Reading, Advanced	Prereq: 444-337	2	2-2
		444-333	*	Fund. of CNC Turning Applications	Prereq: 444-331 Coreq: 421-316; 804-371	3	2-4
		444-334	*	Fund. Of CNC Milling Applications	Prereq: 444-331 Coreq: 421-316; 804-371	3	2-4
		444-335	*	CNC Lathe Set-Up	Coreq: 444-333	3	2-4
		444-336	*	CNC Mill Set-Up	Coreq: 444-334	3	2-4
		801-301		Writing Principles	Prereq: 851-756 (See Note 1)	1	2-0
		804-371		Mathematics II, Applied	Prereq: 804-370	1	2-0
Semester 3		444-307 444-308	*OR	Fund. Of Swiss CNC Turning Fund. Of Live Tooling	Prereq: 444-335; 444-336	3	2-4
		444-306 444-309	*OR	Swiss CNC Setup and Operation Live Tooling Setup and Operation	Prereq: 444-335; 444-336	3	2-4
		444-311	*	CNC Lathe Process	Prereq: 444-335; 444-336	3	2-4
		444-314	*	CNC Mill Process	Prereq: 444-335; 444-336	3	2-4

Minimum Program Total Credits Required 44

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**CNC PROGRAMMER** **(31-444-3)** *Technical Diploma* **Most Courses Offered at Racine and Elkhorn Campuses**
	Manufacturing	Production	

PROGRAM DESCRIPTION

The *CNC Programmer Technical Diploma* program gives an overview of essential machine shop practices including machine safety, blueprint reading and part inspection methods. CNC Machine programming, set-up and operation will also be covered in-depth. Graduates of this program will have the skills necessary for entry-level employment in a machine shop setting. Machinists already employed will find the program a great way to improve their skill set. Special emphasis will be placed on learning the skills necessary to transform raw material into a finished part. Students will be able to apply the techniques learned in lectures within a machine shop setting. Overall this program is intended to introduce students to many different aspects within a machine shop setting.

PROGRAM LEARNING OUTCOMES

Graduates of the CNC Programmer Technical Diploma Program should be able to:

1. Apply basic safety practices in the machine shop.
2. Interpret industrial/engineering drawings.
3. Apply precision measuring methods to part inspection.
4. Perform basic machine tool equipment set-up and operation.
5. Perform programming, set-up, and operation on CNC milling centers.
6. Perform programming, set-up, and operation on CNC turning centers.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 44 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses (marked Z-87) are required in labs. If prescription glasses are needed, allow a minimum of 90 days.
3. A hand calculator capable of trigonometric functions is required for 804-370; the cost is approximately $25.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	**COSMETOLOGY** **(31-502-1)** *Technical Diploma* **Most Courses Offered at Racine Campus**
	Human Services	Personal Care Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		502-312	*	Intro to Barber/Cosmetology	Prereq: Instructor Consent	1	2-0
		502-301	*	Shampoo Treatment	Prereq: Instructor Consent	1	1-1
		502-324	*	Barber/Cosmetology Industry		2	4-0
		502-366	*	Women's Haircutting		2	2-2
		502-352	*	Men's Haircutting	Prereq: 502-366	2	2-2
		502-353	*	Perm Techniques		2	2-2
		502-348	*	Chemical Straightening	Prereq: 502-353	2	2-2
		502-349	*	Facials		2	2-2
		502-320	*	Basic Manicuring		1	1-1
Semester 2		502-345	*	Basic Hair Color	Prereq: Instructor Consent	2	2-2
		502-350	*	Hair Design 1	Prereq: Instructor Consent	2	2-2
		502-347	*	Bleaching	Prereq: 502-345	2	2-2
		502-351	*	Hair Design 2		2	2-2
		502-354	*	Salon Service 1	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-355	*	Salon Service 2	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-356	*	Salon Service 3	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-367	*	Salon Service 4	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-308	*	Salon Service 5	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-309	*	Salon Service 6	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
Semester 3		502-310	*	Salon Service 7	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-361	*	Salon Service 8	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-362	*	Salon Service 9	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-311	*	Salon Service 10	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-364	*	Salon Service 11	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-365	*	Salon Service 12	Prereq: (See Note 11) & Inst. Consent	1	0-0-3
		502-371	*	Mock Board Theory	Prereq: Instructor Consent	1	2-0
		502-370	*	Mock Board Skills	Prereq: Instructor Consent	2	2-2

ΔCourses may be taken out of suggested sequence as long as requisites have been met. ***Minimum Program Total Credits Required*** ***38***

Enrollment Begins in fall and spring ONLY, beginning with the Semester 1 Sequence.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$6,320	$5,600	$3,500	9%	Hairdresser, Hairstylists, & Cosmetologists (39-5012)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.

[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**COSMETOLOGY** **(31-502-1)** *Technical Diploma* **Most Courses Offered at Racine Campus**
	Human Services	Personal Care Services	

PROGRAM DESCRIPTION

Exciting careers are open to the licensed, experienced *Cosmetologists*. In addition to salon ownership, salon management, and specialization of a service, one can choose from positions in sales, advertising, research, education, and makeup artistry. The possibilities are unlimited and so is the income potential. The Cosmetology program is a three-semester Diploma program consisting of 1,550 hours of instruction. Students attend classes Monday through Friday as scheduled, and may attend full or part-time. Students receive instruction in Cosmetology skills such as hair designing, haircutting, hair coloring, permanent waving, and manicuring. Classes in makeup artistry, sculptured nails, color analysis, and salon management are also included.

PROGRAM LEARNING OUTCOMES

Graduates of the Cosmetology Technical Diploma Program should be able to:

1. Perform hair coloring services.
2. Perform chemical relaxing services.
3. Perform hair sculpting services.
4. Perform permanent wave services.
5. Demonstrate styling services.
6. Demonstrate nail services.
7. Demonstrate facial services.
8. Demonstrate sales techniques.
9. Demonstrate basic theory knowledge required in the field.
10. Demonstrate interpersonal skills for success.
11. Develop strategies to market products and services.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math, skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.
4. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 38 credits with a minimum of 2.0 or above.
2. *Minimum of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. This is a high demand program with limited openings.
2. Program requires three semesters to complete 1550 hours on a full-time basis. Part-time attendance will extend student's training time. Please contact an advisor for details.
3. Students are required to purchase regulation uniforms.
4. Supplies and materials are required for this program. All must be purchased prior to beginning the first day of the program.
5. Students must be 18 years of age or a high school graduate to take the state licensure exam.
6. 502-338, Manicure/Nail Technician II is an optional course for State Manicurist/Nail Technician license.
7. Students must complete all classroom portions of a course before beginning any of the Salon Services or Mock Board courses.
8. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
9. All new students must attend a mandatory orientation prior to registering for courses.
10. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
11. These courses require the following prerequisites: 502-301; 502-345; 502-320; 502-347; 502-348; 502-349; 502-350; 502-351; 502-352; 502-353; and 502-366.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** 911 Public Safety, Corrections & Security	**Career Pathway ►** Law Enforcement Services	**CRIMINAL JUSTICE-LAW ENFORCEMENT** (10-504-1) *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		504-900	*	Intro to Criminal Justice		3	3-0
		504-902	*	Criminal Law		3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
		804-107		College Mathematics	Prereq: 834-109 (See Note 1 & 5)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 8)	3	3-0
Semester 2		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 1 & 6)	3	2-2
		504-908	*	Traffic Theory		3	3-0
		504-904	*	Juvenile Law		3	3-0
		504-141	*	Interview, Interrogations, Confessions		3	3-0
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 809-198	3	3-0
Semester 3		504-907	*	Community Policing Strategies	Prereq; 504-900	3	3-0
		504-903	*	Professional Communications		3	3-0
		504-117	*	Police Administration	Prereq: 504-900	3	3-0
		504-148	*	Rules of Evidence	Prereq: 504-900	3	3-0
		809-159		Psychology, Abnormal	Prereq: 838-198	3	3-0
Semester 4		504-901	*	Constitutional Law	Prereq: 504-902 Coreq: 504-148	3	3-0
		504-905	*	Report Writing	Prereq: 504-902; 801-136	3	3-0
		504-906	*	Criminal Investigation Theory	Prereq: 504-902; 504-900 Coreq: 504-148	3	2-2
		802-124		Spanish I	Prereq: 838-105 (See Note 1)	4	4-0
		504-176	*OR*	Spanish for Law Enforcement		3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

504-116 Civil Law (3 Cr)
504-124 Forensic Science (3 Cr)
504-175 Terrorism / Homeland Security (3 Cr)
504-152 Police Internship (3 Cr)
504-173 Cyber Crime (3 Cr)
504-174 Intro to Security (3 Cr)
802-125 Spanish II (4 Cr)
802-119 Spanish III (4 Cr)

Minimum Program Total Credits Required 69

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CRIMINAL JUSTICE-LAW ENFORCEMENT (10-504-1) *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses**
	Law, Public Safety, Corrections & Security	Law Enforcement Services	

PROGRAM DESCRIPTION

Criminal Justice-Law Enforcement is an accredited two-year associate degree program that prepares students for positions in a variety of law enforcement careers at the state, local, and federal levels, as well as in the field of private security. Students study the law enforcement field plus physical and behavioral sciences to meet the demands of the police profession, including criminal investigation, traffic law, patrol procedures, and scientific crime laboratory.

PROGRAM LEARNING OUTCOMES

Graduates of the Criminal Justice Associate Degree Program should be able to:

1. Think critically.
2. Manage emergencies.
3. Communicate effectively.
4. Demonstrate professionalism.
5. Conduct investigations.
6. Interact with others.
7. Demonstrate tactical skills (applies only to occupational certifications).

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *A minimum grade of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Students who complete this associate degree and who wish to be pre-Certified as Wisconsin Law Enforcement Officers must successfully complete an approved Wisconsin Law Enforcement Academy – 520 hour curriculum. This certifiable status is valid for the period of 2 years. Additional Admission requirements pursuant to the Wisconsin Law Enforcement Standards Board will be applicable to pre-Certification.
3. Law Enforcement Academy: Students must attend and successfully complete all components of this program within the specified time period (520hrs – Full time program 15 weeks) to achieve the status of "Certifiable Law Enforcement Officer" according to the State of Wisconsin Law Enforcement Standards Board.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. Formerly 804-106, Intro to College Math.
6. Formerly 103-199, PC Basics/Microsoft Office.3
7. Students wishing to demonstrate proficiency in Spanish are encouraged to enroll in 90-801-3 Spanish Proficiency for Law Enforcement (internal certificate). See an advisor for details.
8. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CRIMINAL JUSTICE –LAW ENFORCEMENT 720 HOUR ACADEMY (30-504-2) *Technical Diploma* Most Courses Offered at Kenosha Campus
	911 Public Safety, Corrections & Security	Law Enforcement Services	

Δ Suggested Sequence	√	Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		504-306	Overview of Criminal Justice		1	2-0
		504-307	Overview of Investigation		2	2-2
		504-308	Overview of Patrol Response		2	2-2
		504-309	Overview of Tactics		1	1-1
		504-310	Princ. of Emergency Vehicle Response		2	2-2
		504-311	Principles of Investigation		2	2-0
		504-312	Principles of Patrol Response		2	2-2
		504-313	Principles of Tactics		3	2-4
		504-314	Application of Investigations		2	2-2
		504-315	Application of Traffic Response		2	2-2
		504-316	Health and Fitness		1	1-1
		504-317	L.E. Academy Scenario Week		1	0-2

Minimum Program Total Credits Required 21

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$2,200	$2,440	$0	100%	Police Patrol Officers (33-3051)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.
[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	CRIMINAL JUSTICE –LAW ENFORCEMENT 720 HOUR ACADEMY (30-504-2) *Technical Diploma* Most Courses Offered at Kenosha Campus
	Public Safety, Corrections & Security	Law Enforcement Services	

PROGRAM DESCRIPTION

The 720 Hour Law Enforcement Academy is designed to prepare the candidate to perform the essential functions of a law enforcement officer in the State of Wisconsin. The competency-based instruction meets the criteria set forth by the Wisconsin Department of Justice, Training and Standards Bureau. Training is delivered in three phases through a combination of lecture, labs, interactive group discussion, hands-on instruction, and integration exercises. The Academy meets daily Monday through Friday for 18 weeks.

PROGRAM LEARNING OUTCOMES

Graduates of the Criminal Justice – Law Enforcement Academy Technical Diploma Program should be able to:

1. Think critically
2. Manage emergencies
3. Communicate effectively
4. Demonstrate professionalism
5. Conduct investigations
6. Interact with others
7. Demonstrates tactical skills

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

Step 1:

1. Students must submit an application and $30 fee.
2. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
3. Students must submit an official college transcript verifying an associate degree or higher in Criminal Justice or at least 60 postsecondary credits earned. Students earning credits at Gateway Technical College do not need a Gateway transcript but should note the completion of credits on their application.
4. Students must request and pay for a background check. Applicants of this program are subject to a review of of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying that they have read and understand the functional abilities for the program.
6. Students must complete DJLE-327 Application for Enrollment form.
7. Students must submit a copy of a valid driver's license.
8. Students must submit Annotation of Birth Facts form.
9. students must submit an abstract copy of their driving record from their state's Department of Motor Vehicles

Step 2:

1. Students must pass the Physical Readiness Test to be considered for an interview.
2. Students will participate in an interview. Selected candidates will need to submit a DJLE-332 Medical Assessment form.

GRADUATION REQUIREMENTS

1. Minimum grade of 2.0 ("C") or above in all courses.
2. Satisfactorily demonstrate proficiency in all hands-on unified tactical areas of training (DAAT, EVOC, Firearms, Vehicle Contacts)
3. Pass the scenario-based final assessment exercise.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. For detailed information about this program please visit the Law Enforcement website: www.gtc.edu/LEAcademy
2. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
3. Background checks for the Law Enforcement Academy program are valid for 6 months. Students must request a current background check every 6 months they are enrolled or re-apply.
4. In order to be admitted to the academy candidates must pass a Physical Readiness Test administered by academy staff. This test must be completed before an interview can be scheduled.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Hospitality & Tourism	**Career Pathway ►** Restaurants and Food/Bev. Services	**CULINARY ARTS** **(10-316-1)** *Associate of Applied Science Degree* **Most Courses Offered at Racine Campus**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		316-109	*	Short Order Deli	Coreq: 316-170; 316-131 (See Note 4)	3	0-6
		316-130	*	Nutrition	(See Note 4)	2	2-0
		316-131	*	Culinary Skills I	Coreq: 316-170 (See Note 4)	4	2-4
		316-140	*	Basic Baking Techniques		3	1-4
		316-170	*	Sanitation and Hygiene	(See Note 4)	1	1-0
		316-190	*	Food Service Supervision		3	3-0
		804-123		Math with Business Apps	Prereq: 834-109 (See Note 1 & 4)	3	3-0
Semester 2		101-112		Accounting for Business		3	3-0
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 1 & 5)	3	2-2
		316-132	*	Culinary Skills II	Prereq: 316-131	4	1-6
		316-133	*	Menu Planning, Purchasing, Cost Control		3	3-0
		316-134	*	Garde Manger		1	0-2
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Semester 3		316-105	*	International Buffets	Prereq: 316-132	4	1-6
		316-135	*	Catering/Banquets	Prereq: 316-132	2	1-2
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Notes 1 & 4)	3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		809-166		Ethics: Theory & Applications, Intro to	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		196-123		Problem Solving/Decision Making		2	2-0
		316-125	*	Fine Dining	Prereq: 316-131; 316-132; 316-135	4	1-6
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

104-101 Marketing Principles (3 Cr)
316-136 Culinary Competition I (1 Cr)
316-137 Culinary Competition II (1 Cr)
196-190 Leadership Development (3 Cr)

Minimum Program Total Credits Required 69

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**CULINARY ARTS** (10-316-1) *Associate of Applied Science Degree* **Most Courses Offered at Racine Campus**
	Hospitality & Tourism	Restaurants and Food/Bev. Services	

PROGRAM DESCRIPTION

Culinary Arts places emphasis on food purchasing, specialty food preparation, dining room operation, and quantity food preparation sanitation. In addition to the business aspects of restaurant operations, this program includes extensive hands-on preparation of different foods. Students completing the program are certified in sanitation and qualified for employment as cafeteria managers, restaurant cooks, concession managers, and specialty cooks.

PROGRAM LEARNING OUTCOMES

Graduates of the Culinary Arts Associate Degree Program should be able to:

1. Apply principles of safety and sanitation in food service operations.
2. Apply principles of nutrition.
3. Demonstrate culinary skills.
4. Manage food service operations.
5. Plan menus.
6. Analyze food service financial information.
7. Relate food service operations to sustainability.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.
4. Students must submit official high school, GED, or HSED transcripts.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A uniform and physical are required for this program.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Students must submit all health and immunization forms prior to the first day of attending all first-semester courses.
5. Formerly 103-199, PC Basics/Microsoft Office.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.
7. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Document Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	DENTAL ASSISTANT (31-508-1) *Technical Diploma* Most Courses Offered at Kenosha Campus
	Health Science	Therapeutic Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		508-101	*	Dental Health Safety	Prereq: Instructor Consent (See Note 4&6)	1	0-2
		508-103	*	Dental Radiography	Prereq: Instructor Consent (See Note 4)	2	1-0-3
		508-113	*	Dental Materials	Prereq: Instructor Consent (See Note 4)	2	1-2
		508-302	*	Dental Chairside	Prereq: Instructor Consent; Coreq: 508-101; 508-113; 508-304 (See Note 4)	5	6-4
		508-304	*	Dental and General Anatomy	Prereq: Instructor Consent (See Note 4)	2	4-0
		508-306	*	Dental Assistant Clinicals	Prereq: Instructor Consent (See Note 4&6)	3	0-0-9
		508-307	*	Dental Assistant Professionalism	Prereq: Inst. Consent (See Notes 1 & 4)	1	2-0
Semester 2		508-120	*	Dental Office Management	Prereq: 508-307 (See Note 1)	2	2-0
		508-308	*	Dental Chairside – Advanced	Prereq: 508-302	5	5-4
		508-309	*	Dental Laboratory Procedure	Prereq: 508-113	4	4-4
		508-310	*	Dental Radiography – Advanced	Prereq: 508-103	1	0-2
		508-311	*	Dental Assistant Clinicals - Advanced	Prereq: 508-306 (See Note 6)	2	0-0-0-8
		801-301		Writing Principles	Prereq: 851-756 (See Note 2&7)	1	2-0
		801-302		Speaking Principles	(See Note 2&7)	1	2-0

Minimum Program Total Credits Required 32

The Dental Assistant program is only offered on a full-time basis, Monday through Friday. Travel is required to clinical sites. Students must provide their own transportation.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-Time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$2,445	$5,350	$0	9.0%	Dental Assistants (31-9091)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.

[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**DENTAL ASSISTANT** **(31-508-1)** *Technical Diploma* **Most Courses Offered at Kenosha Campus**
	Health Science	Therapeutic Services	

PROGRAM DESCRIPTION

Dental Assistant program prepares graduates to work with dentists as they examine and treat patients. Dental Assistants with documented skills also may carry out a variety of laboratory, clinical and office duties. Some dental assistants manage the office and are responsible for patient scheduling and bookkeeping functions. Graduates receive a technical diploma and are eligible to write the certification examination of the Dental Assisting National Board. Most dental assistants work in general or specialized dental offices, either for individual dentists or for groups of dentists. Some dental assistants may choose to work for insurance companies, dental laboratories, or dental supply companies. The dental assistant also may find employment with federal agencies such as the Veterans' Administration, United States Public Health Services, the Armed Forces, or a state, county or city health facility.

PROGRAM LEARNING OUTCOMES

Graduates of the Dental Assistant Technical Diploma Program should be able to:

1. Perform a variety of advanced supportive dental procedures.
2. Manage infection and hazard control.
3. Produce diagnostic intraoral and extraoral radiographs on a variety of patients.
4. Perform advanced dental laboratory procedures.
5. Demonstrate professional behaviors, ethics, and appearance.
6. Perform dental office business procedures.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math, skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.
6. Students must have current CPR for the Healthcare Provider certification.

GRADUATION REQUIREMENTS

1. Minimum 32 credits with an average of 2.0 or above.
2. *Minimum Grade of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. This course will be taught online. Basic computer literacy and Blackboard knowledge are highly recommended.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Any non-508 course may be taken prior to entry in the program, assuming requisites have been satisfied (or waived with departmental approval).
4. Students will be selected for their initial core 508 courses using a petition process. Students must meet petition requirements prior to enrolling in 508 courses.
5. This program has a second-tier admission process for clinical/practicum/program courses called petitioning. Students are selected based on completion of academic eligibility requirements and district residency. See https://www.gtc.edu/student-services/admissions/what-petitioning for additional information.
6. Students must provide CPR for the Healthcare Provider certification prior to enrollment.
7. Students may take 801-196 Oral/Interpersonal Communication in place of 801-301 & 801-302.
8. Please note that your program may require one or all of the following additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	DIESEL EQUIPMENT MECHANIC (31-412-1)
GATEWAY TECHNICAL COLLEGE	Transportation, Distribution & Logistics	Facility & Mobile Equipment Maintenance	*Technical Diploma* Most Courses Offered at Horizon Center

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		412-111	*	Diesel Maintenance Fundamentals		2	1-2
		412-107	*	Diesel Electricity 1	Prereq: 412-111	4	2-4
		412-114	*	Diesel Heating, Cooling & Air Cond.	Prereq: 412-111; 107	3	2-2
		412-117	*	Diesel Suspension & Steering Systems	Prereq: 412-111	3	1-4
		804-107		College Mathematics	Prereq: 834-109 (See Note 1)	3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		412-106	*	Diesel Brake Systems	Prereq: 412-111; 117	4	2-4
		412-112	*	Diesel Drive Trains	Prereq: 412-111; 106	4	2-4
		412-116	*	Diesel Preventative Maintenance	Prereq: 412-111; 106; 112	3	1-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0

Minimum Program Total Credits Required 32

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 10-412-1 Diesel Equipment Technology program can earn their associate degree by completing an additional 38 credits. Please see your academic advisor for details.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$2,445	$5,480	Mobile Heavy Equipment Mechanics (49-3042)

Effective 2016/2017	Career Cluster ►	Career Pathway ►	DIESEL EQUIPMENT MECHANIC (31-412-1)
	Transportation, Distribution & Logistics	Facility & Mobile Equipment Maintenance	*Technical Diploma* Most Courses Offered at Horizon Center

PROGRAM DESCRIPTION

Diesel Equipment Mechanic is a one-year repair and maintenance program designed to prepare an entry level diesel technician. This program is the first year of the associate degree Diesel Equipment Technology program. Program instruction will include over the road, off road and stationary applications. Emphasis will be placed on the fundamentals and repair of diesel engines, and basic diesel vehicle systems including brakes, heating, cooling, and electrical/electronic.

PROGRAM LEARNING OUTCOMES

Graduates of the Diesel Equipment Mechanic Program should be able to:

1. Diagnose major systems in diesel and heavy equipment industry.
2. Repair major systems in diesel and heavy equipment industry.
3. Service major systems in diesel and heavy equipment industry.
4. Practice personal and professional work habits.
5. Document complaint, cause, and correction.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 32 credits with an average of 2.0 or above.
2. Average of 2.0 (“C”) or above for all 412 major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement rest score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Tablet computer required for this program. See an advisor for a fact sheet describing minimum requirement.
3. Work uniform is required. See an advisor for details.
4. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days.
5. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites has been satisfied (or waived with department approval.)
6. A state issued Commercial Driver License (CDL) is not required for the program but highly recommended. Gateway Technical College does not offer CDL training.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	DIESEL EQUIPMENT TECHNOLOGY (10-412-1) *Associate of Applied Science Degree* Most Courses Offered at Horizon Center
	Transportation, Distribution & Logistics	Facility & Mobile Equipment Maintenance	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		412-111	*	Diesel Maintenance Fundamentals		2	1-2
		412-107	*	Diesel Electricity 1	Prereq: 412-111	4	2-4
		412-114	*	Diesel Heating, Cooling & Air Cond.	Prereq: 412-111; 107	3	2-2
		412-117	*	Diesel Suspension & Steering Systems	Prereq: 412-111	3	1-4
		804-107		College Mathematics	Prereq: 834-109 (See Note 1)	3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		412-106	*	Diesel Brake Systems	Prereq: 412-111; 117	4	2-4
		412-112	*	Diesel Drive Trains	Prereq: 412-111; 106	4	2-4
		412-116	*	Diesel Preventative Maintenance	Prereq: 412-111; 106; 112	3	1-4
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Semester 3		412-110	*	Diesel Fuel Systems	Prereq: 412-111	3	2-2
		412-109	*	Diesel Engine Service	Prereq: 412-111; 110	5	2-6
		412-108	*	Diesel Electricity 2	Prereq: 412-111; 107	3	2-2
		809-196		Introduction to Sociology	Prereq: 838-105 (See Note 1 & 7)	3	3-0
Semester 4		412-115	*	Diesel Hydraulic Systems	Prereq: 412-111	2	1-2
		412-113	*	Diesel Fuel Systems - Advanced	Prereq: 412-111; 107; 110; 108	3	2-2
		412-105	*	Diesel Control Systems - Advanced	Prereq: 412-111; 108; 109; 112; 113; 114	4	3-2
		809-198		Psychology, Intro to	Prereq: 838-105 (See Note 1 & 7)	3	3-0
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

412-122 Professional Practices (3 Cr)
412-123 Diesel Equipment Technology Internship (3 Cr)
443-101 Forklift Operation and Maintenance (1 Cr)
442-102 Introduction to Welding (2Cr)
442-101 Welding Basics (1 Cr)
461-120 Small Power Equipment (3 Cr)

Minimum Program Total Credits Required 70

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	DIESEL EQUIPMENT TECHNOLOGY (10-412-1)
	Transportation, Distribution & Logistics	Facility & Mobile Equipment Maintenance	*Associate of Applied Science Degree* Most Courses Offered at Horizon Center

PROGRAM DESCRIPTION

Diesel Equipment Technology is a two-year repair and maintenance program designed to prepare an entry level diesel technician. Program instruction will include over the road, off road and stationary applications. Emphasis will be placed on operational fundamentals and repair of diesel engines, and diesel vehicle systems including brakes, heating, and cooling systems. Technical skills will be developed in diagnosing and repair of advanced engine and system controls.

PROGRAM LEARNING OUTCOMES

Graduates of the Diesel Equipment Technology Program should be able to:

1. Diagnose major systems in diesel and heavy equipment industry.
2. Repair major systems in diesel and heavy equipment industry.
3. Service major systems in diesel and heavy equipment industry.
4. Practice personal and professional work habits.
5. Document complaint, cause, and correction.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. Average of 2.0 (“C”) or above for all 412 major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Tablet computer required for this program. See an advisor for a fact sheet describing minimum requirement.
3. Work uniforms are required. See an advisor for details.
4. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days.
5. Any course may be taken prior to entry in the program, assuming prerequisites and/or co-requisite requirements have been satisfied (or waived with departmental approval).
6. A state issued Commercial Driver License (CDL) is not required for the program but highly recommended. Gateway Technical College does not offer CDL training.
7. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	EARLY CHILDHOOD EDUCATION (10-307-1) *Associate of Applied Science Degree* Most Courses Offered at Racine Campus
	Human Services	Early Childhood Development & Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		307-148	*	ECE: Foundations of Early Childhood Education	(See Note 5)	3	3-0
		307-151	*	ECE: Infant & Toddler Development	(See Note 5)	3	3-0
		307-167	*	ECE: Health, Safety & Nutrition	(See Note 5)	3	3-0
		307-174	*	ECE: Practicum 1	Coreq: 307-167 (See Note 5)	3	2-0-3
		307-178	*	ECE: Art, Music and Language Arts		3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		307-179	*	ECE: Child Development		3	3-0
		307-188	*	ECE: Guiding Children's Behavior		3	3-0
		307-192	*	ECE: Practicum 2	Prereq: 307-174; 307-167	3	1-0-6
		307-195	*	ECE: Family and Community Relationships		3	3-0
		804-107		College Mathematics	Prereq: 834-109 (See Note 1 & 3)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 7)	3	3-0
Semester 3		307-166	*	ECE: Curriculum Planning	Prereq: 307-174 (See Note 5)	3	3-0
		307-187	*	ECE: Children with Differing Abilities		3	3-0
		307-194	*	ECE: Math, Science & Social Studies		3	3-0
		307-197	*	ECE: Practicum 3	Prereq: 307-192; Coreq: 307-151	3	1-0-6
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
		809-128		Marriage and Family	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		307-198	*	ECE: Administering an Early Childhood Ed. Program		3	3-0
		307-199	*	ECE: Practicum 4	Prereq: 307-197	3	1-0-6
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		809-172		Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 3 elective credits. Any associate degree level course may be taken as an elective.***				***3***	

Suggested Electives:

307-100 Children's Play (3 Cr)
307-117 ECE Credit for Prior Learning (3 Cr)
307-150 Emerging Literacy (3 Cr)

Minimum Program Total Credits Required 69

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	EARLY CHILDHOOD EDUCATION (10-307-1)
	Human Services	Early Childhood Development & Services	*Associate of Applied Science Degree* **Most Courses Offered at Racine Campus**

PROGRAM DESCRIPTION

Early Childhood Education prepares students to work as teach-caregivers in early childhood settings. It combines hands-on fieldwork in area centers with related academic work at the college. Graduates become responsible for the care and education of children in the birth-to-six-years age range. They create and maintain safe and healthy play environments, guide behavior, plan and implement learning activities, and work cooperatively with staff and parents.

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants of this program are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying that they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

PROGRAM LEARNING OUTCOMES

Graduates of the Early Childhood Education Associate Degree Program should be able to:

1. Apply child development theory to practice.
2. Cultivate relationships with children, family, and the community.
3. Assess child growth and development.
4. Use best practices in teaching and learning.
5. Demonstrate professionalism.
6. Integrate health, safety, and nutrition practices.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been saftisfied (or waived with department approval).
3. Formerly 804-106, Intro to College Math.
4. Background checks for the ECE program are valid for one year. Students must request a current background check for each year they are enrolled.
5. Students must submit all health and immunization forms prior to the first day of attending all first-semester courses.
6. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
7. Transfer credits in Social Science may substitute for this course. See an advisor for details.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Science, Technology, Engineering & Mathematics	**Career Pathway ►** Engineering & Technology	**ELECTRICAL ENGINEERING TECHNOLOGY** **(10-662-1A)** *Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		605-113	*	DC/AC I		3	2-2
		605-130	*	Digital Electronics		4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 2		605-114	*	DC/AC II	Prereq: 605-113; 804-115	3	2-2
		605-120	*	Electronic Devices I	Prereq: 605-113	4	2-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		804-197		College Algebra & Trig w Apps	Prereq: 804-115	5	5-0
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
Semester 3		605-121	*	Electronic Devices II	Prereq: 605-120	4	2-4
		605-190	*	Microprocessors	Coreq: 605-114; 605-121	4	2-4
		662-112	*	DC/AC III	Prereq: 605-114	3	2-2
		804-198	*	Calculus 1	Prereq: 804-197	4	4-0
		806-143	*	College Physics 1	Prereq: 804-113 or 804-115	3	2-2
Semester 4		662-124	*	Electronic Circuit Analysis	Prereq: 605-120	3	2-2
		804-181	*	Calculus 2	Prereq: 804-198	4	4-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives: 605-150 Industrial Electronics (3 Cr) 605-133 Industrial Data Communications (3 Cr)					
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ELECTRICAL ENGINEERING TECHNOLOGY (10-662-1A) *Associate of Applied Science Degree* Most Courses Offered at iMET Center
	Science, Technology, Engineering & Mathematics	Engineering & Technology	

PROGRAM DESCRIPTION

Electrical Engineering Technology focuses on the installation, maintenance, modification, diagnosis, and troubleshooting of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, microprocessors, optoelectronics, communications, and industrial electronics.

PROGRAM LEARNING OUTCOMES

Graduates of the Electrical Engineering Tech. Associate Degree Program should be able to:

1. Apply electronic theory to practice.
2. Operate test equipment.
3. Build electronic circuits and systems.
4. Evaluate the operation of electronic circuits or systems.
5. Communicate technical information.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Science, Technology, Engineering & Mathematics	**Career Pathway ►** Engineering & Technology	**ELECTRICAL ENGINEERING TECHNOLOGY** **(10-662-1B) – Biomedical Engineering Technology** *Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		605-113	*	DC/AC I		3	2-2
		605-130	*	Digital Electronics		4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 2		605-114	*	DC/AC II	Prereq: 605-113; 804-115	3	2-2
		605-120	*	Electronic Devices I	Prereq: 605-113	4	2-4
		662-102	*	Medical Devices Function & Use I		3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		804-197		College Algebra & Trig w/ Apps	Prereq: 804-115	5	5-0
Semester 3		605-121	*	Electronic Devices II	Prereq: 605-120	4	2-4
		605-190	*	Microprocessors	Coreq: 605-114; 605-121	4	2-4
		662-112	*	DC/AC III	Prereq: 605-114	3	2-2
		804-198	*	Calculus 1	Prereq: 804-197	4	4-0
		806-143	*	College Physics 1	Prereq: 804-113 or 804-115	3	2-2
Semester 4		662-124	*	Electronic Circuit Analysis	Prereq: 605-120	3	2-2
		662-103	*	Medical Devices Function & Use II		3	2-2
		662-101	*	Safety in Healthcare		1	1-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives: 605-150 Industrial Electronics (3 Cr) 605-133 Industrial Data Communications (3 Cr) 804-181 Calculus 2 (4 Cr)					
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ELECTRICAL ENGINEERING TECHNOLOGY (10-662-1B) – Biomedical Engineering Technology *Associate of Applied Science Degree* Most Courses Offered at iMET Center
	Science, Technology, Engineering & Mathematics	Engineering & Technology	

PROGRAM DESCRIPTION

Electrical Engineering Technology focuses on the installation, maintenance, modification, diagnosis, and troubleshooting of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, microprocessors, optoelectronics, communications, and industrial electronics.

PROGRAM LEARNING OUTCOMES

Graduates of the Electrical Engineering Tech. Associate Degree Program should be able to:

1. Apply electronic theory to practice.
2. Operate test equipment.
3. Build electronic circuits and systems.
4. Evaluate the operation of electronic circuits or systems.
5. Communicate technical information.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Science, Technology, Engineering & Mathematics	**Career Pathway ►** Engineering & Technology	**ELECTRICAL ENGINEERING TECHNOLOGY** **(10-662-1C) – Sustainable Energy Systems** *Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		605-113	*	DC/AC I		3	2-2
		605-130	*	Digital Electronics		4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 2		605-114	*	DC/AC II	Prereq: 605-113; 804-115	3	2-2
		605-120	*	Electronic Devices I	Prereq: 605-113	4	2-4
		482-110	*	Sustainable Energy, Intro to		2	1-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		804-197		College Algebra & Trig w Apps	Prereq: 804-115	5	5-0
Semester 3		605-121	*	Electronic Devices II	Prereq: 605-120	4	2-4
		605-190	*	Microprocessors	Coreq: 605-114; 605-121	4	2-4
		662-112	*	DC/AC III	Prereq: 605-114	3	2-2
		804-198	*	Calculus 1	Prereq: 804-197	4	4-0
		482-111	*	Sustainable Energy: Gen of Elec	Prereq: 482-110	2	1-2
Semester 4		662-124	*	Electronic Circuit Analysis	Prereq: 605-120	3	2-2
		482-112	*	Capstone Design Project	Prereq: 482-110; 482-111	3	2-2
		806-143	*	College Physics 1	Prereq: 804-113 or 804-115	3	2-2
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives: 605-150 Industrial Electronics (3 Cr) 605-133 Industrial Data Communications (3 Cr) 804-181 Calculus II (4 Cr)					
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ELECTRICAL ENGINEERING TECHNOLOGY (10-662-1C) – Sustainable Energy Systems *Associate of Applied Science Degree* Most Courses Offered at iMET Center
	Science, Technology, Engineering & Mathematics	Engineering & Technology	

PROGRAM DESCRIPTION

Electrical Engineering Technology focuses on the installation, maintenance, modification, diagnosis, and troubleshooting of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, microprocessors, optoelectronics, communications, and industrial electronics.

PROGRAM LEARNING OUTCOMES

Graduates of the Electrical Engineering Tech. Associate Degree Program should be able to:

1. Apply electronic theory to practice.
2. Operate test equipment.
3. Build electronic circuits and systems.
4. Evaluate the operation of electronic circuits or systems.
5. Communicate technical information.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ELECTRO-MECHANICAL TECHNOLOGY (10-620-1)
	Manufacturing	Manufacturing Production Process Development	*Associate of Applied Science Degree* Most Courses Offered at Elkhorn Campus and Lakeview Center

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		605-113	*	DC/AC I		3	2-2
		612-102	*	Pneumatics/Hydraulics, Intro to		3	2-2
		620-103	*	Intro to Industrial Controls	Coreq: 605-113	4	2-4
		628-109	*	Mechanical Skills for Technicians		3	1-4
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
Semester 2		620-111	*	Intro to Industrial Solid State Circuits	Prereq: 605-113	4	2-4
		620-140	*	Programmable Controllers	Prereq: 620-103	2	1-2
		628-111	*	Computer Assisted Programming/ Robot and FMS		3	1-4
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		806-154		General Physics 1	Prereq: 804-115	4	3-2
Semester 3		620-110	*	Robotics Mechanics I	Prereq: 605-113	3	2-2
		620-145	*	Programmable Logic Controllers/Adv.	Prereq: 620-140	3	1-4
		620-150	*	Electromechanical Drives	Prereq: 605-113	3	1-4
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
Semester 4		620-102	*	Process Controls	Coreq: 620-111	3	2-2
		620-113	*	Troubleshooting Electrical/Electronic Systems	Prereq: 620-102; Coreq: 620-145	3	2-2
		625-121	*	MSSC Certification Preparation & Assessment		2	2-0
		628-112	*	Computer Aided Manufacturing, Adv.	Prereq: 628-111; Coreq: 620-145	3	1-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

196-135 Business Concepts, Ethics, Prin. (2 Cr)
606-126 AutoCAD, Introduction (2 Cr)
890-103 Employability Skills (2 Cr)
628-108 Field Experience (2 Cr)

Minim Program Total Credits Required 69

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**ELECTRO-MECHANICAL TECHNOLOGY (10-620-1)**
	Manufacturing	Manufacturing Production Process Development	*Associate of Applied Science Degree* **Most Courses Offered at Elkhorn Campus and Lakeview Center**

PROGRAM DESCRIPTION

The emerging field of *Electro-Mechanical Technology* and associated robotics equipment is covered in this program, which can be completed in two years of study if taken full-time. Topics covered during classroom lectures and through practical hands-on experience on modern equipment include troubleshooting manufacturing processes with programmable logic controllers (PLC), robotics, industrial electrical and hydraulic systems, mechanical power transfer systems and process control systems. Other items which are covered include technical report writing, human relations, and communication skills.

PROGRAM LEARNING OUTCOMES

Graduates of the Electro-Mechanical Technology Associate Degree Program should be able to:

1. Perform work safely.
2. Troubleshoot electrical and mechanical systems and devices.
3. Repair electrical and mechanical systems.
4. Communicate technical information.
5. Integrate electrical and mechanical systems and devices.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for theses major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A hand calculator capable of trigonometric functions is required; cost is approximately $25.
3. Safety glasses are required in labs. If prescription safety glasses are necessary, allow a minimum of 90 days.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ELECTRONICS (10-605-1)
GATEWAY TECHNICAL COLLEGE	Science, Technology, Engineering & Mathematics	Engineering & Technology	*Associate of Applied Science Degree* Most Courses Offered at iMET Center

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		605-113	*	DC/AC I		3	2-2
		605-130	*	Digital Electronics		4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 2		605-114	*	DC/AC II	Prereq: 605-113; 804-115	3	2-2
		605-120	*	Electronic Devices I	Prereq: 605-113	4	2-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		804-197		College Algebra & Trig w Apps	Prereq: 804-115	5	5-0
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
Semester 3		605-121	*	Electronic Devices II	Prereq: 605-120	4	2-4
		605-133	*	Industrial Data Communications	Prereq: 605-113 OR 605-107	3	2-2
		605-138	*	Circuit Construction and Repair		3	1-4
		605-190	*	Microprocessors	Coreq: 605-114; 605-121	4	2-4
Semester 4		605-136	*	PLC System Design	Prereq: 605-130	3	2-2
		605-150	*	Industrial Electronics	Prereq: 605-114; 605-120	3	1-4
		806-154	*	General Physics 1	Prereq: 804-115	4	3-2
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives: 605-181 Computer Hardware Arch (3 Cr); 605-182 Computer Interfacing Tech (3 Cr); 605-184 Data Acquisition (3 Cr)					
					Minimum Program Total Credits Required	***69***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**ELECTRONICS** **(10-605-1)** *Associate of Applied Science Degree* **Most Courses Offered at iMET Center**
	Science, Technology, Engineering & Mathematics	Engineering & Technology	

PROGRAM DESCRIPTION

Electronics focuses on the installation, maintenance, modification, diagnosis, and troubleshooting of a wide variety of electronic equipment. In addition to comprehensive training in electronic theory, lab experience is an integral part of the program. The study areas include AC/DC principles, transistor operation, digital circuits, microprocessors, optoelectronics, communications, and industrial electronics. The operation and use of various test and diagnostic equipment is included throughout the curriculum. The program prepares the students for a broad range of entry-level electronic technician positions.

PROGRAM LEARNING OUTCOMES

Graduates of the Electronics Associate Degree Program should be able to:

1. Apply electronic theory to practice.
2. Operate test equipment.
3. Build electronic circuits and systems.
4. Evaluate the operation of electronic circuits or systems.
5. Communicate technical information.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	EMERGENCY MEDICAL TECHNICIAN (30-531-3) *Technical Diploma* Most Courses Offered at HERO Center
	911 Public Safety, Corrections & Security	Emergency and Fire Management Services	

Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
531-326	Emergency Medical Technician	Prereq: Department Consent	5	4-4-2
		Minimum Program Total Credits Required	***5***	

Effective 2016/2017	Career Cluster ►	Career Pathway ►	EMERGENCY MEDICAL TECHNICIAN (30-531-3)
	Public Safety, Corrections & Security	Emergency and Fire Management Services	*Technical Diploma* Most Courses Offered at HERO Center

PROGRAM DESCRIPTION

Emergency Medical Technician is a 180 hour entry-level training in emergency medicine. This program provides students the skills and knowledge needed to assess and manage all types of injuries and acute illnesses while providing safe and rapid patient transport to an appropriate medical facility. Components of the course include lecture, practical lab, and hospital clinical experience. Upon program completion, students are prepared to take the National Registry of Emergency Medical Technicians® examination to be licensed as an Emergency Medical Technician in Wisconsin. Students wishing to pursue other levels of EMS licensure, such as Advanced EMT or Paramedic, must first be licensed as an Emergency Medical Technician before being eligible to register in subsequent EMS licensure programs.

PROGRAM LEARNING OUTCOMES

Graduates of the Emergency Medical Technician Technical Diploma Program should be able to:

1. Understand the legal liabilities and requirements of professional conduct to operate as an Emergency Medical Technician as outlined in HSS 110 of the Wisconsin Administrative Code.
2. Demonstrate skills in patient extrication, packaging, and safe movement.
3. Perform cardiac arrest management and airway management of the adult and pediatric patient.
4. Perform a successful assessment, treatment plan, and packaging for trauma and medical patients in both the adult and pediatric population.
5. Demonstrate the ability to interact with patients in a compassionate and professional manner.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 5 credits with an average of 2.0 or above.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	EMT - PARAMEDIC (31-531-1) *Technical Diploma* Most Courses Offered at HERO Center
GATEWAY TECHNICAL COLLEGE	9m Public Safety, Corrections & Security	Emergency and Fire Management Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		531-911	*	EMS Fundamental	Prereq: 838-105 (See Notes 1 & 2)	2	2-0
		531-912	*	Paramedic Medical Principles	Coreq: 531-911	4	4-0
		531-913	*	Adv. Patient Asses. Principles	Coreq: 531-911	3	2-2
		531-914	*	Adv. Pre-Hospital Pharmacology	Coreq: 531-911	3	2-2
		531-915	*	Paramedic Respiratory Mgt.	Coreq: 531-911	2	1-2
		531-917	*	Paramedic Clinical/Field I	Prereq: 531-912 (See Notes 3 & 4)	3	0-0-0-12
		531-955	*	Paramedic Cardiology 1	Prereq: 531-912	2	1.5-1
		531-956	*	Paramedic Cardiology 2	Prereq: 531-955	2	1-2
Semester 2		531-918	*	Adv. Emergency Resuscitation	Coreq: 531-955	1	0-2
		531-919	*	Paramedic Medical Emergencies	Coreq: 531-955	4	3-2
		531-920	*	Paramedic Trauma	Coreq: 531-955	3	2-2
		531-921	*	Special Patient Populations	Coreq: 531-955	3	2-2
		531-922	*	EMS Operations	Coreq: 531-955	1	1-0
		531-923	*	Paramedic Capstone	Coreq: 531-955	1	0-2
		531-924	*	Paramedic Clinical/Field II	Prereq: 531-955 (See Notes 3 & 4)	4	0-0-0-16

Minimum Program Total Credits Required ***38***

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 10-531-1 Paramedic Technician program can earn their associate degree by completing an additional 32 credits. Please see your academic advisor for details.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$340	$5,640	$0	24.0%	EMTs and Paramedics (29-2041)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.
[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Public Safety, Corrections & Security	**Career Pathway ►** Emergency and Fire Management Services	**EMT - PARAMEDIC** **(31-531-1)** *Technical Diploma* **Most Courses Offered at HERO Center**

PROGRAM DESCRIPTION

Program Description: Paramedic requires students to be licensed in Wisconsin at the Emergency Medical Technician (EMT), Advanced EMT (EMT Intermediate Technician), or EMT Intermediate level and be current in Healthcare Provider CPR. Paramedics can perform more acute care and administer advanced drug therapies. They can also perform surgical procedures to open airways and provide resuscitative drugs. Paramedics have an increased knowledge of lifesaving skills as well as advanced emergency assessment expertise. This program is offered on a part time basis: either two evenings a week and Saturdays or an alternating day class 2-3 days a week to accommodate the typical 24 hour on/48 hour off schedule worked by many FF/EMS agencies. At the end of the program, students will take a final Gateway Technical College written and practical exam, and after successful completion students will be eligible to test and credential through the National Registry of Emergency Medical Technicians®. The program includes approximately 650 hours of classroom lecture and skills lab, and approximately 500 hours of supervised hospital clinical and field time. Satisfactory completion of clinical/field time is competency based so actual number of hours may vary from student to student. Graduates of this program can expect to find employment with private ambulance companies, fire departments, or hospital emergency rooms. Students finishing the first two semesters of the program (the 531 courses) are eligible to receive the Paramedic Technical Diploma (31-531-1). All courses in the EMT-Paramedic diploma program can be applied to the Paramedic Technician associate degree.

Program Goal: To prepare competent entry-level Emergency Medical Technician-Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains, with or without exit points at the Emergency Medical Technician-Intermediate and/or Emergency Medical Technician-Basic, and/or First Responder levels.

PROGRAM LEARNING OUTCOMES

Graduates of the EMT - Paramedic Program should be able to:

1. Prepare for incident response and EMS operations.
2. Integrate pathophysiological principles and assessment findings to provide appropriate patient care.
3. Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters.
4. Communicate effectively with others.
5. Demonstrate professional behavior.
6. Meet state and national competencies listed for paramedic credentialing.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must have current CPR certification.
4. Students must have current Wisconsin EMS licensure.
5. Students must submit official high school, GED, or HSED transcript.
6. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.
7. Students must complete a Background Disclosure Form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal Backgrounds. Positive background checks may negatively impact your ability to pursue a Health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

GRADUATION REQUIREMENTS

1. Minimum 38 credits with an average of 2.0 or above.
2. *Minimum of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Prior to enrolling in paramedic level courses, a student must satisfactorily complete an EMS specific pre-admission screening which includes both written and practical components at the Emergency Medical Technician level (EMT) and attend an informational orientation with the program staff.
3. Drug testing and immunizations are required prior to admission to the first clinical course (531-917).
4. Applicants of this program are subject to a review of their criminal backgrounds as part of the training center training permit process. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College.
5. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	FACILITIES MAINTENANCE (31-443-2) *Technical Diploma* Most Courses Offered at Kenosha Campus
	Architecture & Construction	Maintenance / Operations	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		442-101	*	Welding Basics			0-2
		OR				1	
		443-101		Forklift Operation & Maintenance			1-0
		601-111	*	Workplace Fundamentals		1	0-2
		605-107	*	Fund. of Electricity/Electronics	(See Note 3)	3	1-4
		103-143		Computers for Professionals	(See Notes 1 & 4)	3	2-2
		801-301		Writing Principles	Prereq: 851-756 (See Note 1)	1	2-0
		804-370		Mathematics I, Applied	Prereq: 854-760 (See Note 1)	2	4-0
Semester 2		443-311	*	Electrical Applications	Prereq: 605-107; Coreq: 601-111	3	2-4
		443-312	*	Basic Carpentry and Repair	Coreq: 601-111	2	1-3
		443-313	*	Interior Finishing	Coreq: 601-111	2	1-3
		443-314	*	Mechanical Systems	Coreq: 601-111	2	1-3
		443-315	*	Industrial Preventative Maintenance	Coreq: 601-111	2	1-3
		601-112	*	Environmental Systems	Coreq: 601-111	2	1-2
		461-120	*	Small Power Equipment		3	1-4
		804-371		Mathematics II, Applied	Prereq: 804-370	1	2-0

Minimum Program Total Credits Required 28

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$2,445	$4,475	Maintenance and Repair Workers (49-9071)

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**FACILITIES MAINTENANCE** **(31-443-2)** *Technical Diploma* **Most Courses Offered at Kenosha Campus**
	Architecture & Construction	Maintenance / Operations	

PROGRAM DESCRIPTION

Facilities Maintenance provides the training needed to service, maintain, and operate equipment found in public, commercial, and other buildings. Typical operations employing facilities (building) maintenance workers include hospitals, government buildings, schools, hotels, apartment buildings, light manufacturing facilities, and office buildings. The required skills and knowledge include basic carpentry, basic electricity, basic HVAC (heating, ventilating, and air conditioning), basic plumbing, electrical control devices, and safety.

PROGRAM LEARNING OUTCOMES

Graduates of the Facilities Maintenance Diploma Program should be able to:

1. Repair/replace basic electrical components.
2. Perform preventative maintenance procedures.
3. Perform basic drywall repairs.
4. Perform basic plumbing repairs.
5. Use portable tools safely.
6. Apply sustainable practices to facility operations.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 28 credits with an average of 2.0 or above.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. 605-107 Course Cost includes Snap On Digital Multi Meter #EEDM525D.
4. Formerly 103-199, PC Basics/Microsoft Office.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	FIRE MEDIC (10-531-2) *Associate of Applied Science Degree* Most Courses Offered at HERO Center
	911 Law, Public Safety, Corrections & Security	Emergency & Fire Management Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		503-101	*	Advanced Firefighting Concepts I	Prereq: 503-142 & Advisor Consent	4	1-6
		503-103	*	Fire Medic Health & Wellness I	Prereq: Advisor Consent	1	0-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-107		College Mathematics	Prereq: 834-109 (See Note 1)	3	3-0
		809-172		Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 7)	3	3-0
Semester 2		503-102	*	Advanced Firefighting Concepts II	Prereq: 503-101	4	1-6
		503-104	*	Fire Medic Health & Wellness II	Prereq: 503-103	1	0-2
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		806-134		General Chemistry	Prereq: 804-107	4	3-2
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 7)	3	3-0
Semester 3		531-911	*	EMS Fundamental	Prereq: 838-105 (See Notes 1 & 2)	2	2-0
		531-912	*	Paramedic Medical Principles	Coreq: 531-911	4	4-0
		531-913	*	Adv. Patient Asses. Principles	Coreq: 531-911	3	2-2
		531-914	*	Adv. Pre-Hospital Pharmacology	Coreq: 531-911	3	2-2
		531-915	*	Paramedic Respiratory Mgt.	Coreq: 531-911	2	1-2
		531-917	*	Paramedic Clinical/Field I	Coreq: 531-912	3	0-0-0-12
		531-955	*	Paramedic Cardiology 1	Coreq: 531-911	2	1.5-1
		531-956	*	Paramedic Cardiology 2	Prereq: 531-955	2	1-2
Semester 4		531-918	*	Adv. Emergency Resuscitation	Coreq: 531-955	1	0-2
		531-919	*	Paramedic Medical Emergencies	Coreq: 531-955	4	3-2
		531-920	*	Paramedic Trauma	Coreq: 531-955	3	2-2
		531-921	*	Special Patient Populations	Coreq: 531-955	3	2-2
		531-922	*	EMS Operations	Coreq: 531-955	1	1-0
		531-923	*	Paramedic Capstone	Coreq: 531-955	1	0-2
		531-924	*	Paramedic Clinical/Field II	Prereq: 531-955 (See Notes 3 & 4)	4	0-0-0-16
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**FIRE MEDIC** **(10-531-2)** *Associate of Applied Science Degree* **Most Courses Offered at HERO Center**
	Public Safety, Corrections & Security	Emergency & Fire Management Services	

PROGRAM DESCRIPTION

Fire Medic graduates take their initial firefighter and EMT training to the next level through a performance-based advanced firefighter training program. Students are able to complete five advanced firefighting tactics, apply health & wellness principles to their own professional lives, earn a valid candidate physical ability test (CPAT) certificate and earn a paramedic license. Requisite building construction, fire behavior, fire protection systems, fire department risk management and soft skills are stressed, along with life-long learning and living habits to become safe and effective professional Fire Medic providers. This program may be completed in two years of study if taken full-time.

The Paramedic portion requires students to be licensed in Wisconsin at the Emergency Medical Technician (EMT), Advanced EMT (EMT Intermediate Technician), or EMT Intermediate level and be current in Healthcare Provider CPR. Paramedics can perform more acute care and administer advanced drug therapies. Paramedics have an increased knowledge of lifesaving skills as well as advanced emergency assessment expertise. At the end of the program, students will take a final Gateway Technical College written and practical exam, and after successful completion students will be eligible to test and credential through the National Registry of Emergency Medical Technicians®. The program includes approximately 650 hours of classroom lecture and skills lab, and approximately 500 hours of supervised hospital clinical and field time. Students who successfully complete the 531 courses are eligible to receive the Paramedic Technical Diploma (31-531-1). All courses in the EMT-Paramedic diploma can be applied to the Paramedic Technician associate degree.

PROGRAM LEARNING OUTCOMES

Graduates of the Fire Medic Associate Degree Program should be able to:

1. Demonstrate professional conduct by displaying personal code of ethics, positive work ethic, flexibility, teamwork skills, physical fitness, safe procedures, and sensitivity to diverse cultures and individuals.
2. Apply incident management skills to emergency incidents.
3. Meet professional fire and EMS credentialing standards.
4. Communicate clearly and effectively both verbally and through written documentation with clients, coworkers, other agencies, and supervisors.
5. Integrate pathophysiological principles and assessment findings to appropriate patient care.
6. Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters.
7. Meet state and national competencies listed for paramedic credentialing.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete Firefighter 1 certification prior to admission.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.
6. Students must have current CPR certification.
7. Students must have current Wisconsin EMS licensure.
8. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Minimum grade of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Prior to enrolling in paramedic level courses (531), a student must satisfactorily complete an EMS specific pre-admission screening which includes both written and practical components at the Emergency Medical Technician level (EMT) and attend an informational orientation with program staff.
4. Drug testing and immunizations are required prior to admission to the first clinical course (531-917).
5. Applicants of this program are subject to review of their criminal backgrounds as part of the training center training permit process. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College.
6. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
7. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	Firefighter Technician (31-503-1) *Technical Diploma* Most Courses Offered at HERO Center
	9m Law, Public Safety, Corrections & Security	Emergency and Fire Management Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		503-142	*	Firefighting Principles		4	2-4
		531-326	*	Emergency Medical Technician	Prereq: Department Consent	5	4-4-2
		503-103	*	Fire Medic Health & Wellness I	Prereq: Advisor Consent	1	0-2
		503-151	*	Fire Prevention		4	4-0
Semester 2		503-106	*	Firefighting Principles II	Prereq: 503-142	3	2-2
		503-101	*	Advanced Firefighting Concepts I	Prereq: 503-142 & Advisor Consent	4	1-6
		503-104	*	Fire Medic Health & Wellness II	Prereq: 503-103	1	0-2
		503-102	*	Advanced Firefighting Concepts II	Prereq: 503-101	4	1-6
		503-155	*	Fire Protection Hydraulics	Prereq: 503-142	4	3-2

Minimum Program Total Credits Required ***30***

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	Firefighter Technician (31-503-1) *Technical Diploma* Most Courses Offered at HERO Center
	Public Safety, Corrections & Security	Emergency and Fire Management Services	

PROGRAM DESCRIPTION

The Firefighter Technical Diploma will provide applicants with foundational entry level knowledge and practice to pursue a career in the fire service. Students are able to complete five advanced firefighting tactics, apply health & wellness principles to their own professional lives, and earn a valid candidate physical ability test (CPAT) certificate. Requisite building construction, fire behavior, fire protection systems, fire department risk management and soft skills are stressed, along with life-long learning and living habits to become safe and effective fire service professionals. Students will be eligible for employment as a firefighter for volunteer or career service. Additionally, the certificate provides a pathway to the FireMedic and Paramedic Associate Degree Programs.

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math placement assessments.
3. Students must submit official high school, GED, or HSED transcript.
4. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 30 credits with an average of 2.0 or above.
2. *Minimum of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

PROGRAM LEARNING OUTCOMES

Graduates of the Firefighter Technician Program should be able to:

1. Demonstrate professional conduct by displaying personal code of ethics, positive work ethic, flexibility, teamwork skills, physical fitness, safe procedures, and sensitivity to diverse cultures and individuals.
2. Apply incident management skills to emergency incidents.
3. Meet professional fire and EMS credentialing standards.
4. Communicate clearly and effectively both verbally and through written documentation with clients, coworkers, other agencies, and supervisors

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Eye protection may be required in some courses. If prescription safety glasses are required, allow a minimum of 90 days,
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

OTHER INFORMATION

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	Foundations of Teacher Education (10-522-2) *Associate of Applied Science Degree* Most Courses Offered Online
	Education & Training	Administration and Administrative Support	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		522-103	*	IA: Introduction to Educational Practices		3	2-2
		522-106	*	IA: Child and Adolescent Development		3	3-0
		522-111	*	IA: Guiding and Managing Behavior		3	2-2
		804-107		College Mathematics	Prereq: 834-109 (See Note 2)	3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 2)	3	3-0
Semester 2		522-102	*	IA: Techniques for Reading and Language Arts	Prereq: 838-105 (See Note 2)	3	2-2
		522-107	*	IA: Overview of Special Education		3	3-0
		522-118	*	IA: Techniques for Math	Prereq: 804-107	3	1-4
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 2)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 2 & 6)	3	3-0
Semester 3		522-122	*	IA: Advanced Reading/Language Arts	Prereq: 522-102	3	2-2
		522-132	*	IA: Positive Classroom Mgt Tech	Prereq: 522-111	3	3-0
		522-101	*	IA: Teamwork in School Settings		3	2-2
		522-129	*	IA: Practicum 1	Prereq: Advisor Consent (See Notes 1, 4 & 5)	3	1-0-0-6
		809-172		Intro to Diversity Studies		3	3-0
		809-188		Psychology, Developmental	Prereq: 838-105 (See Note 2)	3	3-0
Semester 4		522-104	*	IA: Technology & Media Resources		3	2-2
		522-120	*	IA: Techniques for Science		3	1-4
		522-124	*	IA: Supporting Students with Disabilities		3	3-0
		522-131	*	IA: Practicum 2	Prereq: 522-129 & Advisor Consent (See Notes 1, 4 & 5)	3	1-0-0-6
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 2 & 6)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		103-143 Computers for Professionals (3 Cr)			520-161 Child Adol. Mental Health (3 Cr)		
		520-110 Community Resources & Service (3 Cr)			802-111 Spanish I (3 Cr)		
		520-151 Family Theory & Practice (3 Cr)					
					Minimum Program Total Credits. Required	***69***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	Foundations of Teacher Education (10-522-2) *Associate of Applied Science Degree* Most Courses Offered Online
	Education & Training	Administration and Administrative Support	

PROGRAM DESCRIPTION

Foundations of Teacher Education is an Associate of Applied Science degree, which prepares qualified individuals to work directly with students under the supervision of a licensed teacher. The duties include assisting children with math, reading, and writing assignments, as well as handling classroom management, clerical, and other tasks related to instruction. This program meets Title I requirements. Duties may also include monitoring student activities, correcting papers, tutoring, one-on-one activities, and small group facilitation. In addition, instructional assistants work on classroom displays, assist children with computers and media, and supervise various classroom and school events. Instructional assistants may be hired to provide instructional services to students from pre-k through high school; however, the focus of this program is on preparing grads to work primarily in elementary and middle school levels.

PROGRAM LEARNING OUTCOMES

Graduates of the Instructional Assistant Associate Degree Program should be able to:

1. Support all learning based on knowledge of subject matter.
2. Identify developmentally appropriate child/adolescent physical, social/emotional, intellectual, and language characteristics and their developmental and environmental impact on learning.
3. Adapt instruction to meet the diverse needs of all learners.
4. Utilize a variety of instructional strategies, media, and technology to foster the development of critical thinking and problem solving.
5. Use proactive classroom management techniques to promote a positive class climate, intrinsic motivation, and optimal learning.
6. Demonstrate effective written and verbal communication in working collaboratively within the school setting and interactions with students and families.
7. Assist in plan. and implement.instructional strategies that reflect the learning cycle.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing,and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a background information form and pay a criminal background check fee. Applicants of this program are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. This course requires advisor consent, which will only be given when proper physical and immunization records are submitted.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment See an advisor for details.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Admittance into the Instructional Assistant program is required before taking this course.
5. Students must submit all health and immunization forms prior to the first day of attending these courses.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.
7. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

PROGRAM LEARNING OUTCOMES (CONTINUED)

8. Utilize informal assessment strategies to collect data for the support of student learning.
9. Incorporate the reflective process to promote student learning and prof.growth.
10. Assume professional responsibility for ethical, moral, and legal policies and procedures.
11. Provide for health and safety needs of students.

OTHER INFORMATION

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EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	GAME PROGRAMMING (10-810-16) *Advanced Technical Certificate* Most Courses Offered at Kenosha Campus
	Information Technology	Programming & Software Development	

√	Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
	152-157	Game Programming I	Prereq: 152-126	3	2-2
	152-186	Mobile Game Programming	Prereq: 152-157	3	2-2
	152-124	Computer Programming C	Prereq: 152-126	3	2-2
	152-161	Game Programming Technologies	Prereq: 152-157	2	1-2
	204-162	Graphics for Gaming		1	1-0

Program Total Required ***12***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**GAME PROGRAMMING** **(10-810-16)** *Advanced Technical Certificate* **Most Courses Offered at Kenosha Campus**
	Information Technology	Programming & Software Development	

PROGRAM DESCRIPTION

The *Game Programming* ATC builds on the skills, knowledge, and abilities developed in the IT – Software Developer associate degree, or an equivalent degree program. Students will also develop skills needed to program two and three dimensional computer games. The skills learned in this certificate are transferable to many other industries including multimedia development and animation.

EQUIVALENCY

This program is designed for students who have completed one of the following Gateway Technical College Associate Degrees (or have the equivalent knowledge and skills):

IT – Software Developer (10-152-1)

Equivalency can be earned through a combination of prior class work and/or current work experience. For equivalency information, call the campus advisor.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Related associate degree (official transcript required) or equivalent work experience (documented by advisor) required.

GRADUATION REQUIREMENTS

1. 12 Credits with a minimum of 2.0 or above.

For a complete list of Graduation Requirements check the Student Handbook.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Architecture & Construction	**Career Pathway ►** Maintenance/ Operations	**GAS UTILITY CONSTRUCTION AND SERVICE** **(31-469-2)** *Technical Diploma* **Most Courses Offered at Kenosha Campus**

Δ*Suggested Sequence*	√	*Course Number*		*Course Title*	*Requisites*	*Credits*	*Hrs/Wk Lec - Lab*
Semester 1		804-370		Mathematics I/Applied	Prereq: 854-760 (See Note 1)	2	4-0
		469-301	*	Intro to Gas Utility Industry		1	2-0
		469-302	*	Site Safety		2	2-2
		469-303	*	Equipment Operations: Intro	Coreq: 469-302	3	2-4
Semester 2		801-301		Writing Principles	Prereq: 851-756 (See Note 1)	1	2-0
		442-102	*	Intro to Welding		2	0-4
		469-304	*	Field Operations	Prereq: 469-302; 469-303	4	2-6
		469-307	*	Plastic Piping		4	2-6
		469-306	*	Steel Piping	Coreq: 442-102	2	2-2
		601-301	*	Basic Electricity and Circuits		2	2-2
		469-305	*	CDL Prep for Utility Workers		1	2-0
		469-310	*	Propane Operations		1	2-0
Semester 3		801-302		Speaking Principles		1	2-0
		469-309	*	Gas Appliance Operation		3	3-3
		469-308	*	National Fuel Gas Code for Utility Workers		1	2-0
		601-302	*	Gas Appliance Controls Systems	Prereq: 601-301; 469-302	2	2-2

Minimum Program Total Credits Required ***32***

Δ*Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	GAS UTILITY CONSTRUCTION AND SERVICE (31-469-2) *Technical Diploma* Most Courses Offered at Kenosha Campus
	Architecture & Construction	Maintenance/ Operations	

PROGRAM DESCRIPTION

This Technical Diploma prepares the individual for a career in the Gas Utilities. The program emphasizes the skills needed to install, inspect, repair and maintain natural gas and propane gas distribution systems. Students will develop competencies in the operation of common construction equipment, polyethylene and steel pipe construction and gas appliance operation, start-up and safety. The Programs outcomes are aligned and verified through calibration with Midwest Energy Operator Qualification modules.

PROGRAM LEARNING OUTCOMES

Graduates of the Gas Utility Construction and Service Program should be able to:

1. Communicate technical information.
2. Operate construction tools and equipment.
3. Join polyethylene and steel pipe.
4. Install gas piping for natural and propane gases.
5. Maintain gas distribution systems.
6. Service gas appliances.
7. Apply customer service skills.
8. Develop skills to pass the State of Wisconsin CDL knowledge exam.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 32 credits with an average of 2.0 or above in general education courses.
2. Students must obtain a minimum of 2.0 (“C”) in all core classes to align with Midwest Energy Association (MEA) and Operator Qualified Standards to utility workers Mandated by the Federal Office of Pipeline Safety.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Safety glasses are required in labs. If prescription safety glasses are required, allow a minimum of 90 days.
4. Individuals in program must be able to obtain a Commercial Driver’s License.
5. Do to Office of Pipeline Safety requirements, students must pass a background check and drug/alcohol screen conducted by a 3rd party.

OTHER INFORMATION

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EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	GEOSPATIAL SURVEYING TECHNICIAN (10-607-7)
	Architecture & Construction	Design & Pre-Construction	*Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		607-103	*	Introduction to Civil Engineering & Architecture		2	1-2
		607-104	*	Building Material & Construction Method		3	2-2
		607-170	*	AutoCAD for Construction Sciences		2	1-2
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Semester 2		607-102	*	Conflict Resolution in CET		2	1-2
		607-136	*	Construction Project Management		2	1-2
		607-187	*	3D CAD: Digital Terrain Modeling		2	1-2
		614-150	*	3D CAD: Building Information Modeling		2	1-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 6)	3	3-0
Summer		607-169	*	Surveying Basics	Prereq: 834-110 (See Note 1)	2	1-2
		607-137	*	Global Positioning Systems	Prereq: 607-169	2	1-2
Semester 3		607-117	*	Geographical Information Systems I		2	1-2
		607-127	*	Civil Engineering Drafting		3	1-4
		607-173	*	Surveying Fundamentals	Prereq: 607-169	3	1-4
		607-128	*	Construction Estimating	Prereq: 607-104	3	2-2
		607-189	*	Geospatial Data Processing	Prereq: 607-169	2	1-2
		806-154		General Physics 1	Prereq: 804-115	4	3-2
Semester 4		607-118	*	Geographical Information Systems II	Prereq: 607-117	2	1-2
		607-150	*	Survey Construction/ Route/ Highway	Prereq; 607-173	4	2-4
		607-188	*	Capstone: Geospatial Surveying Tech	Prereq: Inst. Consent	1	1-0
		607-190	*	Legal Research and Boundary	Prereq: 607-169	4	2-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

607-154 Sewer and Water (2 Cr)
607-132 Structural Mechanics (3 Cr)
607-119 Civil Technology/Internship (1 Cr)
614-138 3D Modeling and Virtualization (1 Cr)

Registered Land Surveyor

This program meets the educational requirements to become a Licensed Land Surveyor in the State of Wisconsin as long as 4 of the 6 elective credits are additional math-related credits approved by the surveying instructor of the CET program.

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Minimum Program Total Credits Required ***70***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**GEOSPATIAL SURVEYING TECHNICIAN** **(10-607-7)** *Associate of Applied Science Degree* **Most Courses Offered at iMET Center**
	Architecture & Construction	Design & Pre-Construction	

PROGRAM DESCRIPTION

The Geospatial Surveying Technician program focuses on a wide variety of aspects within the profession of Civil Engineering – beginning with surveying, transitioning into design, and resulting in construction. The first year classes are mostly the same for programs in the Construction Sciences Group (see Note 6). Basic skills are developed and students are exposed to all areas of the various professions. This allows the student to be able to understand and communicate across the professions, plus it allows the student to discover what area they really enjoy working in. The second year focuses on aspects specific to Geospatial Surveying. The program is designed as a fusion of education and application; hence all the core classes are tied to real world experiences with a significant influx of participation from potential future employers. Some students use this program as a place to prepare themselves to transfer to a four year university. Most, however, use this program as a means to develop the skills that allow them to obtain a productive career in various aspects of land surveying.

PROGRAM LEARNING OUTCOMES

Graduates of the Geospatial Surveying Technician Program should be able to:

1. Utilize modern surveying methods for land surveying measurements and/or construction layout.
2. Process Geospatial Data.
3. Apply Legal Principles of Boundary Retracement..
4. Utilize geometric elements to develop alignments.
5. Produce Survey Maps and Documents
6. Process GIS information (Explore, Create, Analyze, and Display) in order to evaluate data geographically.
7. Employ productivity software to solve technical problems.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcripts.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *A 2.0 (“C”) or above for these specific major core courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to enrollment in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. This is a very intense and challenging program. Poor existing skills, especially poor math skills, can always be improved. As long as you have the heart and desire to succeed, the instructors will work with you.
4. Classes offered at Elkhorn Campus via NODAL delivery. See www.gtc.edu for details.
5. The programs in the Construction Science Group include: Civil Engineering Tech: Highway Technology, Geospatial Surveying Technician, Architectural-Structural Engineering Technician, and Civil Engineering Technology: Fresh Water Resources.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Health Science	**Career Pathway ►** Therapeutic Services	**GERONTOLOGICAL AND REHABILITATIVE NURSING CARE** **(10-810-21)** *Advanced Technical Certificate* **Most Courses Offered Online**

√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
	510-155	*	Principles of Gerontological Nursing	Prereq: Instructor Consent	3	3-0
	510-156	*	Assessment of the Older Adult	Prereq: 510-155 & Instructor Consent	3	2-2
	510-157	*	Rehab Care and Chronic Disease Mgmt	Prereq: 510-155 & Instructor Consent	3	2-2

Program Total Required ***9***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**GERONTOLOGICAL AND REHABILITATIVE NURSING CARE** **(10-810-21)** *Advanced Technical Certificate* **Most Courses Offered Online**
	Health Science	Therapeutic Services	

PROGRAM DESCRIPTION

The ATC in Gerontological and Rehabilitative Nursing Care will enhance the nurse's knowledge and skills in the principles needed for providing expert nursing care for the aging population with a rigorous review of relevant material. There will be a strong emphasis on physiology and evidence based practice. Courses are offered entirely online. Application of theory and promotion of critical reasoning will be supported through the use of unfolding case studies and scenarios.

EQUIVALENCY

This program is designed for students who have completed one of the following Gateway Technical College Associate Degrees (or have the equivalent knowledge and skills):

10-543-1 Nursing-Associate Degree

Equivalency can be earned through a combination of prior class work and/or current work experience. For equivalency information, call the campus advisor.

ADMISSION REQUIREMENTS

1. Related associate degree (official transcript required) or equivalent work experience (documented by advisor) required.

GRADUATION REQUIREMENTS

1. 9 credits with a minimum of "C" or better on all courses.

For a complete list of Graduation Requirements check the Student Handbook.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	GRAPHIC COMMUNICATIONS (10-204-3)
	Arts, A/V Technology & Communications	Visual Arts	*Associate of Applied Science Degree* Most Courses Offered at Elkhorn and Racine Campuses & Online

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		204-100	*	Design Concepts		4	3-2
		204-105	*	Comp. Illustration & Drawing Tech		3	2-2
		204-107	*	Digital Photography, Intro to		3	2-2
		204-125	*	Illustration Media Concepts		3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		204-116	*	Web Page Design For Graphic Designers	Prereq: 204-107	3	2-2
		204-120	*	Multimedia Survey		3	2-2
		204-126	*	Design & Publishing	Prereq: 204-100	3	2-2
		204-127	*	Digital Prepress Fundamentals	Coreq: 204-126	3	2-2
		809-166		Ethics: Theory & Application, Intro to	Prereq: 838-105 (See Note 1)	3	3-0
		804-123	*OR*	Math with Business Applications	Prereq: 834-109 (See Note 1)	3	3-0
		804-113		College Technical Math 1A	Prereq: 834-110 (See Note 1)		
Semester 3		204-109	*	Graphic Design Professional Practices	Prereq: 204-126	3	2-2
		204-134	*	Advanced Problems in Graphic Design	Prereq: 204-126	3	2-2
		204-135	*	Advanced Design Concepts	Prereq: 204-126	4	3-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 4		204-142	*	Applied Exit Strategies/Display Graphic	Prereq: 204-109	3	2-2
		204-143	*	Advanced Illustration		3	2-2
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives: 204-115 Advanced Digital Photography (3 Cr) 204-149 Advanced Web Page Design (3 Cr)					
					Minimum Program Total Credits Required	***68***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**GRAPHIC COMMUNICATIONS** **(10-204-3)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn and Racine Campuses & Online**
	Arts, A/V Technology & Communications	Visual Arts	

PROGRAM DESCRIPTION

Graphic Communications educates students in the practice of design, illustration, and reproductive processes related to the print and audio visual media. Course work includes basic illustration, visual communication, and reproductive concepts with emphasis on development in computer graphic skills. The program includes certain aspects of commercial art and communication/computer graphics, with emphasis on skills training required for the increasingly technological focus of graphic design in today's workplace.

PROGRAM LEARNING OUTCOMES

Graduates of the Graphics Communications Associate Degree Program should be able to:

1. Apply principles of design to develop strategic marketing and communication products and services.
2. Demonstrate proficiency in the use of design software, tools, and technology.
3. Implement creative solutions from concept through completion using a formal process.
4. Apply effective legal and ethical business practices and project management skills.
5. Communicate artwork rationale in formal and informal settings.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 68 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. The Graphic Communications program at Gateway Technical College has course articulation degree completion agreements with UW-Parkside and Carthage College. See an advisor for details.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	HEALTH INFORMATION TECHNOLOGY (10-530-1) *Associate of Applied Science Degree* Most Courses Offered at Racine Campus
	Health Science	Health Informatics	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		103-143	*	Computers for Professionals	Prereq: 103-142 (See Notes 1 & 9)	3	2-2
		501-101	*	Medical Terminology	Prereq: 838-105 (See Note 1)	3	3-0
		530-181	*	Intro to the Health Record	Prereq: Advisor Consent	1	0-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
		806-177		General Anatomy and Physiology	Prereq: 806-134 (See Note 5)	4	3-2
Semester 2		530-176	*	Health Data Management	Prereq: 530-181	2	1-2
		530-182	*	Human Diseases for the Health Professions	Prereq: 501-101; 806-189 **OR** 806-177 & Advisor Consent	3	3-0
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-166		Ethics: Theory & Applications, Intro to	Prereq: 838-105 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 11)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 11)	3	3-0
Semester 3		530-160	*	Healthcare Informatics	Prereq: 103-143; 530-176	4	3-2
		530-177	*	Healthcare Stats & Research	Prereq: 530-176	2	2-0
		530-178	*	Healthcare Law & Ethics	Prereq: 530-176	2	2-0
		530-197	*	ICD Diagnosis Coding	Prereq: 501-101; 806-177; 530-181; 530-182 & Advisor Consent	3	2-2
		530-199	*	ICD Procedure Coding	Prereq: 501-101; 806-177; 530-181; 530-182 & Advisor Consent	2	2-0
Semester 4		530-161	*	Health Quality Management	Prereq: 530-177	3	3-0
		530-184	*	CPT Coding	Prereq: 530-181; 530-182	3	2-2
		530-185	*	Healthcare Reimbursement	Prereq: 530-182; 530-197; 530-199 Coreq: 530-184	2	2-0
		530-194	*	HIM Organizational Resources	Prereq: Advisor Consent Coreq: 530-161	2	2-0
		530-195	*	Applied Coding	Prereq: Advisor Consent Coreq: 530-185	2	2-0
		530-196	*	Professional Practice 1	Prereq: 530-177; 530-178; 530-197; 530-199 Coreq: 530-184	3	1-0-6
Summer		530-198	*	Professional Practice 2	Prereq: 530-196; 530-160 Coreq: 530-161; 530-194; 530-195	3	1-0-6
Electives		***Take 5 elective credits. Any associate degree level course may be taken as an elective.***				***5***	
		Suggested Electives:					
		103-106 Microsoft Access II (1 Cr)			103-105 Microsoft Access (1 Cr)		
		103-107 Microsoft Access III (1 Cr)			890-161 Critical Thinking (3 Cr)		
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HEALTH INFORMATION TECHNOLOGY (10-530-1)
	Health Science	Health Informatics	*Associate of Applied Science Degree* **Most Courses Offered at Racine Campus**

PROGRAM DESCRIPTION

Health Information Technology is a field where healthcare meets the cutting edge of technology. Health Information Technicians are specialists in great demand! The HIM professionals can expect to be in high demand as the health sector expands into the century. In fact, the Bureau of Labor Statistics cites health information technology as one of the fastest growing occupations in the U.S. Health Information Technicians contribute to the quality of care by collecting, analyzing, and reporting health care data. This requires knowledge of disease, treatments, computer systems, and organizational skills. The Health Information (medical records) Technology program is accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) in cooperation with the Council on Accreditation of the American Health Information Management Association. Grads who successfully pass the national accreditation exam may use the credential "RHIT", Registered Health Information Technician.

PROGRAM LEARNING OUTCOMES

Graduates of the Health Information Technology Program should be able to:

1. Manage health data.
2. Apply coding and reimbursement systems.
3. Model professional behaviors and ethics.
4. Maintain electronic applications to manage health information.
5. Apply organizational management techniques.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *A minimum grade of 2.0 ("C") or above for each of these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Clinical sites may require proof of insurance and criminal background checks.
3. A liability insurance of approximately $13 in the fourth semester and summer session is required.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. The prerequisite for this course must have been completed with a minimum grade of a 'C' or better.
6. Students must meet petition requirements prior to enrolling in 530 courses.
7. Formerly 804-106, Intro to College Math.
8. If part-time students cannot complete the HIT or Coding programs within 5 and 3 years respectively, they will be asked to retake any courses that exceed those thresholds. Students are allowed to repeat any HIT/Coding course only one time.
9. Formerly 103-199, PC Basics/Microsoft Office.
10. This program has a second-tier admission process for clinical/practicum/program courses called petitioning. Students are selected based on completion of academic eligibility requirements and district residency. See https://www.gtc.edu/student-services/admissions/what-petitioning for additional information.
11. Transfer credits in Social Science may substitute for this course. See an advisor for details.
12. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	**HEALTH UNIT COORDINATOR** **(30-510-2)** *Technical Diploma* **Most Courses Offered at Racine Campus**
	Health Science	Support Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		501-101	*	Medical Terminology	Prereq: 838-105 (See Note 2)	3	3-0
		501-107	*	Intro to Healthcare Computing	(See Note 1)	2	1-2
		501-104	*	Healthcare Customer Service	Prereq: 851-756 (See Note 2) & Advisor Consent; Coreq: 501-107	2	1-2
		509-302 543-300	*OR	Human Body in Health and Disease Nursing Assistant	Coreq: 501-101 Prereq: Advisor Consent (See Note 7)	3	6-0 4-2
		801-301		Writing Principles	Prereq: 851-756 (See Note 2)	1	2-0
Semester 2		510-301	*	Health Unit Coordinator Procedures I	Prereq: 501-101; 501-104; 501-107 (See Note 5)	3	6-0
		510-302	*	Health Unit Coordinator Procedures II	Prereq: 510-301 (See Note 5)	3	6-0
		510-303	*	Health Unit Coordinator Clinical	Coreq: 510-302 (See Note 5)	3	0-2-6

Minimum Program Total Credits Required 20

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$1,390	$2,970	$2,109	0.0%	Receptionists and Information Clerks (43-4171)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.
[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**HEALTH UNIT COORDINATOR** **(30-510-2)** *Technical Diploma* **Most Courses Offered at Racine Campus**
	Health Science	Support Services	

PROGRAM DESCRIPTION

Health Unit Coordinator prepares the student for employment in a variety of health care settings. The program prepares the student to professionally coordinate health unit operations, transcribe medical orders, communicate effectively in a health care environment, and manage client information. The program includes theory, simulated activities, and experience in a health care setting.

PROGRAM LEARNING OUTCOMES

Graduates of the Health Unit Coordinator Technical Diploma Program should be able to:

1. Manage client information.
2. Integrate the role of the Health Unit Coordinator in the health care system.
3. Coordinate health unit operations.
4. Communicate professionally in the health care environment.
5. Transcribe medical orders.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 20 credits with an average of 2.0 or above.
2. *Minimum Grade of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. This course requires advisor consent, which will be granted only to students who either show the ability to type at 35WPM or complete a keyboarding course.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Clinical sites may require proof of health insurance, immunizations, and a physical.
4. Any non-510 course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. Students must petition prior to enrolling in 510 courses.
6. Clinical sites may be at a facility located anywhere in the Gateway District. Students are responsible for their own transportation.
7. Students choosing to enroll in 543-300 Nursing Assistant will need to review the Notes section of the 30-543-1 Nursing Assistant curriculum sheet for a list of additional requirements for this course. See an advisor for details.
8. This program has a second-tier admission process for clinical/practicum/program courses called petitioning. Students are selected based on completion of academic eligibility requirements and district residency. See https://www.gtc.edu/student-services/admissions/what-petitioning for additional information.
9. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	**HORTICULTURE** **(10-001-1A) – Greenhouse & Marketing** *Associate of Applied Science Degree* **Most Courses Offered at Kenosha Campus**
	Agriculture, Food & Natural Resources	Plant Systems	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		001-137	*	Greenhouse Business and Planning		3	2-2
		001-144 001-136	*OR	Floral Design I / Commercial Landscape Management		3	2-2
		001-146	*	Sustainable Landscape		1	1-0
		001-147	*	Soils and Plant Nutrition		1	1-0
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 1 & 3)	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		001-148	*	Plant Pests and Beneficials		1	1-0
		001-150 001-132	*OR	Floristry Landscape Plants II	Prereq: 001-144	3	2-2
		001-151	*	Greenhouse Crops		3	2-2
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
		804-123		Math Business Applications	Prereq: 834-109 (See Note 1)	3	3-0
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
Semester 3		001-130	*	Landscape Plants I		3	2-2
		001-143	*	Herbaceous Plants		3	2-2
		104-104		Selling Principles		3	3-0
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 4		001-111	*	Horticulture Practicum	Prereq: 001-147; 001-151	3	2-2
		001-128	*	Horticulture Marketing		3	2-2
		001-129	*	Pesticide Applicator Certification		1	1-0
		001-154	*	Alternative Growing Methods		3	2-2
		001-142 104-119	*OR	Vegetable Science Visual Merchandising		3	2-2 1-4
		001-180	*	Horticulture Portfolio	Prereq: 001-147; 151; 130; 143 Coreq: 001-128	1	1-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		001-103 Permaculture (3 Cr)			001-152 Perennials (3 Cr)		
		001-108 Business of Urban Farming (3 Cr)			001-153 Fruit Science (3 Cr)		
		001-109 Urban Farming and Mkt. Gard. (3 Cr)			802-124 Spanish I (4 Cr)		
		001-117 Landscape Design/Advanced (3 Cr)			890-105 Serving to Learn Locally (2 cr)		
		001-149 Horticulture Events (3 Cr)			890-106 Serving to Learn Globally (2 cr)		

ΔCourses may be taken out of suggested sequence as long as requisites have been met. ***Minimum Program Total Credits Required*** ***68***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**HORTICULTURE** **(10-001-1A) – Greenhouse & Marketing** *Associate of Applied Science Degree* **Most Courses Offered at Kenosha Campus**
	Agriculture, Food & Natural Resources	Plant Systems	

PROGRAM DESCRIPTION

Horticulture-Greenhouse and Marketing includes training in floral design, greenhouse operations, and garden center and floral shop management. Courses include hands-on experience with flowers, plants, equipment, computers, and horticulture business management. This program may be completed in two years of full-time study.

PROGRAM LEARNING OUTCOMES

Graduates of the Horticulture-Greenhouse & Marketing Associate Degree Program should be able to:

1. Analyze growing media.
2. Diagnose plant health.
3. Communicate as a horticulture professional.
4. Apply design principles.
5. Provide horticulture maintenance.
6. Apply the principles of plant science.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 68 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Formerly 103-199, PC Basics/Microsoft Office.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HORTICULTURE (10-001-1B) – Landscape *Associate of Applied Science Degree* Most Courses Offered at Kenosha Campus
GATEWAY TECHNICAL COLLEGE	Agriculture, Food & Natural Resources	Plant Systems	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		001-130	*	Landscape Plants I		3	2-2
		001-136	*	Landscape Management		3	2-2
		001-146	*	Sustainable Landscape		1	1-0
		001-147	*	Soils and Plant Nutrition		1	1-0
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 1 & 3)	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		001-132	*	Landscape Plants II		3	2-2
		001-148	*	Plant Pests and Beneficials		1	1-0
		001-151	*	Greenhouse Crops		3	2-2
		001-154	*	Alternative Growing Methods		3	2-2
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
		804-123		Math with Business Applications	Prereq: 834-109 (See Note 1)	3	3-0
Semester 3		001-111	*	Horticulture Practicum	Prereq: 001-147; 001-151	3	2-2
		001-140	*	Landscape Design, Intro		3	2-2
		001-143	*	Herbaceous Plants		3	2-2
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		001-122	*	Horticulture Business Operations		3	2-2
		001-128	*	Horticulture Marketing		3	2-2
		001-129	*	Pesticide Applicator Certification		1	1-0
		001-142	*	Vegetable Science		3	2-2
		001-180	*	Horticulture Portfolio	Prereq: 001-147; 151; 130; 143; Coreq: 001-128	1	1-0
		809-195		Economics	Prereq: 838-105 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

001-103 Permaculture (3 Cr)	001-152 Perennials (3 Cr)
001-108 Business of Urban Farming (3 Cr)	001-153 Fruit Science (3 Cr)
001-109 Urban Farming and Mkt. Gard. (3 Cr)	802-124 Spanish I (4 Cr)
001-117 Landscape Design/Advanced (3 Cr)	890-105 Serving to Learn Locally (2 cr)
001-149 Horticulture Events (3 Cr)	890-106 Serving to Learn Globally (2 cr)

Minimum Program Total Credits Required ***68***

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**HORTICULTURE** **(10-001-1B) – Landscape** *Associate of Applied Science Degree* **Most Courses Offered at Kenosha Campus**
	Agriculture, Food & Natural Resources	Plant Systems	

PROGRAM DESCRIPTION

Horticulture-Landscape includes training in landscape design, sustainable management, and garden center operations. Courses include hands-on experience in plant identification, pest control, landscape design concepts and graphics, and landscape techniques such as pruning, planting, and weed control.

PROGRAM LEARNING OUTCOMES

Graduates of the Horticulture-Landscape Associate Degree Program should be able to:

1. Analyze growing media.
2. Diagnose plant health.
3. Communicate as a horticulture professional.
4. Apply design principles.
5. Provide horticulture maintenance.
6. Apply the principles of plant science.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 68 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Formerly 103-199, PC Basics/Microsoft Office.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HOSPITALITY MANAGEMENT- Food and Beverage (10-109-2B)
	Hospitality & Tourism	Lodging	*Associate of Applied Science Degree* Most Courses Offered at Racine Campus

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		109-101	*	Principles of Hospitality		3	3-0
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 3 & 5)	3	2-2
		109-122	*	Intro to Service		3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 3)	3	3-0
		804-123		Math with Business Applications	Prereq: 834-109 (See Notes 3 & 4)	3	3-0
Semester 2		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 3)	3	3-0
		109-114	*	Manag. Serv. in the Hosp. Industry		3	2-2
		109-107	*	Legal Aspects of Hosp. Management		3	2-2
		101-112		Accounting for Business		3	3-0
		316-133		Menu Planning & Cost Control		3	3-0
		316-170		Sanitation & Hygiene		1	1-0
Summer		109-128	*	Hospitality Front Line Internship		2	0-0-0-8
		109-129	*	Hospitality Supervisory Internship	Coreq: 109-128	2	0-0-0-8
		809-172		Introduction to Diversity Studies	Prereq: 838-105 (See Note 3)	3	3-0
Semester 3		801-198		Speech	Prereq: 838-105 (See Note 3)	3	3-0
		109-171	*	Hospitality Sales and Marketing		3	2-2
		109-125	*	Hospitality Managerial Accounting	Prereq: 101-112	3	3-0
		316-100	*	Basic Foods	(See Note 1)	3	1-4
		316-126	*	Dining Room Service	(See Note 1)	3	1-4
Semester 4		809-195		Economics	Prereq: 838-105 (See Note 3)	3	3-0
		809-166		Intro to Ethics: Theory & App	Prereq: 838-105 (See Note 3)	3	3-0
		196-190		Leadership Development		3	3-0
		109-126	*	Advanced Customer Service Mang	(See Note 1)	3	1-4
		109-131	*	Hospitality Capstone	Prereq: 103-143	2	1-2
		109-123	*	Bar and Beverage Management		3	3-0
					Program Total Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HOSPITALITY MANAGEMENT- Food and Beverage (10-109-2B) *Associate of Applied Science Degree* Most Courses Offered at Racine Campus
	Hospitality & Tourism	Lodging	

PROGRAM DESCRIPTION

Hospitality Management prepares students for the exciting and customer focused hospitality field. With a focus on customer service, students will explore the tourism, hotel, and foodservice industries within their coursework and internships. Graduates will have the skills for an entry level position in one of the many local tourism and hospitality establishments including entertainment facilities, tourism attractions, conference centers, hotels, restaurants, and food and beverage operations.

PROGRAM LEARNING OUTCOMES

Graduates of the Hospitality Management Associate Degree Program should be able to:

1. Demonstrate a commitment to customer service.
2. Solve typical customer service issues in a hospitality establishment.
3. Demonstrate supervisory leadership skills in a hospitality establishment.
4. Manage a typical operational event in the hospitality field.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. 70 Credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A uniform and physical may be required for courses marked with “See Note 1”.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
3. Formerly 804-106, intro to College Math
4. Formerly 103-199, PC Basics/Microsoft Office.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult the Master Class Schedule for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY/ACCESS EDUCATOR / EMPLOYER
IGUALDAD DE OPORTUNIDADES

You may call Student Services at 1-800-247-7122 for additional information.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HOSPITALITY MANAGEMENT- Hotels and Lodgings (10-109-2A)
	Hospitality & Tourism	Lodging	*Associate of Applied Science Degree* Most Courses Offered at Racine Campus

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		109-101	*	Principles of Hospitality		3	3-0
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 3 & 5)	3	2-2
		109-122	*	Intro to Service		3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 3)	3	3-0
		804-123		Math with Business Applications	Prereq: 834-109 (See Notes 3 & 4)	3	3-0
Semester 2		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 3)	3	3-0
		109-114	*	Manag. Serv. in the Hosp. Industry		3	2-2
		109-107	*	Legal Aspects of Hosp. Management		3	2-2
		101-112		Accounting for Business		3	3-0
		109-121		Intro to Hotel Operations		3	3-0
Summer		109-128	*	Hospitality Front Line Internship		2	0-0-0-8
		109-129	*	Hospitality Supervisory Internship	Coreq: 109-128	2	0-0-0-8
		809-172		Introduction to Diversity Studies	Prereq: 838-105 (See Note 3)	3	3-0
Semester 3		801-198		Speech	Prereq: 838-105 (See Note 3)	3	3-0
		109-171	*	Hospitality Sales and Marketing		3	2-2
		109-125	*	Hospitality Managerial Accounting	Prereq: 101-112	3	3-0
		109-110	*	Rooms Division Management		3	2-2
		109-124	*	Hotel Facilities Management	Prereq: 109-121	3	3-0
Semester 4		809-195		Economics	Prereq: 838-105 (See Note 3)	3	3-0
		809-166		Intro to Ethics: Theory & App	Prereq: 838-105 (See Note 3)	3	3-0
		196-190		Leadership Development		3	3-0
		109-126	*	Advanced Customer Service Mang	(See Note 1)	3	1-4
		109-131	*	Hospitality Capstone	Prereq: 103-143	2	1-2
		109-127	*	Hotel Strategic Management		3	3-0
					Minimum Program Total Required	***69***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HOSPITALITY MANAGEMENT- Hotels and Lodgings (10-109-2A) *Associate of Applied Science Degree* Most Courses Offered at Racine Campus
	Hospitality & Tourism	Lodging	

PROGRAM DESCRIPTION

Hospitality Management prepares students for the exciting and customer focused hospitality field. With a focus on customer service, students will explore the tourism, hotel, and foodservice industries within their coursework and internships. Graduates will have the skills for an entry level position in one of the many local tourism and hospitality establishments including entertainment facilities, tourism attractions, conference centers, hotels, restaurants, and food and beverage operations.

PROGRAM LEARNING OUTCOMES

Graduates of the Hospitality Management Associate Degree Program should be able to:

1. Demonstrate a commitment to customer service.
2. Solve typical customer service issues in a hospitality establishment.
3. Demonstrate supervisory leadership skills in a hospitality establishment.
4. Manage a typical operational event in the hospitality field.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. 69 Credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A uniform and physical may be required for courses marked with “See Note 1”.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
3. Formerly 804-106, intro to College Math
4. Formerly 103-199, PC Basics/Microsoft Office.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult the Master Class Schedule for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY/ACCESS EDUCATOR / EMPLOYER
IGUALDAD DE OPORTUNIDADES

You may call Student Services at 1-800-247-7122 for additional information.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HOSPITALITY MANAGEMENT- Tourism and Attractions (10-109-2C)
	Hospitality & Tourism	Lodging	*Associate of Applied Science Degree* Most Courses Offered at Racine Campus

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		109-101	*	Principles of Hospitality		3	3-0
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 3 & 5)	3	2-2
		109-122	*	Intro to Service		3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 3)	3	3-0
		804-123		Math with Business Applications	Prereq: 834-109 (See Notes 3 & 4)	3	3-0
Semester 2		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 3)	3	3-0
		109-114	*	Manag. Serv. in the Hosp. Industry		3	2-2
		109-107	*	Legal Aspects of Hosp. Management		3	2-2
		101-112		Accounting for Business		3	3-0
		109-112	*	Intro to Tourism		3	3-0
Summer		109-128	*	Hospitality Front Line Internship		2	0-0-0-8
		109-129	*	Hospitality Supervisory Internship	Coreq: 109-128	2	0-0-0-8
		809-172		Introduction to Diversity Studies	Prereq: 838-105 (See Note 3)	3	3-0
Semester 3		801-198		Speech	Prereq: 838-105 (See Note 3)	3	3-0
		109-171	*	Hospitality Sales and Marketing		3	2-2
		109-125	*	Hospitality Managerial Accounting	Prereq: 101-112	3	3-0
		109-108	*	Event Management		3	2-2
		109-113	*	Tourism Attraction Management		3	3-0
Semester 4		809-195		Economics	Prereq: 838-105 (See Note 3)	3	3-0
		809-166		Intro to Ethics: Theory & App	Prereq: 838-105 (See Note 3)	3	3-0
		196-190		Leadership Development		3	3-0
		109-126	*	Advanced Customer Service Mang	(See Note 1)	3	1-4
		109-131	*	Hospitality Capstone	Prereq: 103-143	2	1-2
		109-106	*	Advanced Tourism Management	Prereq: 109-171	3	3-0
					Program Total Required	***69***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HOSPITALITY MANAGEMENT- Tourism and Attractions (10-109-2C) *Associate of Applied Science Degree* Most Courses Offered at Racine Campus
	Hospitality & Tourism	Lodging	

PROGRAM DESCRIPTION

Hospitality Management prepares students for the exciting and customer focused hospitality field. With a focus on customer service, students will explore the tourism, hotel, and foodservice industries within their coursework and internships. Graduates will have the skills for an entry level position in one of the many local tourism and hospitality establishments including entertainment facilities, tourism attractions, conference centers, hotels, restaurants, and food and beverage operations.

PROGRAM LEARNING OUTCOMES

Graduates of the Hospitality Management Associate Degree Program should be able to:

1. Demonstrate a commitment to customer service.
2. Solve typical customer service issues in a hospitality establishment.
3. Demonstrate supervisory leadership skills in a hospitality establishment.
4. Manage a typical operational event in the hospitality field.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. 69 Credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A uniform and physical may be required for courses marked with “See Note 1”.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See advisor for details.
3. Formerly 804-106, intro to College Math
4. Formerly 103-199, PC Basics/Microsoft Office.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult the Master Class Schedule for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY/ACCESS EDUCATOR / EMPLOYER
IGUALDAD DE OPORTUNIDADES

You may call Student Services at 1-800-247-7122 for additional information.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	HUMAN SERVICE ASSOCIATE (10-520-3)
GATEWAY TECHNICAL COLLEGE	Human Services	Family & Community Services	*Associate of Applied Science Degree* Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 1 & 4)	3	2-2
		520-101	*	Human Services, Intro to		3	3-0
		520-105	*	Interviewing Principles & Recordkeeping		3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
Semester 2		520-110	*	Community Resources & Services		3	3-0
		520-115	*	Counseling, Introduction to	Prereq: 520-105	3	2-2
		520-127	*	Professional Practices in Human Services		3	3-0
		699-136		Writing Grant Proposals	Prereq: 831-103 (See Note 1)	3	2-2
		804-107		College Mathematics	Prereq: 834-109(See Note 1 & 3)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
Semester 3		520-124	*	Field Experience I / Human Services	Prereq: 520-127; Coreq: 520-140	3	1-0-0-8
		520-140	*	Group Counseling	Prereq: 520-115	3	2-2
		550-130	*	Alcohol/Drug Abuse Rehabilitation		3	2-2
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		809-159	*	Psychology, Abnormal	Prereq: 809-198	3	3-0
Semester 4		520-121	*	Field Experience II / Human Services	Prereq: 520-124	3	1-0-0-8
		550-150	*	Psychopharmacology	*Take 550-150* ***OR*** *Human Services Elective*	3	3-0
		809-128 520-151	***OR**	Marriage and the Family Family Theory and Practice	Prereq: 838-105 (See Note1)	3	3-0
		809-188		Psychology, Developmental	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		520-141 Survey Public Services (3 Cr)			520-161 Child and Adolescent Mental Health (3Cr)		
		520-152 Aspects of Disabilities (3 Cr)			550-154 Family & Chemical Abuse (3 Cr)		
		520-160 Correctional Processes (3 Cr)			550-156 Mental Health/Sub Abuse (3 Cr)		
		520-150 Gerontology/Intro to (3 Cr)			520-128 Child Welfare Policy and Practice (3 Cr)		
					Minimum Program Total Credits Required	***66***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Human Services	**Career Pathway ►** Family & Community Services	**HUMAN SERVICE ASSOCIATE** **(10-520-3)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses**

PROGRAM DESCRIPTION

Human Service Associate is designed to prepare people for entry level positions in a variety of human service agencies and social service programs. The Human Service Associate program includes a unique combination of the study of aspects of human services, general education subjects, and 300 hours of actual field experience in a community human service agency under the supervision of a working professional. If taken full-time, this program may be completed in four semesters of study.

PROGRAM LEARNING OUTCOMES

Graduates of the Human Service Associate Degree Program should be able to:

1. Model a commitment to cultural competence.
2. Uphold the Ethical Standards and Values for Human Service Professionals.
3. Demonstrate professionalism.
4. Utilize community resources.
5. Apply human services interventions and best practices.
6. Cultivate professional relationships.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 66 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Formerly 804-106, Intro to College Math.
4. Formerly 103-199, PC Basics/Microsoft Office.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE

Effective 2016/2017

INDIVIDUALIZED TECHNICAL STUDIES (10-825-1)

Associate of Applied Science Degree

Most Courses Offered at All Campuses

PROGRAM DESCRIPTION

Individualized Technical Studies is designed for employed individuals in partnership with their respective employer, desiring to combine skills and knowledge from different academic disciplines. The degree is designed to meet specific educational needs of students whose career goals do not align with current academic programs. Career goals are identified with the input of the student, a Gateway advisor, and an occupational mentor. A formal portfolio is developed to define career goals, document appropriate learning experiences, and formulate a plan for degree completion. Courses from all departments within the college are available for utilization, with a minimum of 20 of these credits being focused in one specific discipline.

PROGRAM REQUIREMENTS

1. For admission, students must meet the following requirements: submit an application and $30 fee; complete reading, writing, and math skills placement assessments; and submit official high school, GED, or HSED transcript.
2. The ITS degree is intended for currently employed individuals who have a spec. career obj. in mind that can't be met by exist. college degree programs.
3. The student is required to work under the direction of an occupational mentor at their current place of employment so that the student and the current employer are in complete agreement as to the curriculum identified, and place value on its contribution to the student and employer. These requirements are in place to prevent students or colleges from designing a program around what they perceive to be a workforce need but which employers do not value, leaving the student with an unmarketable set of skills.
4. Critical to a successful experience and graduation from this program will be the input of an occupational mentor. This real-world business person knows about the requirements and skills needed to be successful in the program of study. The mentor, with the assistance of a Gateway advisor, helps the student decide the combination of technical and general studies courses necessary to meet the job requirements of their employer.

GRADUATION REQUIREMENTS

Requirements for Graduation (67 Credit Hours):

40 credits Individualized Technical Studies courses
(20 *must* be focused in one technical discipline)

21 credits General Studies **required** from the following:
- 6 credits Communications
- 3 credits Social Science
- 3 credits Behavioral Science
- 3 credits Mathematics and/or Natural Science
- 6 credits Additional from General Studies area

6 credits Electives

25% of the total program credits must be completed at Gateway.

For a complete list of Graduation Requirements check the Student Handbook.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE

Effective 2016/2017

TECHNICAL STUDIES-JOURNEYWORKER (10-499-5)

Associate of Applied Science Degree

Most Courses Offered at All Campuses

PROGRAM DESCRIPTION

In response to requests for academic recognition of registered apprenticeship training in the state of Wisconsin, the WTCS provides a TECHNICAL STUDIES – JOURNEYWORKER ASSOCIATE IN APPLIED SCIENCE DEGREE. This degree recognizes the goals, general principles and procedures of the WTCS Credit for Prior Learning Policy (WTCS #323, revised July 2005). The Technical Studies Journeyworker AAS degree is designed to support lifelong learning and accelerate the achievement of individual career goals. Transferability of the Technical Studies portion of the AAS degree to four year institutions will be based on the accepting institution's policies.

PROGRAM REQUIREMENTS

1. For admissions, students must meet the following requirements: submit an application and $30 fee; complete reading, writing, and math, skills placement assessments; and submit official high school, GED, or HSED transcript.
2. Students must possess a Wisconsin Apprenticeship Completion Certificate issued by the Department of Workforce Development-Bureau of Apprenticeship Standards registered program which includes a minimum of 400 hours of prescribed apprentice related instruction in the Wisconsin Technical College System.
3. Complete all prescribed WTCS apprentice related technical instruction. Possession of the DWD-BAS Wisconsin Apprenticeship Completion Certificate AND successful completion of all prescribed coursework fulfills the Technical Studies requirement of the Technical Studies-Journeyworker Associate of Applied Science degree.

GRADUATION REQUIREMENTS

Requirements for Graduation (60 Credit Hours):

39 credits Technical Studies (awarded as advanced standing)
21 credits General Studies **required** from the following:
- 6 credits Communications
- 3 credits Social Science
- 3 credits Behavioral Science
- 3 credits Mathematics and/or Natural Science
- 6 credits Additional from General Studies area

25% of the total program credits must be completed at Gateway.

For a complete list of Graduation Requirements check the Student Handbook.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – COMPUTER SUPPORT SPECIALIST (10-154-3) *Associate of Applied Science Degree* Most Courses Offered at Elkhorn and Kenosha Campuses
	Information Technology	Information Support and Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		154-121	*	CSS Program Orientation	Prereq: 103-142	1	1-0
		154-119	*	System Software Support	Coreq: 154-121	3	2-2
		107-011	*	IT in Business		3	2-2
		107-193	*	IT Essentials		3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-133 804-107	*OR*	Mathematics and Logic College Math	Prereq: 834-110 (See Note 1) Prereq: 834-109 (See Note 1)	3	3-0
Semester 2		154-114	*	Hardware & Software Support	Prereq: 154-119; 107-193	3	2-2
		154-122	*	Introduction to Help/Service Desk	Prereq: 107-193	3	2-2
		150-105	*	Intro to Networking / Web Concepts		3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-196 809-172	*OR*	Sociology, Introduction to Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1 & 4) Prereq: 838-105 (See Note 1)	3	3-0
Semester 3		154-112	*	Data Security & Recovery Support	Prereq: 154-114	3	2-2
		154-113	*	IT Apps Server & Support	Prereq: 154-114	3	2-2
		154-120	*	Advanced Help/Service Desk	Prereq: 154-122	3	2-2
		801-196 801-198	*OR*	Oral/Interpersonal Communication Speech	Prereq: 838-105 (See Note 1)	3	3-0
		809-144 809-143 809-195	*OR*	Macroeconomics Microeconomics Economics	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		154-116	*	Emerging Technologies and Apps.	Prereq: 154-112; 154-113	2	1-2
		154-118	*	CSS Skills Implementation & Career Prep	Prereq: 154-112; 113 Coreq: 801-197	3	2-2
		107-177	*	IT Project Management	Prereq: 154-113 OR 152-131; Coreq: 801-197	4	3-2
		152-126	*	Intro to Prog. & Database Concepts		4	3-2
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		154-109 IT-Computer Support Specialist Internship (3 Cr)			150-111 Network Admin. – Microsoft (3 Cr)		
		107-009 A+ Essentials Review Class (1 Cr)			152-105 System i Concepts (2 Cr)		
		107-010 A+ 602 Review Class (1 Cr)			102-138 BIZ Internship (3 Cr)		
		809-112 Principles of Sustainability (3 Cr)					
					Minimum Program Total Credits Required	***68***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – COMPUTER SUPPORT SPECIALIST (10-154-3)
	Information Technology	Information Support and Services	*Associate of Applied Science Degree* Most Courses Offered at Elkhorn and Kenosha Campuses

PROGRAM DESCRIPTION

The *IT – Computer Support Specialist* program has been designed to prepare students for a career in Information Technology, providing end-user service and support in a variety of environments, including small business, not-for-profit and enterprise-sized corporations. Topics include the architecture, use, installation, and upgrading of hardware and software, operating systems, networking, and communications as well as data security and recovery. Students will evaluate user hardware and software needs, function as a liaison between their firm and outside contractors or vendors, research emerging technologies, and provide user training for both hardware and software.

PROGRAM LEARNING OUTCOMES

Graduates of the IT-Computer Support Specialist Associate Degree Program should be able to:

1. Manage information technology hardware.
2. Manage software.
3. Support computer networks.
4. Provide end user support.
5. Solve information technology problems.
6. Demonstrate customer service skills as an IT professional.
7. Coordinate technology projects.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential computer skills
4. Demonstrate essential mathematical skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 68 credits with an average of 2.0 or above.
2. *Grade of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. See your advisor if you have questions about course selection.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT-COMPUTER SUPPORT TECHNICIAN (31-154-6) *Technical Diploma* Most Courses Offered at Elkhorn and Kenosha Campuses
	Information Technology	Information Support and Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		154-121	*	CSS Program Orientation	Prereq: 103-142	1	1-0
		154-119	*	System Software Support	Coreq: 154-121	3	2-2
		107-011	*	IT in Business		3	2-2
		107-193	*	IT Essentials		3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-133 804-107	OR	Mathematics and Logic College Math	Prereq: 834-110 (See Note 1) Prereq: 834-109 (See Note 1)	3	3-0
Semester 2		154-114	*	Hardware & Software Support	Prereq: 154-119; 107-193	3	2-2
		154-122	*	Introduction to Help/Service Desk	Prereq: 107-193	3	2-2
		150-105	*	Intro to Networking/Web Concepts		3	2-2
		801-197	*	Technical Reporting	Prereq: 801-136	3	3-0
		809-196 809-172	OR	Sociology, Introduction to Diversity Studies, Introduction to	Prereq: 838-105 (See Notes 1 & 3) Prereq: 838-105 (See Note1)	3	3-0

Minimum Program Total Credits Required 31

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 10-154-3 IT-Computer Support Specialist program can earn their associate degree by completing an additional 37 credits. Please see your academic advisor for details.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**IT-COMPUTER SUPPORT TECHNICIAN** **(31-154-6)** *Technical Diploma* **Most Courses Offered at Elkhorn and Kenosha Campuses**
	Information Technology	Information Support and Services	

PROGRAM DESCRIPTION

The *IT-Computer Support Technician* program will provide the first step toward a career in IT which focuses on the support of end users. This program is designed to serve as a pathway into the IT-Computer Support Specialist (10-154-3) associate degree program. Students completing this program will have the option to continue into the parent program or become employed directly in the field. Graduates will have opportunities for employment reaching across all industries.

The IT-Computer Support Technician program is comprised of the first two semesters of the IT-Computer Support Specialist associate degree program. Specific course work includes: System Software Support, IT in Business, IT Essentials, Help/Service Desk, Networking/Web Concepts and Technical Reporting.

PROGRAM LEARNING OUTCOMES

Graduates of the IT- Computer Support Technician Technical Diploma Program should be able to:

1. Support information technology hardware.
2. Install and support software.
3. Provide Level 1 end user support.
4. Solve common technology problems.
5. Demonstrate customer service skills as an IT professional.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 31 credits with an average of 2.0 or above.
2. *Grade of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – JUNIOR SHAREPOINT DEVELOPER (31-152-5)
	Information Technology	Web and Digital Communications	*Technical Diploma* Most Courses Offered Online and Racine Campus

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		152-187	*	Web Program Orientation		1	1-0
		107-193	*	IT Essentials		3	2-2
		152-126	*	Intro to Prog. & Database Concepts		4	3-2
		152-182	*	Web Programming 1		3	2-2
		801-198 801-196	*OR*	Speech Oral/Interpersonal Communications	Prereq: 838-105 (See Note 1)	3	3-0
Semester 2		152-146	*	Advanced Databases	Prereq: 152-126	3	2-2
		152-150	*	Web Programming 2	Prereq: 152-182	3	2-2
		152-151	*	Microcomputer Programming/Adv	Prereq: 152-126	3	2-2
		152-178	*	Develop ASP.NET Web Apps	Prereq: 152-126	3	2-2
		152-184	*	Java Programming 1	Prereq: 152-126	3	2-2
Semester 3		152-129	*	Web Project Management	Prereq: 152-146; Coreq: 152-188	2	1-2
		152-177	*	Core Prog SharePoint Solutions	Prereq: 152-178	3	2-2
		152-174	*	Java Programming 2	Prereq: 152-184	3	2-2
		152-176	*	Adv Prog SharePoint Solutions	Prereq: 152-177	3	2-2
		152-188	*	PHP Web Programming	Prereq: 152-182	3	2-2
					Minimum Program Total Credits Required	***43***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 10-152-3 IT-Web Developer-SharePoint Developer program can earn their associate degree by completing an additional 27 credits. Please see your academic advisor for details.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – JUNIOR SHAREPOINT DEVELOPER (31-152-5)
	Information Technology	Web and Digital Communications	*Technical Diploma* Most Courses Offered Online and Racine Campus

PROGRAM DESCRIPTION

The *IT- Junior SharePoint Developer* diploma trains students in the development and maintenance of business web sites as well as designing and developing collaboration applications with Microsoft SharePoint. Topics will include web site design and development and basic knowledge of SQL and back-end databases. This concentration includes a focus on the Microsoft Certified SharePoint Solution Developer (MCSD) Certification. Typical entry-level positions for this training opportunity include junior web developer, junior web programmer, and Junior SharePoint Developer.

PROGRAM LEARNING OUTCOMES

Graduates of the IT-Junior SharePoint Developer Technical Diploma Program should be able to:

1. Design software systems.
2. Integrate database technologies.
3. Develop software applications.
4. Develop technical documentation.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 43 credits with an average of 2.0 or above.
2. *Grade of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. For those students considering the pursuit of a 4 year degree in this field, 804-115 College Technical Math 1 is recommended. This course may be taken in place of 804-133 Mathematics and Logic.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Information Technology	**Career Pathway ►** Web and Digital Communications	**INFORMATION TECHNOLOGY** **JUNIOR WEB DEVELOPER** **(31-152-4)** *Technical Diploma* **Most Courses Offered Online and Racine Campus**

Δ*Suggested Sequence*	√	*Course Number*		*Course Title*	*Requisites*	*Credits*	*Hrs/Wk Lec - Lab*
Semester 1		152-187	*	Web Program Orientation		1	1-0
		150-105	*	Intro to Networking / Web Concepts		3	2-2
		152-126	*	Intro to Prog. & Database Concepts		4	3-2
		152-182	*	Web Programming 1		3	2-2
		801-198 801-196	*OR*	Speech Oral/Interpersonal Communications	Prereq: 838-105 (See Note 1)	3	3-0
		804-133 804-115	*OR*	Mathematics and Logic College Technical Math 1	Prereq: 834-110 (See Notes 1 & 2)	3 5	3-0 5-0
Semester 2		107-193	*	IT Essentials		3	2-2
		152-146	*	Advanced Databases	Prereq: 152-126	3	2-2
		152-178	*	Develop ASP.NET Web Apps	Prereq: 152-126	3	2-2
		152-184	*	Java Programming 1	Prereq: 152-126	3	2-2
		152-188	*	PHP Web Programming	Prereq: 152-182	3	2-2
		152-190	*	Elements of Dynamic Web Design	Prereq: 152-182	2	1-2

Minimum Program Total Credits Required ***34***

Δ*Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 10-152-3 IT-Web Developer program can earn their associate degree by completing an additional 35 credits. Please see your academic advisor for details.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$1,627	$6,200	Web Developer (15-1134)

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**INFORMATION TECHNOLOGY JUNIOR WEB DEVELOPER** **(31-152-4)** *Technical Diploma* **Most Courses Offered Online and Racine Campus**
	Information Technology	Web and Digital Communications	

PROGRAM DESCRIPTION

The *Information Technology Junior Web Developer* diploma trains students in the development of business web sites using a variety of programming and scripting languages. Topics will include web site design and development and basic knowledge of SQL and back-end databases. Typical entry-level positions are junior web developer and junior web programmer.

PROGRAM LEARNING OUTCOMES

Graduates of the Information Technology Junior Web Developer Technical Diploma Program should be able to:

1. Communicate effectively.
2. Utilize web design principles, standards, and best practices in designing effective and usable websites.
3. Identify and apply HTML/CSS tags and attributes for web page design.
4. Develop basic web applications using server-side scripting languages such as PHP and ASP.NET.
5. Use SQL commands to query a database and display data on a webpage.
6. Conduct testing and troubleshooting of web pages.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 34 credits with an average of 2.0 or above.
2. *Minimum of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. For those students considering the pursuit of a 4 year degree in this field, 804-115 College Technical Math 1 is a better choice. This course may be taken in place of 804-133 Mathematics and Logic.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

OTHER INFORMATION

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My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT-NETWORK SPECIALIST (10-150-2A)
	Information Technology	Network Systems	*Associate of Applied Science Degree* Most Courses Offered at Elkhorn and Racine Campuses & Online

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		107-011	*	IT in Business		3	2-2
		107-193	*	IT Essentials		3	2-2
		150-105	*	Intro to Networking / Web Concepts		3	2-2
		150-114	*	Network Concepts – CCNA 1		3	2-2
		801-198 801-196	***OR***	Speech Oral/Interpersonal Communications	Prereq: 838-105 (See Note 1)	3	3-0
		804-133 804-107	***OR***	Mathematics and Logic College Math	Prereq: 834-110 (See Note 1) Prereq: 834-109 (See Note 1)	3	3-0
Semester 2		150-147	*	Network Administration – Microsoft 1	Prereq: 150-114	3	2-2
		150-124	*	Routing – CCNA 2	Prereq: 150-114	3	2-2
		150-145	*	IT Scripting	Prereq: 150-114	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 3		150-108	*	Virtual Technologies		3	2-2
		150-135	*	Switching & WANs – CCNA 3 & 4	Prereq: 150-124	4	2-4
		150-194	*	Network Security		3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
		809-195 809-143 809-144		Economics ***OR*** Microeconomics Macroeconomics	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		150-113	*	Network Administration – Linux/Unix		4	2-4
		150-148	*	Network Administration-Microsoft 2	Prereq: 150-147	3	2-2
		150-136	*	Server Technologies	Prereq: 150-105 & 107-193	3	2-2
		107-013	*	IT Job Skills	Prereq: 150-114	1	1-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		150-106 Intrusion Detection Systems (3 Cr) 150-131 Network Internship (3 Cr)			150-180 What's in the Cloud? (3 Cr.) 150-133 Message Service Admin (4 Cr)		
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**IT-NETWORK SPECIALIST** **(10-150-2A)** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn and Racine Campuses & Online**
	Information Technology	Network Systems	

PROGRAM DESCRIPTION

IT-Network Specialist is designed to prepare students for a professional career in the computer network field. The program takes the students from the beginning architectural design process through installation, configuration, administration, and tuning of microcomputer network environments. Additional topics incorporated into the program include cross-platform and enterprise network environments.

PROGRAM LEARNING OUTCOMES

Graduates of the IT-Network Specialist Associate Degree program should be able to:

1. Implement computer networks.
2. Implement client systems.
3. Implement server operating systems.
4. Implement network security components.
5. Develop technical documentation.
6. Troubleshoot network systems.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math, skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Minimum of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**IT-NETWORK SPECIALIST** **(10-150-2B) – Cybersecurity Specialist** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn and Racine Campuses**
	Information Technology	Network Systems	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		150-114	*	Network Concepts – CCNA 1		3	2-2
		150-127	*	Security Laws & Policies		3	2-2
		150-194	*	Network Security		3	2-2
		801-198 801-196	***OR***	Speech Oral/Interpersonal Communications	Prereq: 838-105 (See Note 1)	3	3-0
		804-133 804-107	***OR***	Mathematics and Logic College Math	Prereq: 834-110 (See Note 1) Prereq: 834-109 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 2		150-145	*	IT Scripting	Prereq: 150-114	3	2-2
		150-147	*	Network Administration – Microsoft 1	Prereq: 150-114	3	2-2
		150-146	*	Cyber Security	Prereq: 150-194	4	2-4
		150-124	*	Routing – CCNA 2	Prereq: 150-114	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 3		150-106	*	Intrusion Detection Systems	Prereq: 150-194	3	2-2
		150-129	*	Mobile Security	Prereq: 150-124	3	2-2
		150-144	*	Firewalls & VPNs	Prereq: 150-124	4	2-4
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
		809-195 809-143 809-144	***OR***	Economics Microeconomics Macroeconomics	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		150-143	*	Computer Security/Pen Test	Prereq: 150-106	4	2-4
		150-126	*	Network Security Design	Prereq: 150-135	3	2-2
		150-113	*	Network Administration Linux	Prereq: 150-106	4	2-4
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives: 150-108 Virtual Technologies (3Cr.)			150-180 What's in the Cloud? (3 Cr.)		
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**IT-NETWORK SPECIALIST** **(10-150-2B) – Cybersecurity Specialist** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn and Racine Campuses**
	Information Technology	Network Systems	

PROGRAM DESCRIPTION

IT-Network Specialist-Cybersecurity Specialist is designed to prepare students for a professional career in the network security field. The program trains students in how to create a quality Risk Management strategy in order to secure a network environment. Students will complete the following tasks: create security policies and procedures, install VoIP systems, install and configure firewalls and secure VPNs. Additional topics include designing a secure network environment and monitoring systems using IDS/IPS.

PROGRAM LEARNING OUTCOMES

Graduates of the IT-Network Specialist Associate Degree program should be able to:

1. Implement computer networks.
2. Implement client systems.
3. Implement server operating systems.
4. Implement network security components.
5. Develop technical documentation.
6. Troubleshoot network systems.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Minimum of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	**IT – SOFTWARE DEVELOPER** **(10-152-1)** *Associate of Applied Science Degree* **Most Courses Offered at Kenosha Campus**
	Information Technology	Programming and Software Development	

ΔSuggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		107-011	*	IT in Business		3	2-2
		152-105	*	IBM Enterprise System Concepts	Coreq: 107-011	2	1-2
		152-126	*	Intro to Prog. & Database Concepts		4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-133 804-115	*OR*	Mathematics and Logic College Technical Math 1	Prereq: 834-110 (See Note 1)	3 5	3-0 5-0
		801-196 801-198	*OR*	Oral/Interpersonal Communication Speech	Prereq: 838-105 (See Note 1)	3	3-0
Semester 2		152-133	*	IBM Control Language	Prereq: 152-105	2	1-2
		152-141	*	Java Programming – IBM iSeries	Prereq: 152-126; 152-105	3	2-2
		152-145	*	Internet Programming	Prereq: 152-126	3	2-2
		152-151	*	Microcomputer Prog. Advanced	Prereq: 152-126	3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Semester 3		152-093	*	Java Programming – IBM Systems	Prereq: 152-141; 152-145	3	2-2
		152-122	*	Computer Programming RPG/IV (ILE)	Prereq: 152-105; 152-126	3	2-2
		152-168	*	IBM and .NET Enterprise Programming	Prereq: 152-151	3	2-2
		809-195 809-144	*OR*	Economics Macroeconomics	Prereq: 838-105 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 4		152-125	*	Computer Program, RPG/IV (ILE) Adv.	Prereq: 152-122	3	2-2
		152-131	*	Systems Design / Development	Prereq: 152-122	3	2-2
		152-158	*	DB/UDB Programming	Prereq: 152-126; 152-105	3	2-2
		152-167	*	Zend (PHP) Application Programming	Prereq: 152-141	3	2-2
		809-196 809-172	*OR*	Sociology, Introduction to Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1) Prereq: 838-105 (See Note 1 & 3)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

152-124 Computer Programming C++ (3 Cr)
152-149 IBM i Systems Administration (3 Cr)
152-164 Mobile Device Programming (3 Cr)
102-138 Biz Internship (3Cr)
152-165 Mobile App Development Apple iOS (3 Cr)
152-166 Mobile Application Dev. Windows (3 Cr)
809-112 Principles of Sustainability (3 Cr)

Minimum Program Total Credits Required 68

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – SOFTWARE DEVELOPER (10-152-1) *Associate of Applied Science Degree* Most Courses Offered at Kenosha Campus
	Information Technology	Programming and Software Development	

PROGRAM DESCRIPTION

IT-Software Developer covers the rapidly changing field of Information technology with its multiple job opportunities; it may be completed in four semesters if taken full-time. The curriculum includes various types of programming, program analysis, and system software. Typical entry-level positions are entry-level programmer and computer operator.

PROGRAM LEARNING OUTCOMES

Graduates of the IT-Software Developer Associate Degree Program should be able to:

1. Develop interactive programs utilizing structured programming techniques.
2. Code on multiple platforms.
3. Be prepared for entry in the computer field.
4. Assess computer hardware and software needs.
5. Communicate effectively with IT, end-users, teams, and management.
6. Develop and document IT (Information Technology) environments.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math, skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 68 credits with an average of 2.0 or above.
2. *Minimum of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – WEB DEVELOPER (10-152-3A)
	Information Technology	Web and Digital Communications	*Associate of Applied Science Degree* Most Courses Offered Online and Racine Campus

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		152-187	*	Web Program Orientation		1	1-0
		150-105	*	Intro to Networking / Web Concepts		3	2-2
		152-126	*	Intro to Prog. & Database Concepts		4	3-2
		152-182	*	Web Programming 1		3	2-2
		801-198 801-196	*OR*	Speech Oral/Interpersonal Communications	Prereq: 838-105 (See Note 1)	3	3-0
		804-133 804-115	*OR*	Mathematics and Logic College Technical Math 1	Prereq: 834-110 (See Note 1 & 2)	3 5	3-0 5-0
Semester 2		152-146	*	Advanced Databases	Prereq: 152-126	3	2-2
		152-178	*	Develop ASP.NET Web Apps	Prereq: 152-126	3	2-2
		152-188	*	PHP Web Programming	Prereq: 152-182	3	2-2
		152-190	*	Elements of Dynamic Web Design	Prereq: 152-182: 152-187	2	1-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		809-196 809-172	*OR*	Sociology, Introduction to Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1 & 4) Prereq: 838-105 (See Note 1)	3	3-0
Semester 3		107-193	*	IT Essentials		3	2-2
		152-184	*	Java Programming 1	Prereq: 152-126	3	2-2
		152-185	*	Advanced PHP	Prereq: 152-188	3	2-2
		152-189	*	Graphics Programming with Dynamic Elements	Prereq: 152-190	3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 4		152-129	*	Web Project Management	Prereq: 152-146; Coreq: 152-188	2	1-2
		152-139	*	Ruby	Prereq: 152-188	3	2-2
		152-174	*	Java Programming 2	Prereq: 152-184	3	2-2
		809-143 809-144 809-195	*OR*	Microeconomics Macroeconomics Economics	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		152-140 Web Internship (3 Cr) OR 102-138 BIZ Internship (3 Cr) 152-164 Mobile Device App Programming (3 Cr) 152-194 SQL Fundamentals Oracle (3 Cr)			152-110 DBA Part 1 – Oracle (3 Cr) 145-119 Entrepreneurship (3 Cr) 806-112 Principles of Sustainability (3 Cr)		
					Minimum Program Total Credits Required	***69***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – WEB DEVELOPER (10-152-3A) *Associate of Applied Science Degree* Most Courses Offered Online and Racine Campus
	Information Technology	Web and Digital Communications	

PROGRAM DESCRIPTION

The *IT-Web Developer* program trains students in the development and maintenance of business and e-Commerce web sites using a variety of software, programming, and scripting languages. Topics will include web site project management, design, development, deployment, and basic maintenance of back-end databases and websites. Typical entry-level positions for this training opportunity include web developer, web programmer, and web designer.

PROGRAM LEARNING OUTCOMES

Graduates of the IT-Web Developer Associate Degree Program should be able to:

1. Design software systems.
2. Integrate database technologies.
3. Develop software applications.
4. Develop technical documentation.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Grade of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. For those students considering the pursuit of a 4 year degree in this field, 804-115 College Technical Math 1 is a better choice. This course may be taken in place of 804-133 Mathematics and Logic.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – WEB DEVELOPER (10-152-3B) – SharePoint Developer *Associate of Applied Science Degree* Most Courses Offered Online and Racine Campus
	Information Technology	Web and Digital Communications	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		152-187	*	Web Program Orientation		1	1-0
		150-105	*	Intro to Networking / Web Concepts		3	2-2
		152-126	*	Intro to Prog. & Database Concepts		4	3-2
		152-182	*	Web Programming 1		3	2-2
		801-198 801-196	*OR*	Speech Oral/Interpersonal Communications	Prereq: 838-105 (See Note 1)	3	3-0
		804-133 804-115	*OR*	Mathematics and Logic College Technical Math 1	Prereq: 834-110 (See Note 1 & 2)	3 5	3-0 5-0
Semester 2		152-146	*	Advanced Databases	Prereq: 152-126	3	2-2
		152-150	*	Web Programming 2	Prereq: 152-182	3	2-2
		152-151	*	Microcomputer Programming/Adv	Prereq: 152-126	3	2-2
		152-178	*	Develop ASP.NET Web Apps	Prereq: 152-126	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		809-196 809-172	*OR*	Sociology, Introduction to Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1 & 4) Prereq: 838-105 (See Note 1)	3	3-0
Semester 3		107-193	*	IT Essentials		3	2-2
		152-177	*	Core Prog SharePoint Solutions	Prereq: 152-178	3	2-2
		152-184	*	Java Programming 1	Prereq: 152-126	3	2-2
		152-188	*	PHP Web Programming	Prereq: 152-182	3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
Semester 4		152-129	*	Web Project Management	Prereq: 152-146; Coreq: 152-188	2	1-2
		152-174	*	Java Programming 2	Prereq: 152-184	3	2-2
		152-176	*	Adv Prog SharePoint Solutions	Prereq: 152-177	3	2-2
		809-143 809-144 809-195	*OR*	Microeconomics Macroeconomics Economics	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.*** ***Suggested Electives:*** 152-140 Web Internship (3 Cr) OR 102-138 BIZ Internship (3 Cr) 152-164 Mobile Device App Programming (3 Cr) 152-194 SQL Fundamentals Oracle (3 Cr) 152-110 DBA Part 1 – Oracle (3 Cr) 145-119 Entrepreneurship (3 Cr) 806-112 Principles of Sustainability (3 Cr)				***6***	
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	IT – WEB DEVELOPER (10-152-3B) – SharePoint Developer *Associate of Applied Science Degree* Most Courses Offered Online and Racine Campus
	Information Technology	Web and Digital Communications	

PROGRAM DESCRIPTION

The *IT-Web Developer – SharePoint Developer* program trains students in the development and maintenance of business web sites as well as designing and developing collaboration applications with Microsoft SharePoint. Topics will include web site project management, design, development, deployment, and basic maintenance of back-end databases and websites. This concentration includes a focus on the Microsoft Certified SharePoint Solution Developer (MCSD) Certification. Typical entry-level positions for this training opportunity include web developer, web programmer, web designer and SharePoint Developer.

PROGRAM LEARNING OUTCOMES

Graduates of the IT-Web Developer-SharePoint Developer Associate Degree Program should be able to:

1. Design software systems.
2. Integrate database technologies.
3. Develop software applications.
4. Develop technical documentation.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Grade of 2.0 ("C") or above for these major.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. For those students considering the pursuit of a 4 year degree in this field, 804-115 College Technical Math 1 is a better choice. This course may be taken in place of 804-133 Mathematics and Logic.
3. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with departmental approval).
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Architecture & Construction	**Career Pathway ►** Design / Pre-Construction	**INTERIOR DESIGN** **(10-304-1)** *Associate of Applied Science Degree* **Most Courses Offered at Kenosha Campus**

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		304-153	*	Drafting and Rendering Techniques	Coreq: 614-150; 607-170	4	2-4
		304-155	*	Principles of Interior Design		4	2-4
		607-170	*	AutoCAD for Construction		2	1-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 5)	3	3-0
		614-150	*	3D CAD: Building Information Modeling		2	1-2
		801-196		Oral Interpersonal Communication	Prereq: 838-105 (See Note 5)	3	3-0
Semester 2		304-101	*	Hist. of Furniture and Decorative Arts		3	3-0
		304-122	*	Textiles		3	2-2
		304-133	*	Sustainable Materials and Finishes		3	3-0
		304-156	*	Residential Design Studio	(See Note 2)	3	2-4
		804-123		Math with Business Applications	Prereq: 834-109 (See Note 5)	3	3-0
		801-198		Speech	Prereq: 838-105 (See Note 5)	3	3-0
Summer		304-151	*	Center for Sustainable Living Practicum	Prereq: 304-133	1	0-2
Semester 3		304-104	*	Advanced Technology for Interior Design	Prereq: 304-116; 614-150; 607-170	3	2-2
		304-123	*	Business of Interior Design	Prereq: Instructor Consent	3	3-0
		304-154	*	Interior Elements of Building Const.	Coreq: 304-156 (See Note 1)	2	2-0
		304-116	*	Kitchen/Bathroom Plan	Prereq: 607-170	3	2-2
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 5 & 8)	3	3-0
Semester 4		304-120	*	Interior Design Internship & Sales	Prereq: 304-156; Coreq: 304-152	3	2-0-0-4
		304-119	*	Portfolio Presentation	Prereq: Instructor Consent (See Note 4)	1	0-2
		304-152	*	Commercial Design Studio	Prereq: Instructor Consent; (See Note 3)	3	1-4
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 5 & 8)	3	3-0
		809-195		Economics	Prereq: 838-105 (See Note 5)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

304-149 Adv. Kitchen/Bath Planning (3 Cr.)	304-150 Architectural History (3 Cr.)
304-118 Art History (3 Cr.)	614-115 Commercial Drafting (3 Cr.)
304-148 Interior Des. Internship II (2 Cr.) *(see note 7)*	890-105 Learning to Serve Locally (3 Cr.)

Minimum Program Total Credits Required 70

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**INTERIOR DESIGN** **(10-304-1)** *Associate of Applied Science Degree* **Most Courses Offered at Kenosha Campus**
	Architecture & Construction	Design / Pre-Construction	

PROGRAM DESCRIPTION

The Interior Design program prepares students for entry-level residential design and sales positions in retail stores and design studios, and commercial design positions in office dealerships and corporate facilities. Graduates of the Interior Design program are employed by interior design firms, furniture stores, flooring stores, paint and decorating centers, building centers, kitchen and bath design firms, office dealerships, and corporations as in-house interior designers. Interior designers confer with clients to determine the purpose and function of the environment, style preferences, budget, types of construction, equipment to be installed, and other factors which affect planning interior environments.

PROGRAM LEARNING OUTCOMES

Graduates of the Interior Design Program should be able to:

1. Integrate the codes and standards that impact the interior environment.
2. Model professional practices of the Interior Design industry.
3. Validate the design process.
4. Evaluate design decisions within the parameters of the built environment.
5. Prepare written contract proposals and specifications for design projects.
6. Prep.& give presentations of the des. prjct. in order to sell prod., conc., & ideas.
7. Apply industry procedures to specifying, and estimating materials for, window treatments, bed coverings, wall coverings, flooring, and upholstery for interiors.
8. Research & develop alternative design solutions to meet price points & aesthetic requirements of clients.
9. Apply computer applications, utilizing CAD and word processing, to residential, commercial and business areas of Interior Design.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. 304-154 has prerequisites of 304-155, 607-170, 304-122, 304-116, 614-150, 304-133, and 304-153.
2. 304-156 has prerequisites of 304-101, 304-155, 607-170, 304-122, 304-153, 304-133, and 614-150.
3. 304-152 has prerequisites of 304-101, 304-104, 304-116, 304-122, 304-123, 304-133, 304-153, 607-170, 614-140, 304-154, 304-155, 304-156, 304-151, 614-140.
4. Students must complete 72 hours of paid or unpaid internship work at an approved business. Transportation must be provided by the student.
5. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
6. Any course may be taken prior to entry in the program assuming prerequisites and corequisites have been satisfied (or waived with department approval).
7. Students will complete 144 hours of paid or unpaid internship work at an approved business. Transportation must be provided by the student.
8. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	MARKETING (10-104-3B) – Business to Business *Associate of Applied Science Degree* Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online
		Marketing Communications	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		104-101	*	Marketing Principles		3	3-0
		102-137 102-160	*OR	Introduction to Business Business Law		3	3-0
		104-104	*	Selling Principles		3	3-0
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 1 & 3)	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		801-196 801-198	OR	Oral/Interpersonal Communication Speech	Prereq: 838-105 (See Note 1)	3	3-0
Semester 2		104-105	*	Promotion Principles		3	3-0
		104-170	*	Business Purchasing		3	3-0
		804-123 804-115	OR	Math with Business Applications College Technical Math 1	Prereq: 834-109 (See Note 1) Prereq: 834-110 (See Note 1)	3 5	3-0 5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
		103-103		Microsoft Excel II		1	.5-1
Semester 3		104-126	*	Business Marketing I	Prereq: 104-101	3	3-0
		104-173	*	Marketing Research	Coreq: 104-101	3	2-2
		104-194	*	International Marketing		3	3-0
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-172		Intro to Diversity Studies	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		101-112 101-114	OR	Accounting for Business Accounting Principles		3 4	3-0 3-2
		104-161	*	Selling Principles, Advanced	Prereq: 104-104	3	3-0
		104-115	*	Marketing Capstone/Internship	Prereq: 104-101; 104-104 & Inst. Consent Coreq: 104-116; 104-161	3	1-0-0-4
		104-116	*	Electronic Marketing/Social Media	Prereq: 104-101	3	3-0
		104-172	*	Marketing Management	Prereq: 104-101	3	3-0
		809-144		Macroeconomics	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

102-160 Business Law (3 Cr)
104-109 Marketing/Sports & Event (3 Cr)
104-111 Ticket Sales (1 Cr)
102-138 Biz Squad (3 Cr)
104-110 Corporate Sponsorsip (2 Cr)

Minimum Program Total Credits Required 70

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**MARKETING** **(10-104-3B) – Business to Business** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
		Marketing Communications	

PROGRAM DESCRIPTION

Marketing, which can be completed in two years of study if taken full-time, concentrates on a general method of marketing and sales. Course work includes such items as introduction to microcomputers, business overview, credit procedures, business communication, promotion methods, business law, supervisory techniques, retailing, general sales, and psychology.

PROGRAM LEARNING OUTCOMES

Graduates of the Marketing-Business to Business Associate Degree Program should be able to:

1. Communicate effectively in a professional environment.
2. Develop strategies to anticipate and satisfy market needs.
3. Promote products, services, images, and/or ideas to achieve a desired outcome.
4. Evaluate information through the market research process.
5. Prepare selling strategies.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Formerly 103-199, PC Basics/Microsoft Office.
4. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** 	**Career Pathway ►** Marketing Communications	**MARKETING** **(10-104-3A) – General Marketing** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**

ΔSuggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		104-101	*	Marketing Principles		3	3-0
		102-137 102-160	*OR	Introduction to Business Business Law		3	3-0
		104-104	*	Selling Principles		3	3-0
		103-143		Computers for Professionals	Prereq: 103-142 (See Notes 1 & 3)	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		801-196 801-198	OR	Oral/Interpersonal Communication Speech	Prereq: 838-105 (See Note 1)	3	3-0
Semester 2		104-105	*	Promotion Principles	Prereq: 104-104	3	3-0
		804-123	OR	Math with Business Applications	Prereq: 834-109 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 4)	3	3-0
		103-103		Microsoft Excel II		1	1-2
		104-119	*	Visual Merchandising		3	1-2
		104-194	*	International Marking		3	3-0
Semester 3		104-161	*	Advanced Selling, Advanced	Prereq: 104-104	3	3-0
		104-173	*	Marketing Research	Coreq: 104-101	3	2-2
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-172	*	Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
		104-127	*	Retailing		3	3-0
Semester 4		101-112	OR	Accounting for Business		3	3-0
		101-114		Accounting Principles		4	3-2
		104-115	*	Marketing Capstone/Internship	Prereq: 104-101; 104-104 & Inst. Consent Coreq: 104-116; 104-161	3	1-0-0-4
		104-116	*	Electronic Marketing/Social Media	Prereq: 104-101	3	3-0
		104-172	*	Marketing Management	Prereq: 104-101	3	3-0
		809-144		Macroeconomics	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

104-111 Ticket Sales (1 Cr)
104-110 Corporate Sponsorship (2 Cr)
102-138 Biz Squad (3 Cr)
102-160 Business Law (3 Cr)
104-109 Marketing/Sports & Event (3 Cr)

Minimum Program Total Credits Required 70

Δ*Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**MARKETING** **(10-104-3A) – General Marketing** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
		Marketing Communications	

PROGRAM DESCRIPTION

Marketing, which can be completed in two years of study if taken full-time, concentrates on a general method of marketing and sales. Course work includes such items as introduction to microcomputers, business overview, credit procedures, business communication, promotion methods, business law, supervisory techniques, retailing, general sales, and psychology.

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

PROGRAM LEARNING OUTCOMES

Graduates of the Marketing-General Associate Degree Program should be able to:

1. Communicate effectively in a professional environment.
2. Develop strategies to anticipate and satisfy market needs.
3. Promote products, services, images, and/or ideas to achieve a desired outcome.
4. Evaluate information through the marketing research process.
5. Prepare selling strategies.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Formerly 103-199, PC Basics/Microsoft Office.
4. Transfer credits in Social Science may substitute for this course. See an Advisory for details.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**MARKETING** **(10-104-3D) – Marketing Communications** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
		Marketing Communications	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		104-101	*	Marketing Principles		3	3-0
		204-100	*	Design Concepts		4	3-2
		204-105	*	Comp. Illustration & Drawing Tech		3	2-2
		204-107	*	Digital Photography, Intro to		3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		104-104	*	Selling Principles		3	3-0
		104-105	*	Promotion Principles		3	3-0
		204-116	*	Web Page Design for Graphic Designers	Prereq: 204-107	3	2-2
		204-126	*	Design & Publishing	Prereq: 204-100	3	2-2
		804-123	***OR***	Math with Business Applications	Prereq: 834-109 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
		809-172		Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
Semester 3		104-118	*	Advanced Promotion	Prereq: 104-105	3	3-0
		104-161	*	Selling Principles, Advanced	Prereq: 104-104	3	3-0
		204-109	***OR**	Graphic Design Prof. Practices	Prereq: 204-126	3	2-2
		102-138		BIZ Internship	Prereq: Instructor Consent		0-6
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 4		104-172	*	Marketing Management	Prereq: 104-101	3	3-0
		104-116	*	Electronic Marketing/Social Media	Prereq: 104-101	3	3-0
		204-120	*	Multimedia Survey		3	2-2
		801-196	***OR***	Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		801-198		Speech			
		809-144		Macroeconomics	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives:					
		204-115 Advanced Digital Photography (3 Cr)			104-173 Marketing Research (3 Cr)		
		204-134 Advanced Problems in Graphic Design (3 Cr)			204-149 Adv. Web Page Design (3 Cr)		
		104-115 Capstone Internship (3 Cr)					
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**MARKETING** **(10-104-3D) – Marketing Communications** *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
		Marketing Communications	

PROGRAM DESCRIPTION

Marketing, which can be completed in two years of study if taken full-time, concentrates on a general method of marketing and sales. Course work includes such items as introduction to microcomputers, business overview, credit procedures, business communication, promotion methods, business law, supervisory techniques, retailing, general sales, and psychology.

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

PROGRAM LEARNING OUTCOMES

Graduates of the Marketing-Marketing Communications Associate Degree Program should be able to:

1. Communicate effectively in a professional environment.
2. Develop strategies to anticipate and satisfy market needs.
3. Promote products, services, images, and/or ideas to achieve a desired outcome.
4. Evaluate information through the marketing research process.
5. Prepare selling strategies.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Science, Technology, Engineering & Mathematics	**Career Pathway ►** Engineering and Technology	**MECHANICAL DESIGN TECHNOLOGY** (10-606-1A) – Mechanical Engineering Tech *Associate of Applied Science Degree* **Most Courses Offered at iMET Center**

Δ*Suggested Sequence*	√	*Course Number*		*Course Title*	*Requisites*	*Credits*	*Hrs/Wk Lec - Lab*
Semester 1		606-149	*	Introduction to MET		2	1-2
		606-103	*	Material Properties		2	2-0
		606-128	*	CAD – Solidworks		2	1-2
		606-141	*	AutoCAD – Mech Design Tech		3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
Semester 2		606-129	*	CAD Solids / Advanced	Prereq: 606-128	2	1-2
		606-151	*	Statics	Prereq: 804-115	3	2-2
		606-152	*	Engineering Graphics w/ CAD1	Prereq: 606-149	2	1-2
		804-197		College Algebra & Trig w Apps	Prereq: 804-114 OR 804-115	5	5-0
		806-154		General Physics 1	Prereq: 804-115	4	3-2
Semester 3		606-118	*	Mechanisms	Prereq: 606-151; 606-152	2	1-2
		606-119	*	Motor Controls		3	2-2
		606-131	*	Strength of Materials	Prereq: 606-151; 806-154	3	2-2
		606-153	*	Engineering Graphics w/ CAD 2	Prereq: 606-152	2	1-2
		606-159	*	Manufacturing Processes	Prereq: 606-103 OR 606-136	2	2-0
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		606-116	*	Machine Design / Elements of	Prereq: 606-152	3	3-0
		606-138	*	Design Problems	Prereq: Instructor Consent	2	0-4
		606-154	*	Engineering Graphics w/ CAD 3	Prereq: 606-153	2	1-2
		606-160	*	Fluid Power and Design		3	2-2
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

606-130 Introduction – SolidEdge (2 Cr)
606-137 Manufacturing Process Appl (2 Cr)
606-139 Introduction – AutoCAD Inventor (2 Cr)
606-142 Creo – Pro/Engineering (2 Cr)
606-186 Directed Study/Mech. Design (1 Cr)
606-199 Internship, Mechanical Technician (1 Cr)

Minimum Program Total Credits Required 70

Δ*Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**MECHANICAL DESIGN TECHNOLOGY** (10-606-1A) – Mechanical Engineering Tech *Associate of Applied Science Degree* **Most Courses Offered at iMET Center**
	Science, Technology, Engineering & Mathematics	Engineering and Technology	

PROGRAM DESCRIPTION

In *Mechanical Design Technology,* comprehensive instruction is given and practical experience gained in mechanical design, drafting, and computer aided design (CAD). Extensive experience is gained with dimensioning practices, allowances, sections, drafting standards, auxiliary views, exploded views, fabrication drawings detail and assembly drawings, gears and cams, structural shapes, and intersections. Other topics covered through classroom study include practical geometry, basic fabrication methods, engineering geometry, linear velocity, engineering materials and properties, kinematics of machinery, and manufacturing processes.

PROGRAM LEARNING OUTCOMES

Graduates of the Mechanical Design Technology Associate Degree Program should be able to:

1. Prepare detail and assembly drawings for documentation of mechanical components and products.
2. Create CAD geometry, parts, and assemblies.
3. Design mechanical components and products.
4. Analyze mechanical engineering problems.
5. Select purchase parts.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 Credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days.
3. A drafting kit is required for this program; the cost is approximately $20.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	MECHANICAL DESIGN TECHNOLOGY (10-606-1B) – Mechatronics
	Science, Technology, Engineering & Mathematics	Engineering and Technology	*Associate of Applied Science Degree* Most Courses Offered at iMET Center

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		606-149	*	Introduction to MET	Coreq: 606-128	2	1-2
		605-113	*	DC/AC I		3	2-2
		606-103	*	Material Properties		2	2-0
		606-128	*	CAD Solidworks		2	1-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		804-115		College Technical Math 1	Prereq: 834-110 (See Note 1)	5	5-0
Semester 2		605-114	*	DC/AC II	Prereq: 605-113	3	2-2
		605-130	*	Digital Electronics	Coreq: 605-113	4	3-2
		606-129	*	CAD Solids / Advanced	Prereq: 606-128	2	1-2
		606-151	*	Statics	Prereq: 804-115	3	2-2
		606-152	*	Engineering Graphics w/ CAD 1	Coreq: 606-128	2	1-2
		806-154		General Physics 1	Prereq: 804-115	4	3-2
Semester 3		605-120	*	Electronic Devices I	Prereq: 605-113	4	2-4
		605-136	*	PLC System Design	Prereq: 605-130	3	2-2
		606-116	*	Machine Design / Elements of	Prereq: 606-152	3	3-0
		606-153	*	Engineering Graphics w/ CAD 2	Prereq: 606-152	2	1-2
		801-198		Speech	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		606-102	*	Mechanical Systems Design	Prereq: 605-130	3	2-2
		606-138	*	Design Problems	Prereq: Instructor Consent	2	0-4
		606-141	*	AutoCAD – Mech Design Tech		3	2-2
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0

Electives

Take 6 elective credits. Any associate degree level course may be taken as an elective. ***6***

Suggested Electives:

606-118 Mechanisms (2 Cr)
606-130 Introduction – SolidEdge (2 Cr)
605-133 Industrial Data Communications (3 Cr)
606-139 Intro – AutoCAD Inventor (2 Cr)
606-142 Introduction – Pro-E (2 Cr)
606-154 Engineering Graphics w/ CAD 3 (2 Cr)
606-160 Fluid Power and Design (3 Cr)
606-186 Directed Study/Mechanical Design (1 Cr)
606-199 Internship, Mechanical Technician (1 Cr)

Minimum Program Total Credits Required ***70***

^

Effective 2016/2017	Career Cluster ►	Career Pathway ►	MECHANICAL DESIGN TECHNOLOGY (10-606-1B) – Mechatronics
	Science, Technology, Engineering & Mathematics	Engineering and Technology	*Associate of Applied Science Degree* Most Courses Offered at iMET Center

PROGRAM DESCRIPTION

In *Mechanical Design Technology,* comprehensive instruction is given and practical experience gained in mechanical design, drafting, and computer aided design (CAD). Extensive experience is gained with dimensioning practices, allowances, sections, drafting standards, auxiliary views, exploded views, fabrication drawings detail and assembly drawings, gears and cams, structural shapes, and intersections. Other topics covered through classroom study include practical geometry, basic fabrication methods, engineering geometry, linear velocity, engineering materials and properties, kinematics of machinery, and manufacturing processes.

PROGRAM LEARNING OUTCOMES

Graduates of the Mechanical Design Technology Associate Degree Program should be able to:

1. Prepare detail and assembly drawings for documentation of mechanical components and products.
2. Create CAD geometry, parts, and assemblies.
3. Design mechanical components and products.
4. Analyze mechanical engineering problems.
5. Select purchase parts.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription safety glasses are necessary, please allow a minimum of 90 days.
3. A drafting kit is required for this program; the cost is approximately $20.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	MEDICAL ASSISTANT (31-509-1) Technical Diploma Most Courses Offered at Elkhorn and Racine Campuses
	Health Science	Therapeutic Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		509-301	*	Medical Assistant Admin Procedures	Coreq: 501-107	2	3-1
		509-303	*	Medical Assistant Lab Procedures 1	Coreq: 509-304	2	2-2
		509-304	*	Medical Assistant Clinical Procedures 1	Prereq: Advisor Consent	4	4-4
		509-302	*	Human Body in Health and Disease	Coreq: 501-101	3	6-0
		501-107	*	Intro to Healthcare Computing	(See Note 5)	2	1-2
		501-101	+ * §	Medical Terminology	Prereq: 838-105 (See Note Below)	3	3-0
Semester 2		509-305	*	Medical Assistant Lab Procedures 2	Prereq: 509-303	2	2-2
		509-306	*	Medical Assistant Clinical Procedures 2	Prereq: 509-303; 509-304 Coreq: 509-308	3	4-2
		509-307	*	Medical Office Insurance & Finance	Prereq: 501-107; 509-302	2	0-4
		509-308	*	Pharm for Allied Health	Prereq: 509-302	2	4-0
		509-309	*	Medical Law, Ethics and Professionalism		2	4-0
		801-136	+*OR*	English Composition 1	Prereq: 831-103 (See Note Below)	3	3-0
		801-301		Writing Principles	Prereq: 851-756 (See Note Below)	1	2-0
		A four week practicum follows the completion of the second semester.					
		509-310	*	Medical Assistant Practicum	Prereq: Instructor Consent (See Note 7&8)	3	0-0-9

Minimum Program Total Credits Required 31

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

+ A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$2,290	$4,950	$2,334	0%	Medical Assistants (31-9092)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.
[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017

Career Cluster ►

Health Science

Career Pathway ►

Therapeutic Services

MEDICAL ASSISTANT
(31-509-1)
Technical Diploma
Most Courses Offered at Elkhorn and Racine Campuses

PROGRAM DESCRIPTION

The Medical Assistant program's goal is to prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains. Medical assistants are multi-skilled health individuals who work in ambulatory settings such as clinics, group practices, and physicians offices. The medical assistant is responsible for medical and surgical asepsis, taking vital signs, assisting the physician with examinations and surgery, administering ECGs and administering medications. The business/ administrative duties include patient reception, appointment making, record keeping, filing, bookkeeping, processing insurance claims, typing medical correspondence, transcription and microcomputer applications. Laboratory functions include specimen collection, performance of waived laboratory tests and work. Graduates find jobs as medical assistants, secretaries, medical laboratory assistants, phlebotomists, receptionists, medical insurance clerks and electrocardiogram technicians.

PROGRAM LEARNING OUTCOMES

Graduates of the Medical Assistant Program should be able to:

1. Perform medical office administrative functions
2. Provide patient care in accordance with regulations, policies, laws, and patient rights.
3. Perform medical laboratory procedures
4. Demonstrate professionalism in a healthcare setting
5. Demonstrate safety and emergency practices in a healthcare setting

Gateway Technical College's Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Programs (CAAHEP) (www.caahep.org) upon recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs
1361 Park Street Clearwater, FL 33756
(727) 210-2350 www.caahep.org

Additional information on the Medical Assisting profession can be accessed at:
www.aama-ntl.org

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 31 credits with an average of 2.0 or above.
2. A grade of C or better for each of these (*) courses.
3. §Can't be completed more than 26 mos. prior to entry in 509-308, 509-303, 509-304.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A liability fee is assessed for core courses.
2. There is a daily long-term exposure to latex products in this program. Those with latex sensitivity may find exp. to latex impossible to avoid in this environment.
3. When there has been an interruption between core (*) courses and Clinical Office Practice, the student must enroll in and successfully complete, Update for Health Professionals (509-433) prior to the practicum.
4. Some courses may be taken prior to entry in the program, assuming all requisites have been satisfied (or waived with department approval).
5. This course requires advisor consent which will be granted only to students who show the ability to type at 35WPM or complete a keyboarding course.
6. Persons conv. of a felony are not eligible to sit for the cert. exam unless the certifying board grants a waiver based on the mitigating circumstances listed in the Disciplinary Standards of the American Association of Medical Assistants.
7. Course 509-310 Medical Assistant Practicum is a 160 hour unpaid practicum experience that must be completed in order for students to successfully complete the MA program. In order to enroll in the practicum course, students must complete all other coursework, submit a completed health physical form and submit evidence of completion of courses 531-410B CPR-Healthcare Provider and 531-419A Medic First Aid.
8. Students should be advised that they will be assigned a clinical site affiliated with the campus where they have completed 509-305 and 509-306. Reassignment of clinical sites is subject to instructor approval.
9. This program has a second-tier admission process for clinical/practicum/program courses called petitioning. Students are selected based on completion of academic eligibility requirements and district residency. See https://www.gtc.edu/student-services/admissions/what-petitioning for additional information.
10. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	NURSING – ASSOCIATE DEGREE (10-543-1)
	Health Science	Therapeutic Services	*Associate of Applied Science Degree* Most Courses Offered at Burlington Center and Kenosha Campus

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Pre-Clinical		806-177	§*	General Anatomy and Physiology	Prereq: 806-134 (See Notes 1 & 5)	4	2-4
Clinical Semester 1		543-101	§*	Nursing Fundamentals	Prereq: 806-177 & Adv. Cons. (See Notes 1 & 12)	2	2-0
		543-102	§*	Nursing Skills	Prereq: 806-177 & Adv. Cons. (See Notes 1 & 12)	3	0-6
		543-103	§*	Nursing Pharmacology	Prereq: 806-177 & Adv. Cons. (See Notes 1 & 12)	2	2-0
		543-104	§*	Nsg: Intro Clinical Practice	Prereq: 806-177 & Adv. Cons. (See Notes 1 & 12) Coreq: 543-101; 543-102; 543-103	2	0-0-6
		801-136	§	English Composition 1	Prereq: 831-103 (See Note 5)	3	3-0
		809-188	§	Psychology, Developmental	Prereq: 838-105 (See Note 5)	3	3-0
Clinical Semester 2		543-105	§*	Nursing Health Alterations	Prereq: (See Note 2)	3	2-2
		543-106	§*	Nursing Health Promotion	Prereq: 809-188 (See Note 2)	3	3-0
		543-107	§*	Nsg: Clin Care Across Lifespan	Coreq: 543-106 (See Note 2)	2	0-0-6
		543-108	§*	Nsg: Intro Clinical Care Mgt.	Coreq: 543-105 (See Note 2)	2	0-0-6
		801-198	§	Speech	Prereq: 838-105 (See Note 5)	3	3-0
		806-179	*	Anatomy & Physiology, Advanced	Prereq: 806-177 (See Note 3)	4	2-4
Clinical Semester 3		543-109	*	Nursing Complx Health Alter I	Prereq: 806-179; Coreq: 806-197 (See Notes 3 & 16)	3	2-2
		543-110	*	Nursing Mental Health Comm	Prereq: 806-179; Coreq: 809-198 (See Note 3 & 16)	2	1-2
		543-111	*	Nursing Intrmdt Clinical	Coreq: 543-109; 543-110; 543-112 (See Note 3 & 16)	3	0-0-9
		543-112	*	Nursing Advanced Skills	Prereq: 806-179 (See Note 3 & 16)	1	0-2
		806-197	*	Microbiology	Prereq: 806-177 OR 806-105 (See Note 5 & 15)	4	3-2
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 5 & 14)	3	3-0
Clinical Semester 4		543-113	*	Nursing Cmplx Health Alter II	Prereq: 806-197 (See Note 4)	3	2-2
		543-114	*	Nursing Management Concepts	Prereq: (See Note 4)	2	2-0
		543-115	*	Nursing Advanced Clinical	Coreq: 543-113; 543-114 (See Note 4)	3	0-0-9
		543-116	*	Nursing Clinical Trans.	Coreq: 543-113; 543-114; 543-115 (See Note 4)	2	0-0-6
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 5 & 14)	3	3-0
Electives		***Take 5 elective credits. Any associate degree level course may be taken as an elective.***				***5***	

Suggested Electives:

510-154 Pathophysiology for Health Professions (3 Cr)
501-101 Medical Terminology (3 Cr)
510-151 Nsg: Endocrine & Electrolytes (1 Cr)
510-152 Nsg: Pediatrics (1 Cr)
510-153 Nsg: Pharmacology Applications (1 Cr)
543-199 Clinical Reasoning in Nursing (3 Cr)

Minimum Program Total Credits Required 70

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**NURSING – ASSOCIATE DEGREE** **(10-543-1)** *Associate of Applied Science Degree* **Most Courses Offered at Burlington Center and Kenosha Campus**
	Health Science	Therapeutic Services	

PROGRAM DESCRIPTION

Nursing-Associate Degree program is the dynamic interpersonal goal-directed process that seeks to promote optimal health within the context of individuals, family, community and society. The concept of caring, which is central to nursing, is communicated through both attitude and action. Nursing uses the nursing process, a problem solving approach to provide holistic care to individuals, families, and groups within the health care system. Nurses assess health and make clinical decisions to provide safe and effective nursing care according to standards of practice within legal, ethical and regulatory frameworks. Nursing practice is based on its own body of knowledge. Through collaboration with other health care professionals, nursing is responsive to the needs of the community across the health-illness continuum. The program may be completed in two academic years of full-time study. Individuals who are Licensed Practical Nurses should contact Gateway for information regarding advanced standing opportunities.

PROGRAM LEARNING OUTCOMES

Graduates of the Nursing Associate Degree Program should be able to:

1. Implement one's role as a nurse in ways that reflect integrity, responsibility, ethical practices, and an evolving professional identity as a nurse committed to evidence-based practice, caring, advocacy, and quality care.
2. Demonstrate appropriate written, verbal, and nonverbal communication in a variety of clinical contexts.
3. Integrate social, mathematical, and physical sciences, pharmacology, and pathophysiology in clinical decision making.
4. Provide patient centered care by utilizing the nursing process across diverse populations and health care settings.
5. Minimize risk of harm to patients, members of the healthcare team and self through safe individual performance in participation in system effectiveness.
6. Lead the multidisciplinary health care team to provide effective patient care throughout the lifespan.
7. Use information and technology to communicate, manage data, mitigate error, and support decision-making.

The Nursing program is fully accredited by the ACEN, 3343 Peachtree Rd NE Suite #850, Atlanta, GA 30326. For more information call (404) 975-5000.

Eligibility for Licensure Exam: Student must be a grad of a state-app. school, be a U.S. citizen, or submit proof of intention to become a citizen or a perm. resident alien.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. * Minimum Grade of 2.0 ("C") or above for these major courses.
3. § Must be completed to be eligible to take the NCLEX-PN exam.

GTC credits may transfer to colleges and universities offering adv. nurse ed. programs.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. Students must meet current petition requirements at the time they are eligible to enroll in 543 courses.
2. These courses include prerequisites of 543-101; 543-102; 543-103; and 543-104.
3. These courses include prerequisites of 543-105; 543-106; 543-107; and 543-108.
4. These courses include prerequisites of 543-109; 543-110; 543-111; and 543-112.
5. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
6. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
7. Eye protection is required in the chemistry lab and in selected clinical situation.
8. A liability insurance fee per semester is required.
9. Students will be selected for their initial core 543 courses using a petitioning process.
10. A physical examination and immunization are required prior to admission to the first clinical course. Clinical sites may require proof of health insurance.
11. This program has a second-tier admission process for clinical/practicum/program courses called petitioning. Students are selected based on completion of academic eligibility requirements and district residency. See https://www.gtc.edu/student-services/admissions/what-petitioning for additional information.
12. Beginning in January 2015, students must have received a "B-" or better in 806-177 General Anatomy & Physiology before they can enroll in this course.
13. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
14. Transfer credits in Social Science may substitute for this course. See an advisor for details.
15. Students in this program should complete 806-177 as the pre-req for this course.
16. Beginning in May 2016, students must have received a B- or better in 806-179 Anatomy and Physiology, Advanced before they can enroll in the course.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	NURSING ASSISTANT (30-543-1) Technical Diploma Most Courses Offered at Burlington, Elkhorn, Kenosha, and Racine Campuses
	Health Science	Therapeutic Services	

Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
543-300	Nursing Assistant	Prereq: 858-760 & Program Admission	3	4-2
		Minimum Program Total Credits Required	***3***	

The State of Wisconsin Regulatory Agency requires mandatory attendance of 120 hours for this course. There is an allowance of up to 8 hours absence/tardiness with mandatory documented homework assignments. If there is a college related cancellation of course time, mandatory make-up day(s) will be assigned to the course to ensure compliance with state regulations.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**NURSING ASSISTANT** **(30-543-1)** *Technical Diploma* **Most Courses Offered at Burlington, Elkhorn, Kenosha, and Racine Campuses**
	Health Science	Therapeutic Services	

PROGRAM DESCRIPTION

Nursing Assistant, offered numerous times throughout the district, prepares students to perform basic nursing skills in caring for clients in various health care settings. A certificate is awarded upon successful completion of this course and graduates are eligible to competency test for placement on the Wisconsin Nursing Assistant / Home Health Aide Registry.

PROGRAM LEARNING OUTCOMES

Graduates of the Nursing Assistant Technical Diploma Program should be able to:

1. Communicate and interact effectively with clients, family, and co-workers.
2. Maintain and protect client rights.
3. Report information and record observations.
4. Demonstrate the ethical and legal responsibilities of the NA/HHA.
5. Carry out the basic nursing skills required of the NA/HHA.
6. Provide for resident personal care and hygiene.
7. Assist with client rehabilitation and restorative care, promoting independence.
8. Assist clients with long-term, disabling conditions including dementia.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading (score of 55+ or successful completion of 838-105), writing, and math placement assessments.
3. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
4. Students must complete a functional ability form verifying they are able to perform physical requirements of the program and must complete all health requirements.

GRADUATION REQUIREMENTS

1. Minimum 3 credits with an average of 2.0 or above.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A liability fee is assessed on a per credit basis.
2. Clinical sites may require drug testing.
3. Successful completion of 543-300 will result in the student's eligibility to take the Wisconsin Competency Testing for certification as a Nursing Assistant.
4. Certificates will be issued upon successful completion of 543-300.
5. 543-300 is a 120 hour course – classroom / lab / clinical combined.
6. District-wide Nursing Assistant clinical uniform required: Blue uniform top and blue uniform bottom.
7. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**OFFICE ASSISTANT** **(31-106-1)** *Technical Diploma* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Business Management & Administration	Administrative Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		103-109		Windows Operating Sys. & Con.		1	.5-1
		106-011	*	Records Management		1	1-0
		106-137	*	Keyboarding Applications		3	1-4
		106-178	*	Business Proofreading & Editing		2	2-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		804-123		Math with Business Applications	Prereq: 834-109 (See Note 1)	3	3-0
Semester 2		101-112		Accounting for Business		3	3-0
		103-110		Microsoft PowerPoint		1	.5-1
		106-010	*	Publication Design for Business	Prereq: 106-137	2	1-2
		106-012	*	Spreadsheet/DB for Business I	Prereq: 106-137	3	2-2
		106-014	*	Word Processing for Business I	Prereq: 106-137	2	1-2
		106-119	*	Professional Development		2	2-0
		106-019	*	Administrative Service Internship I	Prereq: 106-137 Coreq: 106-119	1	.5-0-0-2

Minimum Program Total Credits Required 30

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Students who are interested in continuing into the 10-106-6 Administrative Professional program can earn their associate degree by completing an additional 36 credits. Please see your academic advisor for details.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-Time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$1,920	$4,690	$1,167	20%	Office Clerks (43-9061)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.
[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**OFFICE ASSISTANT** **(31-106-1)** *Technical Diploma* **Most Courses Offered at Elkhorn, Kenosha, and Racine Campuses & Online**
	Business Management & Administration	Administrative Services	

PROGRAM DESCRIPTION

Office Assistant prepares individuals to fulfill the role of an office generalist. Participants will develop skills in keyboarding, filing, business mathematics, records control, and customer service. Office Assistant graduates will develop the computer skills necessary to succeed in the office environment. Participants will be given the opportunity to visit and observe area office assistants in action.

PROGRAM LEARNING OUTCOMES

Graduates of the Office Assistant Technical Diploma Program should be able to:

1. Demonstrate effective workplace communications.
2. Apply technology skills to business and administrative tasks.
3. Perform routine administrative procedures.
4. Maintain internal and external relationships.
5. Model professionalism in the workplace.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 30 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Information Technology	**Career Pathway ►** Programming & Software Development	**ORACLE** **(10-810-4)** *Advanced Technical Certificate* **Most Courses Offered at Racine Campus**

√	Course Number	Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
	152-194	SQL Fundamentals - Oracle		3	2-2
	152-110	DBA – Part 1 – Oracle		3	2-2
	152-127	DBA – Part 2 – Oracle	Prereq: 152-110	3	2-2
	152-128	DBA – Part 3 – Oracle	Prereq: 152-110	3	2-2

Program Total Required ***12***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	ORACLE (10-810-4) *Advanced Technical Certificate* Most Courses Offered at Racine Campus
	Information Technology	Programming & Software Development	

PROGRAM DESCRIPTION

Oracle prepares you for a career in Oracle Enterprise Database Administration. This career will allow you to organize, manage, backup, and recover data stored in Oracle databases that are available within an Intranet and/or Internet environment. Class work includes introduction to SQL, database administration, Oracle networking and backup and recovery, and Oracle performance tuning.

EQUIVALENCY

This program is designed for students who have completed one of the following Gateway Technical College Associate Degrees (or have the equivalent knowledge and skills):

IT-Software Developer (10-152-1)
IT-Web Developer/Administrator (10-152-3)
IT-Network Specialist (10-150-2)
IT-Computer Support Specialist (10-154-3)

Equivalency can be earned through a combination of prior class work and/or current work experience. For equivalency information, call the campus advisor.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Related associate degree (official transcript required) or equivalent work experience (documented by an advisor) required.

GRADUATION REQUIREMENTS

1. 12 Credits with an average of 2.0 or above.

For a complete list of Graduation Requirements check the Student Handbook.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	PARAMEDIC TECHNICIAN (10-531-1)
GATEWAY TECHNICAL COLLEGE	911 Law, Public Safety, Corrections & Security	Emergency and Fire Management Services	*Associate of Applied Science Degree* Most Courses Offered at HERO Center

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		531-911	*	EMS Fundamental	Prereq: 838-105 (See Notes 1 & 2)	2	2-0
		531-912	*	Paramedic Medical Principles	Coreq: 531-911	4	4-0
		531-913	*	Adv. Patient Asses. Principles	Coreq: 531-911	3	2-2
		531-914	*	Adv. Pre-Hospital Pharmacology	Coreq: 531-911	3	2-2
		531-915	*	Paramedic Respiratory Mgt.	Coreq: 531-914	2	1-2
		531-917	*	Paramedic Clinical/Field I	Coreq: 531-912	3	0-0-0-12
		531-955	*	Paramedic Cardiology 1	Coreq: 531-915	2	1.5-1
		531-956	*	Paramedic Cardiology 2	Prereq: 531-955	2	1-2
Semester 2		531-918	*	Adv. Emergency Resuscitation	Coreq: 531-955	1	0-2
		531-919	*	Paramedic Medical Emergencies	Coreq: 531-955	4	3-2
		531-920	*	Paramedic Trauma	Coreq: 531-955	3	2-2
		531-921	*	Special Patient Populations	Coreq: 531-955	3	2-2
		531-922	*	EMS Operations	Coreq: 531-955	1	1-0
		531-923	*	Paramedic Capstone	Coreq: 531-955	1	0-2
		531-924	*	Paramedic Clinical/Field II	Coreq: 531-531-955 (See Notes 3 & 4)	4	0-0-0-16
Semester 3		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
		806-177		General Anatomy and Physiology	Prereq: 806-134	4	2-4
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
Semester 4		806-179		Anatomy & Physiology, Advanced	Prereq: 806-177	4	2-4
		806-197		Microbiology	Prereq: 806-177 OR 806-105 (See Note 7)	4	3-2
		809-188		Psychology, Developmental	Prereq: 838-105 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 5)	3	3-0
Electives		***Take 5 elective credits. Any associate degree level course may be taken as an elective.***				***5***	
		Suggested Electives: 501-101 Medical Terminology (3 Cr)					
					Minimum Program Total Credits Required	***70***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**PARAMEDIC TECHNICIAN** **(10-531-1)** *Associate of Applied Science Degree* **Most Courses Offered at HERO Center**
	Public Safety, Corrections & Security	Emergency and Fire Management Services	

PROGRAM DESCRIPTION

Paramedic requires students to be licensed in Wisconsin at the Emergency Medical Technician (EMT), Advanced EMT (EMT Intermediate Technician), or EMT Intermediate level and be current in Healthcare Provider CPR. Paramedics can perform more acute care and administer advanced drug therapies. They can also perform surgical procedures to open airways and provide resuscitative drugs. Paramedics have an increased knowledge of lifesaving skills as well as advanced emergency assessment expertise. This program is offered on a part time basis: either two evenings a week and Saturdays or an alternating day class 2-3 days a week to accommodate the typical 24 hour on/48 hour off schedule worked by many FF/EMS agencies. At the end of the program, students will take a final Gateway Technical College written and practical exam, and after successful completion students will be eligible to test and credential through the National Registry of Emergency Medical Technicians®. The program includes approximately 650 hours of classroom lecture and skills lab, and approximately 500 hours of supervised hospital clinical and field time. Satisfactory completion of clinical/field time is competency based so actual number of hours may vary from student to student. Graduates of this program can expect to find employment with private ambulance companies, fire departments, or hospital emergency rooms. Students finishing the first two semesters of the program (the 531 courses) are eligible to receive the Paramedic Technical Diploma (31-531-1). All courses in the EMT-Paramedic diploma program can be applied to the Paramedic Technician associate degree.

Program Goal: To prepare competent entry-level Emergency Medical Technician-Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains, with or without exit points at the Emergency Medical Technician-Intermediate and/or Emergency Medical Technician-Basic, and/or First Responder levels.

PROGRAM LEARNING OUTCOMES

Graduates of the Paramedic Technician Program should be able to:

1. Prepare for incident response and EMS operations.
2. Integrate pathophysiological principles and assessment findings to provide appropriate patient care.
3. Demonstrate paramedic skills associated with established standards and procedures for a variety of patient encounters.
4. Communicate effectively with others.
5. Demonstrate professional behavior.
6. Meet state and national competencies listed for paramedic credentialing.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must have current CPR certification.
4. Students must have current Wisconsin EMS licensure.
5. Students must submit official high school, GED, or HSED transcript.
6. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.
7. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *A minimum grade of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior enrollment. See an advisor for details.
2. Prior to enrolling in paramedic level courses, a student must satisfactorily complete an EMS specific pre-admission screening which includes both written and practical components at the Emergency Medical Technician level (EMT) and attend an informational orientation with the program staff.
3. Drug testing and immunizations are required prior to admission to the first clinical course (531-917).
4. Applicants of this program are subject to a review of their criminal backgrounds as part of the training center training permit process. Positive background checks may negatively impact your ability to pursue this career at Gateway Technical College.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.
6. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
7. Students in this program should complete 806-177 as the pre-req for this course.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	PHARMACY TECHNICIAN (31-536-1) *Technical Diploma* Most Courses Offered at Burlington Center
	Health Science	Therapeutic Services	

	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		501-101	*	Medical Terminology	Prereq: 838-105 (See Note 8)	3	3-0
		536-110	*	Pharmacy Calculations	Prereq: 834-109 Coreq: 501-101	3	3-0
		536-106	*	Community Pharmacy Bus App	Prereq: 834-109; 851-760; 103-142 or 501-107 Coreq: (See Notes 3 & 7)	4	2-4
		536-115	*	Pharmacy Law	Prereq: 834-109 Coreq: (See Note 3)	2	1-2
		536-121	*	Fund. Reading Prescriptions	Prereq: 834-109 Coreq: (See Notes 3 & 10)	2	2-0
		536-105	*	Pharmacy Community Clinical	Prereq: Inst. Consent (See Notes 3, 6 & 10)	2	0-0-0-8
		536-104	*	Pharmacy Benefit Management	Prereq: (See Notes 3 & 10)	1	1-0
Semester 2		536-101	*	Sterile Tech for Pharm Tech	Prereq: (See Note 4) Coreq: (See Notes 5)	3	2-2
		536-107	*	Pharmacy Distribution Systems	Prereq: (See Note 4) Coreq: (See Notes 5 & 10)	1	1-0
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 8)	3	3-0
		536-122	*	Pharmacology for Pharm Tech	Prereq: (See Note 4) Coreq: (See Note 5)	3	3-0
		536-103	*	Pharmacy Hospital Clinical	Prereq: Inst Consent Coreq: (See Notes 5, 7, & 10)	2	0-0-0-8
		536-102	*	Hospital Pharmacy Applications	Prereq: (See Note 4) Coreq: (See Notes 5 & 7)	2	1-2
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 8)	3	3-0

Minimum Program Total Credits Required **34**

Certification: Two organizations, the Pharmacy Technician Certification Board and the Institute for the Certification of Pharmacy Technicians, administer national certification examinations. Certification is voluntary in most states, but is required by some states and employers. Some technicians are hired without formal training, but under the condition that they obtain certification within a specified period of time. To be eligible for either exam, candidates must have a high school diploma or GED, no felony convictions of any kind within 5 years of applying, and no drug or pharmacy related felony convictions at any point.

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$1,785	$5,190	$1459	0.0%	Pharmacy Technicians (29-2052)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.
[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	PHARMACY TECHNICIAN (31-536-1)
	Health Science	Therapeutic Services	*Technical Diploma* Most Courses Offered at Burlington Center

PROGRAM DESCRIPTION

The *Pharmacy Technician* diploma program is designed to prepare you to assist the pharmacist in preparation of drug products and prescriptions to be dispensed to the general public. The course of study covers one year of both academic and clerkship courses. This program is directed toward providing you with the skills and knowledge needed to obtain employment in either community or hospital pharmacies. Pharmacy technicians perform a variety of tasks including preparation of prescriptions, all types of record-keeping, inventory control, cash and credit transactions and third-party claims. Emphasis is placed on communication and customer relations in this health care occupation.

PROGRAM LEARNING OUTCOMES

Graduates of the Pharmacy Technician Technical Diploma Program should be able to:

1. Demonstrate personal /interpersonal knowledge and skills in the practice of pharmacy
2. Demonstrate foundational professional knowledge and skills for the practice of pharmacy
3. Prepare prescriptions/medication orders and pharmaceutical products for dispensing, distributions, and disposal
4. Compound sterile and nonsterile medications
5. Follow established policies and procedures for procurement, billing, reimbursement and inventory management
6. Utilize pharmacy technology and informatics
7. Adhere to state and federal regulations governing the practice of pharmacy
8. Apply the principles of quality assurance to the practice of pharmacy

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 34 credits with an average of 2.0 or above.
2. *A minimum grade of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. Clinical sites may require proof of health insurance, immunizations, and a physical.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. These courses include corequisites of 501-101; 536-104: 536-105; 536-106; 536-110; 536-115; and 536-121
4. These courses include prerequisites of 501-101; 536-104; 536-105; 536-106; 536-110;536-115 and 536-121
5. These courses include corequisites of 536-101; 536-102; 536-103; 536-107 and 536-122
6. Students must have received a "B-" or better in 834-109 Pre-Algebra.
7. Course 536-105 can only be attempted with instructor consent while also enrolled in 536-106; and course 536-103 can only be attempted with instructor consent while enrolled in 536-102.
8. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details
9. This program may have a second-tier admission process for clinical/practicum/program courses called petitioning. Students are selected based on completion of academic eligibility requirements and district residency. See https://www.gtc.edu/student-services/admissions/what-petitioning for additional information.Students must meet petitioning requirements prior to enrolling in 536 courses.
10. Students must successfully complete courses designated as "1st 8 weeks" before progressing to "2nd 8 week" courses.
11. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	**PHYSICAL THERAPIST ASSISTANT** **(10-524-1)** *Associate of Applied Science Degree* **Most Courses Offered at Kenosha Campus**
	Health Science	Therapeutic Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Summer		806-177	*	General Anatomy & Physiology	Prereq: 806-134 (See Note 6)	4	2-4
Semester 1		524-156	*	PTA Applied Kinesiology 1	(See Note 3)	4	2-4
		524-139	*	PTA Patient Interventions	Prereq: Instructor Consent	4	2-4
		524-140	*	PTA Professional Issues 1	Prereq: Instructor Consent	2	2-0
		524-143	*	PTA Therapeutic Modalities	Coreq: 524-139	4	2-4
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 2 & 8)	3	3-0
Semester 2		524-157	*	PTA Applied Kinesiology 2	Prereq: 524-156	3	1.5-3
		524-147	*	PTA Clinical Practice 1	Coreq: 524-141; 524-143	2	0-1-0-6
		524-142	*	PTA Therapeutic Exerc.	Prereq: 806-177 Coreq: 524-138	3	1.5-3
		524-145	*	PTA Principles of Musculoskeletal Rehab.	Prereq: 524-139 Coreq: 524-141 & 524-142	4	2-4
		804-113	*	College Technical Math 1A	Prereq: 834-110 (See Note 2)	3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 2)	3	3-0
Semester 3		524-144	*	PTA Princ of Neuro Rehab.	(See Note 1)	4	2-4
		524-146	*	PTA Cardio & Integ Mgmt	(See Note 1)	3	1.5-3
		524-148	*	PTA Clinical Practice 2	Prereq: 524-147	3	.5-0-0-10
		809-188		Psychology, Developmental	Prereq: 838-105 (See Note 2)	3	3-0
Semester 4		524-149	*	PTA Rehabilitation Across the Lifespan	Prereq: 524-144; 524-145; 524-148 Coreq: 524-146	2	1-2
		524-150	*	PTA Prof Issues 2	Prereq: 524-140 Coreq: 524-148	2	2-0
		524-151	*	PTA Clinical Practice 3	Prereq: 524-144; 524-145; 524-146; 524-148	5	.5-0-0-18
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 2)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 2 & 8)	3	3-0
Electives		***Take 3 elective credits. Any associate degree level course may be taken as an elective.***				***3***	

Suggested Electives:

501-101 Medical Terminology (3 Cr.)
510-154 Pathophys. for Health Prof. (3 Cr.)
524-108 PTA Musculoskeletal Anatomy & Function (2 Cr)
806-179 Anatomy & Physiology, Advanced (4 Cr)

Minimum Program Total Credits Required 70

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	PHYSICAL THERAPIST ASSISTANT (10-524-1)
	Health Science	Therapeutic Services	*Associate of Applied Science Degree* Most Courses Offered at Kenosha Campus

PROGRAM DESCRIPTION

Physical Therapist Assistant is a health profession with the primary purpose of promoting optimal human health and function through the application of scientific principles to prevent, identify, assess, correct, or alleviate acute or prolonged movement dysfunction. The physical therapist assistant (PTA) is a technical health care worker who carries out many patient treatments under the supervision of a physical therapist. PTAs find employment in clinics, hospitals, nursing homes, rehabilitation centers, home care agencies, schools, private health and fitness centers, and other settings.

PROGRAM LEARNING OUTCOMES

Graduates of the Physical Therapist Assistant Program should be able to:

1. Demonstrate effective comm. with patients, families, and health care team.
2. Exhibit behaviors and conduct that reflect respect and sensitivity according to PT practice standards.
3. Func. under the super. of a physical therapist in a safe, legal, ethical manner.
4. Produce documentation to support the delivery of PT services.
5. Demonstrate critical thinking skills to implement and adjust a plan of care under the direction and supervision of a physical therapist.
6. Perform technically competent data collection under the direction and supervision of the physical therapist.
7. Perform technically competent PT interventions under the direction and supervision of the physical therapist.
8. Educate patients, families, and other health providers.
9. Integrate components of administrative, operational, and fiscal practices of PT service in a variety of settings.
10. Implement a self-dir. plan for career dev., credentialing, and lifelong learning.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *A minimum grade of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. Courses 524-144 and 524-146 all have prerequisites of 524-141, 524-139 and 524-142.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Students must meet petition requirements before enrolling in 524 courses.
4. Any general studies course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. CPR certification must be obtained and maintained.
6. The prerequisite for this course must have been completed with a minimum grade of a ‘C’ or better.
7. This program has a second-tier admission process for clinical/practicum/program courses called petitioning. Students are selected based on completion of academic eligibility requirements and district residency. See https://www.gtc.edu/student-services/admissions/what-petitioning for additional information.
8. Transfer credits in Social Science may substitute for this course. See an advisor for details.
9. Please note that your program may require additional fee(s) for: Criminal Background Check, Medication Documentation Manager, and/or Drug Testing.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	PROFESSIONAL COMMUNICATIONS (10-699-1) *Associate of Applied Science Degree* Most Courses Offered at Racine Campus & Online
	Arts, A/V Technology & Communications	Journalism and Broadcasting	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		103-143		Computers for Professionals	Prereq: 103-142 (See Note 1&3)	3	2-2
		699-110	*	Communication Document Design	Coreq: 103-143	3	2-2
		699-117	*	Research Fundamentals		3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1&5)	3	3-0
Semester 2		204-107		Digital Photography, Intro to		3	2-2
		699-112	*	Editing	Prereq: 831-103 (See Note 1)	3	2-2
		699-114	*	Professional and Technical Writing	Prereq: 831-103 (See Note 1)	3	2-2
		Take 9 credits from the list in Note 4 in Semesters 2, 3, or 4				9	
		801-196 801-198	***OR***	Oral/Interpersonal Communication Speech	Prereq: 838-105 (See Note 1)	3	3-0
		801-197		Technical Reporting	Prereq: 801-136	3	3-0
Semester 3		204-105		Computer Illustration & Drawing Tech		3	2-2
		699-111	*	Communication Project Management		3	2-2
		699-113	*	Information Design	Prereq: 831-103 (See Note 1)	3	2-2
		804-107		College Math	Prereq: 834-109 (See Note 1)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1&5)	3	3-0
Semester 4		699-115 102-138	**OR*	Professional Communications Internship Biz Internship	Prereq: 699-113; 114; 117 Prereq: Instructor Consent	3	1-0-0-8 0-6
		699-116	*	Professional Communications Portfolio	Prereq: 699-113; 114; 117	1	1-0
		809-172		Diversity Studies, Introduction to	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	

Suggested Electives:

699-130 Writing and Publishing (3 Cr)
699-131 Writing Copy for Sales (3 Cr)
699-132 Writing for Organizations (3 Cr)
699-133 Writing for Social Media (3 Cr)
699-134 Writing for the Media (3 Cr)
699-135 Writing for the Web (3 Cr)
699-136 Writing Grant Proposals (3 Cr)
699-137 Writing Product Documentation (3 Cr)
699-138 Writing Software User Assist. (3 Cr)

Minimum Program Total Credits Required 67

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	PROFESSIONAL COMMUNICATIONS (10-699-1)
	Arts, A/V Technology & Communications	Journalism and Broadcasting	*Associate of Applied Science Degree* Most Courses Offered at Racine Campus & Online

PROGRAM DESCRIPTION

Professional Communications prepares students to research, plan, create, publish, and evaluate communication products. The curriculum develops the writing, design, and technology skills that students need to produce a variety of paper and electronic communication products, including articles, audiovisual scripts, grant proposals, promotional pieces, social media pages, user assistance, and websites. Professional communication skills are needed to meet the demands of the information age in business, government, and not-for-profit organizations.

PROGRAM LEARNING OUTCOMES

Graduates of the Professional Communications Associate Degree Program should be able to:

1. Plan for a communication project.
2. Create a communication product.
3. Synthesize text, visual elements, and design in a communication product.
4. Manage all aspects of a communication project.
5. Produce a final communication product.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 67 credits with an average of 2.0 or above.
2. *Minimum of 2.0 ("C") or above for these Major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Formerly 103-199, PC Basics/Microsoft Office.
4. Choose 9 credits from the following courses: 699-130; 699-131; 699-132; 699-133; 699-134; 699-135; 699-136; 699-137; 699-138 (noted in Electives list on front of sheet). If using a course to fulfill this requirement, students will not be allowed also to use the course to fulfill the elective requirement for the program. See an advisor for details.
5. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult WebAdvisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	SMALL BUSINESS ENTREPRENEURSHIP (31-145-1) *Technical Diploma* Most Courses Offered at Kenosha Campus & Online
	Business Management & Administration	General Management	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		104-101	*	Marketing Principles		3	3-0
		101-112	*	Accounting for Business		3	3-0
		103-143	*	Computers for Professionals	Prereq: 103-142 (See Note 1&3)	3	2-2
		145-119	*	Entrepreneurship		3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 2		145-120	*	Business Planning and Development	Prereq: 145-119	3	3-0
		104-105	*	Promotion Principles		3	3-0
		145-121	*	Small Business Ownership	Coreq: 145-120 & Inst. Consent	3	3-0
		145-106	*	Entrepreneurship 3 – Operations MGMT	Coreq: 145-119	3	3-0
		104-116	*	E-Marketing/Social Media	Prereq: 104-101	3	3-0
		104-104	*	Selling Principles		3	3-0

Minimum Program Total Credits Required 33

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$1,500	$4,995	Managers (11-9199)

Effective 2016/2017	Career Cluster ►	Career Pathway ►	SMALL BUSINESS ENTREPRENEURSHIP (31-145-1)
	Business Management & Administration	General Management	*Technical Diploma* **Most Courses Offered at Kenosha Campus & Online**

PROGRAM DESCRIPTION

Creating your own path through entrepreneurship takes inspiration, dedication, and the knowledge of the technical skills necessary to operate a business. You can complete the technical diploma in *Small Business Entrepreneurship* in two semesters. The coursework combines business theory with applied application to your proposed business. Whether you are launching your own venture, working for a small business, or working as a project manager for a large firm, the skills you will develop in this program will be an asset to your career.

PROGRAM LEARNING OUTCOMES

Graduates of the Small Business Entrepreneurship Program should be able to:

1. Develop a business plan for a small to medium sized business.
2. Develop a marketing plan for a small to medium sized business.
3. Demonstrate the tasks necessary to operate a small to medium sized business.
4. Apply the proper marketing concepts for a successful business.
5. Demonstrate the accounting skills necessary to manage a small to medium sized business.
6. Demonstrate the capacity to allocate the resources needed to manage a small to medium sized business, including financial, human, and operational resources.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application and $30 fee.
2. Students must complete reading, writing, math, and computer skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 33 credits with an average of 2.0 or above.
2. * Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Formerly 103-199, PC Basics/Microsoft Office.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	SUPERVISORY MANAGEMENT (10-196-1) *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn and Racine Campuses & Online**
	Business Management & Administration	General Management	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		196-129	*	Management Orientation	(See Note 5)	1	.5-1
		196-137	*	Certified Service Specialist		3	3-0
		196-190	*	Leadership Development		3	3-0
		196-191	*	Supervision		3	3-0
		801-136		English Composition 1	Prereq: 831-103 (See Note 2)	3	3-0
		801-198 801-196	***OR***	Speech Oral/Interpersonal Communication	Prereq: 838-105 (See Note 2)	3	3-0
Semester 2		196-134	*	Legal Issues for Supervisors		3	3-0
		196-169	*	Diversity and Change Management		3	3-0
		196-193	*	Human Resource Management		3	3-0
		804-123		Math with Business Applications	Prereq: 834-109 (See Note 2)	3	3-0
		809-166		Ethics: Theory & Applications, Intro to	Prereq: 838-105 (See Note 2)	3	3-0
Semester 3		101-112		Accounting for Business		3	3-0
		196-136	*	Safety in the Workplace		3	3-0
		196-189	*	Team Building and Problem Solving		3	3-0
		196-192	*	Managing for Quality		3	3-0
		809-144		Macroeconomics	Prereq: 838-105 (See Note 2)	3	3-0
Semester 4		196-138	*	Management for Supervisors Capstone		2	2-0
		196-168	*	Organizational Development		3	3-0
		196-188	*	Project Management		3	3-0
		809-172		Diversity Studies, Introduction to	Prereq: 838-105 (See Note 2)	3	3-0
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 2 & 6)	3	3-0
		Take 3 credits from the list in Note 1.				3	
Electives		***Take 6 elective credits. Any associate degree level course may be taken as an elective.***				***6***	
		Suggested Electives: 104-101 Marketing Principles (3 Cr) 196-164 Personal Skills for Supervisors (3 Cr) 102-138 Biz Internship (3 Cr)					
					Minimum Program Total Credits Required	***69***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	SUPERVISORY MANAGEMENT (10-196-1) *Associate of Applied Science Degree* **Most Courses Offered at Elkhorn and Racine Campuses & Online**
	Business Management & Administration	General Management	

PROGRAM DESCRIPTION

Supervisory Management provides opportunities for those interested in acquiring or improving managerial/supervisory skills. The curriculum provides a blend of human relations and management development disciplines. This background enables the supervisor or manager to better understand how to attain organizational goals through the positive motivation of employees. Emphasis is placed on the "how-to-approach" which allows the instruction to be transferred from the classroom to the job.

PROGRAM LEARNING OUTCOMES

Graduates of the Supervisory Management Associate Degree Program should be able to:

1. Utilize quality strategies and tactics.
2. Apply effective leadership skills.
3. Apply Human Resource policies and procedures.
4. Perform supervisory management functions to achieve organizational objectives.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 69 credits with an average of 2.0 or above.
2. *Average of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. Choose 3 credits from the following courses: 103-102; 103-109; 103-112; 103-110 or 103-143.
2. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
3. Enrollment for this program is intended for people currently employed in a position closely related to Supervisory Management or who wish to acquire skills to become a supervisor.
4. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
5. It is recommended that students enroll in 196-129 Management Orientation as the first course in the program.
6. Transfer credits in Social Science may substitute for this course. See an advisor for details.

OTHER INFORMATION

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EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	SURGICAL TECHNOLOGY (10-512-1) *Associate of Applied Science Degree* Most Courses Offered at Kenosha Campus
	Health Science	Therapeutic Services	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Summer		806-177	*	General Anatomy & Physiology	Prereq: 806-134 (See Note 7)	4	2-4
Semester 1		512-125	*	Intro to Surgical Technology	Prereq: 806-177 & Advisor Consent Coreq: 501-101	4	2-4
		512-126	*	Surgical Tech Fundamentals 1	Prereq: 806-177 & Advisor Consent Coreq: 501-101; 512-125	4	2-4
		512-127	*	Exploring Surgical Issues	Prereq: Advisor Consent Coreq: 512-125; 126	2	2-0
		501-101	*	Medical Terminology	Prereq: 838-105 (See Note 1)	3	3-0
		806-179	*	Anatomy and Physiology, Advanced	Prereq: 806-177 (See Note 7)	4	2-4
Semester 2		512-128	*	Surgical Tech Fundamentals 2	Prereq: 512-126; 501-101; 512-125; 512-127 Coreq: 806-179; 806-197; 512-129	4	2-4
		512-129	*	Surgical Pharmacology	Prereq: 512-125; 512-126	2	2-0
		512-130	*	Surgical Skills Applications 1	Prereq: 512-125; 126; 127; 128 & Inst. Consent Coreq: 512-129	2	0-2-3
		806-197	*	Microbiology	Prereq: 806-177 OR 806-105 (See Note 7&12)	4	3-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
Semester 3		512-131	*	Surgical Interventions 1	Prereq: 512-128; 512-130	4	4-0
		512-132	*	Surgical Technology Clinical 1	Prereq: 512-128; 129; 130 & Instructor Consent Coreq: 512-131	3	0-0-9
		512-133	*	Surgical Technology Clinical 2	Prereq: 512-129; 130; 132 & Instructor Consent Coreq: 512-131	3	0-0-9
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 11)	3	3-0
		801-196		Oral/Interpersonal Communication	Prereq: 838-105 (See Note 1)	3	3-0
Semester 4		512-142	*	Surgical Interventions II	Prereq: 512-131; 512-133 Coreq: 512-135; 512-136	4	4-0
		512-135	*	Surgical Technology Clinical 3	Prereq: 512-131; 133 & Instructor Consent Coreq: 512-142	3	0-0-9
		512-136	*	Surgical Technology Clinical 4	Prereq: 512-135 & Instructor Consent Coreq: 512-142	3	0-0-0-12
		809-196		Sociology, Introduction to	Prereq: 838-105 (See Note 1 & 11)	3	3-0
Electives		***Take 5 elective credits. Any associate degree level course may be taken as an elective.*** ***Suggested Electives:*** 804-107 College Mathematics (3 Cr) 103-143 Computers for Professionals (3 Cr)				***5***	

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.* ***Minimum Program Total Credits Required*** ***70***

Effective 2016/2017

Career Cluster ►

Health Science

Career Pathway ►

Therapeutic Services

SURGICAL TECHNOLOGY
(10-512-1)
Associate of Applied Science Degree
Most Courses Offered at Kenosha Campus

PROGRAM DESCRIPTION

Surgical Technology graduates are allied health professionals who are an integral part of the team of medical practitioners providing surgical care to patients in a variety of settings. The surgical technologist works under medical supervision to facilitate the safe and effective conduct of invasive surgical procedures. This individual works to ensure that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety. A surgical technologist possesses expertise in the theory and application of sterile and aseptic technique and combines the knowledge of human anatomy, surgical procedures, and implementation tools and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

PROGRAM LEARNING OUTCOMES

Graduates of the Surgical Technology Program should be able to:

1. Apply healthcare and technological science principles to the perioperative environment.
2. Maintain principles of sterile technique in the surgical environment.
3. Provide a safe, efficient, and supportive environment for the patient.
4. Prepare the patient, operating room, and surgical team for the perioperative phase.
5. Perform intraoperative case management in the scrub role.
6. Perform postoperative case management.
7. Function as an ethical, legal, and professional member of the healthcare team as determined by governing bodies.

The Surgical Technology program is fully accredited by the Commission on Accreditation of Allied Health Education Programs:
1361 Park Street
Clearwater, FL 33756
Phone: (727) 210-2350
Fax: (727) 210-2354

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *A minimum grade of 2.0 ("C") or above for these major courses.
3. Complete the Certified Surgical Technologist exam upon completion of the program which includes an extra fee that the student is required to pay in addition to their normal tuition fees. This exam is an accreditation requirement per ARC-STSA and most employers located in this area require their surgical technology staff to have this certification within a year.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. A liability fee is assessed on all clinical courses.
3. Clinical sites may require proof of insurance.
4. There is a daily exposure to latex products in this program. Those with latex sensitivity may find exposure to latex impossible to avoid in this environment.
5. Students will be selected for their initial core 512 courses using a petitioning process.
6. Students will be required to provide annual tuberculosis test results, proof of influenza immunization, and a 10 panel drug screen before clinical placements can occur. Additionally, students will be required to remain CPR certified for the HealthCare Provider with American Heart Association during the entire duration of the program.
7. The prereq for this course must have been completed with a min. grade of 'C'
8. This program has a second-tier admission process for clinical/practicum/program courses called petitioning. Students are selected based on completion of academic eligibility requirements and district residency. See https://www.gtc.edu/student-services/admissions/what-petitioning for additional information.
9. Students must complete a total of 120 surgical procedures (80 that are first scrub and 40 second scrub) during the clinical rotation per ARC-STSA requirements.
10. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
11. Transfer credits in Social Science may substitute for this course. See an advisor for details.
12. Students in this program should complete 806-177 as the pre-req for this course.

OTHER INFORMATION

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	**TOOL AND DIE TECHNICIAN** **(31-439-1)** *Technical Diploma* **Most Courses Offered at Racine and Elkhorn Campus**
	Manufacturing	Production	

Δ*Suggested Sequence*	√	*Course Number*		*Course Title*	*Requisites*	*Credits*	*Hrs/Wk Lec - Lab*
Semester 1		444-331	*	CNC Machining Technology	Coreq: 444-337	3	3-3
		444-337	*	Fund. Of Blueprint and Shop Safety		3	4-2
		444-338	*	Fund. Of CNC Machine Application	Coreq: 444-337	4	4-4
		444-339	*	Gauging and Quality Control		3	4-2
		801-302	*	Speaking Principles		1	2-0
		804-370		Mathematics, I Applied	Prereq: 854-760 (See Note 1)	2	4-0
Semester 2		420-328	*	Heat Treating Processes		2	2-2
		420-330	*	Machine Tool I	Coreq: 420-332	4	2-6
		420-332	*	Machine Tool II	Coreq: 420-330	4	2-6
		439-301	*	Tool Room Application Theory	Prereq: 420-317	1	2-2
		439-300	*	Basic CAD/Basic Tool Room CAM	Prereq: 420-329	2	2-0
		442-102	*	Intro to Welding		2	0-4
		804-371		Mathematics II, Applied	Prereq: 804-370 (See Note 1)	1	2-0

Minimum Program Total Credits Required ***32***

Δ*Courses may be taken out of suggested sequence as long as requisites have been met.*

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$0	$4,730	Tool and Die Makers (51-4111)

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**TOOL AND DIE TECHNICIAN** **(31-439-1)** *Technical Diploma* **Most Courses Offered at Racine and Elkhorn Campus**
	Manufacturing	Production	

PROGRAM DESCRIPTION

The Tool and Die Technician program prepares students for entry into the metal working industry. Instruction is offered on basic machine tools as well as machines such as the electrical discharge machine, along with jigs, fixtures, gauges, and machinist hand tools. Related training includes blueprint reading, mathematics, precision inspection, and the use of the latest tooling available. This area of study prepares students to enter the field by developing quality skills in precision machining and enables learning of the specific abilities used to create precise machine parts and components. The tool and die work environment centers around the machine shop, tool rooms, and working on factory floors.

PROGRAM LEARNING OUTCOMES

Graduates of the Tool and Die Technician Technical Diploma Program should be able to:

1. Adhere to all required safety regulations by wearing personal protective clothing and practicing safe work habits.
2. Interpret specifications and drawings.
3. Compute dimensions, sizes, shapes, and tolerances of assemblies based on specifications.
4. Select metals to be used based on properties such as hardness and heat tolerance.
5. Operate conventional or computer-numerically controlled machine parts, and produce parts to prescribed dimensions and finishes.
6. Use machine and hand tools to fit and assemble parts used to make common repairs or modify dies, jigs, gauges, and tools.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 29 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE Effective 2016/2017	Career Cluster ►	Career Pathway ►	URBAN FARMING (10-810-20) *Advanced Technical Certificate* Most Courses Offered at Kenosha Campus
	Agriculture, Food & Natural Resources	Plant Systems	

√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
	001-108	*	Business of Urban Farming	Prereq: Instructor Consent	3	1-4
	001-109	*	Urban Farming and Market Gardening		3	1-4
	001-142	*	Vegetable Science		3	2-2
	145-119	*	Entrepreneurship		3	3-0

Program Total Required ***12***

Effective 2016/2017	Career Cluster ►	Career Pathway ►	URBAN FARMING (10-810-20) *Advanced Technical Certificate* Most Courses Offered at Kenosha Campus
	Agriculture, Food & Natural Resources	Plant Systems	

PROGRAM DESCRIPTION

The *Urban Farming* ATC will enable completers to intensively farm small plots of land and bring their crops to market profitably. The certificate will combine intensive farming curriculum with entrepreneurship and business methods training.

EQUIVALENCY

This program is designed for students who have completed one of the following Gateway Technical College Associate Degrees (or have the equivalent knowledge and skills):

Horticulture 10-001-1

Equivalency can be earned through a combination of prior class work and/or current work experience. For equivalency information, call the campus advisor.

ADMISSION REQUIREMENTS

1. Related associate degree (official transcript required) or equivalent work experience (documented by advisor) required.

GRADUATION REQUIREMENTS

1. *Minimum grade of 2.0 ("C") or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
EMPLEADOR Y EDUCADOR QUE OFRECE IGUALDAD DE OPORTUNIDADES

To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor's contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	VETERINARY ASSISTANT (31-091-3) Technical Diploma Most Courses Offered at Elkhorn Campus
	Agriculture, Food & Natural Resources	Animal Systems	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		091-101	*	Animal Care and Management	Prereq: Inst. Consent; Coreq: 806-105	3	2-2
		091-102	*	Veterinary Business Practices	Coreq: 091-101	3	2-2
		806-105		Principles of Animal Biology		4	3-2
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 2		091-103	*	Clinical Pathology I for Vet Sciences	Prereq: 091-101; 091-102	4	2-4
		091-105	*	Surgical Procedures I for Vet Sciences	Coreq: 091-103	3	2-2
		091-107	*	Imaging for Veterinary Sciences	Coreq: 091-103	3	2-2
		801-196 801-198	***OR***	Oral/Interpersonal Communication Speech	Prereq: 838-105 (See Note 1)	3	3-0
Summer		091-108	*	Veterinary Pharmacology	Prereq: 834-109 (See Note 1); Coreq: 091-110	3	2-2
		091-110	*	Clinical Skills I for Vet Sciences	Prereq: 091-105 & Inst. Consent	2	0-0-0-8
		091-111	*	Clinical Skills II for Vet Sciences	Prereq: 091-110 & Inst. Consent	2	0-0-0-8
		091-120	*	Animal Behavior		1	1-0
		091-123	*	Veterinary Medical Terminology		2	2-2

Minimum Program Total Credits Required 36

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017	Career Cluster ►	Career Pathway ►	VETERINARY ASSISTANT (31-091-3) *Technical Diploma* Most Courses Offered at Elkhorn Campus
	Agriculture, Food & Natural Resources	Animal Systems	

PROGRAM DESCRIPTION

In this program, students learn basic veterinary assistant skills including how to care for and handle animals, provide medical and surgical nursing, and perform radiography and clinical laboratory procedures. Applicable federal, state, and local law and ethical guidelines are presented to students throughout the program. Students complete clinical work under the direction of certified veterinary technicians and veterinarians. Upon completion of the program, graduates can provide professional support to veterinarians and veterinary technicians in veterinary clinics.

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 36 credits with an average of 2.0 or above.
2. *Minimum of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

PROGRAM LEARNING OUTCOMES

Graduates of the Veterinary Assistant program should be able to:

1. Participate in facility management utilizing traditional and electronic media and appropriate veterinary medical terminology and abbreviations.
2. Communicate in a professional manner in all formats - written, oral, non-verbal, and electronic.
3. Follow and uphold applicable laws and ethical codes involved in operation of a veterinary clinic in order to provide high quality care to patients.
4. Accurately and safely label, package, and store therapeutic agents and recognize general types of drugs used in a veterinary clinic.
5. Demonstrate and perform basic patient assessment and therapeutic techniques and husbandry in small companion animals.
6. Assist in performing surgical preparations and post-operative patient monitoring for common surgical procedures in small companion animals.
7. Understand and provide the appropriate instruments, supplies and environment to maintain asepsis for surgical procedures.
8. Demonstrate knowledge of proper handling, packaging and storage of specimens for laboratory analysis to ensure safety of patients, clients, and staff.
9. Safely assist with radiographic procedures and maintain radiographic equipment and records.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. Students must maintain minimum course grades of “C” or better for all courses marked with an (*) to remain in the program.
5. A laptop computer, stethoscope, uniform, and other supplies will be needed.
6. Nearly daily exposure to latex and/or animal fur and dander will occur in this program. Those with sensitivities may find exposure impossible to avoid.
7. Immunocompromised individuals should consult their physician before enrollment.
8. Clinical sites are located throughout and potentially outside the district. Students are responsible for their own transportation.
9. Some clinical sites require TB testing and immunizations against tetanus and hepatitis B. Rabies immunization is recommended.
10. This program is full-time. Students should expect to be in class Monday-Friday 8 am-5 pm.
11. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
12. Microbiology (806-197) is recommended as an elective course.
13. Students admitted to the program must complete a volunteer shadowing experience in an approved clinical setting prior to registering for a Veterinary Assistant course. Documentation requirements will be included in the program admission packet.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	VETERINARY TECHNICIAN (10-091-1)
	Agriculture, Food & Natural Resources	Animal Systems	*Associate of Applied Science Degree* Most Courses Offered at Elkhorn Campus

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		091-101	*	Animal Care and Management	Prereq: Inst. Consent; Coreq: 806-105	3	2-2
		091-102	*	Veterinary Business Practices	Coreq: 091-101	3	2-2
		801-136		English Composition 1	Prereq: 831-103 (See Note 1)	3	3-0
		806-105		Principles of Animal Biology		4	3-2
Semester 2		091-103	*	Clinical Pathology I for Vet Sciences	Prereq: 091-101; 091-102	4	2-4
		091-105	*	Surgical Procedures I for Vet Sciences	Coreq: 091-103	3	2-2
		091-107	*	Imaging for Veterinary Sciences	Coreq: 091-103	3	2-2
		801-196 801-198	***OR***	Oral/Interpersonal Communication Speech	Prereq: 838-105 (See Note 1)	3	3-0
Summer		091-108	*	Veterinary Pharmacology	Prereq: 834-109 (See Note 1); Coreq: 091-110	3	2-2
		091-110	*	Clinical Skills I for Vet Sciences	Prereq: 091-105 & Inst. Consent	2	0-0-0-8
		091-111	*	Clinical Skills II for Vet Sciences	Prereq: 091-110 & Inst. Consent	2	0-0-0-8
		806-197		Microbiology	Prereq: 806-105 OR 806-177 (See Note 1 & 4)	4	3-2
Semester 3		091-104	*	Clinical Pathology II for Vet Sciences	Prereq: 806-197; Coreq: 091-106	4	2-4
		091-106	*	Surgical Procedures II for Vet Sciences	Prereq: 091-108; 091-111	3	1-4
		091-109	*	Lab Animals and Non-Traditional Pets	Coreq: 091-104	2	2-0
		091-113	*	Anesthesia for Veterinary Technicians	Prereq: 091-108; 091-111; Coreq: 091-106	3	1-4
		809-198		Psychology, Introduction to	Prereq: 838-105 (See Note 1 & 3)	3	3-0
Semester 4		091-112	*	Clinical Skills III for Veterinary Science	Prereq: 091-106 & Inst. Consent	3	0-0-0-12
		091-114	*	Veterinary Tech. Clinical Internship	Prereq: 091-112 & Inst. Consent	4	0-0-0-16
		806-172		Basic Nutritional Science		3	3-0
		809-166		Ethics: Theory and Apps, Intro to	Prereq: 838-105 (See Note 1)	3	3-0
Electives		***Take 5 elective credits. Any associate degree level course may be taken as an elective.***				***5***	

Suggested Electives:

091-120 Animal Behavior (1 Cr)
091-121 Emergency Med for Vet Tech (1 Cr)
091-122 Integrative Mod for Vet Sci (1 Cr)
091-123 Veterinary Med Term (2 Cr)

Minimum Program Total Credits Required 70

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Effective 2016/2017

Career Cluster ►

Agriculture, Food & Natural Resources

Career Pathway ►

Animal Systems

VETERINARY TECHNICIAN

(10-091-1)

Associate of Applied Science Degree

Most Courses Offered at Elkhorn Campus

PROGRAM DESCRIPTION

In this program, students learn veterinary technical skills such as how to care for and handle animals, provide medical and surgical nursing including anesthesiology and dental prophylaxis, and perform radiography and clinical laboratory procedures. Applicable federal, state, and local law and ethical guidelines are presented to students throughout the program. Students complete clinical work under the direction of certified veterinary technicians and veterinarians. Upon completion of this program, graduates are eligible to take the Veterinary Technician National Exam (VTNE) administered by the Veterinary Examining Board of the Wisconsin Department of Safety and Professional Services. Certified Veterinary Technicians provide professional support to veterinarians in veterinary clinics and hospitals, biological research settings, animal control and humane organizations, zoos, and educational facilities.

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, math, and placement assessments.
3. Students must submit official high school, GED, or HSED transcript including a graduation or passing date.
4. Students must complete a Background Disclosure form and must request and pay for a background check. Applicants for all health science programs are subject to a review of their criminal backgrounds. Positive background checks may negatively impact your ability to pursue a health career at Gateway Technical College. Each case will be individually evaluated based on all available evidence provided to the college.
5. Students must complete a functional ability form verifying they have read and understand the functional abilities for the program.

GRADUATION REQUIREMENTS

1. Minimum 70 credits with an average of 2.0 or above.
2. *Minimum of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

PROGRAM LEARNING OUTCOMES

Graduates of the Veterinary Technician program should be able to:

1. Participate in facility management utilizing traditional and electronic media and appropriate veterinary medical terminology and abbreviations.
2. Communicate in a professional manner in all formats - written, oral, non-verbal, and electronic.
3. Follow and uphold applicable laws and the veterinary technology profession's ethical codes to provide high quality care to patients.
4. Safely and effectively administer prescribed drugs to patients and accurately dispense and explain prescribed drugs to clients.
5. Demonstrate and perform patient assessment techniques, husbandry, nutrition, therapeutic and dentistry techniques in a variety of animal species (including laboratory animal species, companion animals, and food animals).
6. Understand the approach to providing safe and effective care for birds, reptiles, amphibians, guinea pigs, hamsters, gerbils, and ferrets.
7. Safely and effectively manage and maintain patients in all phases of anesthesia as well as safely and effectively select, utilize and maintain anesthetic delivery and monitoring instruments and equipment.
8. Understand and integrate all aspects of patient management for common surgical procedures in a variety of animal species.
9. Understand and provide the appropriate instruments, supplies and environment to maintain asepsis during surgical procedures.
10. Properly perform analysis of laboratory specimens and properly package, handle and store specimens for laboratory analysis to ensure safety of patients, clients, and staff.
11. Safely and effectively produce diagnostic radiographic and non-radiographic images.
12. Safely and effectively handle common laboratory animals used in animal research.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Any course may be taken prior to entry in the program assuming prerequisites and corequisites have been satisfied (or waived with department approval).
3. Transfer credits in Social Science may substitute for this course. See an advisor for details.
4. Students in this program should complete 806-105 as the pre-req for this course.
5. Students must maintain minimum course grades of “C” or better for all courses marked with an (*) to remain in the program.
6. A laptop computer, stethoscope, uniform, and other supplies will be needed.
7. Nearly daily exposure to latex and/or animal fur and dander will occur in this program. Those with sensitivities may find exposure impossible to avoid.
8. Immunocompromised individuals should consult their physician before enrollment.
9. Clinical sites are located throughout and potentially outside the district. Students are responsible for their own transportation.
10. Some clinical sites require TB testing and immunizations against tetanus and hepatitis B. Rabies immunization is recommended.
11. This program is full-time. Students should expect to be in class Monday-Friday 8 am-5 pm.
12. Please note that your program may require additional fee(s) for: Criminal Background Check, Medical Documentation Manager, and/or Drug Testing.
13. Students admitted to the program must complete a volunteer shadowing experience in an approved clinical setting prior to registering for a Veterinary Technician course. Documentation requirements will be included in the program admission packet.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
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5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
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8. Work cooperatively
9. Value learning

OTHER INFORMATION

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EQUAL OPPORTUNITY EMPLOYER AND EDUCATOR
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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**WELDING** **(31-442-1B) – Advanced Welding** *Technical Diploma* **Most Courses Offered at Elkhorn and Racine Campuses and Lakeview and iMET Centers**
	Manufacturing	Production	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		442-321	*	Welding / Gas Metal Arc Welding		3	1-5
		442-322	*	Welding / Shielded Metal Arc Welding		3	1-5
		442-323	*	Welding / Gas Tungsten Arc Welding		3	1-5
		442-324	*	Weld Printreading & Fab. Procedures		2	2-2
		442-334	*	Welding / Oxyacetylene		3	1-5
		625-125	*	Workplace Safety A MSSC		1	1-0
		801-301		Writing Principles	Prereq: 851-756 (See Note 1)	1	2-0
		804-370		Mathematics I / Applied	Prereq: 854-760 (See Note 1)	2	4-0
Semester 2		442-302	*	Metal Fabrication I		3	2-4
		442-329	*	Welding / Advanced Oxyacetylene	Prereq: 442-334	2	2-2
		442-330	*	Welding / Adv. Shielded Metal Arc Welding	Prereq: 442-322	3	1-5
		442-332	*	Welding / Adv. Gas Metal Arc Welding	Prereq: 442-321	3	1-5
		442-333	*	Welding / Adv. Gas Tungsten Arc Welding	Prereq: 442-323	3	1-5

Minimum Program Total Credits Required 32

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	Median Loan Debt[1]	On-time Graduation Rate[2]	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$990	$6,360	$2,334	6%	Welders, Cutters, Solderers, Brazers (51-4121)

[1] **Median Loan Debt:** Based on eligibility, students can receive loans to help pay for the total cost of attending college. The cost is comprised of tuition and fees, books and supplies, transportation costs, room and board, and miscellaneous personal expenses. Therefore, medial loan debt may be more than the listed tuition, fees, books, and supplies cost.
[2] **On-time Graduation Rate:** Dependent upon students' choice to attend college part-time or full-time. Students decide to attend college part-time for a number of reasons including work schedule/demands and family responsibilities. 76 percent of students at Gateway attend part-time, therefore taking longer to complete their chosen program of study.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**WELDING** **(31-442-1B) – Advanced Welding** *Technical Diploma* **Most Courses Offered at Elkhorn and Racine Campuses and Lakeview and iMET Centers**
	Manufacturing	Production	

PROGRAM DESCRIPTION

Welding provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: O-A-Oxyacetylene welding, brazing, and cutting; GMAW-gas metal arc welding (wire, MIG, short arc); GTAW-gas tungsten arc welding (TIG, heliarc); SMAW-shielded metal arc welding (stick, arc), including plasma arc cutting; and robotic welding and cutting.

PROGRAM LEARNING OUTCOMES

Graduates of the Welding Technical Diploma Program should be able to:

1. Prepare three groups of metal plate (stainless steel, aluminum, and mild steel) for a butt joint.
2. Use correct filler wire on welding machines.
3. Use and demonstrate proper safety gear and equipment.
4. Prepare pipe coupons for welding.
5. Use a WPS for AWS D1.1 and ASME Sec IX.
6. Correctly program housekeeping codes for processes used.
7. Have robots perform operations with 100% accuracy.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 32 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription glasses are required, allow a minimum of 90 days.
3. A hand calculator capable of trigonometric functions is recommended for 442-324; the cost is approximately $20.
4. Students are required to have an arc welding helmet, oxy-acet goggles, chipping hammer and welding gloves (leather); the cost is approximately $50. Students must be prepared to bring their own equipment.
5. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
6. Metal fabrication skills may also be enhanced by enrolling in 442-336 Metal Fabrication II.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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To schedule an appointment with an advisor, please call 1-800-247-7122.
For a complete list of course descriptions (and possible online courses) for this program, please consult Web Advisor on our web page at www.gtc.edu.

My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**WELDING** **(31-442-1C) – Pipe Welding** *Technical Diploma* **Most Courses Offered at Elkhorn and Racine Campuses and Lakeview and iMET Centers**
	Manufacturing	Production	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		442-321	*	Welding / Gas Metal Arc Welding		3	1-5
		442-322	*	Welding / Shielded Metal Arc Welding		3	1-5
		442-323	*	Welding / Gas Tungsten Arc Welding		3	1-5
		442-324	*	Weld Printreading & Fab. Procedures		2	2-2
		442-334	*	Welding / Oxyacetylene		3	1-5
		625-125	*	Workplace Safety A MSS1		1	1-0
		801-301		Writing Principles	Prereq: 851-756 (See Note 1)	1	2-0
		804-370		Mathematics I / Applied	Prereq: 854-760 (See Note 1)	2	4-0
Semester 2		442-302	*	Metal Fabrication I		3	2-4
		442-342	*	Welding / Pipe Oxyacetylene Fitting	Prereq: 442-334	1	0-2
		442-343	*	Welding / Pipe Shielded Metal Arc Welding	Prereq: 442-322	2	2-2
		442-344	*	Welding / Pipe Shielded Metal Arc Welding Certification	Prereq: 442-322	2	2-2
		442-345	*	Welding / Pipe Gas Tungsten Arc Welding	Prereq: 442-322; 442-323	2	2-2
		442-346	*	Welding / Pipe Gas Tungsten Arc Welding Certification	Prereq: 442-323	2	2-2
		442-347	*	Welding / Pipe Gas Metal Arc Welding	Prereq: 442-321	2	2-2

Minimum Program Total Credits Required 32

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$990	$6,360	Welders, Cutters, Solderers, Brazers (51-4121)

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Manufacturing	**Career Pathway ►** Production	**WELDING** **(31-442-1C) – Pipe Welding** *Technical Diploma* **Most Courses Offered at Elkhorn and Racine Campuses and Lakeview and iMET Centers**

PROGRAM DESCRIPTION

Welding provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: O-A-Oxyacetylene welding, brazing, and cutting; GMAW-gas metal arc welding (wire, MIG, short arc); GTAW-gas tungsten arc welding (TIG, heliarc); SMAW-shielded metal arc welding (stick, arc), including plasma arc cutting; and robotic welding and cutting.

PROGRAM LEARNING OUTCOMES

Graduates of the Welding Technical Diploma Program should be able to:

1. Prepare three groups of metal plate (stainless steel, aluminum, and mild steel) for a butt joint.
2. Use correct filler wire on welding machines.
3. Use and demonstrate proper safety gear and equipment.
4. Prepare pipe coupons for welding.
5. Use a WPS for AWS D1.1 and ASME Sec IX.
6. Correctly program housekeeping codes for processes used.
7. Have robots perform operations with 100% accuracy.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 32 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription glasses are required, allow a minimum of 90 days.
3. A hand calculator capable of trigonometric functions is recommended for 442-324; the cost is approximately $20.
4. Students are required to have an arc welding helmet, oxy-acet goggles, chipping hammer and welding gloves (leather); the cost is approximately $50. Students must be prepared to bring their own equipment.
5. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
6. Metal fabrication skills may also be enhanced by enrolling in 442-336 Metal Fabrication II.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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My advisor is _____. My advisor’s contact information is _____.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**WELDING** **(31-442-1A) - Robotics** *Technical Diploma* **Most Courses Offered at Elkhorn, Racine Campuses and Lakeview and iMET Centers**
	Manufacturing	Production	

Δ Suggested Sequence	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		442-321	*	Welding / Gas Metal Arc Welding		3	1-5
		442-322	*	Welding / Shielded Metal Arc Welding		3	1-5
		442-323	*	Welding / Gas Tungsten Arc Welding		3	1-5
		442-324	*	Weld Printreading & Fab. Procedures		2	2-2
		442-334	*	Welding / Oxyacetylene		3	1-5
		625-125	*	Workplace Safety A MSSC		1	1-0
		801-301		Writing Principles	Prereq: 851-756 (See Note 1)	1	2-0
		804-370		Mathematics I / Applied	Prereq: 854-760 (See Note 1)	2	4-0
Semester 2		442-302	*	Metal Fabrication I		3	2-4
		442-326	*	Welding / Robotic Advanced GTAW	Coreq: 442-335	4	4-4
		442-327	*	Welding / Robotic Advanced GMAW	Coreq: 442-335	4	4-4
		442-328	*	Welding / Robotic & Plasma Welding	Coreq: 442-335	2	2-2
		442-335	*	Welding / Rob. Prgrm. & Plasma Cutting	Prereq: 442-321; 442-322; 442-323; 442-334	2	4-0

Minimum Program Total Credits Required 33

Δ *Courses may be taken out of suggested sequence as long as requisites have been met.*

Federal regulations require disclosure of the following information for this program:

Books and Supplies	Resident Tuition and Fees	U.S. Department of Labor Standard Occupational (SOC) Code & Occupational Profile – available at http://www.onetonline.org
$990	$6,450	Welders, Cutters, Solderers, Brazers (51-4121)

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**WELDING** **(31-442-1A) - Robotics** *Technical Diploma* **Most Courses Offered at Elkhorn, Racine Campuses and Lakeview and iMET Centers**
	Manufacturing	Production	

PROGRAM DESCRIPTION

Welding provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: O-A-Oxyacetylene welding, brazing, and cutting; GMAW-gas metal arc welding (wire, MIG, short arc); GTAW-gas tungsten arc welding (TIG, heliarc); SMAW-shielded metal arc welding (stick, arc), including plasma arc cutting; and robotic welding and cutting.

PROGRAM LEARNING OUTCOMES

Graduates of the Welding Technical Diploma Program should be able to:

1. Prepare three groups of metal plate (stainless steel, aluminum, and mild steel) for a butt joint.
2. Use correct filler wire on welding machines.
3. Use and demonstrate proper safety gear and equipment.
4. Prepare pipe coupons for welding.
5. Use a WPS for AWS D1.1 and ASME Sec IX.
6. Correctly program housekeeping codes for processes used.
7. Have robots perform operations with 100% accuracy.

CORE ABILITIES

Gateway believes students need both technical knowledge and skills and core abilities in order to succeed in a career and in life. The following nine core abilities are the general attitudes and skills promoted and assessed by all Gateway programs. All Gateway graduates should be able to:

1. Act responsibly
2. Communicate clearly and effectively
3. Demonstrate essential comp. skills
4. Demonstrate essential math skills
5. Develop job seeking skills
6. Respect themselves and others as a member of a diverse community
7. Think critically and creatively
8. Work cooperatively
9. Value learning

ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
2. Students must complete reading, writing, and math skills placement assessments.
3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 33 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

For a complete list of Graduation Requirements check the Student Handbook.

NOTES

1. A satisfactory placement test score (or successful remediation) is required prior to enrollment. See an advisor for details.
2. Safety glasses are required in labs. If prescription glasses are required, allow a minimum of 90 days.
3. A hand calculator capable of trigonometric functions is recommended for 442-324; the cost is approximately $20.
4. Students are required to have an arc welding helmet, oxy-acet goggles, chipping hammer and welding gloves (leather); the cost is approximately $50. Students must be prepared to bring their own equipment.
5. Any course may be taken prior to entry in the program, assuming prerequisites and corequisites have been satisfied (or waived with department approval).
6. Metal fabrication skills may also be enhanced by enrolling in 442-336 Metal Fabrication II.

OTHER INFORMATION

Gateway Technical College reserves the right to modify curriculum requirements for students who interrupt enrollment for a period of two years or take over seven years to complete. Tuition and material fees are determined by the board of the Wisconsin Technical College System. Consult Web Advisor for exact fee amounts. Occasionally, the District may offer a particular course out of published sequence. By doing so, the District does not obligate itself to offer succeeding courses out of published sequence.

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My advisor is _____. My advisor’s contact information is _____.

GATEWAY TECHNICAL COLLEGE **Effective 2016/2017**	**Career Cluster ►** Manufacturing	**Career Pathway ►** Production	**WELDING/MAINTENANCE & FABRICATION** (30-442-2) *Technical Diploma* **Most Courses Offered at Elkhorn and Racine Campuses and Lakeview and iMET Centers**

	√	Course Number		Course Title	Requisites	Credits	Hrs/Wk Lec - Lab
Semester 1		442-321	*	Welding / Gas Metal Arc Welding		3	1-5
		442-322	*	Welding / Shielded Metal Arc Welding		3	1-5
		442-323	*	Welding / Gas Tungsten Arc Welding		3	1-5
		442-324	*	Weld Printreading & Fab. Procedures		2	2-2
		442-334	*	Welding / Oxyacetylene		3	1-5
		625-125	*	Workplace Safety A MSSC		1	1-0
		801-301		Writing Principles	Prereq: 851-756 (See Note 1)	1	2-0
		804-370		Mathematics I / Applied	Prereq: 854-760 (See Note 1)	2	4-0

Minimum Program Total Credits Required 18

Students who are interested in continuing into the 31-442-1 Welding program can earn their technical diploma by completing an additional 15 credits. Please see your academic advisor for details.

Effective 2016/2017	Career Cluster ►	Career Pathway ►	**WELDING/MAINTENANCE & FABRICATION** (30-442-2) *Technical Diploma* **Most Courses Offered at Elkhorn and Racine Campuses and Lakeview and iMET Centers**
	Manufacturing	Production	

PROGRAM DESCRIPTION

Welding/Maintenance & Fabrication provides concentrated instruction, primarily through practical experience, on various welding techniques. The following processes are covered: O-A-Oxyacetylene welding, brazing, and cutting; GMAW-gas metal arc welding (wire, MIG, short arc); GTAW-gas tungsten arc welding (TIG, heliarc); and SMAW-shielded metal arc welding (stick, arc), including plasma arc cutting.

PROGRAM LEARNING OUTCOMES

Graduates of the Welding: Maintenance & Fabrication Technical Diploma Program should be able to:

1. Set up welding machines to operate on proper polarity.
2. Adjust welding machines to operate at various amperages for various fillers.
3. Weld flat position using proper fillers.
4. Weld horizontal position beads on plate using two diameters of E7018 electrodes.
5. Weld vertical position using proper fillers.
6. Weld overhead position using proper fillers.

CORE ABILITIES

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1. Act responsibly
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ADMISSION REQUIREMENTS

1. Students must submit an application & $30 fee.
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3. Students must submit official high school, GED, or HSED transcript.

GRADUATION REQUIREMENTS

1. Minimum 18 credits with an average of 2.0 or above.
2. *Average of 2.0 (“C”) or above for these major courses.

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Certificates of Completion

In addition to the state approved Associate Degrees, Technical Diplomas, and Advanced Technical Certificates that are part of the degree-granting programs at Gateway, a variety of Gateway Certificates are also offered. The courses required to complete these certificates are selected from various degree programs to meet specific and unique occupational needs. The following list represents those programs that will be provided by Gateway during the 2016–2017 academic year. Additional information about the certificates can be found at **gtc.edu/certificates**.

Accounting–Elkhorn-Kenosha-Racine Campuses and Online

Small Business Accounting (90-101-1) ..... 18 Credits
Personal Financial Planning (90-101-2) ..... 10 Credits
Accounting for Vital Communities (90-101-3) ..... 13 Credits
Advanced Income Tax Accounting (90-101-4) ..... 14 Credits
Tax Preparer Assistant (61-101-2) ..... 11 Credits
Payroll Assistant (61-101-3) ..... 12 Credits

Administrative Professional–Elkhorn-Kenosha-Racine Campuses and Online

Computer Applications (90-106-5) ..... 12 Credits
Administrative Professional Basics (90-106-6) ..... 10 Credits
Administrative Professional Intermediate (90-106-7) ..... 14 Credits
Administrative Professional Advanced (90-106-8) ..... 14 Credits
Administrative Professional Growth (90-106-9) ..... 15 Credits
Customer Service (90-106-10) ..... 7 Credits
Business Professional Essentials (61-106-1) ..... 11 Credits
Receptionist (61-106-3) ..... 9 Credits

Automated Manufacturing Systems Technician–Elkhorn Campus and Lakeview

Manufacturing Maintenance (90-628-1) ..... 18 Credits
Programming for Manufacturing (90-628-2) ..... 17 Credits

Automotive Technology–Horizon Center

Automotive Under Car Technician (61-602-1) ..... 10 Credits

Business Management–Elkhorn–Kenosha-Racine Campuses and Online

Leadership Management (90-102-1) ..... 15 Credits
General Management (90-102-2) ..... 13 Credits
Health Management Leadership (90-102-3) ..... 16 Credits

CNC Production Technician–Racine Campus

CNC Operator (61-444-3) ..... 13 Credits

Cosmetology–Racine Campus

Nail Technician (90-502-1) ..... 9 Credits
Retail Beauty Advisor (61-502-1) ..... 4 Credits

Culinary Arts–Racine Campus

Basic Cooking Skills (90-316-1) ..... 11 Credits
Design and Service (90-316-2) ..... 15 Credits
Food and Beverage (90-316-3) ..... 18 Credits
Institutional Food Service (90-316-4) ..... 9 Credits
Line Cook (90-316-5) ..... 17 Credits
Management Skills I (90-316-6) ..... 11 Credits
National Restaurant Association–Professional Management
Development Program (90-316-7) ..... 13 Credits
Baking and Pastry Arts (90-316-8) ..... 8 credits

Developmental Education–Kenosha Campus

Intensive English Prog.–Intermediate Level (90-861-2) ..... 20 Credits

Diesel Equipment Mechanic–Horizon Center

Industrial/Mobile Hydraulic Mechanic (90-412-1) ..... 14 Credits

Early Childhood Education–Racine Campus

Pre-School Credential (90-307-6) ..... 18 Credits
Inclusion Credential (90-307-5) ..... 12 Credits
Administrator's Credential (90-307-7) ..... 18 Credits
Infant/Toddler Credential (90-307-2) ..... 12 Credits
Childcare Teacher (61-307-5) ..... 18 Credits
Childcare Basics (61-307-6) ..... 6 Credits

General Studies–Communications–Kenosha and Racine Campuses

Spanish Proficiency (90-801-1) ..... 16 Credits
Spanish Proficiency for Healthcare Providers (90-801-2) ..... 15 Credits
Spanish Proficiency for Law Enforcement (90-801-3) ..... 15 Credits

Graphic Communications–Elkhorn and Racine Campuses

Desktop Publishing (90-204-1) ..... 13 Credits
Digital Photography (90-204-6) ..... 13 Credits

Health and Human Services–Racine Campus

Aspects of Disabilities (90-520-1) ..... 18 Credits
Gerontology (90-520-2) ..... 18 Credits
Child Welfare (90-520-3) ..... 18 Credits
Alcohol & Other Drug Abuse (AODA) (90-550-1) ..... 24 Credits

Health Occupations–Elkhorn-Kenosha-Racine Campuses

Introduction to Health Occupations (90-501-1) ..... 4 or 6 Credits

Horticulture–Kenosha Campus

Professional Landscaping (90-001-1) ..... 15 Credits
Professional Garden Center Operations (90-001-3) ..... 15 Credits
Professional Floral Design (90-001-4) ..... 12 Credits
Professional Grounds Maintenance (90-001-5) ..... 11 Credits
Horticulture Therapy (90-001-6) ..... 13 Credits
Permaculture (90-001-7) ..... 3 Credits
Environmental Studies (90-001-8) ..... 3 Credits

Information Technology–Elkhorn-Kenosha-Racine Campuses

Programmer/Analyst - AS/400 (90-107-2) ..... 10 Credits
iSeries Operations (90-152-1) (Kenosha) ..... 10 Credits
SharePoint Developer (90-152-3) (Racine, Burlington, Online) ..... 19 Credits

Interior Design–Kenosha Campus

Fundamentals of Interior Design (90-304-1) ..... 10 Credits
History of Design and Decorative Arts (90-304-2) ..... 9 Credits
Introduction to Home Décor for the Beginner (90-304-3) ..... 10 Credits
Sustainable Design (90-304-4) ..... 9 Credits
Technology for Interior Design (90-304-5) ..... 8 Credits

Marketing–Varied Campuses

Marketing/Sales (90-104-2) (Kenosha/Racine) ..... 15 Credits
Professional Selling (90-104-5) (Kenosha) ..... 14 Credits
Sports and Event Marketing (90-104-7) (Kenosha) ..... 15 Credits
Store Management (90-104-8) (Kenosha) ..... 15 Credits

Medical Assistant–Racine Campus

Ophthalmic Medical Assisting Technician (90-509-5) ..... 13 Credits

Nursing–Kenosha Campus

Gerontological and Rehabilitative Nursing Care (90-543-5) ..... 9 Credits

Professional Communications–Racine Campus and Online

Professional Communications Specialization (90-699-1) ..... 12 Credits
Advanced Professional Communications (90-699-2) ..... 24 Credits
Copywriter (90-699-3) ..... 12 Credits
Editor (90-699-4) ..... 12 Credits
Freelance Writer (90-699-5) ..... 12 Credits
Grant Writer (90-699-6) ..... 12 Credits
Technical Journalist (90-699-7) ..... 15 Credits
Technical Writer (90-699-8) ..... 15 Credits
Web Content Writer (90-699-9) ..... 15 Credits

Small Business Entrepreneurship–Elkhorn-Kenosha-Racine Campuses and Online

Entrepreneurship (90-145-1) ..... 9 Credits

Supervisory Management–Elkhorn-Racine Campuses & Online

Human Resources Management (90-196-10) ..... 10 Credits
Project Manager (90-196-11) ..... 9 Credits
Leadership Essentials (61-196-4) ..... 10 Credits
Technical Supervisor (90-196-13) ..... 10 Credits

Welding–Elkhorn-Racine Campuses and SC Johnson iMET Center

Gas Metal Arc Welding (90-442-1) ..... 8 Credits

General Studies Transfer Certificates

General Studies Transfer Agreement with UW Parkside–All Campuses

General Studies Transfer Certificate (90-800-2z) ..... 30 Credits

General Studies Transfer Agreement with Mount Mary–All Campuses

Mount Mary General Studies Transfer Certificate (90-800-3) ..... 30 Credits

The apprenticeship program is part of the Wisconsin educational system which prepares people for skilled occupations. Gateway Technical College, in cooperation with employers, Joint Apprenticeship Committees, and the Wisconsin Department of Workforce Development—Bureau of Apprenticeship Standards, provides the related instruction for persons who are under contract as apprentices in Kenosha, Racine, and Walworth counties under the Wisconsin Apprenticeship Law.

The following list contains apprenticeship related instruction currently being offered at Gateway.

Service Trades

Barber

2 years – 4,000 hours training and instruction

Barbers cut, trim, shampoo, style hair, provide hair and scalp treatments, shave male customers, and give facial massages. Barbers keep their work area and tools clean and sanitized.

Cosmetologist

2 years – 4,000 hours training and instruction

Cosmetologists cut, trim, shampoo, style, straighten, permanent wave, and color hair, as well as give manicures and scalp and facial treatments. They advise patrons how to care for their hair. Cosmetologists keep their work area and implements clean and sanitized.

Wastewater Treatment

3 years – 6,000 hours training and instruction

Wastewater treatment plant operators (WWTPOs) monitor, operate, and adjust a wide variety of systems used in the treatment of wastewater. They control plant processes to ensure the plant operates effectively. They routinely monitor laboratory data, charts, and computer control systems, which indicate performance status of a wide variety of biological nutrient and chemical removal.

Construction Trades

Construction Electrical

5 years- 8,680 hours training and instruction

An electrician reads blueprints and installs materials for transmission of electricity to equipment for lighting, heating, and cooling. They may repair existing wiring and fixtures or inspect installations for conformity of electrical, fire, and safety codes.

HVAC

5 years – 8,400 hours training and instruction

HVAC technicians install, maintain, and repair heating, ventilation, and air-conditioning systems. HVAC technicians must be able to understand the operating principals of different systems such as oil-fired furnaces and commercial refrigerators and to interpret written specifications.

Plumbing

5 years – 8,000 hours training and instruction

Plumbers install and repair pipes for water, gas, sewage, and drainage systems. They install sanitary facilities such as toilets, tubs, bathroom fixtures, showers, kitchen fixtures, drinking fountains, and laundry equipment to code using hand and power tools as well as welding equipment.

Industrial Trades

Computer Numeric Control (CNC) Machinist

4 years- 8,000 hours training and instruction

Sets up and operates computer numerically controlled machines to produce metal into intricate parts and instruments.

Industrial Electrician

4 years – 8,000 hours training and instruction

Maintains, repairs, installs, and inspects electrical equipment and lighting systems.

Industrial Manufacturing Technician

18 months– 3,264 hours training and instruction

Operates and sets-up production equipment, interprets technical information and demonstrates continuous process improvement.

Machine Repair

4 years– 8,896 hours training and instruction

Operates, repairs, and maintains machinery and equipment in an industrial environment.

Maintenance Mechanic/Millwright

4 years – 8,000 hours training and instruction

Uses blueprints to install or move machinery and equipment. Repairs equipment or facilities through methods such as pipefitting, pneumatics, welding, machining, and hydraulics.

Tool and Die/Mold Maker

5 years– 10,000 hours training and instruction

Constructs metal dies through stamping and forging processes and repairs dies, cutting tools, jigs, fixtures, gauges and hand tools.

Maintenance Technician

5 years – 10,400 hours training and instruction

Works on mechanical and electrical equipment and machines in industrial settings. Mechanical includes installing equipment, repairing and replacing units, maintaining equipment and using machines. Electrical includes working with electrical drawings, troubleshooting electrical motors, AC and DC drives and PLC's (programmable logic controllers) along with solid state devices.

Welding/Fabrication

4 years – 8,400 hours training and instruction

Welds, fabricates, prepares lay out, aligns and fits parts of structural metal products according to blueprints and job orders or for structural repairs.

Applying for an Apprenticeship

Apprenticeship selection is done by the individual employers or the Joint Apprenticeship Committee (JAC). Persons should apply with the employer or appropriate JAC (union).

Selection Standards

Most employers prefer candidates for apprenticeships who are high school graduates or the equivalent, and have the mechanical aptitude required to perform the job. Testing requirements vary depending on the trade area the applicant is interested in seeking.

Related Instruction

Apprentices must attend related instruction for a minimum number of hours, which varies depending on the trade area. Gateway provides the required classroom instruction in subjects related to the trade.

Apprenticeship Program

Contact Information

Nicci Pagan

Divisional Apprenticeship Associate
Apprenticeship Department
Gateway Technical College - SC Johnson iMET Center
2320 Renaissance Blvd., Room 404
Sturtevant, WI 53177-1763
262.564.2954
paganj@gtc.edu

Timothy Ziffer

Apprenticeship Training Representative
Bureau of Apprenticeship Standards
Gateway Technical College
SC Johnson iMET Center
2320 Renaissance Blvd., Room 228
Sturtevant, WI 53177-1763
262.564.3210
timothy.ziffer@dwd.wisconsin.gov

gtc.edu/apprenticeship

001-102
Plant Pests and Control **3.00**

The identification and control of insects, diseases, and weeds of importance to the commercial horticulturist will be covered. The course emphasizes an integrated pest management approach in diagnosing pest problems and identifying the combination of biological, cultural, physical, and chemical control methods to be used. Rules and regulations regarding environmental and personal pesticide safety are taught. Students have the option to become state certified pesticide operators.

001-103
Permaculture Design Certification **3.00**

Permaculture draws from several disciplines including organic farming, agroforestry, integrated farming, sustainable community development, alternative/natural building and applied ecology. This course will teach participants techniques to reduce dependence on fossil fuels and increase the long term sustainability of their homes and communities. Integrating organic food production into urban landscapes is a major focus of the course. Students will receive a Permaculture Design Certificate upon successful completion of the course and a design project.

001-107
Plant Biology for Horticulture **3.00**

Study of structure and function of plants and how they are affected by light, water, temperature and nutrient availability. Labs include hands-on experience in potting, propagation, construction of dish gardens and terrariums.

001-108
Business of Urban Farming **3.00**

This class will provide the skills to start and operate a fresh market vegetable business. Growing food is the first step, but we will teach you how to make smart decisions about marketing, pricing, capitalization and labor. You will become aware of current opportunities in urban farming, explore objectives, assess personal and financial resources, conduct preliminary market research, and develop a business plan. We will discuss market gardening start-up, weekly sales targets, yield and pricing, organic certification, organic marketing and labeling, and analyze the value of CSA's, direct marketing and farmers' markets.

001-109
Urban Farming and Market Gardening **3.00**

Sustainable, intensive urban farming forms the important basis for long-term profitability because it maintains quality soils that can provide long-term stable yields. Our hands-on training in biointensive organic growing methods will help you advance from gardening novice to professional urban farmer. Learn about fertility management, greenhouse use, season extension, pest management, equipment needs, planning and budgeting. The course will focus on building and managing healthy soil and understanding how soils, plants, animals, and people form a dynamic living organism. We will use this knowledge to explore the methods to grow organic, nutrient dense produce.

001-111
Horticulture Practicum **3.00**

Work independently, or in small groups, with instructor and staff to gain in depth knowledge and experience in one of five program specialty areas; greenhouse growing , floral retailing and events, trial and display gardens, urban farm. Can also be used for internship with horticulture employer. PREREQUISITES: Courses 001-151 - Greenhouse Crops and 001-147 - Soils and Plant Nutrition with a minimum grade of C or TR

001-117
Landscape Design/Advanced **3.00**

Advanced study of landscaping designed to fine-tune landscape drawing techniques. Course focuses on landscape construction methods, Japanese-style design principles, designing for energy conservation and how to attract wildlife. Labs include drawing plans and blueprinting. PREREQUISITES: Course 001-140 - Landscape Design/ Introduction

001-120
Landscaping/Interior **3.00**

Studies choosing plants to create pleasing and professional interior displays. Includes diagnosing and solving plant problems, drawing plans, and writing maintenance contracts. Labs provide hands-on experience and field trips to exemplary interior landscapes.

001-122
Horticulture Business Operations **3.00**

Simulated operation of horticulture industries utilizing principles of marketing, economics and office management. Includes hands-on practice on computers used in each branch of the horticulture industry. Field trips and practice work are involved.

001-128
Horticulture Marketing **3.00**

Learn how plants and flowers are marketed locally and internationally. This class offers professional marketing techniques for garden centers, greenhouses and floral shops. Students visit garden centers, flower shops, wholesale suppliers and trade markets to identify trends and meet with managers. Students gain practical experience organizing a plant promotion including identifying the customer, purchasing and pricing plants, advertising.

001-129
Pesticide Applicator Certification **1.00**

Learn how to apply pesticides safely and legally. This class prepares students to take the Wisconsin State pesticide applicator exam with the certification exam given during class. Anyone applying chemicals to someone else's property is required to obtain this certification.

001-130
Landscape Plants I **3.00**

Study of deciduous trees, shrubs, and vines grown for landscape use in residential and commercial settings. Examines environmental requirements, dormant characteristics, and landscape applications. Labs involve on-site identification of plant material.

001-132
Landscape Plants II **3.00**

Continued emphasis on identification and evaluation of landscape plants with emphasis on evergreen landscape materials.

001-136
Landscape Management **3.00**

Maintenance of industrial, public, institutional, and private grounds. Also covers operation and management of an ornamental nursery. Labs include pruning, balling and burlapping, procedures for preventing winter injury, and field trips.

001-137
Greenhouse Business Planning **3.00**

Evaluate annual and perennial flowers, cut flowers and vegetable plants in display gardens from international plan breeders. Determine production, scheduling and market for greenhouse crops. Discuss greenhouse and hoophouse construction, operation and mechanicals. Identify the role of hoophouses in providing local food through season extension. Identify greenhouse plants and foliage. Attend greenhouse conference and participate in field trips to growing operations and suppliers.

001-140
Landscape Design/Introduction **3.00**

Covers how to plan and draw a professional landscape design. Focuses on selecting correct plant material, proper placement, and uses of landscape construction elements. Practical design and drawing experience provided in lab.

001-141
Soils and Plant Nutrition **3.00**

Covers physical, chemical and biological properties of soils/media. Includes soil conservation practices and composting. Labs involve soil testing and soil improvement.

001-142
Vegetable Science **3.00**

Students will study methods of vegetable gardening and become familiar with basic annual and perennial vegetables, herbs and edible flowers. Organic growing methods, composting, pest and disease control, and self-sustaining gardening methods will be discussed in detail. Field trips to local market gardens will be included in the course.

001-143
Herbaceous Plants **3.00**

Learn to identify and care for of annual and perennial flowering plants. Visit local gardens and professional sites to study plants and view design styles. Graphic skills used to create professional flower bed designs is also taught. Hands on experience propagating annuals and perennials and working with tropical foliage in the Gateway greenhouse is also included.

001-144
Floral Design I/Commercial **3.00**

The basic principles, elements, and mechanics of floral design are practiced. Identification, care and handling of flowers and foliage will be involved. Includes hands-on designing of corsages, primary arrangements and holiday arrangements.

001-145
Floral Design II/Commercial **3.00**

Hands-on use of fresh flowers, fresh foliages, dried materials, silks and fruit in the more advanced floral designs. Emphasis will also be given to today's color theory as well as development of floral creativity. PREREQUISITES: Course 001-144 - Floral Design I/Commercial

001-146
Sustainable Landscape **1.00**

Following guidelines set forth by the national Sustainable Site's Initiative students will learn how to improve the sustainability of urban landscapes. Identifying soil conditions, capturing storm water, using native plants, composting, waste and energy management are concepts learned in this class. Students have the opportunity to analyze their own property to find ways to improve sustainability while reducing chemical inputs and maintenance needs.

001-147
Soils and Plant Nutrition **1.00**

Students will study physical, chemical and biological properties of soils. Soil conservation practices, plant nutrition and composting will be discussed in detail. Labs involve soil testing and soil improvement.

001-148
Plant Pests and Beneficials **1.00**

Learn to identify the different lifecycle stages of plant pests in the greenhouse and landscape and how to control them using cultural, physical and biological control methods. Learn about beneficial insects and how to use predators, parasites and pathogens to control insects and diseases of plants.

001-149
Horticulture Events **3.00**

Educational seminars and workshops, celebrations, tours and travel are increasingly important to garden centers, botanic gardens and resorts. Learn to plan and organize horticulture and floral events from the initial planning stages through set up to break down and billing. PREREQUISITES: Courses 001-143 - Herbaceous Plants and 001-144 - Floral Design I/Commercial or course 001-151 - Greenhouse Crops

001-150
Floristry **3.00**

Practice skills learned in Floral Design 1 and expand knowledge to include: flower care and handling, visual merchandising and display, pricing floral products and services, customer service and sales, employee relations, specialty cut flowers and using local flowers, the wholesale and international floral trade. PREREQUISITES: Course 001-144 - Floral Design I/Commercial with a minimum grade of C or TR

001-151
Greenhouse Crops **3.00**

Focuses on growing cut flowers, potted plants and foliage plants in a greenhouse. Provides practical experience in growing/maintaining crops using equipment, and solving problems. Includes field trips to commercial greenhouse operations.

001-152
Perennials **3.00**

This course covers the identification, growing and use of common herbaceous perennial plants in the landscape. Propagation, scheduling, and problem identification/solutions will also be taught.

001-153
Fruit Science **3.00**

Students will study methods of fruit growing and become familiar with basic cultivated tree fruits, small fruits, and native fruits and nuts. Organic growing methods, composting, pest and disease control, and self sustaining growing methods will be discussed in detail. Field trips to orchards and market fruit gardens will be included in the course.

001-154
Alternative Growing Methods **3.00**

Students will study emerging growing methods that are "outside the box". These include vertical wall gardening, green roots, hydroponics, aquaponics, and other innovative growing techniques.

001-171
Horticulture Field Study **3.00**

Hands on learning! Work with latest plant introductions from international plant breeders. Learn to identify a wide variety of annuals and perennials. Learn about the care and culture of annual and perennial plants. Design and install beds in Gateway's Learning Garden and Horticulture Center. Assist in evaluating 'trial garden' plants for vigor and garden performance. Learn professional techniques used by botanic gardens.

001-177
Floral Design III **3.00**

This course is designed for the advanced floral designer. You will explore the most advanced techniques in weddings, sympathy, and contemporary designs. PREREQUISITES: Course 001-145 - Floral Design II/Commercial

001-178
Fruit and Vegetable Science **3.00**

Students will study methods of vegetable and fruit gardening and become familiar with basic vegetables, tree fruits, and small fruits. Organic growing methods, composting, pest and disease control, and self-sustaining gardening methods will be discussed in detail. Field trips to market gardens and orchards will be central to the course.

001-180
Horticulture Portfolio **1.00**

This capstone course will provide horticulture students the opportunity to pull together portfolio elements created in several classes into a cohesive professional portfolio for use when starting the career search. The portfolio will include samples of work, letters of reference, resume, horticultural resources and other pertinent career search and employment information, which can be used during employment interviews. Students will develop a high-quality professional portfolio as the final project. PREREQUISITES: Courses 001-147 - Soils and Plant Nutrition, 001-151 - Greenhouse Crops, 001-130 - Landscape Plants I, and 001-143 - Herbaceous Plants with a minimum grade of C or TR COREQUISITES: Course 001-128 - Horticulture Marketing

091-101
Animal Care and Management **3.00**

In this course, students explore basic nutrition, housing needs, and behavior of common domestic animals to develop skills that enable them to assess animal condition. Upon completion of this course, students will be able to obtain a thorough history, perform a physical exam, administer medications, collect samples, and use proper restraint techniques COREQUISITES: Course 806-105 - Principles of Animal Biology

091-102
Veterinary Business Practices **3.00**

In this course, students develop practical workplace techniques for veterinary office procedures to develop customer service and veterinary team support skills. Upon completion of this course, students will be able to use veterinary software to manage records and financial applications, maximize client interactions, and participate in day-to-day operations of a veterinary facility. COREQUISITES: Course 091-101 - Animal Care and Management

091-103
Clinical Pathology I for Vet Sciences **4.00**

In this course, students examine basic laboratory equipment and procedures, as well as features of common veterinary diseases, to acquire skills needed to perform various diagnostic tests. Upon completion of this course, students will be able to collect and process appropriate samples for hematology, blood chemistry, urinalysis, and parasitology, and correlate veterinary clinical pathology findings to clinical signs. PREREQUISITES: Courses 091-101 - Animal Care and Management and 091-102 - Veterinary Business Practices with a minimum grade of C or TR

091-104
Clinical Pathology II for Vet Sciences **4.00**

In this course, students examine additional laboratory procedures and other veterinary disease processes to establish understanding of appropriate methodology and recognition of accurate results. Upon completion of this course, students will be able to collect and process appropriate samples for mycology, cytology, serology, endocrinology, and coagulation and reproductive evaluations, and correlate veterinary clinical pathology findings to clinical signs. PREREQUISITES: Course 806-197 - Microbiology with a minimum grade of C or TR COREQUISITES: Course 091-106 - Surgical Procedures II for Vet Sciences

091-105
Surgical Procedures I for Vet Sciences **3.00**

In this course, students investigate surgical equipment and procedures to develop skills needed to assist with surgical care of animals. Upon completion of this course, students will be able to identify surgical instruments, develop sterile technique, maintain and operate surgical equipment, and assist with patient preparation, monitoring, and recovery. COREQUISITES: Course 091-103 - Clinical Pathology I for Vet Sciences

091-106
Surgical Procedures II for Vet Sciences **3.00**

In this course, students explore the veterinary technician's role in surgery to develop skills needed to manage veterinary patients in the pre-, intra-, and post-operative phases. Upon completion of this course, students will be able to anticipate needs of the surgeon, provide veterinary surgical assistance, manage wounds and incisions, and perform dental prophylaxis in dogs and cats. PREREQUISITES: Courses 091-111 - Clinical Skills II for Vet Sciences and 091-108 - Veterinary Pharmacology with a minimum grade of C or TR

091-107
Imaging for Veterinary Sciences **3.00**

In this course, students explore veterinary imaging concepts and apply veterinary imaging techniques to use radiographic equipment and support diagnostic studies. Upon completion of this course, students will be able to properly position veterinary patients, produce diagnostic images, process exposed films, and maintain equipment. COREQUISITES: Course 091-103 - Clinical Pathology I for Vet Sciences

091-108
Veterinary Pharmacology **3.00**

In this course, students examine drugs, vaccines, and other substances used in veterinary medicine to establish a knowledge base of their therapeutic use, administration, and side effects. Upon completion of this course, students will be able to accurately calculate dosages, prepare dispensed medications, safely administer drugs, and recognize normal and abnormal responses to medications. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of C or TR or achieve the required placement test score COREQUISITES: Course 091-110 - Clinical Skills I for Vet Sciences

091-109
Lab Animals and Non-Traditional Pets **2.00**

In this course, students explore characteristics, basic care, illness, and treatment of animals that may be encountered in research settings and/or kept as pets, to develop skills needed to participate in caring for these animals. Upon completion of this course, students will be able to properly restrain and examine mice, rats, rabbits, and birds, collect blood samples from rats and rabbits, and perform a necropsy on a laboratory animal. COREQUISITES: Course 091-104 - Clinical Pathology II for Vet Sciences

091-110
Clinical Skills I for Vet Sciences **2.00**

In this course, students assimilate skills in a clinical setting to develop proficiency in animal nursing techniques. Upon completion of this course, students will be able to perform routine veterinary clinic procedures such as venipuncture, urine collection, and subcutaneous injection. PREREQUISITES: Course 091-105 - Surgical Procedures I for Vet Sciences with a minimum grade of C or TR

091-111
Clinical Skills II for Vet Sciences **2.00**

In this course, students further assimilate skills in a clinical setting to develop proficiency in animal nursing techniques. Upon completion of this course, students will be able to perform more complex clinical procedures such as monitor patients in the anesthetic and recovery periods, properly restrain small animals, and prepare patients for surgery. PREREQUISITES: Course 091-110 - Clinical Skills I for Vet Sciences with a minimum grade of C or TR

091-112
Clinical Skills III for Veterinary Sci **3.00**

In this course, students assimilate higher level skills in a clinical setting to develop proficiency in animal nursing techniques for veterinary technicians. Upon completion of this course, students will be able to place and care for intravenous catheters, administer intravenous and intramuscular injections, administer enemas, and apply and remove bandages and splints. PREREQUISITES: Course 091-106 - Surgical Procedures II for Vet Sciences with a minimum grade of C or TR

091-113
Anesthesia for Veterinary Technicians **3.00**

In this course, students investigate anesthetic delivery and monitoring equipment, pain management strategies, and appropriate responses to patient compromise to acquire skills needed to coordinate anesthetic events in veterinary patients. Upon completion of this course, students will be able to choose and administer appropriate veterinary anesthetic protocols, monitor and maintain patient status throughout anesthetic events, and maintain equipment and accurate anesthetic records. PREREQUISITES: Course 091-111 - Clinical Skills II for Vet Sciences and 091-108 - Veterinary Pharmacology with a minimum grade of C or TR COREQUISITES: Course 091-106 - Surgical Procedures II for Vet Sciences

091-114
Veterinary Tech Clinical Internship **4.00**

In this course, students hone animal nursing skills in a clinical setting to achieve proficiency needed to function in the role of veterinary technician according to the standards set by CVTEA. Upon completion of this course, students will have the skills and knowledge required of an entry level veterinary technician. PREREQUISITES: Course 091-112 - Clinical Skills III for Veterinary Sci with a minimum grade of C or TR

091-120
Animal Behavior **1.00**

In this course, students consider normal and abnormal animal behavior, training methods, and the relationship between behavior and physical health to identify problem behaviors and potential solutions. Upon completion of this course, students will be able to recognize some behavior issues in domestic animals and choose appropriate resources for their modification.

091-121
Emergency Medicine for Vet Technicians **1.00**

In this course, students explore topics in advanced veterinary critical care to develop awareness of procedures and equipment available in specialty facilities. Upon completion of this course, students will be able to identify the appropriate application of central venous and intraosseous catheterization, active drainage/suction devices, dialysis, and intracranial pressure monitoring in veterinary medicine. PREREQUISITES: Course 091-113 - Anesthesia for Veterinary Technicians with a minimum grade of C or TR

091-122
Integrative Modalities for Vet Sciences **1.00**

In this course, students explore therapeutic options which may supplement traditional Western veterinary medicine to provide awareness of additional resources for patient care. Upon completion of this course, students will identify the appropriate application of spinal manipulation, acupuncture, massage, therapeutic ultrasound, homeopathy, and other treatment modalities in veterinary medicine. PREREQUISITES: Course 091-106 - Surgical Procedures II for Vet Sciences with a minimum grade of C or TR

091-123
Veterinary Medical Terminology **2.00**

In this course, students explore the construction, meaning, and pronunciation of veterinary medical terms to establish understanding and facilitate communication among veterinary team members. Upon completion of this course, students will be able to correctly formulate veterinary medical terms to describe specific concepts.

101-100
Accounting Program Orientation **1.00**

Students develop skills to enhance their success in the Gateway Technical College accounting program and their career. These skills include self-assessment, time management, study skills, learning styles, and stress management. Students research the accounting field through the Internet, periodicals, and surveys. Students design an accounting academic and career development plan and initiate their ongoing program portfolio.

101-103
Internship for Accounting **2.00**

This course is an on-the-job accounting related work experience. The student will perform 72 hours of accounting-related duties in a business, governmental or not-for-profit setting. Students are responsible for seeking and obtaining the internship workstation position (paid or unpaid). The student will make a summary of work activities. Job supervisor approval and instructor pre-approval are required.

101-104
Income Tax Accounting **4.00**

This course covers basic federal and state income tax laws. The student will prepare manual and electronic Federal and manual Wisconsin individual tax returns (including self-employment),as well as basic federal partnership, S-Corp, and corporate tax returns. Additional areas of study will include: exemptions, gross income, deductions, credits, capital gains/ losses, cost recovery, Sec. 1231 and 1245 recapture, passive activity losses, NOLs, AMT, and tax planning. Basic computer literacy required.

101-105
Accounting Career Readiness **2.00**

Accounting Career Readiness will prepare student for entry into the workforce. The student will develop a strategy for seeking, obtaining and retaining employment. The student will identify professional goals and develop a job search or job advancement career plan, resume, application letter, and prepare for interviews. The student will explore local employment resources and career opportunities. PREREQUISITES: Course 101-131 - Management Accounting

101-106
Accounting Spreadsheet Applications **3.00**

This course covers intermediate and advanced spreadsheet topics. The student will develop and edit business-related worksheets and charts, including linking worksheets and workbooks. The student will also work with data tables, Goal Seek, scenarios, and Solver to perform what if calculations on various data. The student will also work with financial functions, macros, and create reports. This course will prepare the student to become Microsoft Office User Specialist (MOUS) certified in Excel at the Core of Expert level. PREREQUISITES: Course 101-114 - Accounting Principles or 101-112 - Accounting for Business and course 103-102 - Microsoft Excel or 103-143 - Computers for Professionals

101-107
Accounting Capstone **3.00**

The accounting capstone course will guide the student in dealing with ethics, internal control and financial statement analysis in the accounting environment. Students will resolve accounting problems by applying skills and techniques acquired in previous courses. Students will apply business law and ethics to the accounting environment. PREREQUISITES: Courses 101-104 - Income Tax Accounting, 101-122 - Intermediate Accounting II, 101-131 - Management Accounting, 101-143 - Payroll Accounting, and 101-154 - Accounting Software Applications COREQUISITES: Course 101-155 - Financial Analysis/ Management

101-112
Accounting for Business **3.00**

A practical approach to the study of accounting. Basic accounting practices and procedures are explained with particular emphasis on the transactional effect on the income statement and balance sheet. Other areas covered include adjusting and closing entries; accounting for cash, including bank reconciliations and payroll accounting.

101-114
Accounting Principles **4.00**

Accounting Principles is an introduction to the field of accounting. The accounting cycle - analyzing, journalizing, posting, adjusting entries, worksheet preparation, financial statements, and closing entries - will be covered. Details of accounting for receivables, payables, cash, subsidiary ledgers, corporate organization, stock transactions, and dividends will be studied. Accounting Principles illustrates accounting methods for service and merchandising firms, partnerships, and corporations. Two comprehensive practice sets will be required.

101-121
Intermediate Accounting I **4.00**

Intermediate Accounting I will apply FASB principles and GAAP to corporations and will emphasize an in-depth understanding of the balance sheet. Students will learn to prepare classified balance sheets, account for receivables, inventory valuation and estimation, acquisition and disposition of fixed and intangible assets, current and long-term liabilities, including time value of money concepts. PREREQUISITES: Course 101-114 - Accounting Principles COREQUISITES: Course 101-100 - Accounting Program Orientation and course 804-115 - College Technical Math 1 or 804-123 - Math with Business Applications, and course 103-143 - Computers for Professionals or 103-102 - Microsoft Excel

101-122
Intermediate Accounting II **4.00**

Intermediate Accounting II will cover advanced topics of corporate accounting with an emphasis on stockholders' equity and presentation of income statement items. Students will learn to prepare multi-step income statements and statements of cash flows, calculate EPS, account for investments in debt and equity securities, income taxes, and leases. They will utilize the revenue recognition principle, perform error analysis, and become familiar with the FASB's full disclosure requirements. Students will be expected to use Excel for preparation of designated projects. PREREQUISITES: Course 101-121 - Intermediate Accounting I

101-126
Accounting Spreadsheet Applications **2.00**

This course covers intermediate and advanced spreadsheet topics. The student will develop and edit business-related worksheets and charts, including linking worksheets and workbooks. The student will also work with data tables, Goal Seek, scenarios, and Solver to perform "what if" calculations on various data. The student will also work with financial functions, macros, and create reports. This course will prepare the student to become Microsoft Office User Specialist (MOUS) certified in Excel at the Core or Expert level. PREREQUISITES: Course 101-114 - Accounting Principles or 101-112 - Accounting for Business and course 103-102 - Microsoft Excel or 103-199

101-127
Accounting Database Applications **2.00**

This course is designed to introduce the student to a database package that can be used to generate reports containing accounting information. The student will learn the basics of database software, including tables, queries, and reports as they relate to the revenue, purchases, production, and payroll cycles. COREQUISITES: Course 101-126 - Accounting Spreadsheet Applications

101-131
Management Accounting **4.00**

This course covers the fundamentals of managerial accounting for a manufacturing company. The student will learn the flow of costs through the accounting system,

including material, labor, and factory overhead. The student will also learn job order vs. process cost accumulation, as well as computing and recording variances in a standard cost system. Cost behavior analysis, costing joint and by-products, and just-in-time manufacturing will also be covered. The student will use quantitative models and cost analysis to make managerial decisions. The student will also prepare a master budget for a manufacturing business. PREREQUISITES: Course 101-121 - Intermediate Accounting I

101-143
Payroll Accounting **2.00**

Payroll accounting exposes students to the various tax rules and laws, tax rates, and reports that form the core of a payroll accountant's responsibility. Students will be working with tax tables and forms and will learn how to determine gross and net earnings of an employee. Deductions for social security, Medicare, and federal and state income taxes will be computed. Students will also be able to determine the employer's liability for payroll taxes, including unemployment and workman's compensation premiums. Other requirements include the completion of a Wisconsin Sales and Use Tax form. Electronic software will be utilized to input and run a company's payroll for one quarter along with manual preparation of federal tax forms.

101-152
Accounting for Government and Nonprofit Entities **3.00**

The purpose of this course is to apply the objectives of the GASB to general purpose financial reporting for government and nonprofit organizations, in order to provide timely data for the administrators and users of these organizations. Specific techniques for reporting the resources and uses of funds are included, in addition to financial statement presentation and budgeting applications. PREREQUISITES: Course 101-121 - Intermediate Accounting I

101-154
Accounting Software Applications **2.00**

This course is designed to introduce the student to commercially available accounting software. The student will keep data for customers, invoices, vendors, purchase orders, inventory, payroll, cash, and other data needed for both service and retail businesses. The student will also generate financial statements and other reports needed both for financial accounting and income tax purposes. PREREQUISITES: Course 101-114 - Accounting Principles or 101-112 - Accounting for Business

101-155
Financial Analysis/Management **3.00**

The student will think critically and apply accounting knowledge, principles, and procedures by utilizing financial analysis and financial management techniques in managing the financial aspects of a "for profit" business. The student will learn to measure risk/reward/return; analyze corporate financial statements, and use time value of money analysis to make long-term financing decisions. The student will analyze corporate merger techniques, apply working capital management techniques, develop cash budgets, utilize breakeven analysis, and develop pro forma financial statements. A corporate annual report project is required using spreadsheet and word processing software. PREREQUISITES: Course 101-106 - Accounting Spreadsheet Applications COREQUISITES: Course 101-122 - Intermediate Accounting II

101-158
Accounting Capstone **4.00**

The accounting capstone course will guide the student in dealing with ethics, internal control, and financial statement analysis in the accounting environment. Students will resolve accounting problems by applying skills and techniques acquired in previous courses. Students will apply business law and ethics to the accounting environment. This course will prepare students to take the ABA (Accredited Business Accountant) exam. The ABA is a national certification supported by the National Society of Accountants. It is a certification designed for accountants with associate degrees. The capstone course will provide an assessment opportunity aimed at achieving national certification. PREREQUISITES: Course 101-104 - Income Tax Accounting, 101-122 - Intermediate Accounting II, 101-131 - Management Accounting, and 101-143 - Payroll Accounting COREQUISITES: Course 101-155 - Financial Analysis/Management

101-159
Income Tax Accounting II **3.00**

Students enhance their Income Tax Accounting skills in this course which expands on the knowledge of individual income tax accounting and introduces the basics of partnership and corporate tax accounting. Students will prepare individual and basic partnership and corporate tax returns. Current taxation topics will be discussed. The course also enables students to obtain certification as a Volunteer Income Tax Assistance (VITA) program volunteer. PREREQUISITES: Course 101-104 - Income Tax Accounting with a minimum grade of C or TR

101-162
Accounting - Serving the Public Interest **3.00**

Students will learn how accountants can give to the community by providing their services without a fee. This course consists of class time plus approximately 36 hours of community service time doing something that reinforces and supplements their academic knowledge of accounting. Students will be able to choose from a variety of service learning placements, such as working with an agency who serves adults and helping with a banking, budgeting and other money management skills workshop, developing and implementing a cost system for a non-profit organization, developing and implementing an inventory tracking system for a food bank, provide basic accounting functions, bank reconciliations, general ledger, or computerize an accounting system for a non-profit organization. PREREQUISITES: Course 101-114 - Accounting Principles with a minimum grade of B

101-163
Triple Bottom Line Accounting **3.00**

Students will look at financial and managerial accounting concepts with a focus on being responsible to all stakeholders, anyone who is influenced by the actions of the company, directly or indirectly. The triple bottom line is made up of economic, environmental and social factors. The ultimate goal is strong profits, a healthy environment and strong communities. Sustainability and the idea of global stewardshipa and responsible management of resources are emphasized. PREREQUISITES: Course 101-114 - Accounting Principles with a minimum grade of B

101-164
Non-Profit Acctg
Software Applications **3.00**

Students will learn how to account for non-profit organizations using commercially available accounting software. Management of donors, grants, and pledges and topics such as allocating expenses to programs, handling donor restrictions, and generating the reports needed for donors and tax returns are covered.

101-184
Business Finance and Budgeting **3.00**

In Business Finance and Budgeting, the learner applies the skills necessary to achieve an understanding of the fiscal/ monetary aspects of business. Each learner will demonstrate application of business types, cycles, forecasting, budgeting, expense control, and financial statement interpretation relevant to the supervisor as a non-accountant.

102-118
International Bizsquad Internship **3.00**

International BIZSquad students will engage in multidisciplinary global projects. As projects go from creation to implementation the students will have to engage the clients and provide communication essential to positive outcomes. Project management skills help define the scope of the project that leads to successful implementation. Students will be required to travel internationally to complete these projects.

102-121
Credit Management **3.00**

The learner will examine the world of personal and business credit and explore the implementation and consequences of various credit management policies. The learner will also examine applicable regulations as it pertains to consumer and business credit, as well as relationships with regulatory agencies, stakeholders and the management of the business as it relates to fiduciary responsibilities of the modern manager. PREREQUISITES: Course 804-123 - Math with Business Applications with a minimum grade of C or TR

102-122
Investments **3.00**

This course acquaints the student with the fundamentals of investments. Topics include the operation of the securities and financial markets and the risk and timing of investment decisions. Analysis factors such as the investment environment, the economy, the industry and the individual company are discussed in terms of equity, fixed income and specialized security analysis. Investment strategies are utilized to develop an investment plan and diversified portfolio. Other individual projects include mutual fund and stock selection and analysis.

102-137
Business/Introduction to **3.00**

General orientation to the business world. Studies include organization and administration, production, labor and personnel, accounting and statistics, distribution, finance, and the relationship of business to society.

102-138
BIZ Internship **3.00**

This course establishes an opportunity for the students to apply training and skills learned while participating on a multidisciplinary consulting team. The team will develop a strategic plan for a specified business. Students contract with the business and an MBA consultant to complete a project to the parameters mutually identified by the business and the MBA consultant. Evaluation of the student's performance will be a cooperative effort between the MBA Consultant and the Instructor(s).

102-160
Business Law **3.00**

Business Law is a survey course which introduces the student to relevant legal issues that affect business today. Students will learn the fundamentals of law from the U.S. Constitution to the Uniform Commercial Code, from Contract Law to Property Law, and will be able to identify the legal basis of various business activities.

102-186
Business Management Internship **3.00**

Establishes an opportunity for the student to apply training and skills in a business work environment. The student will spend 144 hours at the worksite(s). the worksite activities will allow the student to interact with a variety of management functions found in small to medium sized businesses. Classroom hours will include preparation of job portfolio materials and interview techniques.

102-196
Business Decision Management **4.00**

This capstone course within the Business Management Program will take the student through the decision process of a business enterprise. This class will pull together the breadth of the learner's business and general educational exposure, experience and education leading into this course and put practical use and application to this knowledge. Application concepts such as capital budgeting techniques, time value of money consideration, conventional and alternative sources of capital, mitigating risk and liability through utilizing various forms of business organizations as well as analysis of financial statements will be covered in detail. The learner will then assemble their own business plan for a new venture, business line expansion, business acquisition or business divestiture. PREREQUISITES: Courses 101-114 - Accounting Principles and 104-101 - Marketing Principles or courses 101-112 - Accounting for Business, 103-103 - Microsoft Excel II, and 104-101 - Marketing Principles

103-100
Internet, Introduction to **1.00**

Students learn to use the Internet effectively, to access the net through the World Wide Web browser and other useful tools, and to use the Internet's vast resources to complete a research project in a field of interest.

103-102
Microsoft Excel **1.00**

Introduction to Excel spreadsheet software. Students will learn how to create, store, retrieve and edit a variety of spreadsheets and charts, format worksheets and use formulas. Basic functions will be stressed.

103-103
Microsoft Excel II **1.00**

This course will take students to the next level of competency in Excel. Topics covered include creating workbooks using templates, multiple sheets, 3-D references in formulas and linked workbooks, using database features of Excel, use copy, paste, paste special, and paste link features, and create charts using the Chart Wizard.

103-104
Microsoft Excel III **1.00**

Students will use the Function Wizard to create functions involving IF, Lookup, and PMT; use the tools menu to create, play and edit macros; and integrate spreadsheets and charts with Word and Access tables.

103-105
Microsoft Access **1.00**

For beginning-level users of Microsoft Access. Students will discuss basic database terminology and design concepts; create and modify table structures; add, change, and delete records; and create simple selection queries to find, display, and print records.

103-106
Microsoft Access II **1.00**

For intermediate-level users of Microsoft Access. Students will create queries to sort records, compute record and group totals and statistics; and use different methods to create and print data entry forms and reports.

103-107
Microsoft Access III **1.00**

For advanced-level users of Microsoft Access. Students will create queries to crosstab, update, list top values, and join tables for data entry forms and reports; create a menu-driven application; and write macros to automate tasks.

103-108
Office 2007, Transition to **1.00**

Microsoft Office 2007 introduces many new features to help you get your work done more efficiently and effectively. If you're familiar with Office 93, 95, 2000, 2003 (Word, Excel, Access, PowerPoint) and want to upgrade to this new version of 2007, you'll want to take this class! This new version of Office presents the biggest change in features in the last 10+ years. Note: This class is not intended for students who are new to working with computers and software.

103-109
Windows Operating Systems and Concepts **1.00**

This is the beginning course for students wishing to learn the Windows operating system. Creating and manipulating files and programs in this operating environment will be emphasized.

103-110
Microsoft PowerPoint **1.00**

This course will take the user of PowerPoint through the basic procedures necessary to create a presentation and related handout materials. The student will learn to use the wizards, toolbars, dialog boxes, menus, and various PowerPoint views to create a presentation.

103-111
Microsoft PowerPoint II **1.00**

This course will take the user of PowerPoint presentation graphics to an advanced level of competency. Inserting graphics, clip art, and organizational charts are emphasized. Adding sound to the presentation is also covered.

103-112
Microsoft Word **1.00**

This course is designed to teach the participant the fundamentals of word processing with Microsoft Word. A variety of business documents will be created to familiarize the learner with various commands and features.

103-113
Microsoft Word II **1.00**

This course will cover multi-page documents, tables, columns, graphics and other desktop publishing features.

103-123
Microsoft Word III **1.00**

This course will cover merging, sorting, advanced editing techniques, file management and special document features. PREREQUISITES: Course 103-113 - Microsoft Word II

103-133
Microsoft Outlook **1.00**

Outlook is a software application that allows you to send and receive electronic mail, maintain schedules, calendars, contacts, and tasks.

103-138
FrontPage - Beginning **1.00**

This is the entry-level course for creating, maintaining and publishing a website using web authoring software.

103-141
Transition to Office 2010 **1.00**

Microsoft Office 2010 enhances the new user interface introduced initially in office 2007 to help you get your work done more efficiently and effectively. If you're familiar with Office 2003 (Word, Excel, Access, Powerpoint) and want to upgrade to this new version of 2010, you'll want to take this class! Upgrading from office 2003 to Office 2010 presents the most significant change in features in the last 10+ years. Note: This class is intentended for students who are new to working with computers and software.

103-142
Basic Computing **1.00**

This course will give the learner the skills to use electronic mail, Bb, Web Advisor, common beginning features of Microsoft Office, USB usage, printing at Gateway, and saving/opening files.

103-143
Computers for Professionals **3.00**

This course introduces students to the use of a PC. Through hands-on practice, students will manage files, communicate using e-mail, and use the Internet, word processing, spreadsheet, and presentation software. Students must use the version of Microsoft Office software in use at Gateway Technical College. Basic keyboarding skills are recommended. PREREQUISITES: Course 103-142 - Basic Computing with a minimum grade of C or TR or achieve the required placement test score

103-144
Windows 8: Basics **1.00**

This course will prepare you to work in the new Windows 8 operating system and create an interface designed for your personal needs. You will learn about new terminology, what happened to the Start Button, Icons and Taskbar. If you have a new computer that came with Windows 8 or recently upgraded, you will want to take this class. Students are required to have Windows 8 on their own personal computer/laptop (no tablets or iPads), as it will not be available in any campus labs.

103-164
Microsoft Publisher I **1.00**

This course is designed to teach the fundamentals of Microsoft Publisher. The course will expose students to practical examples of desktop publishing. It will acquaint students with the proper procedures to create professional quality publications.

103-175
MS Integration **1.00**

Class for DOC. Provides hands-on experience integrating documents from/to database, word processing, presentation graphics and spreadsheet software programs PREREQUISITES: Courses 103-172, 103-174, and 103-171

104-101
Marketing Principles **3.00**

This is a foundational course that introduces students to the principles of marketing. The course explores the entire marketing mix including: segmentation, targeting, positioning, marketing research, consumer behavior, Product development, pricing policies, distribution and overview of promotion. This course provides a comprehensive overview of the exciting world of marketing.

104-104
Selling Principles **3.00**

This course covers retail, business, industrial, and direct selling procedures which involve prospecting, pre-approaching the customer, discovering the customer's wants and needs, demonstrating the product, answering questions, meeting objections, closing the sale, and suggestion selling.

104-105
Promotion Principles I **3.00**

Students are introduced to the theory and practice of integrated marketing communications. This course is designed to provide an understanding of the promotional elements; advertising, direct marketing, public relations, sales promotion, and digital marketing with emphasis placed on implementation of integrated marketing communications (IMC) in planning marketing and promotional programs.

104-109
Marketing/Sports and Event Introduction **3.00**

This course will provide students with an awareness of the careers available within sport/ event marketing industry and enable them to learn the introductory skills necessary to pursue employment in the field. A basic understanding of sports and event marketing followed with exposure to the major components of the industry will be covered. Students will also maintain an awareness of current trends and happenings in the industry.

104-110
Corporate Sponsorship Development **2.00**

This course will provide students with the necessary information and skills to develop marketable sponsorship proposals. In addition, they will explore both perspectives of sponsorship: the seller (representing an event, team, property or venue) and the buyer (representing a company with a desire to market and promote through a sport or event sponsorship). Students will develop skills necessary to sell their proposals.

104-111
Ticket Sales **1.00**

This course is intended to teach the importance of the sell out mentality for events. The class will cover developing a data base, discounting, creating a variety of ticket packages, targeting groups, developing a sales staff, and retaining season ticket holders through renewals.

104-115
Marketing Capstone/Internship **3.00**

This course will allow you to prepare for entering the career of marketing. You will create and update career credentials (resume and portfolio) that will be necessary to compete in an employment market. To further enhance your employability you will be able to demonstrate your marketing skills in an applied internship. PREREQUISITES: Courses 104-101 - Marketing Principles and 104-104 - Selling Principles COREQUISITES: Courses 104-116 - E-Marketing/Social Media and 104-161 - Selling Principles/Advanced

104-116
E-Marketing/Social Media **3.00**

In this course the student will explore the concepts, trends and planning involved in developing a comprehensive electronic marketing strategy for a business, with an emphasis on social media. This will include looking at the proper design concepts for a web site, using successful social media techniques, identifying emerging trends in the marketplace and developing a comprehensive electronic marketing/social media campaign. PREREQUISITES: Course 104-101 - Marketing Principles

104-118
Advanced Promotion **3.00**

Advanced Promotion immerses students in the application of offline and online Integrated Marketing Communications. Creative emphasis will be placed on positioning and branding along with the incorporation of Digital Space innovation that encourages customer engagement with promotions through technology. This hands-on course challenges the students to perform the role of ad agency with creative development of promotions, writing a creative brief, and incorporating presentation skills. PREREQUISITES: Course 104-105 - Promotion Principles I

104-119
Visual Merchandising **3.00**

Merchandising display and point of purchase advertising. The principles of display, harmony, rhythm, proportion, balance, emphasis and color. Creative efforts through the production of several displays. Showcard and sign production.

104-126
Business Marketing I **3.00**

Process and systems analysis, inventory planning and control, quality control, marketing cost analysis, marketing plans all related to industrial goods. PREREQUISITES: Course 104-101 - Marketing Principles

104-127
Retailing **3.00**

Retailing provides the student with a basic understanding of the retail environment. The course includes: the retail structure, basic factors involved with store location, product line, fixtures and equipment. The course will also focus on major trends in retailing, along with strategies used in staffing, maintaining personnel, merchandise planning and control, and strategies in merchandise buying and receiving.

104-161
Selling Principles/Advanced **3.00**

This course further applies Selling techniques in real world applications. Student will be made aware of various sales careers and necessary qualifications. Time management, territory planning, motivation, networking, direct marketing and negotiating for the salesperson will be studied. Sales meetings and practical sales demonstrations will be presented by the students. PREREQUISITES: Course 104-104 - Selling Principles

104-170
Business Purchasing **3.00**

An understanding of industrial purchasing is developed through the study of the basic principles of buying; regulations and laws controlling purchasing; duties and qualifications of the buyer or purchasing agent.

104-172
Marketing Management **3.00**

This course is an expanded look at issues and trends in the field of marketing. This course provides the student with decision-making activities that are involved with marketing management. Emphasis is placed marketing opportunities and strategies used in the marketing mix. Students will develop a comprehensive marketing plan. PREREQUISITES: Course 104-101 - Marketing Principles

104-173
Marketing Research **3.00**

Businesses today need current, accurate information upon which to base their decisions. We will study the types and sources of data as well as the methods of organizing that data into usable readable information for marketing decisions. We will apply our learning by developing a marketing research project. COREQUISITES: Course 104-101 - Marketing Principles

104-194
International Marketing **3.00**

The course is a study in the marketing of goods and services at the Global level. The international uncontrollable variables of marketing are analyzed along with emphasis on market development, marketing research, product planning, international distribution, promotion, and pricing. Students explore how marketing strategies and tactics must be managed and adapted for success in different cultural, economic, geographic and political environments around the world.

105-106
Business Communications **3.00**

In this course, students apply the skills and tools necessary to effectively compose business communication in a written format. Each student demonstrates the application of analyzing the communication situation, including: planning and preparing the message; developing persuasive, informational, and negative messages, sales letters, media releases, proposals and promotional materials; demonstrating skills in basic writing mechanics and English grammar; and effective electronic communication. PREREQUISITES: Course 801-136 - English Composition 1

106-005
Administrative Professional Internship **2.00**

Students perform word processing, spreadsheet, and database application work in an on-the-job training situation in an office. The student employee, employer, and internship instructor interact during the training experience. The Internship includes 72 hours of employment credential preparation and software review before job placement.

106-006
Business Communication Skills **3.00**

Effective written business communication principles are discussed and applied to the composition of routine business correspondence and reports. Oral communication presentations will be used to enhance the student's understanding of effective communication principles. Proper communication techniques for telephone use will be demonstrated. PREREQUISITES: Courses 106-178 - Business Proofreading and Editing, 106-137 - Keyboarding Applications, and 801-136 - English Composition 1 with a minimum grade of C or TR

106-007
Business Software Solutions **2.00**

Business Software Solutions is a capstone course integrating the aspects of word processing, database, spreadsheet, graphics, and communications using a Windows environment. PREREQUISITES: Course 106-013 - Spreadsheet/Database for Business II or 106-142 with a minimum grade of C or TR

106-008
Emerging Business Trends and Tech. **2.00**

A capstone course integrating the aspects of word processing, database, spreadsheet, graphics, electronic mail, and calendaring applications.

106-009
Meetings/Planning **1.00**

This course introduces students to the scheduling and planning of business meetings.

106-010
Publication Design for Business_ **2.00**

Create print-ready newsletters, brochures, flyers, forms, business cards, and other business publications. PREREQUISITES: Course 106-137 - Keyboarding Applications with a minimum grade of C or TR

106-011
Records Management **1.00**

This course presents guidelines and procedures for controlling business information from its creation through its distribution, retention and retrieval, storage, preservation, protection, and final disposition. The main systems include alphabetic, numeric, and subject filing.

106-012
Spreadsheet/DB for Business I **3.00**

This course covers spreadsheet and database software for the business world. PREREQUISITES: Course 106-137 - Keyboarding Applications with a minimum grade of C or TR

106-013
Spreadsheet/Database for Business II **3.00**

This course covers spreadsheet and database software for the business world. Emphasis will be on more advanced features of spreadsheets and databases. PREREQUISITES: Course 106-012 - Spreadsheet/DB for Business I or 106-138 with a minimum grade of C or TR

106-014
WP for Business I **2.00**

This class covers features of word processing software from the beginning level. Students develop expertise in the creation of business documents through the use of operational and text-editing

features. Proofreading and language skills will be developed through the production of business documents. PREREQUISITES: Course 106-137 - Keyboarding Applications with a minimum grade of C or TR

106-015
Word Processing for Business II 2.00

This class covers the features from an intermediate level. Proofreading and language skills will be developed through the production of business documents. PREREQUISITES: Course 106-014 - WP for Business I or 106-003 with a mimimum grade of C or TR

106-016
Principles of Customer Service 3.00

Provides a solid foundation in the areas of customer service and service excellence and provides techniquies to retain customers and maintain loyalty in both a face-to-face environment and in remote settings via telephone and the Internet.

106-017
Customer Service Capstone 1.00

Students will job shadow at a customer service call center.

106-018
Customer Service Management 3.00

Includes instruction in customer behavior; using customer service databases; Internet searching and retrieval; and telephone, e-mailing, and communications skills. PREREQUISITES: Course 106-016 - Principles of Customer Service

106-019
Administrative Service Internship 1 1.00

Students will be required to complete 36 hours of an on the job work experience. Students will also spend time in the classroom enhancing their employability skills.

106-020
Administrative Service Internship 2 1.00

Students will be required to complete 36 hours of an on the job work experience. Students will also spend time in the classroom enhancing their employability skills.

106-119
Professional Development 2.00

Professional Development places emphasis on the development of a total professional image. Social and business intelligence, personal and professional goals, positive work attitude, time management, productive work habits, customer service knowledge, and job seeking skills, including the development of a job portfolio, are covered.

106-126
Keyboarding 1.00

Develop touch method skills on the computer keyboard through fingering techniques, speed, and accuracy drills.

106-127
Skill Building I 1.00

A beginning course designed to help students who already have basic keyboarding skills improve their speed and accuracy. PREREQUISITES: Course 106-126 - Keyboarding

106-137
Keyboarding Applications 3.00

This course is designed to develop keyboarding skills and basic document formatting techniques using word processing software.

106-137A
Keyboarding Applications 2.00

This course is designed to develop basic document formatting techniques using word processing software.

106-178
Business Proofreading and Editing 2.00

This course is designed to improve total effectiveness in written communication by providing a comprehensive review of the rules governing business communications. The current edition of the Gregg Reference Manual will be used in this course. In addition, the course provides tips for developing and strengthening good proofreading skills.

106-190
Administrative Office Procedures 3.00

This course will develop professional skills and attitudes needed in today's global business environment. Topics include making ethical decisions, working independently and as a team member, and managing time. Telecommunications, mail processing, travel arrangements and conferences, public relations, and ergonomics will be included. PREREQUISITES: Course 106-012 - Spreadsheet/DB for Business I or 106-138 with a minimum grade of C or TR

106-199
Web Pages for the Office 2.00

This is an entry level course for the office systems technology professional who wishes to modify, publish, and maintain a web site. This course will focus on what the Internet is and how it is used in a business environment. Web publishing software will be used for: revising and publishing web pages and web sites; using lists, hyperlinks, images, and the task list; creating tables and frames in web pages; using advanced editing and publishing features; and incorporating forms and using appropriate forms handling. To be successful, the student must have an understanding of any one of the Windows 95/98/ME/XP operating systems and file management.

106-370
Medical Transcription I 4.00

Structured to help students become skilled in translating physician's dictated reports into final written form acceptable for use in the patient's medical record. COREQUISITES: Courses 106-178 - Business Proofreading and Editing, 501-101 - Medical Terminology, and 509-302 - Human Body in Health & Disease

106-371
Medical Transcription II 4.00

Students increase and sharpen skills in transcribing medical reports. Includes working with foreign accents. PREREQUISITES: Course 106-370 - Medical Transcription I

106-373
Medical Transcription Functions 3.00

Introduces the response of the body to interruptions in normal functioning as with

injury and disease. Diagnostic measures and treatment modalities associated with pathophysiology, clinical laboratory and pharmacology will be identified. Professional and ethical conduct will be emphasized. PREREQUISITES: Courses 106-370 - Medical Transcription I and 509-302 - Human Body in Health & Disease

106-374
Medical Transcription Externship **1.00**

The externship will be done in an affiliated hospital or medical clinic. Opportunity to put into practice the skill mastered in the academic setting will be provided. Supervision, guidance and evaluation will be completed by the externship site and Gateway Technical College staff.

106-392
Office Field Study **1.00**

This course provides the student with the opportunity to observe basic office procedures and personnel on a job site. The student will be responsible for making arrangements for two four-hour observations and one eight-hour job shadowing experience. Students will be expected to report orally and in writing on their observations and shadowing experience. PREREQUISITES: Course 106-137 - Keyboarding Applications COREQUISITES: Course 106-119 - Professional Development

107-003
Network+ Exam Prep **1.00**

This course will prepare an individual for the Network+ certification exam. It is intended for individuals who have completed the CCNA classes (107-135 Data Communications, 107-162 Routing Principles, 107-167 Switching Basics, and 107-168 WAN Technologies) or have a background in network installation, troubleshooting, and maintenance.

107-009
A+ Essentials Review Class **1.00**

This course will prepare an individual for the A+ Essentials Certification Exam. This is the first of two exams that must be passed for an individual to achieve the A+ certification. This class is intended for individuals who have completed coursework in basic computer support or have a background in PC troubleshooting. The focus of this class is the fundamentals of: personal computer components, laptop and portable devices, operating systems, printers and scanners, networks, security, safety and environmental issues, and communication and professionalism. This class will consist of lectures on the essential material for this exam and will not provide class time to perform labs. All students will be required to purchase a book and a certification test bank (self-test software).

107-010
A+ 602 Review Class **1.00**

This course will prepare an individual for the A+ 602 Certification Exam. This is the second of two exams for an individual to achieve A+ certification. This class is intended for individuals who have passed the A+ Essentials exam and have completed coursework in computer support or have a background in PC troubleshooting. The focus of this class is the advanced topics of: personal computer components, laptop and portable devices, operating systems, printers and scanners, networks, security, safety and environmental issues, and communication and professionalism. This class will consist of lectures on the essential material for this exam and will not provide class time to perform labs. All students will be required to purchase a book and a certification test bank (self-test software).

107-011
IT in Business **3.00**

This course is a basic introduction to Information Technology (IT) and how it impacts our lives. It will focus on how IT professionals implement industry tools and applications throughout businesses. Students will learn proper terminology as well as industry trends and concepts.

107-013
IT Job Search Skills **1.00**

Learn how to start your IT job search! Students will develop a job search plan and prepare a professional job search portfolio. Different job search tools will be utilized in order to assist the student in finding the best job for them. Current job searching trends and interviewing techniques will be discussed and applied. PREREQUISITES: Course 150-114 - Network Concepts - CCNA1

107-014
A+ 801 Certification Review **1.00**

This course will prepare an individual for the A+ 801 Exam. This is the first of two exams that must be passed for an individual to achieve the A+ certification. This class is intended for individuals who have completed coursework in basic computer support or have a background in PC troubleshooting. The focus of this class is installation and support of personal computer hardware, laptops, printers, networks, security, safety and environmental issues, and communication and professionalism. This class will consist of lectures on the essential material for this exam and will not provide class time to perform labs. All students will be required to purchase a book and certification test bank.

107-015
A+ 802 Certification Review **1.00**

This course will prepare an individual for the A+ 802 Certification Exam. This is the second of two exams for an individual to achieve A+ Certification. This class is intended for individuals who have passed the A+ 801 Exam and have completed coursework in computer support or have a background in PC troubleshooting. The focus of this class is installation and support of operating systems, mobile devices, security/forensics, and properly and safely diagnose, resolve and document common hardware and software issues whil applying troublshooting skills. This class will consist of lectures on the essential material for this exam and will not provide class time to perform labs. All students will be required to purchase a book and certification test bank.

107-177
IT Project Management **4.00**

Focus will be on project management from the information systems professional perspective while keeping a customer-based orientation and business focus. Cooperative team-based business strategies will be stressed. Students will develop written and oral communications, as necessary, to complete the steps within the project management process. Project management software will be utilized, within all phases of the systems development as the students progress through a team-based project simulation. PREREQUISITES: Course 154-113 - IT Apps Server & Support or 152-131 - Systems Design and Development

107-193
IT Essentials **3.00**

IT Essentials focuses on the relationship between hardware and system software. The course topics include PCs, peripherals, networking, security, troubleshooting, and communication skills. IT Essentials is an introductory course that presents a foundation toward the pursuit of CompTIA A+ certification.

107-193A
Computer Hardware Essentials for Teacher **2.00**

The Computer hardware and software course helps teachers gain greater skills in working with laptops and portable devices, wireless connectivity, security, safety and environmental issues and communication skills. Teachers will gain access to materials that include: course quides, reference guides, PowerPoint presentations, lab materials and activities.

109-101
Hospitality/Principles of **3.00**

Introduction to origin, development, current scope, future outlook of hospitality field. Prepares student to interact with people, social and corporate etiquette addressed.

109-106
Advanced Tourism Managment **3.00**

This course covers practical marketing and management for temporary events such as fairs, pop-ups, and tourism events. The goal is to create vital internet marketing strategies using emerging technologies to entice customers. Students will identify the key customer service needs for this type of tourism event.

109-107
Legal Aspects of Hospitality Management **3.00**

Identifies the role of management in avoiding criminal or tortious legal difficulties. Applies legal principles to the development, implementation, and supervision of hospitality-based management programs.

109-108
Event Managment **3.00**

This course explores the details of event management including identifying stakeholders, planning event, development of event needs, management of participants, and execution of events.

109-110
Rooms Division Management **3.00**

Communications, guest services and housekeeping departments are examined. Management techniques common to all departments include scheduling, inspection and documentation of staff functions. Personal skills necessary for interacting with guests are evaluated.

109-111
Front Office Management **3.00**

Reservations and front office departments are examined. Techniques common to these include guest interaction, reservation taking, registration and yield management. Students become familiar with various types of information and communication systems.

109-112
Tourism, Introduction To **3.00**

This course covers the tourism industry including why people travel, the social and cultural aspects to tourism, and governmental development of tourism. Students will explore the interrelations between tourism, hotels, food, and attractions in the Wisconsin region. Emphasis will be on customer service needs within this field.

109-113
Tourism Attraction and Management **3.00**

This course is an overview of the Tourism Attractions in the local area. Students will identify the establishments, look at the specific unique customer service and management aspects of this type of establishment.

109-114
Managing Services/Hospitality Industry **3.00**

Students simulate a customer service cycle for hospitality industry businesses. Cycle includes analyzing the customer market, quality standards; team building; human resources and pro-active problem solving.

109-121
Hotel Operations, Intro to **3.00**

This course covers the historical development of hotels with a discussion of the modern day types of properties. Students will learn the guest cycle with a focus on customer service and will explore the interrelations of the different departments in a hotel or resort.

109-122
Service in the Hospitality Ind, Intro to **3.00**

Discusses customer service in the hospitality field, how it is the backbone of this industry. Students will learn how to identify good and not so good service as well as how correct service evolved and the reasons for its existence. Students will learn how to deal with upset customers and gain basic dispute management skills.

109-123
Bar and Beverage Management **3.00**

This course deals with the practical operational issues of beverage operations. With a customer service focus, this class will focus on marketing, menu development, cost control, pricing, mixology, customer service, legal issues, training, as it relates to bars and beverage service. Students will have an overview of products available for sale as well as a discussion of food and alcohol pairing principles.

109-124
Hotel Facilities Management **3.00**

This course focuses on the management of the property including design and renovation considerations. The class will also identify security and risk management issues especially as related to customer service standards. This class will also discuss the facility operations of alternative hotels including historic, B&B, spas, resorts, etc.

109-125
Hospitality Managerial Accounting **3.00**

This course explains financial statements as they apply to the hospitality industry. Students will learn how to interpret, analyze, and use these statements. Ratios and comparison techniques will be explored. Students will create budgets using generally accepted principles.

109-126
Advanced Customer Service Mgmt. **3.00**

This class focuses on the systematic structures needed to provide exceptional customer service including hiring, training, work organization, quality management and quality assurances. Students will explore how change affects customer perceptions and expectations.

109-127
Hotel Strategic Management **3.00**

This capstone course focuses on the strategic management of a hotel property. Student will master cost controls, yield management, and revenue strategies as it relates to lodging properties. Students will be able to articulate how their decisions affect the marketing, financial, and customer service standards of a hotel.

109-128
Hospitality Front Line Internship **2.00**

This hands on course focuses on work experience at the entry level in the Hospitality Industry.

109-129
Hospitality Supervisory Internship **2.00**

This hands on course focuses on work experience at the supervisory level in the Hospitality Industry.

109-131
Hospitality Capstone **2.00**

This course readies the student for employment in the hospitality field.

109-136
Lodging Field Experience **1.00**

Observation and some hands-on experience in the front office and housekeeping areas of a lodging property. Time is also spent in at least one other department determined by the student, instructor and property-based supervisor. COREQUISITES: Course 109-101 - Hospitality/Principles of

109-137
Hospitality Portfolio **1.00**

Hospitality students will go through the process of developing a personal portfolio that will include samples of their work, letters of reference, a resume, and other pertinent career search and employment information, which can be used during employment interviews. PREREQUISITES: Courses 109-136 - Lodging Field Experience and 109-144 - Hospitality Internship

109-144
Hospitality Internship **3.00**

Students learn and perform duties of at least one position at a hospitality related business. Some examples of eligible businesses are hotels, restaurants, entertainment venues, tourism information centers and convention bureaus. Time is scheduled every other week for sharing insight about the experience with the instructor and other students. PREREQUISITES: Courses 109-110 - Rooms Division Management, 109-111 - Front Office Management, 109-145 - Conference Center Internship, and 109-171 - Hospitality Sales and Marketing

109-145
Conference Center Internship **2.00**

Hands-on experience in operating Gateway Conference Center on Racine Campus. Examine standard and innovative practices in other conference facilities. Team work and self-examination emphasized. First Aid/CPR certification completed in course. COREQUISITES: Course 531-419

109-171
Hospitality Sales and Marketing **3.00**

Apply marketing techniques to hospitality industry. Emphasis given to convention and group sales concepts. Preferences and considerations of various market segments are addressed.

114-101
Personal Financial Planning **3.00**

This course considers finance from the perspective of the individual or family unit. A broad range of topics in personal finance are discussed including: planning and managing your personal finances, making purchasing and credit decisions, insuring assets, investing and controlling your financial future.

140-102
International Study - German Language **2.00**

This course is designed for students participating in an international exchange with KSII school in Hessen, Germany. Students will be exposed to basic German language skills, cultural information, business etiquette, global business practices, and development of an oral presentation.

140-103
International Study-China **2.00**

This course is designed for students participating in an international exchange to China. Students will be exposed to basic Chinese language skills, cultural information, business etiquette, global business practices, and development of an oral presentation.

140-104
International Study-French Language **2.00**

This course is designed for students participating in an international exchange to Canada. Students will be exposed to basic French Canadian language skills, cultural information, business etiquette, global business practices, and development of an oral presentation.

140-105
International Field Study **3.00**

Provides students with first-hand knowledge of working and studying in their program related area in the international environment. While abroad, students will gain cultural knowledge and understanding of values and behaviors in a different society and workplace. Upon completion of the course, students will be able to incorporate a global perspective into a comparison of professional and social practices in the US and the country visited. They will share their experiences and findings in a formal presentation.

140-105A
International Field Study Project **2.00**

Provides students with first-hand knowledge of working and studying in their program related area in the international environment. Course includes a project designed by the Study Abroad Leader to enhance the students skills. While abroad, students will gain cultural knowedge and understanding of values and behaviors in a different society and workplace. Upon completion of the course, students will be able to incorporate a global perspective into a comparison of professional and social practices in the US and the country visited. They will share their experiences and findings in a formal presentation.

140-105C
Cultural Elements of Study Abroad **1.00**

Students will become familiar with geography, climate, demographics, conventions, customs, beliefs and safe travel practices of the country they are visiting in preparation for their study abroad experience. While abroad, students will gain cultural knowledge and understanding of values and behaviors in a different society and workplace.

141-101
Chinese for International Travel 1.00

Students will learn the fundamentals of a Chinese language spoken in the country they are visiting and become familiar with modes of transportation, currency, and food in preparation for their study abroad experience.

141-102
French for International Travel 1.00

Students will learn the fundamentals of the French language spoken in the country they are visiting and become familiar with modes of transportation, currency, and food in preparation for their study abroad experience.

141-103
German for International Travel 1.00

Students will learn the fundamentals of the German language spoken in the country they are visiting and become familiar with modes of transportation, currency, and food in preparation for their study abroad experience.

141-104
Spanish for International Travel 1.00

Students will learn the fundamentals of the Spanish language spoken in the country they are visiting and become familiar with modes of transportation, currency, and food in preparation for their study abroad experience.

141-105
Dutch for International Travel 1.00

Students will learn the fundamentals of the Dutch language spoken in the country they are visiting and become familiar with modes of transportation, currency, and food in preparation for their study abroad experience.

141-106
Culture and Language of Italy 3.00

This course is designed as an introduction to the Italian language in which a formal presentation of the proper language and correct grammatical structures will be presented through listening, reading, writing, and speaking in Italian. The course includes cultural studies of Italy including business, art, government, education, geography, music and travel. In addition, learners will examine cultural behaviors essential to engage successfully in Italian business and social settings.

141-107
Cultural Elements of Study Abroad 1.00

Students will become familiar with geography, climate, demographics, conventions, customs, beliefs and safe travel practices of the country they are visiting in preparation for their study abroad experience. While abroad, students will gain cultural knowledge and understanding of values and behaviors in a different society and workplace.

141-108
Italian for International Travel 1.00

Students will learn the fundamentals of the Italian language spoken in the country they are visiting and become familiar with modes of transportation, currency, and food in preparation for their study abroad experience.

141-109
International Field Study 3.00

Provides students with first-hand knowledge of working and studying in their program related area in the international environment. While abroad, students will gain cultural knowledge and understanding of values and behaviors in a different society and workplace. Upon completion of the course, students will be able to incorporate a global perspective into a comparison of professional and social practices in the US and the country visited. They will share their experiences and findings in a formal presentation.

141-110
Culture and Language of Peru 3.00

This course is designed as an introduction to the culture of Peru and the Spanish language in which the proper language and correct grammatical structures will be presented through listening, reading, writing, and speaking in Spanish. The course includes cultural studies of Peru including history, government, economy, education, geography, art, music and demographics. In addition, learning will examine cultural behaviors essential to engage successfully in community service work in Peru and communicate in social settings.

141-111
Culture and Language of Iceland 3.00

This course is designed as an introduction to the culture of Iceland, the Icelandic language and Icelandic and Norse literature. Icelandic literature will be presented through a series of readings and instruction provided by the University of Iceland. The course includes cultural studies of Iceland including history, government, economy, education, geography, geology, sustainable energy, art, music and demographics.

145-101
Entrepreneurship I 2.00

This course provides an opportunity for students to identify and develop a current business start-up in a field of their choice. Identify characteristics necessary for a successful entrepreneur and assess their personal skills, attitudes, education and experience. Explore entrepreneurial opportunities for product/service. Analyze demographics and psychographics of a targeted market. Select a location for business. Determine ownership and financing for business. Plan personnel, including job descriptions. Assess insurance and licensing needs. Create a marketing plan.

145-102
Entrepreneurship II 1.00

Student will develop a complete business plan for a new entrepreneurial endeavor. Develop a formalized business. Critique business plans. Present a business plan.

145-103
Principles of Small Business Operations 2.00

This course covers the fundamentals of business life needed to profitably operate a small business, including site selection, building needs, financing know-how, personnel relations, franchises, and automation.

145-106
Entrepreneurship 3 - Operations MGMT 3.00

This course covers the aspect of effectively managing the resources of a small business. Covering the topics of managing finances, staff, marketing and technology. The student will work on projects that will be focused on their specific business needs and will assist the student in planning how to handle their day to day operations. COREQUISITES: Course 145-119 - Entrepreneurship

145-119
Entrepreneurship **3.00**

Can your idea be turned into a profitable business? Will power and hard work are not enough to guarantee success. You must first determine the feasibility of your idea. Before you quit your job, invest your life savings or dedicate time to complete a business plan, wouldn't it be nice to know whether business ownership is right for you? In this class, you'll examine your business idea from every angle. Not only will it help you make a decision about starting your business, you will discover whether the life of an entrepreneur is right for you.

145-120
Business Planning and Development **3.00**

Regardless if you need financing or not, a business plan is essential for the entrepreneur to be successful. This course will take a comprehensive look at your prospective business. Looking at key components that will include evaluating and developing your product/service offering, marketing plan, financial plan and growth plan. At the end of class you will develop a business plan for your proposed business. PREREQUISITES: Course 145-119 - Entrepreneurship

145-121
Small Business Ownership **3.00**

This course goes beyond the business plan and students will have the opportunity to start their own business. Students will combine classroom experience with the management of their business. To make this happen students will be assigned a mentor that will help them through the process. The goal of the course is to assist students in implementing their businesses in an ethical and socially responsible manner that ultimately enhances the local business community. COREQUISITES: Course 145-120 - Business Planning and Development

150-105
Network/Web Concepts, Introduction to **3.00**

This course will introduce networking and web concepts. Topics will include the internet, OSI model, wireless, security, logical and physical topologies, hacking, and web pages. Individuals will learn real world skills related to employment.

150-106
Intrusion Detection Systems **3.00**

Learn the basic concepts and techniques of Intrusion Detection Systems (IDS) and other network related defense strategies. Students will setup, configure, and monitor an Intrusion Detection System utilizing different leading edge products. Current network defense strategies will be discussed and popular tools will be used. Students will be able to apply the correct IDS and defense strategies for different business? goals. PREREQUISITES: Course 150-194 - Network Security

150-107
Scripting **3.00**

Windows Powershell is used in the Microsoft world for administration and management of Windows Clients. This class will introduce IT students to Powershell and how it is used for administering Microsoft networks. Students will develop a sound understanding of administering Window's environments using Powershell and developing scipts using basic programming logic. COREQUISITES: Course 150-111 - Network Administration - Microsoft

150-108
Virtual Technologies **3.00**

Learn the basic concepts and techniques of virtual technologies. Students will setup, configure, and monitor virtual systems utilizing different leading edge products. Current virtual technologies configurations will be discussed and popular tools will be used. Students will be able to apply the correct virtual solution to different business goals.

150-111
Network Administration - Microsoft **3.00**

This course is an introduction to basic and intermediate administration tasks in a Windows NT network environment.

150-113
Network Administration - Linux/Unix **4.00**

Advanced administration concepts and applications will be discussed and implemented. Topics include: implementing an enterprise network that incorporates a host system, multimedia, multiple platforms, UNIX, and other advanced network administration tasks.

150-114
Network Concepts - CCNA1 **3.00**

This course will provide you with more in depth networking concepts. Topics will include the Internet, OSI model, wireless, security, logical and physical topologies, instant messaging, basic router setup and switch configuration, network connectivity, and hardware and software configurations. You will also learn how to create local area networks and wide area networks. Individuals will learn real-world skills related to employment.

150-123
Application Server Administration **3.00**

Learn how to provide administration support for a variety of leading-edge application servers. Different types of application server software will be chosen to match the current trends in industry. Students will have hands-on experience installing, configuring, and supporting these application servers. PREREQUISITES: Course 150-111 - Network Administration - Microsoft

150-124
Routing CCNA 2 **3.00**

Provides classroom and lab experience in current and emerging networking technology. Includes the following networking concepts and technologies: OSI reference model, LANs, WANs, TCP/IP addressing, routers, router configuration, routed and routing protocols, Internetwork Open System (IOS) images and network troubleshooting. Students will become familiar with the use of commands and protocols that are used when configuring networks and will learn how to troubleshoot a multi-router topology. PREREQUISITES: Course 150-114 - Network Concepts - CCNA1

150-125
CCNA Security **4.00**

This course will lead to CCNA Security certification. This course will enhance the student's knowledge of securing Cisco routers and switches and their associated networks. Acquired skills include installation, troubleshooting and monitoring of network devices in order to maintain integrity, confidentiality and availability of data and devices. Develops competency in the technolgies that Cisco uses in its security infrastructure. PREREQUISITES: Course 150-135 - Switching & Wan's - CCNA 3 & 4 with a minimum grade of C or TR

150-126
Network Security Design **3.00**

This course affords the network security specialist the opportunity to design a secure network in a team environment using the skills learned from the prerequisite classes. The student must demonstrate the ability to design, plan and execute an infrastructure that represents the services offered by a common business or organization. The student will research, design and prepare documents including notes, diagrams, references, and implementation instructions. PREREQUISITES: Course 150-135 - Switching & Wan's - CCNA 3 & 4 with a minimum grade of C or TR

150-127
Security Laws/Policies **3.00**

Students will learn about business and/ or medical security laws, policies and procedures. This will include interpreting laws and policies as well as learning to write security policies and procedures to protect information, people, and property, while complying with legal and policy requirements. Students will develop an understanding of why certain procedures and policies must be followed in the business or medical field.

150-128
Voice over Internet Protocol (VoIP) **4.00**

This course will provide the student with an understanding of converged voice and data networks and also the challenges fac ed by the various network technologies. The course will provide students with hands on experience in building and configuring an IP Telephony Infrastructure using Cisco Call Manager Express and Cisco VOIP phones. Students will modify the current LAN and WAN to accommodate the various IP Protocols. PREREQUISITES: Course 150-135 - Switching & Wan's - CCNA 3 & 4 with a minimum grade of C or TR

150-129
Mobile Security **3.00**

This course focuses on leading-edge industry solutions for mobile technology and related security. Topics will include best practices for connecting and securing mobile devices, updating, recognizing the threats mobile devices pose to organizations, authenticating, encrypting, troubleshooting, theft services and wireless hot spot protection. PREREQUISITES: Course 150-124 - Routing CCNA 2 with a minimum grade of C or TR

150-131
Network Specialist Internship **3.00**

Establishes an opportunity for the student to apply training and skills in a business/ industrial/ academic work environment. The student will spend 144 hours at the worksite. Student contracts with the employer and the instructor regarding the work agreement and competencies. Classroom hours will include preparation of job portfolio materials and practicing interview techniques. PREREQUISITES: Courses 150-114 - Network Concepts - CCNA1 and 107-193 - IT Essentials

150-132
Active Directory Administration **3.00**

This course will prepare a network professional to work in a medium to very large computing environment that uses the windows network operating system. Hands-on labs will provide real-life tasks involved in implementing and administering directory services. PREREQUISITES: Course 150-111 - Network Administration - Microsoft

150-133
Message Services Administration **4.00**

Students will learn to install, configure, and maintain a messaging server. This will include, but not be limited to, preparing for deployment, server installation, creation of user accounts, server management, and disaster recovery. PREREQUISITES: Course 150-111 - Network Administration - Microsoft

150-135
Switching & Wan's - CCNA 3 & 4 **4.00**

Continue to grow your networking skills by applying your knowledge from the two previous classes and learning more advanced concepts. New skills that will be explored include: configuring switches, implementing intermediate routing, calculating VLSMs, WAN services, NAT, PAT, configuring DHCP. Hands-on experience will be acquired by applying your knowledge to complete a comprehensive threaded case study. PREREQUISITES: Course 150-124 - Routing CCNA 2

150-136
Server Technologies **3.00**

Learn advanced server technology skills to prepare you to support a production server. These skills include server upgrades, fault tolerance, advanced networking, disaster planning and more. Develop a basic technology plan which includes server management and disaster recovery plans. This class will also prepare you to take the CompTIA's Server+ industry certification exam. PREREQUISITES: Courses 150-105 - Network/Web Concepts, Introduction to and 107-193 - IT Essentials

150-143
Computer Security and Penetration Test **4.00**

Students will examine current network security topics through real world examples. They will explore how and why people attack computers and networks and prepare to defend and protect networks and their components.

150-144
Firewalls & VPNs **4.00**

Students will setup and configure hardware and software firewalls. They will compare and contrast firewall technologies, design firewall controls to meet various security scenarios and establish VPNs. Security controls will be deployed and performance analyzed.

150-145
IT Scripting **3.00**

This course is designed to provide an overview of modern scripting languages commonly used to build and extend network administration and security tools. The course will introduce the student to scripting on both the Microsoft and Linux platforms. Students will explore the uses of scripting languages and third party modules for accomplishing tasks including scanning, enumeration and automation of network tasks.

150-146
CyberSecurity **4.00**

Students will develop ethical offensive and defensive strategies to protect various network configurations. They will determine which current tools and technologies to utilize while simulating attacks, analyzing and securing the network systems.

150-147
Network Administration Microsoft 1 3.00

Perform basic administration tasks of core services in a Windows Server environment. The class is the first in a series of three classes. Microsoft Official Academic Course materials are used.

150-148
Network Administration Microsoft 2 3.00

Perform intermediate administration tasks of infrastructure services in a Windows Server network environment. This class is the second in a series of three classes. Microsoft Official Academic coursework is used.

150-180
What's in the Cloud? 3.00

Learn about the IT cloud. This course is designed to teach students the basic concepts and terminology of cloud computing. In addition to learning the definition of cloud computing, the students will be able to describe the various service delivery options of a cloud computing architecture, and cloud deployment models including private, public and community clouds. Students also learn about the security challenges that cloud deployments experience, and how these are addressed. Current cloud technolgies, tools, configurations and trends will be discussed. PREREQUISITES: Course 150-194 - Network Security

150-192
Administration 1 - Unix 3.00

The Administration 1 - Unix course provides students with the necessary knowledge and skills to perform essential system administration tasks in the Solaris operating environment, such as installing software, managing file systems, performing system boot procedures, performing user and security administration, managing network printers and system processes, and performing system backups and restores. This course is the second in a two-part series that students take in preparation for the Sun Certified System Administrator for the Solaris Operating Environment, Part I, exam. PREREQUISITES: Course 150-191

150-193
Administration 2 - Unix 3.00

The Administration 2 - Unix course provides students with the necessary knowledge and skills to perform network basics, manage virtual file systems and core dumps, manage storage volumes, control access and configure system messaging, set up naming services, and understand installation procedures. This course is taken in preparation for Part II of the Sun System Administration certification exam. PREREQUISITES: Course 150-192 - Administration 1 - Unix

150-194
Network Security 3.00

Students will learn how to maintain security in the workplace. Security plans will be created based on, but not limited to, ten key security technologies: access control, network security, management security procedures, systems development security, cryptography, security models, operations security, disaster recovery, laws and ethics, and physical security.

150-196
Security Measures and Hacking Detection 3.00

Students will learn about the events that occur on network systems from audit trails, network monitoring systems, and intrusion detection systems. Students will develop a system to provide early warning of an information attack. Students will learn how to identify explicit and secure well known and little-known vulnerabilities in various operating systems. Students will explore common weaknesses in router and firewall installations, exposing the ways that are used to circumvent traditional and hardened security filters or firewalls. Protective measures and incident response checklists will be covered. PREREQUISITES: Course 150-194 - Network Security

150-197
Securing Wireless Devices and Networks 3.00

This introductory course to wireless LANs focuses on the design, planning, implementation, operation, and troubleshooting of wireless LANs. It covers an overview of technologies, security, and design best practices, with particular emphasis on hands on skills, including wireless LAN setup and troubleshooting, 802.11 technologies, products, and solutions, radio technologies, WLAN applications and site surveys, design, installation, configuration, and troubleshooting, WLAN security, and emerging wireless technologies. PREREQUISITES: Course 150-194 - Network Security

150-198
Interconnecting Cisco Network Dev P1 1.00

640-822 ICND1: Interconnecting Cisco Networking Devices Part 1, this course focuses on providing the skills and knowledge necessary to install, operate, and troubleshoot a small branch office Enterprise network, including configuring a switch, router, and connecting to a WAN and implementing network security. A student should be able to complete configuration and implementation of a small branch office network under supervision. PREREQUISITES: Course 150-124 - Routing CCNA 2 with a minimum grade of C or TR

150-199
Interconnecting Cisco Network Dev P2 1.00

640-816 ICND2: Interconnecting Cisco Networking Devices Part 2 this course focuses on providing the skills and knowledge necessary to install, operate, and troubleshoot a small to medium-size branch office Enterprise network, including configuring several switches and routers, connecting to a WAN and implementing network security. PREREQUISITES: Course 150-135 - Switching & Wan's - CCNA 3 & 4 with a minimum grade of C or TR

152-089
AP Computer Science A Java Programming 4.00

This course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object oriented and imperative problem solving and design using Java language.

152-091
iSeries Application Integration Tools 3.00

Using both theoretical and practical components, students will learn why integration of the enterprise has emerged

as a critical issue for organizations in all business sectors striving to maintain competitive advantage. This course will teach the theory and concepts of application integration. Students will use the IBM WebSphere Application Server (WAS), WebSphere Development Studio, and WebFacing Tool in class projects and lab assignments. PREREQUISITES: Course 152-141 - Java Programming-IBM iSeries

152-093
Java Programming-IBM Systems 3.00

This course will introduce dynamic web application development using Java Servlets and JSP technologies. Moreover databases in web applications and the Java Database Connectivity (JDBC) API will also be covered. Students will also be learning to program Java Applications using XML (Extensible Markup Language), multithreading, 110, and network programming. Students will be learning to develop N-Tier e-Business applications. PREREQUISITES: Courses 152-141 - Java Programming-IBM iSeries and 152-145 - Internet Programming with a minimum grade of C or TR

152-094
IBM Servers Configuration and Security 3.00

Servers covered will include WebSphere, Apache and ZendServer for IBM servers. Topics included will be installation, configuration and proper security of the servers as well as the IFS file system. PREREQUISITES: Course 152-149 - IBM i System Administration with a minimum grade of C or TR

152-105
IBM Enterprise Systems Concepts 2.00

System i Concepts will provide an overview of the i5 Operating System functions and capabilities. Emphasis will be placed upon utilities intrinsic to the operating system and provide a prelude to the programming environment. Some of the features discussed are file structures, library organization, application development tools, control language commands, and structured query. The course will demonstrate business applications without the use of formal programming languages. The labs will focus on data collection, processing, and reporting. At the end of the course, the learner should be able to access the user support facilities, command prompting, online help, and various commands to organize and manipulate the system. It is the intent of the course to make the learner knowledgeable and comfortable enough with the platform and operating system to focus on the programming languages supported by i5/OS Operating System. COREQUISITES: Course 107-011 - IT in Business

152-110
DBA Part 1 - Oracle 3.00

This course is designed to give students a firm foundation in basic administration of a large database. In this class, students learn how to install and maintain Oracle Database 11g. Students gain a conceptual understanding of the database architecture and how its components work and interact with one another. Students learn how to create an operational database and properly manage the various structures in an effective and efficient manner including performance monitoring, database security, user management, and backup/recovery techniques. In addition to learning the various commands needed to perform the DBA tasks, the course also provides students with instruction to perform the same DBA tasks using the Graphical User Interface tools. The lesson topics are reinforced with structured hands-on practices.

152-122
Computer Programming RPG/IV (ILE) 3.00

Business oriented programming language. Topics include: specification forms, logic cycle, RPG structure commands, physical and logical file structures, externally described printer files, table and array processing, joined logical files, multiple physical files, extensive programming and documentation of business related applications. PREREQUISITES: Courses 152-105 - IBM Enterprise Systems Concepts and 152-126 - Programming & Database, Introduction to Concepts

152-124
Computer Programming C 3.00

Learn the principles of object oriented programming using C++. Topics include: formatted 1/10 streams, variables, constants, references, functions, decisions, loops, classes, objects, inheritance, memory management, libraries, and error handlers. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

152-125
Computer Programming RPG/IV (ILE), Adv 3.00

Describe and define syntax for constructing online business applications using IBM's High Level Language RPG/400. Competencies learned in RPG/400 are enhanced with additional focus on the following topics: creating sub-file structures, interactive programming techniques, use of arrays and matrixes, creating and using Help screens, introduction to group update techniques and to DB2 relational database. PREREQUISITES: Course 152-122 - Computer Programming RPG/IV (ILE)

152-126
Programming & Database, Introduction to Concepts 4.00

This class will introduce students to the structures, logic, and controls of programming techniques and database applications. Students will be able to develop a program that will utilize a database.

152-127
DBA - Part 2 - Oracle 3.00

This Oracle 11g database course takes the student beyond the basic tasks of database administration. The student begins by gaining a much deeper understanding of possibly the most important job of a DBA backup and recovery. The concepts and architecture that support backup and recovery, along with the steps of how to carry it out in various ways and situations, are covered in detail. This includes how to define and test your own backup and recovery scenarios. Also, the student learns how to manage memory effectively and how to perform some performance evaluation and tuning tasks, including using some of the advisors. Flashback technologies, scheduling jobs inside and outside of the database, and controlling system resource usage are also covered. The lesson topics are reinforced with structured hands-on labs. PREREQUISITES: Course 152-110 - DBA Part 1 - Oracle

152-128
DBA - Part 3 - Oracle **3.00**

In this Oracle 11g database course students learn how to use Oracle Database 11g automatic tuning features such as SQL Tuning Advisor, SQL Access Advisor, Automatic Workload Repository and Automatic Database Diagnostic Monitor, and practice these tuning methods. The course focuses on the tuning tasks expected of a DBA: reactive tuning of SQL statements, maintaining SQL statement performance, and tuning the Oracle Database Instance components. Throughout the course, students practice the art of tuning an Oracle Instance through a series of workshops. The methodology is practiced in the workshops rather than taught. PREREQUISITES: Course 152-110 - DBA Part 1 - Oracle

152-129
Web Project Management **2.00**

This course covers the fundamentals of project management for web projects. The course covers the full project management lifecycle, from the basics of getting started (defining the project and scope, prioritizing and estimating features) to developing and deploying the website. In this course the students will work with a business client to design, develop and deploy a website. PREREQUISITES: Course 152-146 - Databases, Advanced COREQUISITES: Course 152-188 - PHP Web Programming

152-131
Systems Design and Development **3.00**

Introduction to systems development and design concepts. Survey of business applications and their relationship to computers. Students will develop a business system and its associated documentation. PREREQUISITES: Course 152-122 - Computer Programming RPG/IV (ILE) with a minimum grade of C or TR

152-133
IBM Control Language **2.00**

AS/400 Control Language (CL) commands, functions, and applications are used in a hands-on environment. PREREQUISITES: Course 152-105 - IBM Enterprise Systems Concepts

152-138
Java, Introduction to **3.00**

The course provides an introduction to all core aspects of Java. Students will be provided an overview of Java, Object Oriented programming concepts, GUI components, threading, development tools, error handling, and graphics. Java Language has become the preferred choice for Application Development, Internet solutions, and e-business solution development. PREREQUISITES: Courses 152-126 - Programming & Database, Introduction to Concepts and 152-148 - Web Programming Concepts

152-139
Ruby **3.00**

This course introduces the student to the Ruby a popular, open-source, dynamic object-oriented scripting language, and the Rails Application framework based on an MVC architecture. Topics will include installing Ruby and Rails, an introduction to the Ruby programming language, an overview of the Rails framework, ActiveRecord basics, ActionController coding, Action Views, AJAX and the Web 2.0 Action mailer basics, security, deployment and scaling. Students will produce a very modern web application that can be adapted to many professional web development needs. PREREQUISITES: Course 152-188 - PHP Web Programming

152-140
Web Internship **3.00**

This course establishes an opportunity for the student to apply training and skills in a business/industrial/academic work environment. The student will spend 144 hours at the worksite and contracts with the employer and the instructor regarding the work agreement and competencies. Classroom hours will include preparation of job portfolio materials and practicing interview techniques.

152-141
Java Programming-IBM iSeries **3.00**

This course introduces the new learner to the Java programming language, specifically as it relates to the IBM iSeries platform. Specific iSeries subjects covered will include using WebSphere Development Studio, accessing AS/400 objects from Java, working with AS/400 databases, and building AS/400 graphical applications. PREREQUISITES: Courses 152-105 - IBM Enterprise Systems Concepts and 152-126 - Programming & Database, Introduction to Concepts

152-145
Internet Programming **3.00**

This introduction to web programming will explore a variety of tools used for web page creation. An introduction to client side internet website programming, this course covers HTML, CSS, DHTML, and JavaScript. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

152-146
Databases, Advanced **3.00**

This course offers students an introduction to enterprise data server technology. The class covers the concepts of both relational and object relational databases and the powerful SQL programming language. Students are taught to create and maintain database objects and to store, retrieve, and manipulate data. Demonstrations and hands-on practice reinforce the fundamental concepts. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

152-147
IT Web Graphics - Flash **2.00**

This course will teach students basic design principles, such as color theory and layout, as they relate to interface design and interactive graphics creation. Students will use Flash to create graphics, animation, and rollover buttons. Web sites and multimedia will be designed and programmed using action script, which is the built in programming language in Flash. COREQUISITES: Course 150-105 - Network/ Web Concepts, Introduction to

152-148
Web Programming Concepts **3.00**

This course teaches students essential Web page development skills. Students will learn to develop websites using HTML, XHTML and CSS. Students will learn how to write code manually as well as use a GUI authoring tool. Students will also learn to insert images, create hyperlinks, and add tables, forms and frames to web pages. Other topics include validating their code, recognizing the importance of marketing, and implementing fundamental design concepts. Students will learn how to control web resources with client-side web scripts. They will also learn how to analyze elements of a website that will add to its functionality from a client-side perspective.

152-149
IBM i System Administration **3.00**

This course is designed to prepare the student for a junior IBM i administrator position. After completing this course the student will have a in-depth understanding of the IBM i operating system as well as the ability configure hardware and software on the system. This course provides the student with hands-on exercises configuring IBM i software and hardware.

152-150
Web Programming 2 **3.00**

This course provides an introduction to HTML, CSS, and JavaScript. The course focuses on using HTML/CSS/JavaScript to apply programming logic, define and use variables, perform looping and branching, develop user interfaces, capture and validate user input, store data, and create well-structured applications. This course will help prepare students for exam 70-480. PREREQUISITES: Course 152-182 - Web Programming 1 with a minimum grade of C or TR

152-151
Microcomputer Programming Advanced **3.00**

A class in advanced microcomputer programming techniques. This class will examine trends in microcomputer program development including: use of objects, database access, receiving user input, displaying output, error handling, application controls, and online assistance. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

152-155
Action-Scripting Flash **3.00**

This advanced course introduces students to the advanced features in Flash such as Action Script, Flash's programming language. Students will use Flash to create interactive games, animations, and dynamic websites. Students will use action Script's Object Oriented programming to create interactive projects. PREREQUISITES: Course 152-147 - IT Web Graphics - Flash COREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

152-156
Web Applications ASP.Net **3.00**

This course will prepare the student to develop web sites with ASP.NET. Course work includes hands on development and problem solving utilizing Visual Basic based code; XML structure and Active Server Page scripting; accessing and managing databases through ASP.NET; exploring web access features and the power of this cutting edge development tool. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

152-157
Game Programming I **3.00**

This course is an introduction to computer game programming. Students will create their own computer games utilizing development tools. Through hands-on work students will learn how to develop a typical game. Topics include graphics, game design, bitmaps, sprites and backgrounds. Students will design, implement, and test interactive computer games. This course requires prior computer programming skills. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

152-158
DB2 UDB Programming & Stored Procedures **3.00**

Exploring the powerful programming features of RDBMS is required in developing enterprise wide applications. This course provides a comprehensive review of DB2 programming using Java, embedded SQL, and stored procedures. This course also discusses advanced RDBMS concepts. This course may only be offered by authorized e-business application advanced career education program providers with IBM authorized instructors, software, and hardware. PREREQUISITES: Courses 152-126 - Programming & Database, Introduction to Concepts and 152-105 - IBM Enterprise Systems Concepts

152-159
Game Programming Overview **1.00**

Game Programming Overview course is developed create a realistic view of game programming and the game industry, including skills the aspiring programmer needs and job prospects.

152-160
Game Engine Development **3.00**

This course develops a working engine for a computer game. After completing this advanced class, student will be able to develop usable working game engine. Students will learn about rendering graphics, supporting modules, audio interfaces, network interfaces and game engine design. A knowledge of C++ is required to successfully complete this class. PREREQUISITES: Course 152-157 - Game Programming I

152-161
Game Programming Technologies **2.00**

This class examines modern technologies for computer game development. Students will learn how to install development components. In addition, students will learn how to draw game elements. PREREQUISITES: Course 152-157 - Game Programming I

152-163
PHP Web Development **2.00**

This course introduces the student to dynamic web page development using the PHP programming language. Students will learn how PHP works, how to effectively use many of its powerful features, and how to design and build their own PHP web applications. PREREQUISITES: Course 150-191 and 152-148 - Web Programming Concepts

152-164
Mobile Device Application Programming **3.00**

This course teaches students to develop applications for mobile platforms. Students will utilize a Software Development Kit (SDK) to develop working applications. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts

152-165
Mobile App Development Apple iOS **3.00**

This hands-on course introduces software developers to iOS Programming. You will learn how to use tools such as Xcode and Interface Builder to write applications for all iOS devices: iPhone, iPod Touch, and iPad. After reviewing the Objective-C

programming language, the course will cover iOS concepts such as tables, persistent storage, views, view controllers, controls and device features such as location, touch and alert handling. PREREQUISITES: Course 152-124 - Computer Programming C with a minimum grade of C or TR

152-166
Mobile Application Development Windows **3.00**

This hands-on training course introduces students to application development for the Windows Phone operating system. This course requires some knowledge of programming fundamentals, however will teach students programming concepts in the framework of Windows Phone 7 development. Students will be introduced to Windows Phone Application Development environment/tools and fundamental concepts of Windows Phone. Students will also be introduced to Silverlight and XNA Frameworks. Students will also learn about user interface design, execution model, frame and page navigation, themes, isolated storage, lauchers and choosers, performance, security, data services, and Windows Phone Marketplace. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts with a minimum grade of C or TR

152-167
Zend (PHP) Application Prog - IBM SYS **3.00**

Topics covered include techniques for modernizing traditional applications using i5 Toolkit Utilizing DB2 Storage Engine for mySQL. Development techniques necessary for the full PHP application lifecycle using a comprehensive set of editing, debugging, analysis, optimization, database tools and testing. Zend Studio for Eclipse i5 Edition. PREREQUISITES: Course 152-141 - Java Programming-IBM iSeries with a minimum grade of C or TR

152-168
IBM and .NET Enterprise Programming **3.00**

Topics covered include advanced .NET tools for creating front end applications for the IBM i. Additional topics include database access using ADO.NET and ASP.Net, XML, Multithreaded and Parallel Programming. The course will also examine advanced .NET topics like WPF and LINQ. PREREQUISITES: Course 152-151 - Microcomputer Programming Advanced with a minimum grade of C or TR

152-169
Intermediate Java **3.00**

This course provides Web Developers greater depth into the Java programming language utilizing so me of the more advanced capabilities. PREREQUISITES: Course 152-138 - Java, Introduction to

152-170
IT WEB Project Lab I **4.00**

In this lab course students will apply their knowledge and skills of Visual Basic Programming and HTML to develop project(s) for business clients. This class will provide students with additional lab time to be mentored by instructors and work with their peers on hands-on projects which are designed to further develop their technical competencies in these areas.

152-171
IT Web Project Lab 2 **5.00**

In this lab course students will apply their knowledge and skills of HTML, CSS, JavaScript, Java, C+, and SQL to develop project(s) for business clients. This class will provide students with additional lab time to be mentored by intructors and work with their peers on hands-on projects which are designed to further develop their technical competencies in these areas.

152-172
IT Web Project Lab 3 **5.00**

In this lab course students will apply their knowledge and skills of HTML, CSS, JavaScript, PHP, MySQL and Java to develop projects(s) for business clients. This class will provide students with additional lab time to be mentored by instructors and work with their peers on hands-on projects which are designed to further develop their technical competencies in these areas.

152-173
IT Web Project Lab 4 **5.00**

In this lab course students will apply their knowledge and skills of HTML, CSS, JavaScript, ASP.NET, and SharePoint Programming to develop project(s) for business clients. This class will provide students with additional lab time to be mentored by instructors and work with their peers on hands-on projects which are designed to further develop their technical competencies in these areas.

152-174
Java Programming 2 **3.00**

This course focuses on the advanced language features of Java. Topics will include Java servlets, database access with Java Database Connectivity (JDBC), JavaServer Pages and JavaBeans. A portion of the class deals with application design issues in a web environment as well as connecting to a backed database server. Labs and hands-on projects are a required element to this class and provide the student with experience working with the more advanced features of the Java language. PREREQUISITES: Course 152-184 - Java Programming 1 with a minimum grade of C or TR

152-175
MCSD HTML w JavaScript & CSS Review **1.00**

This course helps prepare an individual for the MCSD HTML with JavaScript and CSS certification exam. This is the first of four exams that must be passed for an individual to achieve the Microsoft Certified Sharepoint Developer certification. PREREQUISITES: Course 152-150 - Web Programming 2 with a minimum grade of C or TR

152-176
Adv Prog Sharepoint Solutions **3.00**

In this course students will learn the information needed to implement SharePoint solutions using Enterprise Scarch, Managed Metadata Service (MMS), Business Connectivity Services (BCS), Enterprise Content Management (ECM), Web Content Management (WCM), Social computing features and SharePoint Apps. This course will help prepare students for exam 70-489. PREREQUISITES: Course 152-177 - Core Prog Sharepoint Solutions with a minimum grade of C or TR

152-177
Core Prog Sharepoint Solutions **3.00**

In this course students will cover core skills that are common to almost all SharePoint development activities. Including working with the server-and client-side object models, developing and deploying features, solutions and apps, managing identity and permissions, querying and updating list data, managing taxonomy, using workflow to manage business processes, and customizing the user interface.This course will help prepare students for exam 70-488. PREREQUISITES: Course 152-178 - Developing ASP.NET Web Apps with a minimum grade of C or TR

152-178
Developing ASP.NET Web Apps 3.00

In this course students will learn to use .NET Framework tools and technologies to develop advanced ASP.NET MVC applications. The focus will be on coding activities that improve performance and scalability of Web site applications. ASP.NET MVC will be introduced and compared with Web Forms so that students know when each should/could be used. This course will help prepare students for exam 70-486. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts with a minimum grade of C or TR

152-179
MSCD ASP.NET MVC Review 1.00

This course helps prepare an individual for the MCSD ASP.NET MVC Web Applications certification exam. This is the second of four exams that must be passed for an individual to achieve the Microsoft Certified SharePoint Developer certification. PREREQUISITES: Course 152-178 - Developing ASP.NET Web Apps with a minimum grade of C or TR

152-180
MCSD Server Advanced Review 1.00

This course helps prepare an individual for the MCSD Server Advanced Solutions certification exam. This is the last of four exams that must be passed for an individual to achieve the Microsoft Certified SharePoint Developer certification. PREREQUISITES: Course 152-176 - Adv Prog Sharepoint Solutions with a minimum grade of C or TR

152-181
MCSD Server Core Review 1.00

This course helps prepare an individual for the MCSD Server Core Solutions certification exam. This is the third of four exams that must be passed for an individual to achieve the Microsoft Certified SharePoint certification. PREREQUISITES: Course 152-177 - Core Prog Sharepoint Solutions with a minimum grade of C or TR

152-182
Web Programming 1 3.00

This course teaches students essential Web page development skills. Students will build an understanding of how to manage the Application Life Cycle, build the User Interface by Using HTML5, and format the User Interface by Using CSS, code by Using JavaScript. Other topics include validating HTML and CSS code, recognizing the importance of marketing, and implementing fundamental design concepts.

152-183
Review MTA 98-375 Exam 1.00

This focused course helps prepare a student to take the HTML.5 Application Development Fundamentals: MTA Exam 98-375. the Microsoft Technology Associate exam focuses on the areas of Managing the Application Life Cycle, building the User Interface by Using HTML.5, formatting the User Interface by Using CSS, and Coding by Using JavaScript. PREREQUISITES: Course 152-182 - Web Programming 1 with a minimum grade of C or TR

152-184
Java Programming 1 3.00

The course introduces the student to the fundamentals of object-oriented programming using the Java programming language. Students will learn the core aspects of Java including how to write and debug Java code. Labs and hands-on projects are a required element to this class and provide the student with experience working with the Java language. PREREQUISITES: Course 152-126 - Programming & Database, Introduction to Concepts with a minimum grade of C or TR

152-185
Advanced PHP 3.00

This course prepares the student to develop advanced PHP and MySQL web applications. Students will learn advanced techniques for session management, validation, and authentication. Advanced web application features such as shoppping carts, content management using Drupal, web forums and connecting to web services are discussed. PREREQUISITES: Course 152-188 - PHP Web Programming

152-186
Mobile Game Programming 3.00

This class is designed to give students a foundation for writing games on mobile devices. PREREQUISITES: Course 152-157 - Game Programming I

152-187
Web Developer/Administrator Orientation 1.00

Students develop skills to enhance their success in the Gateway Technical College Web Developer/Administrator program and their career. These skills include self-assessment, time management, study skills, learning styles, and stress management. Students research the Web Programming/ Administrator field through the Internet, periodicals, and surveys. Students design an academic and career developmeent plan and initiate their ongoing program portfolio.

152-188
PHP Web Programming 3.00

This hands-on PHP Web Programming course provides the knowledge necessary to design and develop dynamic, database-driven web pages. Students will learn how to write and debug PHP code, how to effectively use many of its powerful features, and how to design and build their own PHP web applications. Students will design and create a Web Database usng the popular MySQL DBMS to function as a backend database for their PHP website. PREREQUISITES: Course 152-182 - Web Programming 1 with a minimum grade of C or TR

152-189
Graphics Programming with Dynamic Elemen 3.00

This advanced course uses the languages and elements introduced in the prerequisite and extend the dynamic interaction and animation of HTML5 and Javascript. Students will use JQuery and Ajax Animator to create animations; use still and video motion to further enrich dynamic websites that could be used for desktop and mobile computing alike. Students will use Web based Object Oriented programming to create interactive projects. PREREQUISITES: Course 152-190 - Elements of Dynamic Web Design

152-190
Elements of Dynamic Web Design 2.00

This course will introduce students to how to add intuitive, dynamic and animated interaction between their webpages and its visitors. Using HTML5 as a base, we will be using the universal languages of Javascript and Ajax to react to user actions and change webpage structure, content,

and appearance. Through this course, we will learn how to dynamically refine design appearance and create content within a medium that is used for both desktop and mobile device computing. PREREQUISITES: Course 152-182 - Web Programming 1 and 152-187 - Web Developer/Administrator Orientation with a minimum grade of C or TR

152-193
Dynamic Web Applications - Macromedia **3.00**

The student will design and develop a dynamic web application using a popular WYSIWYG environment. The focus will be on development of an interactive data driven web site. PREREQUISITES: Course 152-192

152-194
SQL Fundamentals - Oracle **3.00**

This course introduces students to the fundamentals of SQL using Oracle Database 11g database technology. In this course students learn the concepts of relational databases and the powerful SQL programming language. This course provides the essential SQL skills that allow developers to write queries against single and multiple tables, manipulate data in tables, and create database objects. The students also learn to use single row functions to customize output, use conversion functions and conditional expressions and use group functions to report aggregated data. Demonstrations and hands-on labs reinforce the fundamental concepts. This course counts towards the Hands-on course requirement for the Oracle Database 11g Administrator Certification.

154-108
IT Help Desk/User Support **3.00**

Introduces the student to the service concepts, skill sets, career paths, and operations of the help desk industry. Help desk concepts are presented from an educational and business application perspective. PREREQUISITES: Course 154-106 COREQUISITES: Courses 150-111 - Network Administration - Microsoft and 150-112

154-109
Computer Support Specialist Internship **3.00**

Establishes an opportunity for the student to apply training and skills in a business/ industrial/ academic work environment. The student will spend 144 hours at the worksite. Student contracts with the employer and the instructor regarding the work agreement and competencies. Classroom hours will include preparation of job portfolio materials and practicing interview techniques. COREQUISITES: Courses 154-113 - IT Apps Server & Support and 154-114 - Hardware & Software Support

154-112
Data Security & Recovery Support **3.00**

Focus will be on desktop data security, data retention and recovery. Students will be introduced to computer forensics / data recovery tools, local security issues, disaster recovery plans and legal data requirements (i.e. HIPPA requirements, Sarbanes-Oxley Act, etc.). PREREQUISITES: Course 154-114 - Hardware & Software Support with a minimum grade of C or TR

154-113
IT Apps Server & Support **3.00**

Students will learn to resolve operating system and application issues by telephone, remote access, or by visiting an end user's desktop. Students will gain a working knowledge of operating in a workgroup and a client/server environment. NOTE: This course will help prepare the student to take the Microsoft Certified Desktop Technician Exam 70-272. PREREQUISITES: Course 154-114 - Hardware & Software Support with a minimum grade of C or TR

154-114
Hardware & Software Support **3.00**

Students will learn to resolve hardware and software issues in a multiplatform environment. Students will troubleshoot and repair various systems and applications, as well as desktop issues. NOTE: This course will help prepare students to attain certifications if desired. PREREQUISITES: Course 154-119 - System Software Support and 107-193 - IT Essentials with a minimum grade of C or TR

154-116
Emerging Technologies & Applications **2.00**

Students will research, explore and evaluate new and future hardware and software advancements and trends. Areas to investigate may include contemporary package development applications, collaboration tools, reporting software, and innovative equipment and hardware, as well as new versions of current standards in software and applications. PREREQUISITES: Course 154-112 - Data Security & Recovery Support and 154-113 - IT Apps Server & Support with a minimum grade of C or TR

154-118
CSS Skills Implementation & Career Prep **3.00**

This capstone class will provide students with opportunities to apply knowledge and concepts acquired in program coursework. Students will develop proficiency while resolving issues in a simulated, scenario-based environment. In addition to reinforcement of concepts previously covered in the curriculum, the course will include employment seeking skills (resumes, portfolios, interviewing), image creation and deployment, and remote desktop diagnostics/troubleshooting. PREREQUISITES: Course 154-112 - Data Security & Recovery Support and 154-113 - IT Apps Server & Support with a minimum grade of C or TR COREQUISITES: Course 801-197 - Technical Reporting

154-119
System Software Support **3.00**

Focus will be on the principles of system software and utilities. This course will enable the learner to effectively configure and troubleshoot system software in multiple environments. Students will be introduced to integrated tools within the software and the different methods for interacting with system software. Topics will include Windows command-line, Linux GUI and command-line, emulation/connectivity to other non-PC-based systems and network directory services. COREQUISITES: Course 154-121 - CSS Program Orientation

154-120
Advanced Help Service Desk **3.00**

This capstone class broadens the students' customer service skill set. The course continues to build on end user communication methods, both oral and written. Students will be exposed to Information Technology Infrastructure Library (ITIL) methodology and Help Desk Institute (HDI) best practices. PREREQUISITES: Course 154-122 - Help Service Desk, Intro

154-121
CSS Program Orientation **1.00**

Students will develop skills to enhance their success in the Gateway Technical College Computer Support Specialist program and their career. These skills include self-assessment, time management, study skills, learning styles, and stress management. Students research the CSS field through the Internet, periodicals, and surveys. Students will design an academic and career development plan and initiate their ongoing program portfolio. PREREQUISITES: Course 103-142 - Basic Computing with a minimum grade of C or TR or achieve the required placement test score

154-122
Help Service Desk, Intro **3.00**

This class broadens the students' customer service skill set. The course continues to build on end user communication methods, both oral and written. Students will be expected to prepare and deliver end user training, create written and online manuals and FAQ's (Frequently Asked Questions), and perform the day-to-day duties in a variety of help desk environments. PREREQUISITES: Course 107-193 - IT Essentials

182-135
Principles of Operation Management **2.00**

This course deals with the design of systems to produce goods and services and the operation of these systems. It discusses relationships within the company environment, particularly with marketing and product design. Additional topics include facilities planning, total quality management, cost analysis, project planning, and operations resource management.

182-137
Principles of Inventory Control **2.00**

This course deals with essential vocabulary and skills in identifying and applying basic principles of inventory management. Basic methods of planning and controlling inventory in manufacturing, institutional, distribution, and retail environments are covered. Questions of what to stock are addressed through an examination of current and evolving technologies of inventory management.

182-150
Lean Operating Principles and Techniques **1.00**

This course investigates how to improve quality, eliminate waste, reduce manufacturing lead time and inventory, and develop productive customer and supplier relationships. Also discussed are cycle time, kanban, demand-pull, and order push techniques to reduce inventory in an organization's supply chain.

182-156
APICS: Strategic Management of Resources, Advanced Concepts **3.00**

In this capstone module, participants explore the relationship of existing and emerging processes and technologies to manufacturing strategy and supply chain related functions. The course addresses aligning resources with the strategic plan, configuring and integrating operating processes to support the strategic plan, and implementing change. COREQUISITES: Courses 182-161 - Basics of Supply Chain Management, 182-162 - Detailed Scheduling & Planning, 182-163 - Execution and Control of Operations, and 182-164 - Master Planning of Resources

182-161
Basics of Supply Chain Management **3.00**

This course explains the basic concepts in managing the flow of materials in a supply chain. In the basics you get a complete overview of material flow, from internal and external suppliers and to and from your organization. It is designed to be preparation for APICS certification.

182-162
Detailed Scheduling & Planning **3.00**

This course centers on the various techniques for material and capacity scheduling. This course includes demand planning (MRP), capacity requirements planning (CRP), inventory management practices, and procurement practices. It is designed to be preparation for APICS certification.

182-163
Execution and Control of Operations **3.00**

The focus is on areas of prioritizing and sequencing work, executing work plans, and implementing plans and feedback on performance. The course explains techniques for scheduling and controlling production processes and continuous improvement plans. It is designed to be preparation for APICS certification.

182-164
Master Planning of Resources **3.00**

This course explores processes used to develop sales and operations plans and identify and assess demand and forecasting requirements. The course focuses on the importance of producing achievable master schedules that are considering resource constraints. It is designed as preparation for APICS certification.

182-171
Master Planning **2.00**

Topics include production and priority planning, master production scheduling policies and procedures, performance measurements, forecasting, made to order/ made to stock approaches, and process inventory.

182-173
Advanced Sourcing Principles **3.00**

Advanced Sourcing Principles in an introduction to the world of professional purchasing. Basic issues are studied, including investment recovery, legal aspects of purchasing, international purchasing, public purchasing, the acquisition of capital assets, the acquisition of services, and special emphasis on purchasing negotiation. In addition, major changes taking place in the world in continuous improvement, customer satisfaction, and management philosophy are incorporated in the course. CPM points available.

182-174
Transportation Management **3.00**

Fundamentals of the administration aspects of transportation operations; hands-on exercises in freight classification, tariffs, carrier pricing schedules, rates, bills of lading, contracts, and freight claims. CPM points are available upon completion of the course.

182-178
Freight Claims **3.00**

A study of freight loss, damage claims, and adjustments of claims in various modes of transportation, including carrier and shipper liability, transportation documents, and claim filing procedures, along with legal implications.

182-180
Customer Service Management 2.00

Students will learn to develop professional telephone etiquette, explore customer service work environments, identify and analyze customer service failures, resolve problems cost effectively, and set complaint policies and communication techniques to handle complaining customers.

182-181
Certified Supply Chain Management 3.00

The Certified Supply Chain Management course is designed to examine Supply Chain Management Fundamentals; Building Competitive Operations,Planning, and Logistics Systems; Managing Customer and Supplier Relationships; and Using Information Technology to Enable Supply Chain Management. Topics include creating and executing supply chain strategies that meet customer needs and increase profits; learning how successful supply chain management adds value to your organization; understanding customer loyalty and the lifetime value of a customer; understanding the role of data and information technology in support of the supply chain; and exploring the IT infrastructure as it relates to supply chain management systems.

196-123
Problem Solving and Decision Making 2.00

Practice sessions on problems faced on the job, problem resolution using various techniques learned in the classroom. Topics: marginal analysis; psychological decision making; cause and effect; intuition; experimental, past experience and follow-the-leader approaches, group problem-solving techniques.

196-129
Management Orientation 1.00

This course will introduce the student to the skills necessary to be successful in the Supervisory Management and Business Management programs. The language and navigation of the accelerated learning model will be explored. The student will demonstrate the use of Blackboard and Mind Mapping as well as the software used in the program such as Microsoft Word, PowerPoint and use of the internet as a research tool. This is the first course a student should take within the Supervisory Management and Business management programs.

196-134
Legal Issues for Supervisors 3.00

In Legal Issues for Supervisors, the learner applies the skills and tools necessary for a supervisor to effectively function in today's legal work environment. Each learner will demonstrate the application of legal practices in both union and nonunion environments, the analysis of the impact of U.S. employment laws, the impact of the global economy, and the appeal process. Students will also learn to deal with harassment and privacy issues and summarize legal issues facing contemporary supervisors.

196-135
Business Ethics, Concepts, & Principles 2.00

This course emphasizes the practical application of ethics and values to decision making in a business setting. Participants will experience lesson topics in the importance of values in the workplace, learning about your own personal values, using values to make decisions, applying ethics and values to the workplace, and creating a code of ethics.

196-136
Safety in the Workplace 3.00

In Safety in the Workplace, the learner applies the skills and tools necessary to provide a safe and secure work environment. Each learner will demonstrate the application of safety awareness, federal/state/local compliance, incident investigation and documentation, human relations techniques, safety orientation, inspections, risk analysis, issues of workplace violence, substance abuse, health hazards, first aid and CPR, fire and electrical safety, emergency preparedness, and liaison with external agencies.

196-137
Certified Service Specialist 3.00

This course validates the students interpersonal and business skills by providing the necessary work to prepare for the certification exam to earn the Certified Service Specialist Certification. The exam is the final exam for the course and certifies the student?s ability to work with customers. This course explores the skills of communications, policies and procedure manuals, record keeping and evaluating performance. Focus on teams and proper functioning roles within teams in a company setting that values ethical actions in the workplace and respect for the customer and fellow workers. Problem solving, interpersonal relationships and sales and marketing skills will be honed throughout this course. Successful students will be able to represent themselves with a national certification that illustrates their under standing of the skills necessary for the service and manufacturing industry as an employee or employer.

196-138
Management for Supervisors Capstone 2.00

This course is designed to be the capstone of the Supervisory Management Program. This course validates the student?s management skills by providing the necessary work to prepare for the certification exam to earn the Certified Service Manager Certification. The exam is the final exam for the course and certifies the student?s ability to work with customers and team members. This course explores the knowledge of business management, project management and employee management. The student?s mastery of skills in managing employees and teams are exemplified in change management, conflict resolution and leadership skills. Students will explore basic financial reports and employee management. Successful students will be able to represent themselves with a national certification that illustrates their understanding of the skills necessary for management in the service and manufacturing industries as a supervisor.

196-155
Certified Customer Service 1.00

This course helps students build the necessary skills needed to be successful in working with internal and external customers. Students learn how to work with customers in a professional manner by providing world class customer service. The course prepares them for the ETA-I Customer Service Specialist (CSS) exam.

196-164
Personal Skills for Supervisors **3.00**

In Personal Skills for Supervisors, the learner applies the skills and tools necessary to deal with the time management, stress, and related challenges to a supervisor. Each learner will demonstrate the application of time management techniques, personal planning, continuous learning, valuing rights and responsibilities of others, effective communication, assertiveness, and dealing effectively with stress.

196-164A
Time Management **1.00**

Teaches supervisors how to manage their time to become more effective on the job. Topics covered include: motivating through effective planning; job analysis; identification and elimination of time wasters; effective delegation of work; and how to set measurable, achievable goals.

196-164B
Stress Management **1.00**

Teaches supervisors how to identify, deal with and channel everyday stress constructively. Topics covered include: Type A versus Type B behavior patterns; causes of stress; personal and organizational stress; and conflict resolution techniques.

196-164C
Assertive Behavior **1.00**

In Assertive Behavior, the learner will apply the skills and tools necessary to be an effective supervisor in today's modern organization. Each learner will demonstrate assertiveness skills in communication with employees and others. In addition, the learners will demonstrate that the rights and responsibilities of others are valued.

196-168
Organizational Development **3.00**

In Organizational Development, the learner applies the skills and tools necessary to deal with organizational behavior and change. Each learner will demonstrate the application of the impacts of globalization on an organization, dealing with organizational culture, change and future challenges affecting the total organization, organizational decision making, vision, goals, performance management, and planning, and the role of organizational structure.

196-169
Diversity and Change Management **3.00**

In Diversity and Change Management, the learner applies the skills and tools necessary to implement and maintain a diverse work environment which values change. Each learner will demonstrate the application of: assessing the current extent of diversity in the workplace; analyzing the effect of perceptions, attitudes, biases, and organizational culture on diversity; dealing with barriers; changing management strategies, processes, and reactions; measuring progress; and celebrating success.

196-188
Project Management **3.00**

In Project Management, the learner applies the skills and tools necessary to design, implement, and evaluate formal projects. Each learner will: demonstrate the application of the role of project management; develop a project proposal; use relevant software; work with project teams; sequence tasks; chart progress; and deal with variations, budgets, resources, implementation, and assessment.

196-189
Team Building and Problem Solving **3.00**

In Team Building and Problem Solving, the learner applies the skills and tools necessary to facilitate problem solving in a team environment. Each learner will demonstrate the application of the benefits and challenges of group work, necessary roles in a team, stages of team development, different approaches to problem solving, consensus, a systematic process of problem definition, data acquisition, analysis, the development of alternative solutions, solution implementation, and evaluation.

196-190
Leadership Development **3.00**

In Leadership Development, the learner applies the skills and tools necessary to fulfill his/her role as a modern leader. Each learner will demonstrate the application of: evaluating leadership effectiveness and organization requirements, using individual and group motivation strategies, implementing mission and goals, observing ethical behavior, developing personal leadership style and adaptation, understanding the impact of power, facilitating employee development, coaching, managing change, and resolving conflict effectively.

196-191
Supervision **3.00**

In Supervision, the learner applies the skills and tools necessary to perform the functions of a frontline leader. Each learner will demonstrate the application of strategies and transition to a contemporary supervisory role, including day-to-day operations, analysis, delegation, controlling, staffing, leadership, problem-solving, team skills, motivation, and training.

196-192
Managing for Quality **3.00**

This course is designed to examine the role of the supervisor in assisting an organization to produce a quality product or service. The meaning and benefits of quality, the cost of quality, how to interact with customers, and problem solving tools for continuous improvement will be covered.

196-193
Human Resource Management **3.00**

This course establishes a foundation for development of employee effectiveness by focusing on the supervisor's role in understanding, communicating, and implementing organizational policies. The organizational topics covered include: employee hiring, training, performance management, contract compliance, employment law, employee assistance programs, and related topics that affect the supervisor's work group.

203-120
Field Photography **2.00**

This course will explore the use of cameras, lenses and digital media as they apply to newsworthy photography as well as location and nature photography. Students will learn how to get good shots in fast paced environments like sporting events. Special tools used in field of photgraphy will be examined. PREREQUISITES: Course 204-107 - Digital Photography/ Introduction to with a minimum grade of C or TR

203-121
Studio Lighting and Tools **2.00**

Students will examine lighting, drapes, reflectors and special studio photography tools, for a variety of subjects. Shutter and aperture settings will be explained. Commercial photography, portraiture, food photography and macro photography

will be explored. Students will plan photo shoots and coordinate all aspects of a shoot. PREREQUISITES: Course 204-107 - Digital Photography/ Introduction to with a minimum grade of C or TR

204-100
Design Concepts **4.00**

Students will study typography, color, and layout. Studies include symmetrical and symmetrical compositions, grid method systems, designing with type, image, and the graphic functions of typography. Students will develop an understanding of the basic design principles, including space, line, form, color, and the use of letterforms and design contrasts to convey a visual message. Students will be introduced to target markets and designing for an audience. Projects will be completed with various design media while exploring the importance of working in stages from research to rough idea to finished design work.

204-105
Computer Illustration/Drawing Techniques **3.00**

Students will use a variety of illustrations and graphic design software for illustration, technical drawing, composition, and implementation of created art into page layout. Students will also incorporate traditional drawing skills and scanning methods into their digital illustrations and drawings. Composition, digital color specification and current graphic design trends will be emphasized.

204-107
Digital Photography/ Introduction to **3.00**

This course explores the use of digital photography, desktop scanning and photo manipulation software in the creation of photo compositions and support materials for graphic design.

204-109
Graphic Design Professional Practices **3.00**

This course introduces students to the workflow of graphic design, from the initial conceptualization of a project to the printed piece. Attention to customer needs, development of presentation materials, and cost estimates are discussed. Students will become familiar with graphic design, job titles and duties. Stress management and time management are incorporated into the course. Legal and ethical issues, as well as those involving copyrights and trademarks, are discussed. PREREQUISITES: Course 204-126 - Design & Publishing

204-114
Internship and Portfolio Development **3.00**

Students will focus on an area of interest in their graphic design field through a match with to an appropriate employer. This match can be directed by the student or the instructor. The student will meet with the instructor to discuss job issues and assist in the development of a student portfolio. Career exploration and networking will also be discussed with a focus on the professional development of the individual student.

204-115
Digital Photography/Advanced **3.00**

Course focuses on advanced use of photomanipulation software including special effects and new applications. In addition, the basics of good photography and its use in the various areas of graphic design will be studied. PREREQUISITES: Course 204-107 - Digital Photography/ Introduction to

204-116
Webpage Design for Graphic Designers **3.00**

Students will examine the appearance and structure of existing web pages using a browser, and learn how to design their own home pages. An emphasis will be placed on using current web page design software to create pleasing on-line documents that follow the principles of good graphic design and marketing. PREREQUISITES: Course 204-107 - Digital Photography/ Introduction to

204-120
Multimedia Survey **3.00**

This course offers tips on presentation design and the use of multimedia in the graphic design field. Students will learn how to create slides, overheads, and on screen presentations. Transition effects and the use of sound and video will be incorporated into on screen presentations. Students will create an interactive portfolio and at least on presentation for class demonstration.

204-125
Illustration Media Concepts **3.00**

This course guides students through an organized experimentation of traditional art media to create images that convey specific messages to viewers. A variety of media is used, including: watercolor, acrylic, oil, pastel, inks, dyes, collage, and computers. Good composition, visual organization, development of creative thinking, and visual problem solving will be emphasized. This course will include a study of perspective, light, shade, and color theory. Current design and color trends will be explored.

204-126
Design & Publishing **3.00**

This course examines the basic concepts of graphic design page layout and focuses on the principles, equipment, software, and workflow used in the design and publishing process. Students will integrate basic marketing principles in their design strategies and will apply graphic design concepts to produce page layout projects. In so doing, they will understand the primary components of design and publishing: research, strategy, input, composition, project development, and output. Using scanners and importing text from other programs are also covered. PREREQUISITES: Course 204-100 - Design Concepts

204-127
Digital Prepress Fundamentals **3.00**

Students will study basic concepts in digital prepress fundamentals used in preparing graphic design artwork for printing and publishing. They will become familiar with the complete graphic design creation process: from initial concept and planning through to the final printed collateral. Simple color separations and trapped and/or press ready artwork is the main focus of this course. History and discussion of traditional and digital prepress equipment and techniques will be introduced. Customer needs, technical accuracy, prepress troubleshooting issues, timelines, and proofing will be included. COREQUISITES: Course 204-126 - Design & Publishing

204-128
Business of Photography **2.00**

This course deals with all aspects of running a photography business, including studio management, copyright law, career options, contracts, proposals, marketing and self-promotion. Student will create a digital portfolio and examine several successful photography businesses. History of photography from film to digital will be studied.

204-129
Field Photography **2.00**

This course will explore the use of cameras, lenses and digital media as they apply to newsworthy photography as well as location and nature photography. Students will learn how to get good shots in fast paced envrironments like sporting events. Special tools used in field photography will be examined.

204-130
Studio Lighting and Tools **2.00**

Students will examine lighting, drapes, reflectors and special studio photography tools, for a variety of subjects. Shutter and aperture settings will be explained. Commercial photography, portraiture, food photography and macro photography will be explored. Students will plan photo shoots and coordinate all aspects of a shoot.

204-134
Problems in Graphic Design, Advanced **3.00**

Students will produce advanced level projects in graphic design. Various software applications will be integrated in the creation process. Emphasis will be placed on solving advanced visual problems, creating portfolio quality pieces, participating in classroom critiques and final production options and issues. Students will develop problem-solving techniques to guide them through the process of organizing a complete project, including research, marketing, conceptualization, full design development, file preparation, analysis of the project components, color (ink) selections, paper selection, photography, and various finishing techniques. Reproduction issues including timelines, budgets, ink properties, paper properties and design mechanics will be applied to individual projects. PREREQUISITES: Course 204-126 - Design & Publishing

204-135
Design Concepts, Advanced **4.00**

This course examines advanced concepts of graphic design page layout and focuses on the marketing, software, and workflow used in the design and publishing process. Students will use layout, illustration, and photomanipulation software at and advanced level to create portfolio quality projects. Color usage, scanning principles, file formats, importing of text and graphics will be reinforced. All projects will be properly prepared for commercial production. Students will integrate research, and marketing principles in their design strategies. Projects will be presented and critiqued through written and oral presentation processes. PREREQUISITES: Course 204-126 - Design & Publishing

204-142
Applied Exit Strategies/Display Graphics **3.00**

Students will focus on resume, portfolio development and interview practices. Career exploration, professional practices, networking will also be discussed. All aspects of this course will lend to the professional development of the individual student. In order to showcase and promote the accomplishments of the student, a graduate design display requirement will be met at the Annual Student Design Show. COREQUISITES: Course 204-109 - Graphic Design Professional Practices

204-143
Illustration, Advanced Illustration, Advanced **3.00**

This course will teach students the basics of using 3D software for design. Animation, modeling and storyboarding will be examined, as well as the technical aspects and vocabulary involved in mastering 3D software. 3D computer graphics will be compared to 2D. Practical applications for 3D software will be examined as they relate to graphic design, web design, and game design.

204-149
Advanced Webpage Design **3.00**

Students will build upon the knowledge learned from the prerequisite course. Emphasis will be placed on current webpage editors, while adding video and animation elements to their own website. The course will include current topics in web development. Principles of web design for development and posting of websites will be emphasized. PREREQUISITES: Course 204-116 - Webpage Design for Graphic Designers

204-162
Graphics for Gaming **1.00**

This course is designed to introduce programming students to graphics and graphics creation. Specifically, the graphics used in computer games will be discussed.

304-101
History of Furniture and Decorative Arts **3.00**

Emphasizes the history of decorative arts from ancient times through the technological era especially concerning furnishings and interiors. Interior design careers, projects and markets are surveyed.

304-102
Interior Design, Principles of **3.00**

This course will provide the beginning college student with the fundamentals of interior design. Students will explore the elements and principles of art and design as they are applied to interior environments. The learner will also gain knowledge of basic concepts in the design process, human ecology, space planning, selecting finishes and furnishings, and design communications techniques.

304-103
AutoCAD, Introduction to **3.00**

This course is a basic introduction to AutoCAD used in the field of Interior Design. Applications covered include equipment overview, Windows, computer technology and use of the current version of AutoCAD. Major emphasis will be on learning AutoCAD commands, menus and input needed to generate 2D drawings used in the industry. Emphasizes mastering a basic level of proficiency. PREREQUISITES: Course 304-115 - Drafting for Interiors

304-104
Advanced Technology for Interior Design **3.00**

Students will learn to integrate technology across different phases of design and learn to produce well composed and thorough designs quickly and efficiently. The student will develop a strategic overview of the design process, examining how different

software can be best woven into the traditional phases of an interior design project and demonstrate tactics within those programs to optimize workflow and interoperability. By lining the standard phases and processes of an interior design project with the capabilities of the software most commonly used student will produce enhanced deliverables such as presentations, renderings and construction drawings. PREREQUISITES: Courses 607-170 - AutoCAD for Construction Sciences, 614-150 - 3D CAD:Building information Model, and 304-116 -Kitchen and Bathroom Planning with a minimum grade C or TR

304-106
Interior Lighting/Fundamentals of 3.00

Students will study interior lighting application, assess client and site requirements, use compositional techniques for lighting design, evaluate construction constraints, select light sources and fixtures, and communicate the design through drawings and documents. PREREQUISITES: Courses 304-115 - Drafting for Interiors and 304-140 - Rendering Techniques

304-115
Drafting for Interiors 3.00

The student will design floor plans through the fundamental knowledge and use of drafting equipment. This course will build the student?s understanding of floor plans, site plans, site selection, architectural styles and concepts, layout and final design drawings.

304-116
Kitchen and Bathroom Planning 3.00

Students will develop the skills of planning and remodeling kitchens and bathrooms through drawing methods using the National Kitchen and Bath Association (NKBA) standards. The course provides client-oriented design problems and includes planning using standard components and fixtures. PREREQUISITES: Course 607-170 - AutoCAD for Construction Sciences with a mimimum grade of C or TR

304-117
Color Theory 3.00

Selection and arrangement of tasteful color schemes are designed through sample use. Expressive use of color; color conditioning problems. Psychology and physics of color are explored as these relate to designing and decorating.

304-118
Art History 3.00

Briefly traces western arts from prehistoric through contemporary art. Surveys Oriental and American art. Delves into the complexities of artwork, created by females. Makes application to the field of Interior Design, including art media, techniques, art terms, current artists, replica art methods, and resources for original and duplicate artworks. CD-ROM, internet computer programs, slides, videos, and prints provide visual sources as well as a beautifully illustrated textbook with thousands of examples. This class is culturally and educationally expanding for the student.

304-119
Portfolio Presentation 1.00

The learner gains knowledge and assistance in preparing a professional portfolio. The course culuminates with a portfolio show presenting the students design achievement, body of work, and skills to the professional community.

304-120
Interior Design Internship & Sales 3.00

This includes, planning, presentation, handling resistance, and closing the sale. The internship portion introduces students to entry level interior design work experiences and career planning skills. Students will select an area of interest in the design field where they will complete 72 hours of internship. PREREQUISITES: Course 304-156 - Residential Design Studio with a minimum grade of C or TR COREQUISITES: Course 304-152 - Commercial Design Studio

304-122
Textiles 3.00

Students will study the selection, use and care of textile fabrics. All fibers, natural and synthetic, will be dealt with. The most recent technology in construction, finishes and color application will be emphasized.

304-123
Business of Interior Design 3.00

Design business procedures and resources used by designers to expedite dealing with clients, vendors, and contractors. Surveys methods of billing, business forms and types of businesses. Introduces students to the various types of window treatments and methods for fabrication, measurement and charging.

304-127
Interior Space Plan and Design 3.00

Interior Space Planning and Design combines the study of human factors, codes, regulations, standards, and universal design, the selection and specification of; furniture, fixtures, equipment, and accessories in planning interior spaces. Projects include the steps of the design process, from space planning through design finalization, for both residential and commercial spaces. Students will explore various problem solving methods, working in a design team, and presenting design solutions as if working with actual clients. PREREQUISITES: Courses 304-101 - History of Furniture and Decorative Arts, 304-102 - Interior Design, Principles of, 304-103 - AutoCAD, Introduction to, 304-117 - Color Theory, 304-122 - Textiles, 304-133 - Sustainable Materials and Finishes, 304-140 - Rendering Techniques, and 304-115 - Drafting for Interiors

304-133
Sustainable Materials and Finishes 3.00

Focuses on identifying building materials to satisfy the design criteria. Students will learn appropriate selection of: materials, finishes, and products based on their properties, sustainability, performance criteria, installation methods, and maintenance requirements. Additionally insight will be gained in procedures within the construction industry from; organizational culture, to the interior designer's role, responsibilities and documentation of specifications.

304-140
Rendering Techniques 3.00

This course will introduce students to a broad range of drawing and rendering methods. Floor plan, elevation, one, two, and three point perspectives are used in illustration of furnishings and room interiors are discussed. Surveys use of neutral and color media, shadow, texture, signage and presentation techniques.

304-146
Interior Project Design, Advanced 3.00

The design of large scale spaces is studied with actual experience in designing residential and commercial interiors. The course includes an exploration of complete solutions based on client criteria, space analysis, codes, standards, budget factors, selection and specification of; materials, finishes, fixtures, and products. The student will use computer technologies in the design and presentation process. PREREQUISITES: Courses 304-101 - History of Furniture and Decorative Arts, 304-102 - Interior Design, Principles of, 304-103 - AutoCAD, Introduction to, 304-106 - Interior Lighting/ Fundamentals of, 304-115 - Drafting for Interiors, 304-116 - Kitchen and Bathroom Planning, 304-117 - Color Theory, 304-122 - Textiles, 304-123 - Business of Interior Design, 304-127 - Interior Space Plan and Design, 304-133 - Sustainable Materials and Finishes, 304-140 - Rendering Techniques COREQUISITES: Courses 304-147 and 104-114

304-148
Interior Design Internship II 2.00

The internship course will allow students to gain meaningful work experience in a specialty area of the interior design industry. Students will work in an environment that will allow them to apply their skills and knowledge at an actual business. This course requires a minimum of 144 hours of occupational / internship work, and students will submit the required agreement forms prior to commencing the work experience. Additionally, students seeking credit hours that comply with NKBA and or NCIDQ must have the written permission of the course instructor and provide the necessary documentation to verify the internship supervisor's professional credentials prior to beginning the internship work.

304-149
Kitchen and Bath Planning, Advanced 3.00

Through this studio, Kitchen and Bath Design students gain advanced approaches to their design solutions, including knowledge of NKBA Planning Guidelines for the kitchen, and NKBA Access Planning Guidelines used in universal design projects. Building upon skills learned in K&B Design, students improve their ability to develop and present a design concept and theme. In addition, a focus will be learning to produce professional working documents of advanced kitchen projects as they progress from inception to completion. PREREQUISITES: Course 304-116 - Kitchen and Bathroom Planning with a minimum grade of C or TR

304-150
Architectural History 3.00

This course is introductory and assumes no background in architecture or architectural history. It seeks to provide students with an introduction to basic foundations for studying architecture.

304-151
Center for Sust. Living: Practicum 1.00

With the creation of a "green room" Interior Design students will apply what they have learned in 304-155 Principles of Interior Design and 304-133 Sustainable Materials and Finishes. Students will confrim that preliminary space plans and design concepts are safe, functional, aesthetically appropriate, and meet all public health, safety and welfare requirements, and sustainability guidelines. Students will be performing and learning all duties related to the installation of materials, finishes and products. The space will feature re-purposed furnishings and finishes that promote sustainable and green design. PREREQUISITES: Course 304-133 - Sustainable Materials and Finishes

304-152
Commercial Design Studio 3.00

Examine the elements of commercial interiors through the study of human factors, codes, space planning guides with ADA and universal design, the selection and specification of; furniture, fixtures, equipment, comprehensive lighting solutions, and accessories in planning interior spaces. Projects include the steps of the design process, from programming through design finalization, for commercial spaces such as retail, restaurants, and health care facilities. Students will explore various problem solving methods, working in a design team, and presenting design solutions as if working with actual clients. PREREQUISITES: Courses 304-101 - History of Furniture and Decorative Arts, 304-104 - Advanced Technology for Interior Design, 304-116 - Kitchen and Bathroom Planning, 304-122 - Textiles, 304-123- Business of Interior Design, 304-133 - Sustainable Materials and Finishes, 304-153 - Drafting and Rendering Techniques, 304-154 - Interior Elements of Building Const., 304-155 - Principles of Interior Design, 304-156 - Residential Design Studio, 304-151 - Center for Sust. Living: Practicum, 304-150 - Architectural History, and 607-170 - AutoCAD for Construction Sciences with a mimimum grade of C or TR COREQUISITES: Course 104-114

304-153
Drafting and Rendering Techniques 4.00

This course covers the development of 2D and 3-D graphic communication techniques in developing preliminary and final interior design presentations to convey design concepts and solutions. Student will use manual and digital methods to produce construction plans, perspective drawings, axonometric, presentation boards, 3-D models, freehand sketching and rendered drawings using pen and ink, color media. COREQUISITES: Courses 607-170 - AutoCAD for Construction Sciences and 614-150 - 3D CAD:Building information Model

304-154
Interior Elements of Building Const. 2.00

This course will introduce students to basic components of building construction, including structural components and mechanical systems Students will learn basic structural principles applied to the building environment through a review of common building methods including timber frame, masonry, and steel construction for residential and commercial projects as applicable. Sustainable design and the health and welfare of occupants will be considered throughout. PREREQUISITES: Courses 304-155 - Principles of Interior Design, 304-116 - Kitchen and Bathroom Planning, 304-122 - Textiles, 304-133 - Sustainable Materials and Finishes, 304-153 - Drafting and Rendering Techniques, 607-170 - AutoCAD for Construction Sciences, and 614-150 - 3D CAD:Building information Model with a minimum grade of C or TR COREQUISITES: Course 304-156 - Residential Design Studio

304-155
Principles of Interior Design **4.00**

This course will provide the beginning college student with the fundamentals of interior design. Study and apply elements of interior design to interior environments while focusing on basic concepts in the design process, human ecology, space planning, color theory, selecting finishes and furnishings, and design communications techniques. Develop an understanding of the space allocation skills required for the practical and aesthetic manipulation of a building's interior space. Use the fundamentals of design in hands-on lab experiences.

304-156
Residential Design Studio **3.00**

This course focuses on the problem-solving discipline of the design process and its application to residential design. Students develop concepts to achieve design goals and apply theoretical knowledge and technical skills to their design solutions as they work on a variety of professionally relevant interior design projects. Student will examine the elements of residential interiors through the study of human factors, codes, space planning guides with ADA and universal design, the selection and specification of; furniture, fixtures, equipment, comprehensive lighting solutions, and accessories in planning interior spaces. Projects include the steps of the design process, from programming through design finalization, for residential spaces such as single family homes, multi-unit residences and other specialized areas. Students will explore various problem solving methods, working in a design team, and presenting design solutions as if working with actual clients. PREREQUISITES: Courses 304-101 - History of Furniture and Decorative Arts, 304-155 - Principles of Interior Design, 304-122 - Textiles, 304-153 - Drafting and Rendering Techniques, 304-133 - Sustainable Materials and Finishes, 607-170 - AutoCAD for Construction Sciences, and 614-150 - 3D CAD:Building information Model with a minimum grade of C or TR

304-195
Global Interior Design Field Study **1.00**

This class provides the opportunity for students to investigate the interior design industry, learn about global markets, cultural and design influences on products in the industry, how to forecast market trends, and apply networking skills to professional venues.

307-100
Children's Spontaneous Play **3.00**

This course examines the essential role of children's spontaneous play in their development and the strategies teachers utilize to promote it. Course competencies include: analyze the critical of child-initiated spontaneous play; analyze children's play skills based on assessment; enrich a developmentally appropriate environment to support children's spontaneous play; examine the role of the teacher in participating/intervening in children's spontaneous play; develop strategies for participating/intervening in children's spontaneous play; identify strategies that support diversity and anti-bias perspective; and utilize positive interpersonal skills with children.

307-117
ECE: Credit for Prior Learning **3.00**

This course examines early childhood professional experience for the purpose of receiving credit for prior learning.

307-122
Early Childhood/Professional Growth in **4.00**

Discussion and analysis of current issues and ethical dilemmas in the early childhood profession. Students will practice and refine techniques for teaching, directing, or managing an early childhood program. PREREQUISITES: Courses 307-112 and 999-104

307-139
Behavior Challenges **1.00**

This course covers methods of support and intervention teachers use to promote children's understanding and appropriate expression of their emotions and competent social interaction skills. PREREQUISITES: Course 307-106

307-140
ECE: Behavior and Emotional Challenges **3.00**

This course helps promote children's success by building relationships and creating supportive environments, and learning how to demonstrate positive social-emotional teaching strategies. Specific discipline and guidance strategies will be described. Individualized intensive interventions for developing behavior support plans as they relate to challenging behavior will be created and evaluated.

307-141
ECE: Spec Health Care Needs **3.00**

This course explores the frequently encountered specialized health care needs of young children with disabilities. PREREQUISITES: Course 307-187 - ECE: Children with Differing Abilities

307-142
ECE: Inclusion Cred Capstone **3.00**

This course is designed to enhance the students understanding of the impact a child with a disability has on the family system. Students will have the opportunity to participate with a child and his/her family in daily routines and community settings. PREREQUISITES: Course 307-187 - ECE: Children with Differing Abilities

307-143
Administration/Supervision in EC Progs **3.00**

This course provides an overview of roles and responsibilities of directors, coordinators, supervisors and other administrators in early childhood programs.

307-144
Administrative Seminar **3.00**

This is the culminating experience in the Early Childhood Administrator /credential course sequence. Major individual projects are required with a focus on the integration of program aspects in developing strategic planning for change.

307-145
Best Practices for Children and Families **3.00**

Establishing and maintaining quality programs based on professional standards and the best available information on child growth and development and family friendly environment/services. Coursework includes a review of the literature and research studies, licensing laws and regulations, criteria for staff credentials (CDA) and the accreditation of programs by the National Academy of Early Childhood Programs and funding requirements and performance standards such as those for Head Start.

307-146
EC Programs and External Environment **3.00**

Review of external factors which affect the operation of early care and education programs including determination of community child care needs, marketing, laws and regulations, working with government and community agencies, political and social issues and trends.

307-147
Financial Management in Ec Programs **3.00**

This course includes principles and practices in budget planning, preparation and fiscal management including hands-on preparation with program applications.

307-148
ECE: Foundations of Early Childhood Education **3.00**

This three credit course introduces you to the early childhood profession. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; investigate the history of early childhood education; summarize types of early childhood education settings; identify the components of a quality early childhood education program; summarize responsibilities of early childhood education professionals; and explore early childhood curriculum models.

307-149
Operations Management in EC Programs **3.00**

This course includes discussion and practical applications related to scheduling, staffing, facilities management, equipment acquisition and maintenance, record keeping, and communication.

307-150
Emerging Literacy **3.00**

This three credit course focuses on the role of the teacher in supporting the emerging literacy of all children. Course competencies include: use developmentally appropriate strategies that support emerging literacy as a source of enjoyment; promote vocabulary and language development; promote phonological awareness; increase children's knowledge of print; promote children's knowledge of letters and words; build children's comprehension skills; and promote understanding of books and other texts.

307-151
ECE: Infant & Toddler Development **3.00**

In this three credit course, you will study infant and toddler development as it applies to an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze development of infants and toddlers (conception to three years); correlate prenatal conditions with development; summarize child development theories; analyze the role of heredity and the environment; examine research-based models; and examine culturally and developmentally appropriate environments for infants and toddlers.

307-166
ECE: Curriculum Planning **3.00**

This three credit course examines the components of curriculum planning in early childhood education. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; examine caregiving routines as curriculum; develop activity plans that promote child development and learning; develop unit plans that promote child development and learning; and analyze early childhood curriculum models. PREREQUISITES: Course 307-174 - ECE: Practicum 1 with a minimum grade of C or TR

307-167
ECE: Health, Safety, & Nutrition **3.00**

This three credit course examines the topics of health, safety, and nutrition within the context of the early childhood educational setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; follow governmental regulations and professional standards as they apply to health, safety, and nutrition; provide a safe early childhood program; provide a healthy early childhood program; provide a nutritionally sound early childhood program; adhere to child abuse and neglect mandates; apply Sudden Infant Death Syndrome (SIDS) risk reduction strategies; and incorporate health, safety, and nutrition concepts into the children's curriculum.

307-167B
ECE: Safety **1.00**

This one credit course examines the topics of safety within the context of the early childhood educational setting. Course competencies include: follow governmental regulations and professional standards as they apply to safety; provide a safe early childhood program; adhere to child abuse and neglect mandates; apply Sudden Infant Death Syndrome (SIDS) risk reduction strategies; and incorporate safety concepts into the children's curriculum.

307-174
ECE: Practicum 1 **3.00**

In this practicum course, you will learn about and apply the course competencies in an actual child care setting. The course competencies include: document children's behavior; explore the standards for quality early childhood education; explore strategies that support diversity and anti-bias perspectives; implement activities developed by the co-op teacher/instructor; demonstrate professional behaviors; practice caregiving routines as curriculum; practice positive interpersonal skills with children; and practice positive interpersonal skills with adults. COREQUISITES: Course 307-167 - ECE: Health, Safety, & Nutrition

307-178
ECE: Art, Music, and Language Arts **3.00**

This three credit course will focus on beginning level curriculum development in the specific content areas of art, music, and language arts. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; develop activity plans that promote child development and learning; analyze caregiving routines as curriculum; create developmentally appropriate language, literature, and literacy activities; create developmentally appropriate art activities; and create developmentally appropriate music and movement activities.

307-179
ECE: Child Development **3.00**

This three credit course examines child development within the context of the early childhood education setting. Course competencies include: analyze social, cultural, and economic influences on child development; summarize child development theories; analyze development of children

age three through eight; summarize the methods and designs of child development research; and analyze the role of heredity and environment.

307-187
ECE: Children with Differing Abilities 3.00

This three credit course focuses on the child with differing abilities in an early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; provide inclusive programs for young children; apply legal and ethical requirements including, but not limited to, ADA and IDEA; differentiate between typical and exceptional development; analyze the differing abilities of children with physical, cognitive, health/medical, communication, and/or behavioral/emotional disorders; work collaboratively with community and professional resources; utilize an individual educational plan (IEP/IFSP) for children with developmental differences; adapt curriculum to meet the needs of children with developmental differences; and cultivate partnerships with families who have children with developmental differences.

307-188
ECE: Guiding Children's Behavior 3.00

This three credit course examines positive strategies to guide children's behavior in the early childhood education setting. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; summarize early childhood guidance principles; analyze factors that affect the behavior of children; practice positive guidance strategies; develop guidance strategies to meet individual needs; and create a guidance philosophy.

307-189
Group Care for Infants and Toddlers 3.00

This course focuses on caring for infants and toddlers in center based and family child care settings. Materials will cover program quality, philosophy, structure, environments, health and safety, and developmentally appropriate practice.

307-190
Preschool Credential Capstone 3.00

The capstone is the last course all students take prior to completing the Preschool Credential. The intent of this capstone course is to cover and revisit the important themes from the prior five courses. The student will synthesize the information and demonstrate best practices and mastery of the competencies through the completion of a portfolio. PREREQUISITES: Courses 307-148 - ECE: Foundations of Early Childhood Education, 307-179 - ECE: Child Development, 307-167 - ECE: Health, Safety, & Nutrition, 307-188 - ECE: Guiding Children's Behavior, and 307-178 - ECE: Art, Music, and Language Arts

307-191
Infant/Toddler Credential Capstone 3.00

This course integrates the theory, practice and reflection of courses 1-3 in the Infant/Toddler Credential and requires demonstration of best practices. PREREQUISITES: Courses 307-151 - ECE: Infant & Toddler Development, 307-195 - ECE: Family and Community Relationships, and 307-189 - Group Care for Infants and Toddlers

307-192
ECE: Practicum 2 3.00

In this three credit practicum course, you will learn about and apply the course competencies in an actual child care setting. The course competencies include: identify children's growth and development; maintain the standards for quality early childhood education; practice strategies that support diversity and anti-bias perspectives; implement student-teacher developed activity plans; identify the elements of a developmentally appropriate environment; implement positive guidance strategies; demonstrate professional behavior; utilize caregiving routines as curriculum; utilize positive interpersonal skills with children; and utilize positive interpersonal skills with adults. PREREQUISITES: Courses 307-174 - ECE: Practicum 1 and 307-164 with a minimum grade of C or TR

307-194
ECE: Math, Science, & Social Studies 3.00

This three credit course will focus on beginning level curriculum development in the specific areas of math, science, and social studies. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; examine the critical role of play; establish a developmentally appropriate environment; develop activity plans that promote child development and learning; create developmentally appropriate science activities; create developmentally appropriate math activities; and create developmentally appropriate social studies activities.

307-194A
ECE: Math 1.00

This one credit course will focus on beginning level curriculum development in the specific area of math. Course competencies include: develop activity plans that promote child development and learning; create developmentally appropriate math activities.

307-195
ECE: Family and Community Relationships 3.00

In this three credit course, you will examine the role of relationships with family and community in early childhood education. Course competencies include: implement strategies that support diversity and anti-bias perspectives when working with families and community; analyze contemporary family patterns, trends, and relationships; utilize effective communication strategies; establish ongoing relationships with families; advocate for children and families; and work collaboratively with community resources.

307-197
ECE: Practicum 3 3.00

In this three credit practicum course, you will learn about and apply the course competencies in an actual child care setting. The course competencies include: assess children's growth and development; implement the standards for quality early childhood education; integrate strategies that support diversity and anti-bias perspectives; build meaningful curriculum; provide a developmentally appropriate environment; facilitate positive guidance strategies; evaluate one's own professional behaviors and practices; lead caregiving routines as curriculum; utilize positive interpersonal skills with children; and utilize positive interpersonal skills with adults. PREREQUISITES: Course 307-192 - ECE: Practicum 2 with a minimum grade of C or TR COREQUISITES: Course 307-151 - ECE: Infant & Toddler Development

307-198
ECE: Administering an Early Childhood Education Program **3.00**

This three credit course focuses on the administration of an early childhood education program. Course competencies include: integrate strategies that support diversity and anti-bias perspectives; analyze the components of an ECE facility; design an ECE program; analyze the aspects of personnel supervision; outline financial components of an ECE program; apply laws and regulations related to an ECE facility; and advocate for the early childhood profession.

307-199
ECE: Practicum 4 **3.00**

In this three credit practicum course, you will learn about and apply the course competencies in an actual child care setting. Course competencies include: analyze children's growth and development based on assessment; integrate strategies that support diversity and anti-bias perspectives; promote professional behaviors and practices; implement meaningful curriculum; create respectful, reciprocal relationships; evaluate early childhood education programs for quality; and explore professional options in early childhood education. PREREQUISITES: Course 307-197 - ECE: Practicum 3 with a minimum grade of C or TR

316-100
Foods, Basic **3.00**

Basic theory of food and hands-on preparation. Emphasis on evaluation of products, teamwork, safety and sanitation.

316-104
Short Order/Deli **2.00**

Practice in short order food preparation; frying, grilling, sandwich making, salad and dessert preparation. Analysis of cost and returns. COREQUISITES: Courses 316-170 - Sanitation and Hygiene and 316-131 - Culinary Skills I

316-105
International Buffets **4.00**

Organization and service of buffets are stressed. Includes menu planning, cost control and dining room set up. Emphasis is placed on preparation and cooking of international cuisine. PREREQUISITES: Course 316-132 - Culinary Skills II

316-109
Short Order Deli **3.00**

This course provides learners with the opportunity to practice short order food preparation including: frying, grilling, sandwich making, salad, and dessert preparation. Menu planning and cost analysis is presented.

316-110
Baking for Chefs **3.00**

Baking techniques and procedures as related to food service operations. Use of and care of equipment. Sanitation and hygiene considerations. PREREQUISITES: Courses 316-131 - Culinary Skills I and 316-132 - Culinary Skills II

316-125
Fine Dining **4.00**

Training in the duties of a waiter is given including table setting, taking orders and placing in the kitchen and clearing the table. Students also learn how to set up foods in the service line, serve hot and cold foods, prepare beverages and keep a flow of foods in the service line. PREREQUISITES: Courses 316-131 - Culinary Skills I, 316-132 - Culinary Skills II, and 316-135 - Catering/ Banquets

316-126
Dining Room Service **3.00**

Emphasis on procedures for hosting, bussing, and serving customers in fine dining. Set up and serve different styles of service. Assist as a team member of the food service team.

316-130
Nutrition **2.00**

Basic principles and current nutritional concepts are explored with emphasis on meeting the nutritional needs of various individuals.

316-131
Culinary Skills I **4.00**

Practical experience in basic food preparation is emphasized by using fundamental concepts and developing skills and techniques used in professional cookery. Luncheon items will be prepared and served by students for cafeteria patrons during the final weeks of this course. COREQUISITES: Course 316-170 - Sanitation and Hygiene

316-132
Culinary Skills II **4.00**

Students reinforce knowledge and skills learned in Culinary Skills I to begin building on that knowledge. Includes cooking luncheon menus, garnishing, plate presentation and kitchen management. PREREQUISITES: Course 316-131 - Culinary Skills I

316-133
Menu Planning Purchasing Cost Control **3.00**

Menu planning as affected by acceptability, cost, labor requirements, available space and equipment. Principles of purchasing, receiving, issuing and managing food products, restaurant wares and equipment. Study and utilization of several systems used in the food service business to provide management information in food and beverage cost.

316-134
Garde Manger **1.00**

Preparation of decorative meats and centerpieces and decorating and arranging food platters for buffet presentation.

316-135
Catering/Banquets **2.00**

Practical experience in organizing, menu planning, room set-up, preparation, cooking and serving banquets of various sizes. PREREQUISITES: Course 316-132 - Culinary Skills II

316-136
Culinary Competition I **1.00**

This course introduces new students to the rules and regulations of culinary competition. Emphasis is on food styling concepts that meet the American Culinary Federation's judging standards. As a final project, students compete in the WRA student culinary arts salon.

316-137
Culinary Competition II **1.00**

This course builds on skills and knowledge gained in Culinary Competition I. Emphasis

is on food styling concepts that meet the American Culinary Federation's judging standards. As a final project, students compete in the WRA student culinary arts salon.

316-138
Basic Baking **2.00**

This course presents basic baking techniques and procedures related to food service operations. Use and care of equipment are presented. Sanitation and hygiene considerations are reviewed. COREQUISITES: Courses 316-170 - Sanitation and Hygiene and 316-131 - Culinary Skills I

316-139
Convenience Baking **1.00**

This course presents convenience baking techniques and procedures related to food service operations. Use and care of equipment are presented. Sanitation and hygiene considerations are reviewed. COREQUISITES: Courses 316-170 - Sanitation and Hygiene and 316-131 - Culinary Skills I

316-140
Basic Baking Techniques **3.00**

This course presents basic baking techniques and convenience baking techniques and procedures related to food service operations. Use and care of equipment are presented. Sanitation and hygiene considerations are reviewed.

316-158
Food and Beverage Cost Control **2.00**

Study and utilization of several systems used in the food service business to provide management information in food and beverage costs and investment return.

316-170
Sanitation and Hygiene **1.00**

A study of sanitary conditions and the methods used in applying the measure effectively. Includes organisms responsible for food contamination, spoilage, and the diseases transmitted by food. Personal health habits necessary for food service personnel and the laws regarding sanitary practices are interpreted.

316-190
Food Service Supervision **3.00**

How to fulfill a leadership role; how to organize resources of people, time, equipment and jobs; how to motivate people and communicate effectively with subordinates; how to select, interview and appraise employees; how to handle problems of discipline, morale and grievances.

401-501
Introduction to HVAC **1.00**

This introductory course introduces the student to the terminology used; the basic math concepts relevant to the HVAC industry and basic electrical concepts are covered.

401-502
Tube and Piping Skills **1.00**

This course introduces the mechanical skills necessary to identify, select, and construct plastic, copper and ferrous tubing and pipe to industry and Code standards.

401-503
Ductwork **1.00**

The design and application of sheet steel, fiberglass and flexible duct layout and construction are extensively covered.

401-505
Alternating Current and Contr **1.00**

Types of motors, transformers and capacitors are covered in depth. The application of electronics in HVAC are introduced and basic troubleshooting of common electromechanical and electronic devices are explored.

401-506
Forced Air Heating Intro to **1.00**

The theory of heating using air as the medium is introduced. The common components of each fuel are covered and how efficiency changes affects the heating cycle. The importance of proper venting and vent design and basic troubleshooting are introduced.

401-508
Cooling Fundamentals **1.00**

This course introduces the student to the concepts of heat transfer, the refrigeration cycle and use of the P/T chart. Evacuation, recovery, leak detection and basic troubleshooting are covered.

401-509
Troubleshooting HVAC **1.00**

Expanded troubleshooting of gas, electric furnaces and central air forced air systems are covered in detail.

401-510
Hydronics **1.00**

This course covers Hydronic equipment, types of piping circuits, safety components, pumps and near boiler piping. Also basic steam and chilled water technology is introduced.

401-512
Heating and Cooling Design **1.00**

Interpretation and use of construction drawings, heat loss and gains, and site factors that affect equipment selection and duct design are introduced.

401-513
Indoor Air Quality and DDC Controls **1.00**

Factors that affect IAQ, the use of DDC controls in energy management are covered. Economizers, energy recovery and ice storage concepts are introduced.

401-514
Commercial Concepts **1.00**

Cooling towers, water quality and treatment, steam plant commissioning and idling are introduced.

401-515
Heat Pumps **1.00**

The student is introduced to the operation, maintenance and troubleshooting of heat pumps.

401-516
Commercial Refrigeration Systems **1.00**

The types of common industrial and commercial refrigeration equipment are covered. Advanced troubleshooting skills are introduced for the technician.

401-517
Troubleshooting Gas Furnaces **1.00**

The importance of proper venting, vent design and basic troubleshooting of today's Standard and High Efficiency furnaces is introduced.

401-518
Troubleshooting Cooling **1.00**

Evacuation, recovery, leak detection methods and basic troubleshooting of A/C equipment are introduced.

401-519
Com/Ind Refrigeration and Alter. Systems **1.00**

Refrigeration components and techniques used in large refrigeration plants are covered. Also introduced to the student is alternative heating/cooling methods that are emerging in our renewable society.

401-520
Refrigeration Fundamentals **2.00**

The topics covered in this class include refrigeration principles and terms, thermodynamic processes, refrigerants, vapor compression cycles, mechanical refrigeration components, use of electrical controls, refrigeration applications, and refrigeration tools and materials.

401-521
Heating Systems Applications **2.00**

Topics include introduction to HVAC, heat principles, temperature measurement, fuels, sources of heat, types of combustion, basic heating systems, basic furnace design, gas furnace design and operation, ventilation principals, Trade mathematics, proper tool use, Safety and basic pipefitting.

401-522
Control Circuit Applications **2.00**

Topics include introduction to control circuit terminology, measuring devices and control systems. The principals of self contained, pneumatic, and other electronic-electric controls are examined and applied to control systems operation and design.

401-523
HVAC IV Refrig Apps GL NAV **2.00**

Topics include commercial refrigeration systems, applications, installation, servicing, troubleshooting, heat loads and piping, absorption systems and special refrigeration systems. PREREQUISITES: Courses 401-520 - Refrigeration Fundamentals and 401-522 - Control Circuit Applications with a minimum grade of C or TR

401-524
Heating Applications GL NAV **2.00**

The topics covered in this class include the service and repair of Commercial Heating Cooling equipment. Units covered will include forced air gas and oil fired equipment, heat pumps, hydronic hot water, steam heating systems and direct and indirect cooling systems. Fresh air calculations and economizer operation will also be covered. PREREQUISITES: Courses 401-523 - HVAC IV Refrig Apps GL NAV and 401-520 - Refrigeration Fundamentals with a minimum grade of C or TR

401-525
Electronic Energy Management GL NAV **2.00**

Topics include introduction to the role of computers and their use in energy management in the HVAC Industry. Emphasis will be on the identification, installation, function, repair, and upgrading of EEM Systems used to control the HVAC environment in commercial applications. PREREQUISITES: Courses 401-520 - Refrigeration Fundamentals, 401-523 - HVAC IV Refrig Apps GL NAV, and 401-524 - Heating Applications GL NAV with a minimum grade of C or TR

401-526
Electronic Energy Management 2 GL NAV **2.00**

Topics include computers and their use in energy management in the HVAC Industry. Emphasis will be on use of EEM Systems to control the HVAC environment in commercial applications. Students will learn the use of Trending and Scheduling practices, the use of overides and the importance of proper sequencing of equipment. PREREQUISITES: Courses 401-520 - Refrigeration Fundamentals, 401-523 - HVAC IV Refrig Apps GL NAV, 401-524 - Heating Applications GL NAV, and 401-525 - Electronic Energy Management GL NAV with a minimum grade of C or TR

401-560
Comm/Ind Refrigeration & Alt. Systems **1.00**

This week will deepen the student's understanding of the complex controls and operation of large scale refrigeration equipment. The week will also Introduce the student to emerging technolgies that have not been used in large scale to date. Geothermal, radiant, waste heat, and other alternatives are explored.

401-561
Heating & Cooling Design **1.00**

Use of construction drawings, the fundamentals of heat loss/gain, equipment selection, and the fundamentals of leadership are covered in the student's final week.

401-562
Commercial Concepts, Advanced **1.00**

This week broadens the knowledge base for the fourth year student. Topics include the effects of water quality on cooling towers, boilers and chillers, proper startup/shutdown of physical plants, and how new energy conservation equipment is being used in HVAC.

401-563
IAQ/DDC Controls & Air Balancing **1.00**

This week covers the factors that affect IAQ, the use of automated controls in our energy management, and the effects of proper airfolow on comfort in structures.

401-564
Heat Pumps **1.00**

This week moves the student from the introduction of the fundamentals of heat pump technology to component identitifcation and troubleshooting of the various kinds of heat pumps. The student is also introduced to customer relation principles as they move towards their last year.

401-565
Refrigerant; Advanced Topics **1.00**

This week covers troubleshooting techniques a student needs when working on A/C and refrigeration systems. This week also introduces the student to the emerging VRF, ductless and zoned systems that have entered into the marketplace.

401-566
Troubleshooting HVAC Systems **1.00**

This intense week contains concentrated review of troubleshooting techniques for fuel fired appliances, motors, and controls. The correct use of installation fasteners, terminal connectors, and hardware are also covered.

401-567
Hydronics & Steam Systems **1.00**

This week expands on the student's general knowledge of hydronics by covering individual

componenets, their function, and operation. The student is then introduced to the operation of unique controls of steam plants.

401-568
Venting & Introduction to Hydronics 1.00

This week is split between the complex requirements for venting fuel burning appliances and introducing the student to the basics of hydronic heating concepts and the components used.

401-569
Alternating Current and PM Basics 1.00

This week expands on the student's basic understanding of AC electricity by covering motors, transformers and other loads found in HVAC equipment. This week also covers basic preventative maintenance procedures for typical HVAC equipment.

401-570
Ductwork Construction & Airside Basics 1.00

This week covers the selection and fabrication of common materials used in ductwork applications and the uses of those delivery systems in commercial buildings.

401-571
Mechanical Refrigeration Circuit 1.00

This comprehensive week focuses on the major working components of a mechanical refrigeration device. Regrigerant oils, types of refrigerants, leak detection, recovery and proper charging techniques are covered in depth.

402-120
Aeronautical Decision Making 2.00

The student will apply theories and procedures learned in Aviation Safety in simulated flight conditions. Analysis and evaluation of student actions, individual and as a flight crew, will be completed for each flight scenario. COREQUISITES: Courses 402-177 - Professional Piloting IV and 402-138 - Aero Science Aviation Safety

402-122
Aircraft Systems-Advanced 3.00

This lecture based course covers the principles of turbine engine theory and operation. Turbine aircraft systems are studied, including pressurization, anti and de-ice systems, pneumatic and hydraulic systems and aircraft control systems. Advanced electronic and navigation systems are learned. Low and high performance aircraft structures are evaluated and compared. FAR's pertaining to advanced aircraft are learned and applied to a daily flight routine. PREREQUISITES: Course 402-139 - Aero Science Engine/ Structures/ Systems

402-129
Aviation/Introduction 3.00

An introductory aviation ground course designed to prepare the student for the FAA Private Pilot Airplane written examination.

402-131
Aero Science Fundamentals of Instruction 2.00

An advanced aviation ground course designed to prepare the student for the FAA Fundamentals of Instruction written examination. PREREQUISITES: Course 402-140 - Flight Private Pilot

402-133
Aero Science Commercial 3.00

An advanced aviation ground course designed to prepare the student for the FAA Commercial Pilot Airplane written examination. PREREQUISITES: Course 402-140 - Flight Private Pilot or 402-140D - Flight Private Pilot B with a minimum grade of C or TR

402-134
Aero Science Certified Flight Instructor Airplane 2.00

An advanced aviation ground course designed to prepare the student for the FAA Airplane Flight Instructor written examination. PREREQUISITES: Course 402-140 - Flight Private Pilot

402-135
Aero Science Aerophysics/ Aerodynamics 3.00

Principles of physics as applied to the flight topics of velocity and acceleration and application to take-off and landing performance. Lift, gravity, thrust and drag relationships in accelerated and unaccelerated flight are included.

402-136
Aero Science Aviation Weather 3.00

Covers basic concepts of aviation meteorology including temperature, pressure, moisture, stability, clouds, air masses, fronts, thunderstorms, icing and fog. Analysis and use of weather data for flight planning and safe flying and interpretation of U.S. Weather Bureau maps, reports and forecast are discussed.

402-137
Aero Science Instrument 3.00

An advanced aviation ground course designed to prepare a student for the FAA Instrument Airplane rating written examination. PREREQUISITES: Course 402-140 - Flight Private Pilot

402-138
Aero Science Aviation Safety 3.00

This course will develop the student's awareness and understanding of the safe, legal, and efficient operation of an aircraft in the modern aviation environment. This will be accomplished through the study of specific listed topics, NTSB reports, and presentation by aviation professionals.

402-139
Aero Science Engine/ Structures/ Systems 3.00

Principles of aircraft engine theory and operation including construction, lubrication, carburetion, ignition, supercharging and propellers. Principles of aircraft structures including basic stresses, types of construction, advantage of each type and an overview of FAA repair procedures.

402-140
Flight Private Pilot 3.00

Introduces the student to flight. Develops the necessary skills and knowledge to solo and prepare for the private pilot flight test. COREQUISITES: Course 402-129 - Aviation/ Introduction

402-140C
Flight Private Pilot A 1.00

This is the first of 2 courses (402-140C and 402-140D) required to attain a private pilot certificate. Introduces the student to flight. Develops the necessary skills and knowledge to solo. Part B must be taken either the same semester as Part A, or no later than the following semester. COREQUISITES: Course 402-129 - Aviation/ Introduction

402-140D
Flight Private Pilot B **2.00**

This is the second of two courses (402-140C and 402-140D) required to attain a private pilot certificate. Develops the necessary skills and knowledge to prepare for the private pilot flight test. Part B must be taken either the same semester as Part A, or no later than the following semester. PREREQUISITES: Course 402-140C - Flight Private Pilot A

402-145
Flight/Certified Flight Instructor Airplane **2.00**

Prepares the commercial rated pilot for the FAA flight instructor airplane certificate. PREREQUISITES: Course 402-177 - Professional Piloting IV COREQUISITES: Courses 402-134 - Aero Science Certified Flight Instructor Airplane and 402-131 - Aero Science Fundamentals of Instruction

402-146
Flight Certified Instructor Instrument **1.00**

Prepares the CFI for the addition of an instrument instructor rating to the flight instructor certificate. PREREQUISITES: Course 402-145 - Flight/Certified Flight Instructor Airplane

402-166
Aeronautical Skills Development **1.00**

This flight course will prepare the student for the completion of an FAA certificate or rating.

402-171
Professional Piloting I **2.00**

This is the first in a series of four courses approved as an FAA Part 141 combined commercial/ instrument certification course. This course will focus on the addition of the multi-engine rating to the student's existing private pilot certification. PREREQUISITES: Course 402-140 - Flight Private Pilot or 402-140D - Flight Private Pilot B with a minimum grade of C or TR COREQUISITES: Course 402-137 - Aero Science Instrument

402-173
Professional Piloting II **2.00**

This is the second course in a series of four courses approved as an FAA Part 141 combined commercial/instrument certification course. This course will focus on the addition of instrument rating to the student's existing private pilot certificate. Flight instruction will be conducted in a single-engine aircraft. PREREQUISITES: Course 402-171 - Professional Piloting I

402-175
Professional Piloting III **2.00**

This is the third course in a series of four courses approved as an FAA Part 141 combined commercial/instrument certification course. This course will focus on the student's gaining cross-country experience and will provide multi-engine instrument privileges. PREREQUISITES: Course 402-173 - Professional Piloting II COREQUISITES: Course 402-133 - Aero Science Commercial

402-177
Professional Piloting IV **2.00**

This is the fourth course in a series of courses approved as an FAA Part 141 combined commercial/ instrument certification course. This course will focus on gaining the required skills necessary to meet the requirements of the FAA Commercial Pilot Certification, both single and multi-engine. COREQUISITES: Course 402-175 - Professional Piloting III

408-510
Brick Masonry Technology II **2.00**

408-520
Brick Masonry Technology III **2.00**

408-530
Brick Masonry Technology IV **2.00**

410-500
Carpentry I/Related **2.00**

This course covers math related to carpentry, use of the framing square and its tables for layout and the fundamentals of BPR.

410-501
Carpentry II/Related **2.00**

This course addresses the principles of site development and building layout and the various principles involved in building foundations and footings.

410-502
Carpentry III/Related **2.00**

This course addresses the principles of floor and wall construction for both residential and commercial considerations.

410-503
Carpentry IV/Related **2.00**

This course covers the principles of roof framing including architectural drafting of plan and elevation views for roofs. It also covers the principles of layout and cutting of all roof framing members for both equal and unequal pitch roofs.

410-504
Carpentry V/Related **2.00**

This course covers exterior trim considerations, including roofing, siding, and exterior windows and doors. It also includes an introduction to the principles of stair construction.

410-505
Carpentry VI/Related **2.00**

This course continues the principles of stair construction and addresses more sophisticated stair layout problems such as L-shaped, U-shaped, circular stairs. In addition, this course covers carpentry principles regarding interior finish work including door hanging, hardware, crown moldings, and various principles relating to interior finishing work.

410-506
Carpentry Review **1.00**

An overview of construction Carpentry principles including printreading, site layout, foundation, floor, wall, and roof construction, exterior and interior finish work and stairbuilding.

412-101
Diesel, Intro to **3.00**

Theory and laboratory experiences in this course are designed to introduce the student to the diesel systems used on today's modern trucks and construction equipment. Students develop basic knowledge of design, construction and operating principles of the diesel engine. The course emphasizes the service, maintenance and the types of repairs made on diesel engines. Introduces shop procedures, safety practices, tools and using service information. PREREQUISITES: Course 602-

148 - Auto Mechanic Fundamentals and Service References

412-102
Diesel Fuel and Emissions **3.00**

This combined lecture and lab course will use the latest in diagnostic equipment to evaluate engine performance and diagnose power complaints on modern hydro-mechanical diesel fuel injection systems.

412-105
Diesel Control Systems, Advanced **4.00**

This course will continue to develop the knowledge and skills required to troubleshoot, repair and maintain heavy duty vehicle control systems. Emphasis will be place on the skills that are required of a technician to utilize advanced electronic diagnostic tools. Topics include multiplex systems, active and inactive codes, system reprogramming intermittent codes (EBS), electronic braking systems, control systems and hydraulic control systems. The theory and operation of the Global Positioning System (GPS) and related systems will be covered. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-111 - Diesel Maintenance Fundamental, 412-108 - Diesel Electricity 2, 412-109 - Diesel Engine Service, 412-112 - Diesel Drive Trains, 412-113 - Diesel Fuel Systems, Advanced, and 412-114 - Diesel Heating, Cooling & Air Cond

412-106
Diesel Brake Systems **4.00**

This course will develop the knowledge and skills required to troubleshoot, repair and maintain heavy duty vehicle braking systems. Hydraulic and pneumatic drum and disc systems will be covered. This course will help prepare for ASE certification. PREREQUISITES: Courses 412-111 - Diesel Maintenance Fundamental and 412-117 - Diesel Suspension & Steering Systems

412-107
Diesel Electricity 1 **4.00**

This course will develop the basic knowledge and skills required to troubleshoot, repair and maintain basic electrical/electronic systems that are utilized on today's heavy duty vehicles. Emphasis will be placed on the Direct Current (DC) fundamentals and vehicle charging and starting systems. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental

412-108
Diesel Electricity 2 **3.00**

This course will focus on the development of troubleshooting and repair skills as they relate to electrical systems found on heavy duty vehicles. An emphasis will be placed on the understanding and application of electronic diagnostic tools and their application to modern heavy duty vehicles. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-111 - Diesel Maintenance Fundamental and 412-107 - Diesel Electricity 1

412-109
Diesel Engine Service **5.00**

This course provides the student with the knowledge and skills required to maintain basic diesel engines. Students will gain practical experience in rebuilding, testing, and troubleshooting by disassembling a diesel engine, inspecting it's components, explaining their function and reassembly. Diesel engine cooling and lubrication systems will be included. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-111 - Diesel Maintenance Fundamental and 412-110 - Diesel Fuel Systems

412-110
Diesel Fuel Systems **3.00**

This course develops the knowledge and skills required to maintain basic diesel fuel systems. Operation and troubleshooting of system components such as fuel supply systems, fuel injection pumps and injectors, intake systems, turbo chargers and exhaust systems will be included. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental

412-111
Diesel Maintenance Fundamental **2.00**

The student will develop the knowledge and skills to operate in today's heavy duty vehicle repair facility. Shop safety, hazardous material handling, hand tool identification and tool and personal safety will be emphasized. Skills development will be stress in the areas of precision measurement instrument usage, basic mechanical skills, and basic wiring skills learn the basic skills. Additionally, the course will include instruction on use of electronic information services, hard copy shop manuals and Wisconsin automotive practice regulations (ATCP132.)

412-112
Diesel Drive Trains **4.00**

The student will develop the knowledge and skills required to troubleshoot, repair and maintain heavy duty vehicle power trains. Topics will include clutches, manual transmissions, drive shafts, universal joints, and drive axles. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-106 - Diesel Brake Systems and 412-111 - Diesel Maintenance Fundamental

412-113
Diesel Fuel Systems, Advanced **3.00**

The student will develop the knowledge and skills required to troubleshoot and repair advanced heavy duty vehicle fuel systems. Fuel designs and characteristics (including alternative fuels), electronic management control and emission control systems will be emphasized. Exploration of diesel hybrid systems will be included. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-111 - Diesel Maintenance Fundamental, 412-110 - Diesel Fuel Systems, 412-107 - Diesel Electricity 1, and 412-108 - Diesel Electricity 2

412-114
Diesel Heating, Cooling & Air Cond **3.00**

This course will develop the knowledge and skills required to troubleshoot, repair and maintain heavy duty vehicle heating, cooling and air-conditioning systems. Students will be required to take and pass the federal and state air-conditioning certification. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-107 - Diesel Electricity 1 and 412-111 - Diesel Maintenance Fundamental

412-115
Diesel Hydraulic Systems **2.00**

This course will provide the application of basic hydraulic principles as they relate to typical heavy duty vehicle applications. The student will develop the knowledge and skills required to diagnose, service and repair and maintain hydraulic systems and components including valves, pumps, and cylinders. Servicing, diagnosing and

preventive maintenance prodedures will be performed on trucks and other equipment. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental

412-116
Diesel Preventative Maintenance **3.00**

The student will develop the knowledge and skills that are required to conduct preventative maintenance on today's heavy duty vehicles. Students will become familiar with established industry standards and regulations (state and federal) and the NORTH AMERICAN out of service criteria. Vehicle inspections will be conducted on both on and off road vehicles with emphasis on component identification and inspections and preventative maintenance services. This course will help the student prepare for ASE certification. PREREQUISITES: Courses 412-106 - Diesel Brake Systems, 412-111 - Diesel Maintenance Fundamental, and 412-112 - Diesel Drive Trains

412-117
Diesel Suspension & Steering Systems **3.00**

This course will focus on the skills and knowledge required for today's technician to effectively diagnose, service and repair heavy duty suspension systems. Analysis of the construction and working principles of chassis components including vehicle frames, suspension systems, steering systems, wheels and tires will be covered along with wheel alignment. This course will help the student prepare for ASE certification. PREREQUISITES: Course 412-111 - Diesel Maintenance Fundamental

412-118
I/C Engines **3.00**

This course provides the student with knowledge of gas and diesel engine theory. Its focus will be operation, maintenance, and repair of diesel and gasaoline powered engines. Lubrication and cooling systems will also be covered. PREREQUISITES: Course 412-121 - Shop Tools and Safety Principles with a minimum grade of C or TR

412-119
Mobile Electrical Systems **3.00**

This course introduces the student to electrical theory in terms of voltage, amperage, resistance, and impedance in various circuits. Operation and troubleshooting methods using multimeters will be covered. Students will learn how to read and utilize electrical schematics and sysmbols. Batteries, starting circuits, charging circuits and electrical accessories will be covered.

412-120
Mobile Hydraulic Systems **3.00**

This course introduces the students to the fundamentals of fluid power, components, different hydraulic systems, hydraulic schematics and terminology of the hydraulic systems used on modern mobile equipment. Includes operation of fluid flow on various systems, maintenance, and system diagnostics.

412-121
Shop Tools and Safety Principles **2.00**

This course will introduce the student to the diverse mechanical skills required in today's service and repair facilities for mobile equipment. The student will demonstrate, through practical hands-on lab exercises, the proper care and use of common hand and power tools. General drilling, tapping, threading, and proper lifting and supporting various mobile equipment will also be focused on. The student will also be required to use test instruments to gather data on length, volume, area, depth, and torque. Safety is stressed in this course.

412-122
Professional Practices **3.00**

In this course, students will investigate best business practices, examine workplace liability topics, and explore professional communication. Students will be introduced to monitoring agencies (OSHA, EPA, DOT, DNR) and federal, state, and local regulations. PREREQUISITES: Course 412-116 - Diesel Preventative Maintenance with a minimum grade of C or TR

412-123
Diesel Equipment Technology Internship **3.00**

In this internship, students will participate in a planned diesel equipment technology learning experience in the workplace. Through direct occupational experience, students will participate in the supervised performance of maintenance, troubleshooting, and repair activities of diesel components. Worksite activities will focus on advanced fuel systems, engine overhaul, advanced control systems, and hydraulics. PREREQUISITES: Courses 412-116 - Diesel Preventative Maintenance with a minimum grade of C or TR, 801-196 - Oral/ Interpersonal Communication, and 801-197 - Technical Reporting

412-124
Diesel Equipment Mechanic Internship **3.00**

In this internship, students will participate in a planned diesel equipment mechanic learning experience in the workplace. Through direct occupational experience, students will participate in the supervised performance of maintenance, troubleshooting, and repair activities of diesel componenets. Work site activities will focus on basic electrical, HVAC, steering and suspension, brakes, drive train, and preventative maintenance. PREREQUISITES: Course 412-116 - Diesel Preventative Maintenance with a minimum grade of C or TR

413-100
Industrial Electricity **3.00**

Industrial electricity covers advanced electrical functions, such as: sizing, conductors, wiring methods, battery maintenance, UPS systems, low voltage and high voltage switchgear, transformers, electrical distribution, lighting, electric head, industrial electronics, and programmable controllers. This is an advanced course for the electrician who wants to learn new opportunities and challenges.

413-501
Arithmetic and Introduction to Algebra For Electrical Crafts **1.00**

This course is an intensive review of arithmetic, with emphasis on common and decimal fractions, ratio and proportion, percentage, systems, units of measurement, conversions, and square root. An introduction to algebra, including terminology, additive functions, grouping symbols, axioms, basic procedures, multiplication, and division, is included.

413-502
Electrical Circuitry Algebra and Trigonometry **1.00**

This course covers sign numbers, grouping symbols, factoring equations in one unknown, fractions, fractional equations, exponents and radicals, solution of simultaneous equations, and an introduction to factors.

413-503
Basic AC/DC Current Motor Control **1.00**

This course is an introduction to DC and AC motor control concepts. Topics include: fundamental concepts of electricity and magnetism, three phase motors, single-phase motors, DC motors and generators, and DC motor controls.

413-504
Electrical Equipment and Introduction to Machine Circuits **1.00**

After a brief introduction to the fundamentals of electricity, this course covers wire size, insulation, connections, and wiring methods. Also covered are switches, relays, motor starters, and other control components. Machine tool control circuits are introduced along with maintenance procedures and safe working practices.

413-505
AC/DC Fundamentals Apprentice **1.00**

413-506
Electrical Theory I/Construction **4.00**

413-510
Motor Control **1.00**

The principle objective is to present the fundamentals of motor control by developing the ability to read and draw control circuits given many control problems using schematic, wiring and piping diagrams.

413-516
Electrical Theory II/Construction **4.00**

413-520
National Electric Code Updates **0.50**

This course comprehensively covers the National Electric Code revisions. It is designed to acquaint the student with the current year's revisions/updates/changes with NEC calculations, NEC theory, and NEC content. This program explains the strategies of taking an exam regarding the revisions to the NEC and prepares you to take the Journeyman or Masters Electrical Exam.

413-521
Polyphase Alternating Current Fundamentals **1.00**

Students learn about three and four wire two-phase circuits, three-phase induction, star and delta circuits, power balanced and unbalanced loads, transformer principles, characteristics, and connection, electrical instruments, self synchronous systems, protective relays, lamps, and illumination.

413-522
Electrical-Mechanical Blueprint Reading **1.00**

This course consists of practice in: print reading using large blueprints for process control for temperature control, flow, and pressure; delta-Y connections; application of electronic controls; circuits for automated systems; systems using programmable controllers; application of motor control circuits; power wiring layout; plant layout; and interconnecting wiring.

413-526
Electrical Theory III/Construction **4.00**

413-528
Direct Current Fundamentals **1.00**

This course covers electron theory, Ohm's Law, series and parallel circuits, power, Kirchoff's Law, work effective heat torque, motor sizes, wire sizes, voltage drop, wiring systems, and kinds of wire insulation.

413-529
Single Phase AC Fundamentals **1.00**

This course covers properties of alternating current, AC measurement, inductance and inductive resistance, capacitance and capacitive resistance, impedence, series and parallel AC circuits, resonance, and power and power factor correction.

413-531
Industrial Electronics Fundamentals **1.00**

This course is an introduction to electronics, which includes semi-conductor theory and circuits, transistor theory and circuits, power supplies, integrated circuits, oscillator circuits, photosensitive devices, and pulse circuits.

413-536
Electrical Theory IV/Construction **4.00**

413-537
Wiring Commercial & Industrial **1.00**

This course covers the accurate interpretation of the requirements of the NEC with regard to industrial wiring. The text includes industrial building plans and blueprints. The course builds upon the knowledge and experience gained from working with the text, the NEC, and blueprints.

413-538
Alternating Current Fundamentals **1.00**

This course covers alternators, rotating magnetic fields, AC motors, speed control, types of winding, and an introduction to AC motor control.

413-539
National Electric Code (BAT) **1.00**

This course is a study of national and local electrical codes for wiring and apparatus. It covers wiring design and protection, wiring methods and materials, general use equipment, special occupancies, special equipment, and the use of tables and diagrams for the solution of practical wiring problems.

413-540
Automation Circuits & Introduction to Programmable Logic Controllers **1.00**

This course is an introduction to programmable controllers, specifically the Allen Bradley SLC-500. It covers basic instructions, programming software, input and output files, timers and counters, and programming instructions.

413-541
Electronic Controller Applications **1.00**

This course covers electronic motor controls, DC motor control by means of phase shifters, three phase rectifiers, AC motor controls, adjustable frequency drives, and synchronous motor controls.

413-544
Motor Control Industrial **1.25**

This course provides a systematic approach to the study and application of motor control. The presentation of subject matter includes: both magnetic and electronic

principles; motors, starters, and pilot devices; and control circuits (including the development of both wiring diagrams and schematics). This course should enable the student to understand motors of all types and to develop the ability to draw and wire basic control circuits. Troubleshooting of these circuits is stressed.

413-545
Troubleshooting Electrical Motors 1.00

This course presents the procedures needed to locate and correct a malfunction in an electric motor quickly and efficiently. It first gives an understanding of electric motor operation. Then, it covers troubleshooting of AC (single and three phases), DC, and universal motors.

413-546
Electrical Theory V/Construction 4.00

413-547
Troubleshooting Electrical Systems 1.00

This course is a presentation of step by step applications and activities on how to troubleshoot electrical and electronic systems. Applications present information that a skilled technician should know in order to successfully troubleshoot electrical and electronic systems. Activities provide practical experience in troubleshooting typical circuits and applying the information studied.

413-548
Programmable Logic Controllers I 1.00

This course is an introduction to programming techniques, hardware configuration, and theory of operation of a programmable logic controller. The Modicon industrial controller is the system to be studied.

413-556
Electrical Theory VI/Construction 4.00

413-557
AC Electricity 2.00

This course is designed to introduce the industrial electrical student to the basic concepts of alternating current. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of modern industrial electric systems.

413-558
Codes 2: OCPD/Electrical Device Install 0.50

In this module of Codes for Industrial Electricians, students will learn how to plan for the installation of overcurrent protection devices and how to select the proper boxes, cabinets and conduits for industrial electrical installations as called for in the NEC and other electrical codes.

413-559
Codes 3: Article 250 Part A 0.50

This course examines the application of grounding to industrial electrical situations as required by the NEC and other electrical codes.

413-562
Codes 4: Article 250 Part B 0.50

This course examines Article 250 and grounding applications for industrial electrical installations. Students will complete their review of this portion of the NEC and examine additional related codes in effect across Wisconsin.

413-563
Codes 5 Art.300, Crds/Cble, Haz Install 0.50

This course examines Article 300 of the NEC and wiring methods for industrial electrical applications. Students will determine sizing requiremnt for cords and cables for installations common to industrial facilities. This course will identify code requirements for equipment installations in hazardous locations.

413-564
Codes 6 Cond., Raceways, Data/Comm Cabl 0.50

This course covers the selection of proper conductors and raceways for industrial electrical installations as required by the NEC and other electrical codes. Course competencies will include examining the installation requirements for data and communication cables.

413-569
Codes 7: Motors and Generators 0.50

This course reviews the code requirements for the selection of electrical components for typical industrial electrical motor installations. Course module includes sizing of controls, conductors, switches, branches, and more.

413-570
Codes 8: Transformers 0.50

This course reviews the electrical code requirements which provide for the protection of various industrial transformer installations. Course competencies include developing plans, sizing equipment and components, safety,and references to applicable sections of the NEC.

413-571
Codes 1: Introduction to NEC 0.50

This course introduces the student to the layout and purpose of the National Electric Code. It will teach the student proper methodology to research a code question and correctly interpret what is read. Students will research the structure of the NEC and define the requirements of the code that are common to all electrical installations. Students will examine the installation requirements for fire pumps, emergency systems and fire alarms.

413-576
DC Electricity 2.00

This course introduces the fundamental concepts of and computations related to DC electricity. Emphasis is placed on circuit analysis and the problem solving skills necessary for the maintenance of modern industrial electric systems. Competencies related to metering and safe use of measuring devices are included.

413-577
Motor Controls 1 1.00

This course will lead the student through the fundamentals of electric motor control. Students will learn to recognize and draw the basic symbols, the language of motor control, and how to apply these symbols into current industrial format. Students will learn to draw and read ladder and wiring diagrams. Students will be introduced to the logic used in motor control and be required to apply this logic in order to correctly interpret, design, and wire control circuits.

413-578
Motor Controls 2 **1.00**

This course will examine motor controls applicable to the industrial electrician trade.

413-579
Motor Controls 3 **1.00**

This course examines motor controls applicable to the industrial electrician trade. Applications and assessment activities are intended in this course.

413-586
Motors and Generators **1.00**

This course introduces concepts, terminology, and safety. This course is designed to give the student the knowledge required by industry to maintain electric motors and generators. This course will cover DC motors and generators, single phase motors as well as alternators.

413-587
Power Systems & Variable Speed Drives **2.00**

This course provides the opportunity for students to learn about power systems and variable speed drives. Topics include electricity, electronics, power transmissions, motor operations, AC and DC motor drives, servo and stepper drives, peripherals and communication. Students will also explore closed loop control, feedback devices, and drive maintenance and the troubleshooting of VSD's.

413-588
Solid State Electronics **2.00**

This course provides the student with the skills and knowledge for troubleshooting basic solid-state devices and circuits. The construction, identifications, and operating characteristics of solid-state devices is investigated. The student builds test circuits, gathers and analyzes data, and follows safety procedures. Methods for locating defective componenets are applied. The replacement of printed circuit board components is performed. Also examined is the effect of temperature on the operation of solid state devices.

413-589
Transformers **1.00**

This course is designed to introduce the Industrial Electrician student to the basic concepts of single and three-phase transformers. The course will cover transformer theory, turns, current and voltage ratios as well as proper connections and use of various transformers.

413-590
National Electrical Codes **1.25**

This course comprehensively covers the National Electrical Code. It is designed to acquaint the student with NEC calculations, NEC theory, and NEC content. This program explains the strategies of taking an exam & you get to see how prepared you are by taking simulated tests for the Journeyman or Masters Electrician Exam.

413-591
Troubleshooting Electrical Systems **1.00**

Learn electrical and electronic system applications, alternate energy systems, NFPA 70E requirements, step by step procedures for troubleshooting and hands on activities. Gain knowledge for troubleshooting modern technology such as solar, security systems, robotics, lighting systems, charging systems wind turbines and others.

413-592
Troubleshooting Elect Motors **1.00**

Learn procedures for troubleshooting motors, generators and motor circuits commonly used in commercial, industrial, institutional and residential applications. Learn: how to locate problems using test instruments, proper motor replacement, safety, latest technology applications, proper code compliance and how to analyze problems for best solution.

413-593
Grounding and Bonding Electrical System **1.00**

This in-depth course provides the student with practical knowledge of code compliant grounding and bonding of electrical systems. Students will learn when and when not to ground electrical systems, different types of grounding techniques and how to properly install them.

413-594
Grounding and Bonding II **1.00**

This in-depth course provides the student with practical knowledge of code compliant grounding and bonding of electrical systems. Students will learn when and when not to ground electrical systems, different types of grounding techniques and how to properly install them.

413-595
Fluid Power Systems - Hydraulics **0.50**

The hydraulics course is customized for Industrial Electricians and relates the basics of hydraulic theory and hydraulic components. Safety and the interrelationship between hydraulic power with electrical control is emphasized.

413-596
Fluid Power Systems - Pneumatics **0.50**

This is a pneumatics course customized for industrial electrician students who deal with fluid power systems. This course will relate the basics of pneumatic theory and pneumatic components. Safety and the interrelationship between pneumatic power with electrical control is emphasized.

413-597
Green Awareness for the E & I 3Trades **1.00**

Green Awareness for the E&I trades examines new and emerging technolgoies influenced by green trends which are impacting work processes today and in the future. The course introduces students to green related knowledge and skills. Green topics covered in this course include energy efficiency; energy conservation; changes in state, national and local codes; lighting alternatives; alternative energy generation; energy efficient motors, drives, controllers and equipment; eliminating toxic materials and reducing wastes; and specific "green" applications for the various trades involved under the E & I trades.

413-598
Programmable Logic Controllers 1 **1.00**

This course is designed to teach fundamentals of programmable logic controller and its programming software. This course will introduce terminology, concepts, print reading and safety.

413-599
Programmable Logic Controllers 2 **1.00**

This is the second of 3 courses for industrial electrician students.

413-600
Programmable Logic Controllers 3 1.00

This is the third course of 3 for industrial electrician students. PLC applications and assessment projects are planned.

413-601
Safety and Print Reading 0.50

This course will aquaint the student with the interpretation of "Prints" (blueprints) and other engineering and manufacturing documentation. The primary focus of the course will be on the basics of prints and how they are used to convey information to technicians. Application of electrical prints from industrial settings will be studied.

413-602
AC & DC Motors 1.00

This course identifies the components of an AC motor, introduces the student to DC motors, basic components and theory, and discusses split-phase motors and capacitance start motors. Defines and explains AC motor functions, synchronous speed and how to calculate it, the components and functions of various three-phase motors, the components and functions of externally excited motors, starters, and variable speed drives, basic magnetic principles, sine waves, methods of increasing magnetic flux in a conductor, how rotating field is created in an AC motor, torque, and role in motor operation, and the components and functions of externally excited motors, starters, and variable speed drives. Demonstrates the relationship between phased current and roto spin, induction, its effect on a rotor, armature reaction, compensations, and introduced voltage. Trains the student to practice slip and how to calculate it using a formula and distinguish single-phase motors from three-phase motors.

413-603
Solid State Electronics Basics 1.00

This course provides the student with the skills and knowledge for troubleshooting basic solid-state devices and circuits. The construction, identifications, and operating characteristics of solid-state devices is investigated. The student builds test circuits, gathers and analyzes data, and followsx safety procedures. Methods for locating defective components are applied. The replacement of printed cirucuit board components is performed. Also examined is the effect of temperature on the operation of solid state devices.

413-604
Variable Speed Drives 1.00

This course provides the opportunity for students to learn about power systems and variable speed drives. Topics include electricity, electronics, power transmissions, motor operations, AC and DC motor drives, servo and stepper drives, peripherals and communication. Students will also explore closed loop control, feedback devices, and drive maintenance and the troubleshooting of VSD's.

413-701
Elect. Safety & Print Reading
Electrical Safety & Print Reading 1.00

This course is designed to provide basic electrical skills to those who need to perform first-line electrical maintenance tasks including the safe isolation, replacement, and testing of a range of common electrical devices (motors, sensors, heating elements, solenoids, etc.) in a safe and effective manner. In addition to basic electrical skills, this course will acquaint the student with the interpretation of "Prints" (blueprints) and other engineering and manufacturing documentation. The primary focus of the course will be on the basics of prints and how they are used to convey information to technicians. Application of electrical prints from industrial settings will be studied. Importantly, the format of the course is specifically designed so that, when combined with suitable on-site consolidation of training, it will assist the maintenance manager in meeting the legal requirements for employee competence in electrical work.

413-705
Codes for Industrial Electricians 2.25

This course introduces the student to the layout and purpose of the National Electric Code. It also strives to teach the student proper methodology to research a code question and correctly interpret what they are reading. Students will research the structure of the National Electric Code and define the requirements of the code that are common to all electrical installations. In addition, students will examine the installation requirements for fire pumps, emergency systems and fire alarms, plan for the installation of overcurrent protection devices and how to select the proper boxes, cabinets, and conduit, the application of grounding, examine Article 250, Article 300 of the NEC and wiring methods, determine sizing requirements for cords and cables for isntallations common to industrial facilities, the selection of proper conductors and raceways for industrial facilities, the code requirements which provide for the protection of various industrial transformer installations.

419-511
Hydraulic Pumps Apprenticeship 0.75

The student will be able to design hydraulic pumps using a variety of pressure and flow control valves.

419-512
Hydraulic Controls Apprenticeship 1.00

The student will study and analyze the effects of various control valve applications.

419-551
Pneumatics Apprentice 1.00

Learning is accomplished with lecture and laboratory using hydraulic, pneumatic, and electrical hardware, videotapes, multi-media interactive video, reference books, and computer simulation software.

419-567
Basic Hydraulics Beginning 1.00

Students study all the basic components of hydraulics in simple fluid power systems, covering topics such as symbols, flow control valves, pressure control valves, and directional control valves and pumps.

419-570
Fluid Power - Apprentice 1.00

This course introduces the student to all the basic concepts without going into detail and applications.

420-317
CNC Machining Operations 2.00

This course presents Computer Numerical Control (CNC) concepts and skills. Students learn how to setup and operate CNC machinery. Basic programming, G and M codes, and fundamental features of CNC control panels are introduced. PREREQUISITES: Course 420-330 - Machine Tool I with a Minimum grade of C or TR

420-318
Die Stamping 4.00

This course presents concepts and skills used in the construction of progressive dies. Through critical thinking and practical

applications, students will construct two progressive pierce and blank dies that will produce the parts for a non-twist clamp. They will make the hardware that turns the stamped pieces into five separate working clamps and perform entry-level machining tasks for employment in the machining industry. PREREQUISITES: Course 420-332 - Machine Tool II with a Minimum grade of C or TR

420-319
Electrical Discharge Machining **2.00**

This course presents concepts and skills needed to use CNC programming to operate a wire Electrical Discharge Machine (EDM). Students will program a Mitsubishi wire EDM and perform routine maintenance of the machine and part set-up. PREREQUISITES: Course 420-317 - CNC Machining Operations with a minimum grade of C or TR

420-326
GD & T for Die Making **1.00**

This course presents concepts to interpret more complex prints and tolerancing techniques. Students will examine part dimensions and assemblies and construct stamping dies. PREREQUISITES: Course 420-329 - Industrial Print Interpretation with a minimum grade of C or TR

420-328
Heat Treating Processes **2.00**

This course explores the properties of industrial metals with a focus on ferrous metals and tool steels. Students will examine a variety of heat treating applications and will perform metal hardness and stress testing.

420-329
Industrial Print Interpretation **2.00**

This course presents universal techniques for interpreting mechanical and industrial prints. Students learn to visualize parts and assembly through interpretation and sketching activities. Drawing standards, abbreviations, dimensioning rules and sectional views are emphasized. Geometric dimensioning and tolerancing are introduced.

420-330
Machine Tool I **4.00**

This course introduces the basic concepts and skills needed to operate engine lathes, power saws, drill presses and bench applications. Safe and proper operation of tools and machines is emphasized. Students will operate speeds, feeds, cutting tools, tool geometry, tool grinding and work-holding devices. Dimensional accuracy and finished quality will be emphasized. COREQUISITES: Course 420-332 - Machine Tool II

420-332
Machine Tool II **4.00**

This course expands on the basic concepts and skills introduced in Machine Tool I related to engine lathes, power saws, drill presses, bench applications, CNC setup and operation. Safety and proper operation of tools and machines is emphasized. Speeds feeds, cutting tools, tool geometry, tool grinding and work-holding devices are examined. Dimensional accuracy and finished quality are emphasized.

420-333
Metallurgy Principles **1.00**

This course examines the principles concerning the metals used in the industrial world. The production and properties of these materials are presented as well as their application. Students investigate the behavior of ferrous and non ferrous metals with an introduction to steel alloys.

420-334
Precision Measuring and Gauging **1.00**

This course introduces the student to precision measuring equipment and techniques. Students will measure a wide variety of interior and exterior part features. Advanced equipment such as the dial caliper and outside micrometer will be presented.

420-335
Surface Grinding **1.00**

This course presents techniques for the precision grinding of various metals. Students perform a variety of complex setups and precise machining. Safety and cleanliness are emphasized. PREREQUISITES: Course 420-330 - Machine Tool I

420-342
CNC Introduction and Support Equipment Basics **1.00**

This course is designed to give the students a familiarization with the necessary practices and techniques used to operate Computer Numerical Controlled (CNC) machines. Some of the topics covered include CNC machine introduction, safe practices and techniques used to remove burrs, Machinery's Handbook usage, basic CNC machine operator maintenance, and production support equipment use and operation. COREQUISITES: Course 420-345 - Gauging/ Inspection and 623-147 - Manufacturing Shop Safety

420-343
CNC Machine Tool Operation **4.00**

This course is actual run time in the lab for hands-on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run. Students bring together all of the theories learned in other classes and apply them to the production process.

420-344
CNC Offsets and Operations **1.00**

In this course, we will cover CNC machine operations. Topics covered include machine homing, tooling used, an understanding of offsets, setting offsets, and the application of offsets in the CNC machine. COREQUISITES: Course 420-345 - Gauging/ Inspection

420-345
Gauging/Inspection **2.00**

Students will learn to apply blueprint specifications, perform shop math calculations, understand geometric dimensions and tolerances, and correctly use many different analog and digital measuring instruments, including various types of micrometers, calipers, stales, gauges (height, plug, thread, and surface roughness), and optical comparators. COREQUISITES: Courses 421-376 - Blueprint Reading and 804-370 - Mathematics I/Applied

420-494
Cost Estimating **0.25**

This course will provide the learner knowledge of the necessary steps to cost and build the various componenets used in manufacturing, including dies, mold, fixtures and gauges. The learner will utilize a hands-on approach to performing cost estimations as if they were in the position of doing so in the real world for a company.

420-495
Grinding, Drilling, & Cut-Off Machine 1.00

In this course. the techniques and machines used for surface grinding, hand grinding, and ID+OD grinding will be reviewed. The use of different types of drilling machines and their functions will be presented, including how they benefit the tool and die maker. The importance of cut-off machines including the various types, pros and cons will also be discussed.

420-505
Machine Technology I 1.00

Survey different areas of machine technology. Variety of areas covered are: safety, measurement, layout, hand tools, drills, grinding, lathe, milling.

420-506
Basic CAD/CAM 1.00

This course is designed for students in the CNC Apprenticeship program to gain basic knowledge of what CAD/CAM is and how it is effective in the CNC manufacturing area. The student will be introduced to various concepts and methods of producing parts and drawings and then uploading them to the CNC machine for machining. The student will learn the basics of drawing a part from a concept or looking at a drawing and implementing the tools in the CAM program.

420-507
Machine Technology II 1.00

Advanced manual machine operation will be explored in this course. Practical tasks and assignments will be performed on the drill press, lathe, and milling machine.

420-509
CNC Programming and Planning 1.00

This course is designed for students in the CNC program to gain knowledge of planning the steps to machine a part and learn how to program the machine using these steps. The student will be given a print and they will need to decide how to hold the part, what features to machine first and second, and why they need to be machined in this order. The student will also learn about various machines and which one works best with their applications in industry. The student will utilize the CAD/CAM from other courses to help with the programming and planning.

420-516
Precision Measurement 1.00

This course introduces students to the use of various types of precision measurement instruments used in the CNC/Tool & Die manufacturing environment. The students will learn about different types of Micrometers, Calipers, Gage blocks, and Gage pins. The students will be taught how to measure inside the part with telescoping gauges or Bore gauges. The students will also be introduced to SPC. The method of holding light tolerances will be discussed in this course also.

420-517
Cutting Tools 0.50

This course will introduce various types of cutting tools used in the Tool & Die/Mold Maker fields. While in the class, the students will learn the bsics of drills and taps to the many different types of inserts, cutting edges and angles associated with these cutting tools. We will also discuss the diferent types of tool holders for these tools and the pros and cons of the different types of holders.

420-518
Machinery Handbook 0.25

This course is designed to introduce the students to the Machinery's Handbook. The Machinery's Handbook is an in depth book comprised of information pertaining to the manufacturing world. We will focus on the Tool & Die/Mold making information found in the book. The students will also focus on various ways to look up information using this book.

420-519
Geometric Dimensioning & Tolerancing 0.25

This course is designed to introduce the students to Geometric Dimensioning & Tolerancing (GD&T) systems. We will discuss the 5 different groups and the symbols associated within the GD&T groups. The students will be shown how and why the GD&T symbols are used on a bludprint. While introducing the different sysmbols for GD&T, the students will be shown how to check or verify the manufactured parts using these various symbols.

420-520
Precision Measurement 0.50

This course introduces students to the use of various types of precision measurement instruments used in the CNC/Tool & Die manufacturing environment. The students will learn about different types of Micrometers, Calipers, Gage blocks, and Gage pins. The students will be taught how to measure inside the part with telescoping gauges or Bore gauges. The students will also be introduced to SPC. The method of holding light tolerances will be discussed in this course also.

420-542
Metal Science for Metal Trades 1.00

This course provides the apprentice with technical related instruction in metallurgy, to learn the proper terminology and technical information used by tool and die makers.

420-560
Machine Trades/Mathematics 3 1.00

420-561
Machine Trades/Mathematics 4 1.00

420-569
Electrical Discharge Machining Apprenticeship 1.00

Course is designed to give apprentices a basic understanding of theory and process of sinker and wire EDM in toolmaking.

420-592
Numerical Control 1.00

This course is a basic course as it relates to machine tools. Learning the operation of numerical control and the programming of simple jobs. Designed to introduce numerical control to machine trades apprentices.

420-593
Mechanical Drive Components 2.75

This course will deliver the necessary information so the student will be able to select, install, adjust and inspect the following industrial drive components: belts/pulleys, couplings, bearings, chains/sprockets and gears. Furthermore this course will give the student the opportunity to incorporate the above listed industrial drive components into complex mechanical power transmission systems. The lecture portion of the course will be augmented with hands-on exercises.

421-316
Blueprint Reading/Advanced 2.00

Review of basic blueprint reading principles. Deals with more forgings, castings and complex prints. New material introduced includes surface textures, fits, auxiliary views, cast iron, pin fasteners, gears, cams, ratchet wheels, and additional GDT coverage. Students read information units, perform mathematical calculations, and answer questions pertaining to part prints. PREREQUISITES: Course 444-337 - Fund of Blueprint and Shop Safety

421-376
Blueprint Reading 2.00

Read and interpret information found on shop prints. Students answer questions in text relating to part prints. Learn to visualize objects from various views provided. Perform math calculations to obtain necessary dimensions and tolerances shown by symbols, notes and various views. Covers rectangular coordinate system and inch/metric systems. Introductory information on geometric dimensioning and tolerancing (GD&T).

421-505
Drafting and Sketching 1.00

One of the most important communication tools used in the modern factory is the drawing. Drawings and sketches are the graphic language used universally in the manufacturing world. Anything from simple mechanisms to complex systems can be graphically described. The skill of drafting and sketching needs to be a part of every mechanic's knowledge base. This course will focus on learning this valuable communication tool. Topics covered include using drafting and sketching tools properly and learning to read and interpret the drawings and sketchings of others. Lecture will be supplemented by individual class exercises that provide actual practice for participants.

421-515
Blueprint Reading I/Metal Trades 1.00

This course covers the basic principles necessary for training in the interpretation of blueprints and free hand drawings of machine parts.

421-516
Blueprint Reading 2/Machine Trades 1.00

This course teaches students proficiency in the interpretation of blueprints which illustrate job procedure tactics and their relation to drafting. Special attention is given to drawings which represent common machine processes.

423-501
Equipment Installation 0.75

Students will layout equipment installations, plan for moving equipment, and set and level equipment.

423-502
Mechanical Power Transmission 0.75

Course examines drive transmission systems and their applications, including roller chains. Students will develop skills inspecting power transmission systems and troubleshooting mechanical drive systems.

423-503
Packings, Seals, Gaskets 0.50

Students will examine packing, seals, and gaskets and compare materials and applications. Then skills in layout, cutting, inspecting, removing, and installing these components will be developed.

423-504
Pipefitting and Valves 0.75

Course introduces students to pipe sizes, materials and schedules, examines fittings, tubing and valves, and develops skills related to layout, installation, and maintenance.

423-506
Sheet Metal & Structural Steel Fab 0.75

Course compares types of sheet metal and tools used by the trade. Students will develop skills related to fabricating sheet metal and structural steel and then erecting structural steel.

423-507
Vacuum Systems 0.75

Course introduces principles of vacuum systems and interpreting vacuum system schematics. Students will then develop skills related to installing, repairing, replacing and applying troubleshooting principles to vacuum systems and components. Course examines preventative maintenance techniques commonly used on the job.

423-508
Fasteners 0.25

Course provides students with a chance to compare fasteners and their uses, analyze fastener failures, and install mechanical fasteners.

423-530
Principles of Power and Hand Tools 0.50

The basic principles of hand tools and power tools will be explained. Learning will be accomplished by using a combination of lecture and lab.

423-535
Principles of Power Transmission and Lubrication 1.00

The basic principles of mechanical power transmission and lubrication will be explored. Learning is accomplished by using a combination of lecture and practical lab.

423-540
Equipment Installation 0.50

The basic principles of equipment installation will be explored. Learning is accomplished by using a combination of lecture and practical lab.

423-545
Principles of Bearings, Couplings, and Conveyors 1.00

The basic principles of bearings, couplings, and conveyors will be explored. Learning is accomplished by using a combination of lecture and practical lab.

423-550
Principles of Carpentry & Concrete Work 1.00

Learning is accomplished by using a combination of lecture and practical lab assignments. The basic principles of carpentry and concrete work will be explored.

423-555
Principles of Structural Steel, Sheet Metal, and Metal Work 1.00

Learning is accomplished by using a combination of lecture and practical lab assignments. The basic principles of structural steel, sheet metal, and metal working will be explored.

423-560
Principles of Screw Threads, Mechanical Fasteners, Adhesives, and Sealants 0.50

Learning is accomplished by using a combination of lecture and practical lab assignments. The identification, application, selection, and making of screw threads and other mechanical fasteners will be explored.

423-565
Principles of Rigging 0.50

Learning is accomplished by using a combination of lecture and practical lab assignments. The basic principles of safe rigging will be explored.

423-716
Metallurgy 1.00

This course develops skills regarding metallurgical concepts. Students will compare various metals and their applications, apply metallurgical techniques to work processes, test metals for hardness, and examine heat treating applications.

423-724
Preventative & Predictive Maintenance 1.00

Course examines both preventative and predictive maintenance concepts as they apply to millwright work processes and machine maintenance. Students will develop skills related to assessing machine conditions and faults based on both preventative and predictive maintenance.

423-730
Bearings 0.75

Students will examine bearing types and applications, and compare equipment bearings. Learners will develop skills related to bearing inspection, selection, removal, mounting, lubrication and diagnosing bearing failures.

423-731
Couplings & Alignment 1.00

Course compares different coupling types and examines common misalignment problems. Learners will develop skills related to inspecting, troubleshooting, and preparing couplings for removal and installation, and also aligning and lubricating couplings.

424-510
Painting/Decorating I/ Related 2.00

History of apprenticeship, painting and trade organizations. Common trade terms, mathematical review. Materials of the trade, tools and equipment, ladders and scaffolding. Surface preparation and application procedures. Paint failures and remedies, safety will be covered.

424-511
Painting/Decorating II/Related 2.00

Subjects covered: color, its nature and effects. Characteristics and relationship of color. Preparation and mixing of colors. Types of ladders and their limitations and use. Ground based scaffolds, rigging and off the ground work platforms. Mobile and power scaffolds. Safety and personal protection in ladder and scaffold work.

424-512
Painting/Decorating III/Related 2.00

Surface preparation for wallcoverings. Tools, equipment and adhesives. Wallcovering materials, wallcovering estimating and application. Conventional air spray systems, use of. Safety in spray painting. Airless spray systems. Specialized spray systems and equipment.

424-513
Painting/Decorating IV/Related 2.00

Subjects covered: wood and wood products. Materials and procedures for wood surface preparations. Wood finishing materials and procedures. Maintenance and repair of old finishes. Finishing schedules and finishing problems. Corrosion, film thickness and surface preparation. Safety with special coatings, materials and their use, inspection and testing.

424-514
Painting/Decorating V/Related 2.00

Subjects covered: types of abrasive blasting equipment and their use. Surface preparations with abrasive blasting, selection of abrasives. Blasting standards and specifications. Water blasting, steam cleaning. Blasting exposed aggregate finishes, various parts of a set of blueprints and specifications. Lines, symbols, scales and dimensions. Practice reading architectural and engineering drawings.

424-515
Painting/Decorating VI/Related 2.00

Subjects covered: drywall tools and equipment. Materials of the trade, taping and finishing applications, texturing and special effects, common problems and corrections. Techniques, materials and tools for: glazing, antiquing, woodgraining, marbleizing, stipple finishing, texturing, gilding, stenciling.

424-516
Painting & Decorating VII 1.00

This course allows students to finish incomplete program material, learn special decorative (faux) finishes, and complete the final three year exam in painting and decorating.

424-517
Painting and Decorating VII 2.00

The history of painting, decorating and apprenticeship will be covered along with trade organizations. Painting failures and remedies will be covered and demonstrated.

427-500
Plumbing I/Related 2.00

427-501
Plumbing II/Related 2.00

427-502
Plumbing III/Related 2.00

427-503
Plumbing IV/Related 2.00

427-504
Plumbing V/Related 2.00

427-505
Plumbing VI/Related 2.00

427-509
Waste Vent & Drain Apprenticeship 1.00

Students will learn the basic fundamental practices and techniques of waste, vent, and drain piping as they relate to the plumbing code. Learning will be accomplished through a combination of class discussion and practical exercises.

427-515
Plumbing Fundamentals Apprenticeship 1.00

Students will learn the basic fundamental practices and techniques of the plumbing trade with an emphasis on safety throughout the course. Learning will be accomplished through a combination of class discussion and practical exercises.

427-516
Plumbing Heating Apprenticeship 1.00

Students will learn the fundamental principles of various types of hot water heating systems. Learning will be accomplished through a combination of class discussion and practical exercises.

427-517
Plumbing Code Apprenticeship 1.00

Students will learn to use and apply the information contained in the plumbing code book. Learning will be accomplished through a combination of class discussion and practical exercises.

427-579
Plumbing Advanced Topics 2.00

Plumbing Apprentices will be required to interpret building plans and specifications, and apply code requirements to site plans, floor plans, and isometric drawings of DWV, water, POWTS, and stormwater systems.

432-510
Sheet Metal Techniques I 2.00

432-511
Sheet Metal Techniques II 2.00

432-511A
Sheet Metal Techniques II - 54 Hr 1.50

432-511B
Sheet Metal Review 0.50

An overview of Sheet metal construction and final exam based on previous courses to prepare apprentices for journey worker level work.

432-512
Sheet Metal Techniques III 2.00

432-513
Sheet Metal Techniques IV 2.00

432-514
Sheet Metal Techniques V 2.00

432-515
Sheet Metal Techniques VI 2.00

432-516
Sheet Metal Techniques VII 2.00

435-505
Industrial Pipefitting I Apprenticeship 1.00

The purpose of this course is to provide the student with knowledge and experience in specifying and selecting materials for a particular piping system. Often, there may not be a set design to a specific piping system. A general system may have been designed, but it is the experienced pipefitter who must select components and determine the location and size of piping runs. Pipefitting I is an engineering course that will focus on the mechanical design of a piping system and how to make it both safe and efficient.

435-506
Industrial Pipefitting II Apprenticeship 1.00

In our Pipefitting I course, we used an engineering approach to design piping systems. Pipefitting II will take the skills learned in this course and apply them to the actual hands-on application. The student must not only design the piping system, but select the components and build the system. This course is a measurement of all we have learned previously and should allow the student to showcase the skills learned.

435-526
Drafting for Pipefitters-Apprenticeship 1.00

This course instructs students in very basic pipe drafting, graphic symbols for piping, use of the architectural scale rule, visualizations, plan views, and isometric and oblique drawings.

439-300
Basic CAD and Basic Toolroom CAM 2.00

This course is designed to introduce the student to Basic CAD (Computer Aided Design) / Basic CAM (Computer Aided Machining) practices used in the tool room. The student will complete a machined part from the beginning to the end using the CAD/CAM software. Each student will draw a part using CAD software, the student will then assign the necessary tools needed to machine the part, and program the tools to machine part. The students will then run the part through a simulator and prove out their program. Once the part is proven they will then download the program to a tool room machine and produce the part safely and correct.

439-301
Tool Room Theory 1.00

The Tool Room Theory course will cover topics such as Die Stamping, Jig and Fixtures, Mold Making and advanced tooling techniques. The students will gain knowledge in each of these topics through various class discussions and hands on displays. This course will also cover various types of cutting tools and their purpose on the machining floor.

439-505
Stamping and Die Design Applications 1.00

This course presents concepts and skills used in the construction of various types of stamping and forming dies. Students will learn how stamping dies work and what parts make-up the design.

439-506
Mold Die Design Applications 1.00

Students will research design applications and the construction of various types of molds used in industry today. Instruction will include how molds work and what parts make-up the mold design.

439-507
Milling/Turning 1 1.00

This course introduces the basic and minor advanced Milling and Turning used in industry today. Safe and proper operation of tools and machines is emphasized. Students will learn speeds and feeds and use various types of tools used on the lathe and mill.

439-508
Milling and Turning II 1.00

This course is designed for students in the CNC Apprentice program to gain advanced knowledge of the support machines used in the tool room and CNC manufacturing environments. This is an advanced class and uses advanced techniques from the Milling and Turning I course. Students will make advanced parts and fixtures for the CNC machines. Machine processes used in this class will help support CNC machining methods.

439-535
Jig and Fixture Design **1.00**

This course explores the basic types and functions of jigs and Fixtures, design economics. Design and construction of jigs, fixtures, and specialized workholding topics.

442-101
Welding Basics **1.00**

This lab course covers the fundamentals of welding. Welding, soldering, brazing, and fabrication of various metals are included.

442-102
Introduction to Welding **2.00**

This course provides the theory and practical experience for arc and gas welding techniques. An emphasis is placed on basic safety, equipment usage, and proper procedures. The welding of ferrous and non-ferrous metals will be explored.

442-302
Metal Fabrication I **3.00**

This course is an introduction to basic metal fabrication, including safety, measuring, hand tools, layout, and applications with shearing, drilling, bending, tack welding, and inspection of final projects.

442-314
Welding/Fundamentals of **2.00**

This course covers the four main welding processes of gas metal ARC (mig wire) shielded metal arc (stick) gas tungsten arc (tig, heliarc) and oxyacetylene weld, cut and braze. Ideal course for beginners, home welders or apprentices.

442-321
Welding/Gas Metal Arc Welding **3.00**

(GMAW; MIG; Short-Arc; Wire.) Instructs in basic safety, equipment usages and procedures with various filler metal in four basic welding positions. Instruction in plasma arc cutting of various metals. Provides considerable hands-on experience as well as technical information.

442-322
Welding/Shielded Metal Arc Welding **3.00**

(SMAW,Stick,Stick-Arc) Instructs in basic safety, equipment usages and procedures with five basic welding electrodes in four basic welding positions. Provides considerable hands-on experience as well as technical information. Allows for simulated structural steel welding certification opportunity.

442-323
Welding/Gas Tungsten Arc Welding **3.00**

(GTAW, TIG, Heli-Arc, Tungsten) Instructs in basic safety, equipment usages and procedures with various filler rods in three basic welding positions. Provides considerable hands-on experience as well as technical information.

442-324
Weld Printreading and Fabrication Procedures **2.00**

Instructs in basic graphic communication relating to the welding field. Provides for hands-on application of fabrication from blueprints. Follows American Welding Society welding symbol format.

442-326
Welding/Robotic Advanced GTAW **4.00**

This course covers basic safety, equipment usage, and procedures with a Panasonic VR 008 G2 series robot on programming and advanced gas metal arc welding. COREQUISITES: Course 442-335 - Welding/Robotic Program and Plasma Cutting

442-327
Welding/Robotic Advanced GMAW **4.00**

This course covers basic safety, equipment usage, and procedures with a Panasonic VR 008 G2 series robot on programming and advanced gas tungsten arc welding. COREQUISITES: Course 442-335 - Welding/Robotic Program and Plasma Cutting

442-328
Welding/Robotic and Plasma Welding **2.00**

This course covers basic safety, equipment usage, and procedures with a Panasonic VR 008 G2 series robot on programming and plasma welding. COREQUISITES: Course 442-335 - Welding/Robotic Program and Plasma Cutting

442-329
Welding/Advanced Oxyacetylene **2.00**

Provides advanced welding applications in O-A welding, torch cutting and fitting of structural steel and brazing of alloy materials. Includes Gateway Technical College small pipe weld certification. PREREQUISITES: Course 442-334 - Welding/Oxyacetylene

442-330
Welding/Advanced Shielded Metal Arc Welding **3.00**

Provides advanced welding applications in SMAW welding with small (3/23 inch) and large (5/32 inch) electrodes hardface, aluminum, structural and pipe applications. PREREQUISITES: Course 442-322 - Welding/Shielded Metal Arc Welding

442-332
Welding/Advanced Gas Metal Arc Welding **3.00**

Provide advanced welding applications in GMAW welding using various size and types of electrodes of hard and soft wires on structural applications. Includes Gateway Technical College flux cored weld certification. PREREQUISITES: Course 442-321 - Welding/Gas Metal Arc Welding

442-333
Welding/Advanced Gas Tungsten Arc Weld **3.00**

Provides advanced welding applications in GTAW welding using stainless steel, aluminum and mild steel. Includes Gateway Technical College aluminum tensile certification and steel plate certification. PREREQUISITES: Course 442-323 - Welding/Gas Tungsten Arc Welding

442-334
Welding/Oxyacetylene **3.00**

(O-A; Gas) Instructs in basic safety, equipment usage and procedures with steel and braze filler rods in the four basic welding positions. Instructs in O-A cutting; providing considerable hands-on experience as well as technical information.

442-335
Welding/Robotic Program and Plasma Cutting **2.00**

This course covers basic safety, equipment usage, and procedures with a Panasonic VR 008 G2 series robot on programming and plasma cutting. PREREQUISITES: Courses 442-334 - Welding/Oxyacetylene, 442-321 - Welding/Gas Metal Arc Welding, 442-322 - Welding/Shielded Metal Arc Welding,

and 442-323 - Welding/Gas Tungsten Arc Welding

442-336
Metal Fabrication II **3.00**

This course presents layout application, blueprint and weld symbol interpretation, welding, fabrication, equipment set ups, and operation skills to safely complete metal fabrications. Selection of fabrication equipment and its safe operation is emphasized. Tools and techniques used in metal fabrication are introduced and students practice their use. PREREQUISITES: Courses 442-302 - Metal Fabrication I, 442-324 - Weld Printreading and Fabrication Procedures, and 804-370. Courses 442-321 - Welding/Gas Metal Arc Welding and 442-322 - Welding/Shielded Metal Arc Welding or 442-323 - Welding/Gas Tungsten Arc Welding

442-342
Welding/Pipe Oxyacetylene Fitting **1.00**

Provide cutting and fitting of basic pipe joints. Includes pipe layout. PREREQUISITES: Course 442-334 - Welding/Oxyacetylene

442-343
Welding/Pipe Shielded Metal Arc Welding **2.00**

Provide open butt SMAW welding with E6010 in 2G, 5G and 6G positions. PREREQUISITES: Course 442-322 - Welding/Shielded Metal Arc Welding

442-344
Welding/Pipe Shielded Metal Arc Certification **2.00**

Provide open butt SMAW welding with E6010 root, E7018 fill i 2G, 5G and 6G positions. Includes Gateway Technical College pipe certification. PREREQUISITES: Course 442-322 - Welding/Shielded Metal Arc Welding

442-345
Welding/Pipe Gas Tungsten Arc Welding **2.00**

Provide open butt GTAW with ER70S-2 filler and E7018 filler in 2G, 5G, 6G positions. PREREQUISITES: Course 442-322 - Welding/Shielded Metal Arc Welding

442-346
Welding/Pipe Gas Tungsten Arc Certification **2.00**

Provide open butt GTAW root and fillers with ER70S-2 in 2G, 5G and 6G positions. Provides Gateway Technical College welding certification. PREREQUISITES: Course 442-323 - Welding/Gas Tungsten Arc Welding

442-347
Welding/Pipe Gas Metal Arc Welding **2.00**

Provides open butt GMAW in 2G, 5G and 6G positions. PREREQUISITES: Course 442-321 - Welding/Gas Metal Arc Welding

442-510
Welding Fundamentals (apprentices) **1.00**

442-580
Welding Tech I **1.00**

Students learn how to set up and operate gas welding and shielded metal arc welding equipment and safely function in a welding shop. They weld various joints using gas welding and arc welding processes in the flat position.

442-581
Welding Tech II **1.00**

Students learn how to set up and operate Acetylene and Mapp gas welding equipment and safely function in a welding shop. They weld various joints using Acetylene and Mapp gas welding processes in the various positions.

443-101
Forklift Operation and Maintenance **1.00**

This course is intended to prevent accidents, injuries, and fatalities that may be caused by the improper and unsafe use of forklifts. The course will cover pre-operation, operation, and load handling by means of presentations and hands-on training. Course participants will earn certification after passing a driving test on a forklift.

443-311
Electrical Applications **3.00**

This course introduces the student to the basics of building electrical maintenance. Repair and replacement of 110 and 220 volt electrical components are emphasized. PREREQUISITES: Course 605-107 - Fundamentals of Electricity/Electronics COREQUISITES: Course 601-111 - Workplace Fundamentals

443-312
Carpentry and Repair, Basic **2.00**

Basic construction methods and building materials are discussed. Students develop the knowledge and skills to perform a wide range of building maintenance activities. COREQUISITES: Course 601-111 - Workplace Fundamentals

443-313
Interior Finishing **2.00**

This course will introduce the student to the basics of building interior finishing. Dry walling, painting, wall papering, and preventative maintenance will be emphasized. COREQUISITES: Course 601-111 - Workplace Fundamentals

443-314
Mechanical Systems **2.00**

The knowledge and skills required to perform basic plumbing installations and repairs are covered. COREQUISITES: Course 601-111 - Workplace Fundamentals

443-315
Industrial Preventative Maintenance **2.00**

This course will cover the basics of industrial preventative maintenance equipment, scheduling, and repair that will be covered in lecture and lab. COREQUISITES: Course 601-111 - Workplace Fundamentals

444-306
Swiss CNC Setup and Operation **3.00**

This course will further expose students to the setup of CNC Swiss Style Lathes, tooling, and the bar feeder. The student will setup and operate CNC Swiss-Style Lathes. Parts will be machined from selected programs. This course will also require students to write and produce programs for CNC Swiss Style Lathes. The student will also produce projects on the CNC Swiss Style Lathes using these programs. Setup and cycle reduction time will also be covered. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

444-307
Fundamentals of Swiss CNC Turning **3.00**

This course demonstrates the similarities and differences between conventional and Swiss turning processes. This course will

also review the bar feeder, main collect, guide bushing, gang slide tools and live tool options. Controller orientation and basic programming with the discussion and demonstration of basic swiss-specific G codes will be covered. Machine operation and processes will be the main focus of this course. This course will review the characteristics of hazardous wastes and its safe handling, storage and disposal. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

444-308
Fundamentals of Live Tooling **3.00**

This course is acutely aligned to provide the specific skills required to efficiently and effectively operate machines employing the 4 axis part processing to maximize machine productivity. This course covers concepts of CNC machining, set-up and operations, tooling and work-holding systems, and basics of manual part programming for drilling, milling, tapping, as well as boring operations by utilizing G codes. Hands-on practice is an integral part of the class. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

444-309
Live Tooling Setup and Operation **3.00**

The course is aligned to providing the knowledge and skills required to "translate" the part drawing into a finished product. Part programs will be created with a consistent focus on identifying those specific part features that readily lend themselves to 4 axis structured programming, and simultaneous machining. The individual will be capable of defining the list of required processes, their optimum sequential order, create the complete CNC part program, install the appropriate tools correctly, establish the program zero points, perform corresponding tool offsets, and related machine safety procedures. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

444-311
CNC Lathe Process **3.00**

This course is designed to provide the knowledge and skills required to create a CNC program that will convert stock material into a finished product. The student will be capable of defining the list of required processes, their optimum sequence, create the complete CNC part program, install the appropriate tools correctly, establish the program zero point, and perform corresponding tool offsets. This course is also an advanced, hands-on study of Computer Aided Design/Computer Aided Manufacturing theory and applications using CAD/CAM software. Emphasis is placed on generating programs using advanced modeling techniques for the CNC Lathe at an intermediate level under moderate instructor supervision. The course is structured to include classroom instructional theory and hands on operation of a CNC Turning Center. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

444-314
CNC Mill Process **3.00**

This course is designed to provide the knowledge and skills required to create a CNC program that will convert stock material into a finished product on a Vertical Machining Center. The students will be capable of defining the list of required processes, their logical / optimum sequence, create the complete CNC part program, install the approopriate tools correctly, establish the program zero point, and perform corresponding tool offsets. This course is also an advanced hands-on study of Computer Aided Design/Computer Aided Manufacturing theory and applications using CAD/CAM software. Emphasis is placed on generating programs using advanced modeling techniques for the CNC Mill at an intermediate level under moderate instructor supervision. The course is structured to include classroom instructional theory and hands on operation of a CNC Vertical Machining Center. PREREQUISITES: Courses 444-335 - CNC Lathe Set-Up and 444-336 - CNC Mill Set-Up

444-331
CNC Machining Technology **3.00**

This course provides an introduction to CNC machining processes and the technology that supports them. Some of the processes covered are spot drilling, drilling, reaming, tapping, counterboring, countersinking, defining and calculating speed and feed rates, screw thread identification, and drill sharpening. Students will perform these processes on manual equipment prior to observing them on CNC equipment. Basic computer skills are also covered in this course. COREQUISITES: Course 444-337 - Fund of Blueprint and Shop Safety

444-332
CNC Production Applications **2.00**

This course is actual run time in the lab for hands-on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run. They bring together all of the theories learned, in other classes, to the production process and apply them. PREREQUISITES: Course 420-342 - CNC Introduction and Support Equipment Basics COREQUISITES: Courses 420-344 - CNC Offsets and Operations and 444-331 - CNC Machining Technology

444-333
Fundamentals of CNC Turning Applications **3.00**

This course provides an introduction to CNC turning processes and their proper application. Some of the topics covered include lathe set-up and operation, lathe safety, types of lathes, lathe workholding devices, lathe cutting tools, grinding and sharpening of lathe cutters, and a review of lathe machining speeds and feeds. In this course, you will perform O.D. and I.D. turning operations on engine lathes as well as facing, drilling, reaming, tapping, grooving, chamfering, boring, knurling, tapering, and thread cutting operations. PREREQUISITES: Course 444-331 - CNC Machining Technology COREQUISITES: Courses 421-316 - Blueprint Reading/ Advanced and 804-371 - Mathematics II/ Applied

444-334
Fundamentals of CNC Milling Applications **3.00**

This course provides an introduction to CNC milling processes and their proper application. Some of the topics covered include machine set-up and operation, machine safety, types of milling machines, use and care of various cutting tools, and a review of milling speeds and feeds. The student will perform face and end milling operations as well as drilling, reaming, tapping, and slotting operations on manual milling machines. The proper use and care of accessories, such as edge finders, digital readouts, dial indicators, and boring heads, and an introduction to a Computer Numerical Control milling machine is

also covered. PREREQUISITES: Course 444-331 - CNC Machining Technology COREQUISITES: Courses 421-316 - Blueprint Reading/Advanced and 804-371- Mathematics II/Applied

444-335
CNC Lathe Set-Up **3.00**

Students will produce and troubleshoot CNC lathe set-ups from job packets and machine parts to blueprint specifications. Students will learn simple G and M codes, download programs to machines, graphically verify programs, and prove out parts on 2-axis turning center utilizing various CNC controllers. Set-ups will include faceting, turning, drilling, grooving, and thread operations. Students will also learn to produce some simple tooling necessary to complete various set-ups. COREQUISITES: Course 444-333 - Fundamentals of CNC Turning Applications

444-336
CNC Mill Set-Up **3.00**

Students will produce and troubleshoot CNC mill set-ups from job packets and machine parts to blueprint specifications. Students will learn simple G and M codes, download programs to machines, graphically verify programs, and prove out parts on 3-axis machining centers using various CNC controllers. Set-ups will include face, end, and profile milling and drilling, slotting, boring, and tapping operations. Students will also learn to produce some simple tooling necessary to complete various set-ups. COREQUISITES: Course 444-334 - Fundamentals of CNC Milling Applications

444-337
Fund of Blueprint and Shop Safety **3.00**

This course provides students with the skills to read and interpret information found on shop prints. Rectangular coordinate and inch/metric systems will be covered and will allow students to perform math calculations to obtain necessary dimensions and tolerances shown by symbols, notes and various views. Students will also study general shop safety for a machining environment, raising the awareness of workers to the hazards around them and identifying work and personal safety practices. Other safety topics will be covered, including MSDS sheets, personal protective equipment, and lockout tag out. Students who successfully complete this course will be eligible to complete an additional exam to receive MSSC certification.

444-338
Fundamentals of CNC Machine Application **4.00**

This course is designed to give students a familiarization with the necessary practices and techniques used to operate Computer Numerical Controlled (CNC) machines. Some of the topics covered include CNC machine introduction, safe practices and techniques used to remove burrs, basic CNC machine operator maintenance, and production support equipment use and operation. Topics such as machine homing, tooling used, an understanding of offsets, setting offsets, and the application of offsets in the CNC machine will also be covered. Actual run time in the lab will be provided for hands on machine operation. Students will work in groups and as individuals to gain experience in machine operation during a production run, applying theories learned to the production process. COREQUISITES: Course 444-337 - Fund of Blueprint and Shop Safety

444-339
Gauging and Quality Control **3.00**

This course introduces the methods and applications of Statistical Process Control (SPC) used in manufacturing operations. Emphasis will be placed upon the concepts of central tendency, variation and normal distribution of data. The development, application, and interpretation of variable and attribute control charts will be the main focus of this course. Students will also learn to apply blueprint specifications, perform shop math calculations, understand geometric dimensions and tolerances, and correctly use different analog and digital measuring instruments, including various types of micrometers, calipers, scales, gauges (height, plug, thread, and surface roughness), and optical comparators.

461-120
Small Power Equipment **3.00**

Structure and theory of the two and four cycle engines. Troubleshooting, storage, maintenance, and repair of the small gas engine are included. Safety of the operator is stressed along with the use and study of operator's manuals for small power equipment.

462-101
Maintenance Machining **3.00**

Students will learn the operation of machine tools necessary for industrial machine repair. The operation of a lathe, mill, drill press, and band saw will be incorporated in the manufacturing of repair parts and fabrications. Skills using precision measuring tools will also be advanced. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications with a minimum grade of C or TR COREQUISITES: Course 606-121 - Blueprint/Schematic Interpretation

462-102
Preventative/Predictive Maintenance **3.00**

The concepts of preventative and predictive maintenance will be delivered during this course. Preventative maintenance procedures will be developed and performed on complex systems by the students. Predictive technologies as thermal imaging and vibration analysis will be studied and performed. The concepts of Reliability Centered Maintenance and Total Planned Maintenance will also be included. COREQUISITES: Course 462-103 - Mechanical Power Transmission

462-103
Mechanical Power Transmission **3.00**

Students will learn bearing design and application, bearing failure and analysis, properties of lubrication and correct lubrication procedures, gear drives, belt drives, gear reduction units, and chain and shaft drives. Troubleshooting and maintenance of these types of power transmissions will be emphasized. PREREQUISITES: Course 628-109 - Mechanical Skills for Technicians

462-104
Machine and Equipment Installation **3.00**

Machine and Equipment Installation will cover the installation and setup of complex machinery and equipment. Precision machine leveling, alignment, laser alignment, and scraping fundamentals will be included in this course. PREREQUISITES: Course 606-121 - Blueprint/Schematic Interpretation

462-105
Robotics/Material Handling Systems 3.00

Students will learn the intricacies of electromechanical material handling systems during this course. Conveyors and robots will be connected to a microprocessor and the appropriate feedback devices to make a complete operational material handling system. COREQUISITES: Course 620-104 - Electro Hydraulic/Mechanical Systems

462-106
Industrial Mechanic Capstone Project 5.00

During this course, students working in a team environment will assemble and test a complex project from a print analysis stage to final testing. Once the system is operational, problems will be introduced to enhance the troubleshooting skills of the students. The concepts of project management will be included in this course. COREQUISITES: Courses 462-102 - Preventative/Predictive Maintenance and 462-105 - Robotics/Material Handling Systems

462-106A
Industrial Mechanic Capstone Project A 2.00

This course will set the foundation for a complex project that will be completed during part II of this course (462-106B). Parts and equipment needed will be identified and fabricated or machined. The concepts of team dynamics and project management will also be delivered throughout the course.

462-106B
Industrial Mechanic Capstone Project B 3.00

During this course, students working in a team environment will assemble and test a complex project from a print analysis stage to final testing. Once the system is operational, problems will be introduced to enhance the troubleshooting skills of the students.

462-108
Industrial Machine & Equipment Troubleshooting Introduction 3.00

This course focuses on the troubleshooting and repair of hydraulic/pneumatic circuits with an emphasis on the integration with mechanical systems. Troubleshooting techniques are introduced and applied in determining the cause of actual systems faults that will be placed in lab equipment by the instructor.

462-110
Maintenance Machining Tech, Advanced 3.00

Advanced Maintenance Machining Technology gives students an opportunity to expand their maintenance machining skills and learn new techniques. A combination of lecture and practical lab exercises will expose students to: taper turning and boring, sine plate application and use, advanced tooling selection and appplication, hard cutting, OD and ID grinding and CNC milling using conversational language programming. PREREQUISITES: Course 462-101 - Maintenance Machining

462-503
Industrial Mechanic Fundamentals I 1.00

The application and safe operation of hand and power tools will be explored in this course. The care and use of precision measuring tools and their application will also be covered.

462-504
Industrial Mechanic Fundamentals II 1.00

Manual machine operation will be explored in this course. Practical tasks and assignments will be performed on the drill press, lathe, and milling machine.

462-521
Mechanical Drive Components 2.75

This course will deliver the necessary information so the student will be able to select, install, adjust and inspect the following industrial drive components: belts/pulleys, couplings, bearings, chains/sprockets and gears. Futhermore this course will give the student the opportunity to incorporate the above listed industrial drive components into complex mechanical power transmission systems. The lecture portion of the course will be augmented with hands-on exercises.

462-522
Developing and Conducting PM/PDM 1.25

This course provides the information needed by the learner to effectively develop and perform preventative and predictive maintenance procedures on industrial equipment. The predictive technologies of IR and Vibration analysis will be covered. The lecture portion will be augmented by hands-on exercises where the learner will write procedures for equipment and conduct the inspections.

462-523
Bolting Basics 1.00

This course provides the information needed by the learner to effectively identify, apply and install fasteners used on industrial equipment. The fundamental principles that influence how threaded fasteners work will be explored. The proper installation and tightening will also be covered.

462-524
Fundamentals of Metallurgy 0.50

This course provides an introduction to the principle alloy categories and their applications. It explains the properties of metals, how they are tested, how metal products are made and where they are used.

469-301
Introduction to Gas Utility 1.00

This course introduces the individual to the common job tasks and the history of the gas utility industry. Topics covered to include; the gas distribution system, the characteristics of natural gas and propane, the history and application of Operator Qualifications in the gas utility industry and discussions on customer relation skills.

469-302
Site Safety 2.00

This course covers pertinent OSHA safety training in the hazards to workers and the general public at active utility sites. Trench safety, including working in and around open trenches, soil identification, confined space identification and entry and performing DOT required traffic control and worker safety in construction zones.

469-303
Intro to Equipment Operations Introduction to Equipment Operation 3.00

This class submerses the student into the job tasks required by a utility worker on an active site. The students will apply their knowledge of site safety and perform the various tasks required by the utility laborer,

equipment operator and crew lead. Students will operate under supervision back hoes, trenchers, directional drills, piercing tools aqnd air compressors in field activities. Proper backing, loading and unloading of trailered loads will also be covered.

469-304
Field Operations **4.00**

This class is for those who have successfully completed "Intro to Equipment Operation". This Field activities class requires students to perform complex field tasks such as pipe location, pipe burial, installation and repair of main, branch or service runs, trench compaction and utility covering while being supervised. Also included will be exercises in meter and regulator setting and leak testing piping integrity using both common hand and powered machinery.

469-305
CDL Prep for Utility Workers **1.00**

This course introduces the student to the Federal and State of Wisconsin for obtaining a commercial driver license (CDL). The purpose of this course is to familiarize the student with the Wisconsin Commericial Driver's Manual. The class will cover all the sections of the Manual and through practice exams prepare the student to sit and take the appropriate knowledge test required to obtain a State of Wisocnsin Commerical Driver Learner Permit.

469-306
Steel Piping **2.00**

The student will be able to identify the common components of a steel distribution and service system. The student will be able to assess weld joints for defects and joint integrity. The student will also be able to demonstrate knowledge of tapping and stopping of steel gas mains. Other topics include the ability to examine/identify corrosion on steel piping and address proper protection of steel from corrosion. The student will also be expected to cut, thread and install common piping and fitting from meter to the appliance.

469-307
Plastic Piping **4.00**

This course covers the history of polyethylene (PE) piping in the gas industry and the proper handling, storage and uses of PE pipe. The students will learn the fusion processes common to the industry such as butt, socket and the use of saddles. The students will also learn the techniques used in the electrofusion process. The students will learn to identify proper joining processes, construct various industry connections that can withstand pressure testing and when cut apart for inspection will pass various test standards. Mechanical stab fittings for pipe connection will also be covered.

469-308
National Fuel Gas Code for Utility Work **1.00**

This course covers the applicable sections of the current NFGC book that apply to the gas utility worker. Air for combustion, proper venting of Category I and IV appliances, proper use of the common venting, pipe sizing and combustion air tables are covered in detail through classroom examples and lab exercises.

469-309
Gas Applicance Operation **3.00**

This course covers the combustion process and sequence of operation of common residential applicances. Topics include water heaters, stoves, gas dryers and heating appliances. Additional coverage of the diferences between Standard, Mid and High Efficiency furnaces and boilers are addressed. The purging, leak detection and relighting of appliances after gas interruption are also covered.

469-310
Propane Operations **1.00**

This course covers the history of the propane gas industry. The student will be able to identify propane storage containers and their DOT requirements. This class also covers propane combustion, line sizing and safety components unique to propance fired appliances.

475-300
Building Construction, Introduction to **3.00**

This course presents the varieties, identification, characteristics and uses of wood in the construction industry. Material measurement is introduced. Common fasteners, nails, screws and staples and their appropriate use are examined. Principles of construction safety are discussed and safe operation of power tools is demonstrated.

475-301
Building Construction, Fundamentals **5.00**

This course introduces the operation of power woodworking machines, portable power equipment, and hand tools. Safety is emphasized. Fasteners common to the construction industry are presented and studied. Site layout and the use of the builder's level, builder's transit, and the laser transit are explored. Building foundations, concrete and formwork are examined.

475-302
Residential Print Reading **2.00**

This course presents the symbols, notations, abbreviations, and conventions that are the architectural language, and acquaints the student with the basic concepts on which residential construction drawings are read and interpreted.

475-303
Framing Techniques I **3.00**

This course presents frame construction techniques related to floor systems and staircases.

475-304
Commercial Print Reading **1.00**

This course is designed to provide print reading experience in commercial construction. Students will review concepts regarding elements commonly found on prints of commercial structures. Included are types of construction, sitework, structural steel construction, reinforced concrete construction and finish construction. PREREQUISITES: Course 475-302 - Residential Print Reading

475-305
Framing Techniques II **3.00**

This course presents wall layout and framing, rough-opening calculations and layouts for windows and doors. The principles of roof framing including architectural drafting of plan and elevation views for roofs are examined. Principles of layout and cutting of all roof framing members for both equal and unequal pitch

roofs are presented. The Wisconsin Uniform Dwelling Code is explored in relation to wall and roof construction. PREREQUISITES: Course 475-303 - Framing Techniques I

475-306
Exterior Trim **3.00**

This course presents the skills and theory related to roof cornice detail, roof coverings, windows, skylights, doors, and decks. Exterior finish methods are explored. PREREQUISITES: Course 475-301 - Building Construction, Fundamentals and 475-302 - Residential Print Reading

475-307
Interior Trim **5.00**

This course presents techniques for interior trim, mitering, coping and scribing. Door hanging is examined and performed. Newel post, balustrades and handrails are studied and installed. The Wisconsin Uniform Dwelling Code is explained and emphasized. Solid wood flooring is studied along with several ceiling tile applications. Installation of cabinets is examined and performed. PREREQUISITES: Course 475-301 - Building Construction, Fundamentals and 475-302 - Residential Print Reading

482-101
Wind Systems, Intro to **3.00**

This course prepares the learner to assess the global energy picture; analyze the causes of wind and wind flow properties; explore small, medium, and large wind turbine designs; assess the environmental effects of wind turbines; perform business and site assessments for a wind turbine project, plan your wind turbine project, evaluate operation and maintenance of the turbine system, and analyze the future of wind energy.

482-110
Intro to Sustainable Energy **2.00**

Introduction to Sustainable Energy will describe force, work, energy, and power as related to alternative-energy systems. The fundamental operation of the electric power grid is described. The focus of this course is on small business and residential applications of distributed renewable-energy electrical-generation systems like small wind turbines, photovoltaic systems, and fuel cells. This course will be tied to the Alternative Energy Hybrid Systems Integrator Level I Certification examination offered by the Electronics Technicians Association, International.

482-111
Sustainable Energy-Generation of Elec **2.00**

Sustainable Energy: The Generation of Electricity will describe the operation of photovoltaic (PV) systems comprised of solar modules, batteries, battery chargers, and inverters to produce power-grid-quality ac voltage. Wind turbines are also studied including generators, alternators, rectification, inverters, and resistive loading during periods of light loading. Fuel cell characteristics, control and monitoring are also explored. The integration of these three technologies is also investigated. This course will be tied to the Alternative Energy Hybrid Systems Integrator Level I Certification examination offered by the Electronics Technicians Association, International. PREREQUISITES: Course 482-110 - Intro to Sustainable Energy

482-112
Sustainable Energy-Capstone Design Proj **3.00**

The Sustainable Energy: Capstone Design Project course will tie together the topics covered in the "Introduction to Sustainable Energy" course and the "Sustainable Energy: The Generation of Electricity" course through the development of the design and implementation of a sustainable energy project. PREREQUISITES: Course 482-110 - Intro to Sustainable Energy

483-101
Geothermal: Water to Water **3.00**

This course introduces the HVAC technician to the components, heat exchange circuit, hydronic circuit and operation of the water to water GeoThermal heat pump. The operation of the unit as an intergral part of a hydronic system, coupling of the the heat pump for domestic hot water production and the connection to the outside loop are covered in depth. PREREQUISITES: Courses 601-116 - Mechanical Fundamentals and 601-133 - Refrigeration Fundamentals

483-102
Geothermal: Commissioning **3.00**

This advanced course is for the HVAC technician who wants to perform startup and commissioning of Geothermal heat pump systems. The student will learn about the design parameters, the pertinent startup data that needs to be collected and the basics of troubleshooting the unique problems associated with Geothermal heat pumps. PREREQUISITES: Course 483-101 - Geothermal: Water to Water and 483-103 - Geothermal: Air to Water

483-103
Geothermal: Air to Water **3.00**

This course will introduce the HVAC technician to the components, heat exchange circuit and operation of an air to water Geothermal heat pump. The operation of the unit, as an intergral part of a forced air system, coupling of the heat pump for domestic hot water production, and connection to the outside loop are covered in depth. PREREQUISITES: Courses 601-110 - Air Conditioning Fundamentals, 601-116 - Mechanical Fundamentals, and 601-133 - Refrigeration Fundamentals

483-170
Rotary: Rig Operation **3.00**

This course introduces the student to the setup and operational controls associated with Geo industry rigs for vertical boreholes. Topics covered will include the different types of rigs, their associated pumps, power take-offs, rig capabilities, rig safety, rig set-up and transport, site hazards and environmental damage awareness. The students under instructor supervision will assist in the set-up and drilling of sample boreholes to various depths using selected bits. PREREQUISITES: Courses 483-174 - Introduction to Ground Loop Methods, and 483-175 - GeoExchange Site Safety

483-171
Rotary: Mud Boring Applications **3.00**

In this course the requirements for drilling/boring in loose/unconsolidated formations will be covered. The student will learn to drill using drag and tri-cone bits and the proper use of drilling mud and casing to ensure the stability of boreholes. Also covered will be the site management of drilling fluids, sampling of drill tailings and maintenance of drill logs. PREREQUISITES: Courses 483-

174 - Introduction to Ground Loop Methods, 483-172 - Grouting and Sanitation, 483-170 - Rotary: Rig Operation, and 483-175 - GeoExchange Site Safety

483-172
Grouting and Sanitation **2.00**

This course will introduce the student to grouting and sanitation operations on a Geo boring site. Grouting materials, mixing methods and pumping applications will be discussed and applied. Site sanitation, record keeping, environmental logging including State and Federal requlatory compliance are topics covered.

483-173
Plastic Fusion Applications **2.00**

This course will provide the student with the hands-on fusion applications of HDPE piping. The student will learn Butt and Socket fusion techniques according to IGSHPA certification requirements. Upon completion of course student will be able to test for IGSHPA Fusion Certifcation.

483-174
Introduction to Ground Loop Methods **2.00**

This course introduces the student to GeoExchange technology.Common loop configurations and the various drilling techniques needed to install them will be covered. Types of equipment used to heat/cool residential and commercial buildings will also be discussed. the economics and the future of GeoExchange in a renewable energy economy are addressed.

483-175
GeoExchange Site Safety **1.00**

This course introduces the student to the hazards associated with the typical active worksite at a GeoExchange installation project. Topics covered include recognizing and preventing motion hazards, fall prevention, lifting safety and open trench/hole precautions. General personal protection of head/limbs and hearing/sight will also be covered.

483-176
Trenching and Headering **2.00**

This course teaches the student the fundamentals of calculating and constructing 2 pipe reverse return reducing headering. Calculating necessary flow rates for proper flushing and purging of loops and header systems are demonstrated. Working in, around and proper construction and back filling of header trenches is also covered. PREREQUISITES: Course 483-175 - GeoExchange Site Safety, 483-173 - Plastic Fusion Applications, and 483-174 - Introduction to Ground Loop Methods

483-177
Trenching/Header Fundamentals **2.00**

This course teaches the student the fundamentals of calculating and constructing 2 pipe reverse return reducing headering. Calculating necessary flow rates for proper flushing and purging of loops and header systems are demonstrated. Working in, around and proper construction and back filling of header trenches is also covered. PREREQUISITES: Courses 483-173 - Plastic Fusion Applications, 483-174 - Introduction to Ground Loop Methods, and 483-175 - GeoExchange Site Safety

483-178
Geological Formations for Drillers **3.00**

This course introduces the student to the complex field of geology as it relates to borehole construction. The types of consolidated and unconsolidated formations, the regional occurrance, the most efficient drilling process for each as well as basic rock identifcation and sample classification for logging purposes are covered. Sources of possible contamination and the protection of subsurface groundwater from the drilling process or surface contaminates are covered.

483-179
Flushing, Purging and Pressurizing **2.00**

This course is for the advanced student who already understands and can perform socket and butt fusion of HDPE piping. Course content includes the leak and pressure testing of the completed the associated headers and supply/return runs from inside the building. The techniques for flushing debris and trapped air from the completed piping circuits are practiced during lab activities. Troubleshooting and identifying restricted and collapsed loops are demonstrated and the introduction and testing of antifreeze levels in pressurized and non-pressurized flow centers is also covered. PREREQUISITES: Courses 483-173 - Plastic Fusion Applications and 483-177 - Trenching/Header Fundamentals

483-180
Rig Transport, Set-Up and Safety **2.00**

This course covers the safety and regulatory issues regarding the transportation and commissioning of standard industry drilling/boring rigs for GeoExchange borehole construction. DOT issues concerning weight, trailering, CDL licensure etc. are covered. Site safety to minimize environmental impact of rig, drilled spoils and personnel protection from overhead and underground hazards are also covered.

483-181
Geo Site & Record Management **2.00**

This course introduces the student to the types of records and data that must be collected, tabulated, maintained and reported to governmental bodies. The proper preparation of driller logs, equipment safety and maintenance logs, driver road logs and collection of loopfield coordinates for warranty submission are covered.

483-182
Geo Safety Lead **2.00**

This course is for the Lead person who will be responsible for overall safety of the worksite and those subordinates working at the site with only limited knowledge of OSHA safety requirements. This course parellels much of the information covered by an OSHA 30 hr. training session but with specific emphasis on the knowledge needed by the crew leader at an active GeoExchange site. PREREQUISITES: Course 483-175 - GeoExchange Site Safety, 483-177 - Trenching/Header Fundamentals, and 483-180 - Rig Transport, Set-Up and Safety

483-183
Rotary: Air Boring Applications **3.00**

This course is for the advanced student wishing to add rotary drilling with air to their skill set. Use of compressed air, water and foam injection to enhance particle size carrying ability of air are introduced. Tri-cone and downhole hammer bits and proper dust control are also covered. PREREQUISITES: Course 483-175 - GeoExchange Site Safety,

483-170 - Rotary: Rig Operation, and 483-178 - Geological Formations for Drillers COREQUISITES: Course 483-172 - Grouting and Sanitation

501-101
Medical Terminology **3.00**

This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms, with an emphasis on spelling, definition, and pronunciation. They are introduced to operative, diagnostic, therapeutic, and symptomatic terminology of all body systems, as well as systemic and surgical terminology. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

501-102
Intro to Medical Language **1.00**

This course focuses on the component parts of medical terms: prefixes, suffixes, and word roots. Students practice formation, analysis, and reconstruction of terms, with an emphasis on spelling, definition, and pronunciation.

501-103
Health Occupations, Intro to **3.00**

This course provides an over-view of the health care industry. Students will identify characteristics of various health care services areas. The learner will acquire essential knowledge, skills and attributes necessary to be employed in the health care industry. There is a focus on ethics, confidentiality, legal issues, responsible behaviors and spoken and written communication. The learner will investigate roles and responsibilities of a variety of career options within the health care industry. Students will experience job shadowing in a variety careers in hospitals, clinics and long term care facilities.

501-104
Principles of Customer Service in Healthcare **2.00**

This course is designed as an introduction to customer service for learners interested in working in various healthcare settings. The learner investigates healthcare systems, safety standards, and the workforce. The learner examines professionalism, interpersonal and written communication skills, and confidentiality as they relate to customer service in healthcare. PREREQUISITES: Course 851-760 or achieve the required placement test score COREQUISITES: Course 501-107 - Computing for Healthcare, Introduction

501-107
Computing for Healthcare, Introduction **2.00**

This course provides an introduction to basic computer functions and applications utilized in contemporary healthcare settings. Students are introduced to the hardware and software components of modern computer systems and the application of computers in the workplace. The course emphasizes the use of common software packages, operating systems, file management, word processing, spreadsheet, database, internet, and electronic mail.

502-301
Shampoo Treatments **1.00**

Theory and practical training in shampooing, scalp massage, scalp and hair analysis, and procedures for treating scalp and hair conditions. Students apply knowledge and skills on customers in patron laboratory to complete competencies in subject areas.

502-308
Salon Service 5 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of basic perming and texture skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-309
Salon Service 6 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of men's haircutting skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-310
Salon Service 7 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of hair color skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-311
Salon Service 10 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of interpersonal skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-312
Barber/Cosmetology/ Introduction to **1.00**

This course provides knowledge in the general subjects pertaining to barber/ cosmetology, including: bacteriology, sanitation, anatomy and physiology, Wisconsin laws, basic chemistry, and electricity.

502-320
Basic Manicuring **1.00**

Students will receive theory and practice training in basic and advanced manicuring, pedicuring, and nail art procedures and techniques.

502-324
Barber/Cosmetology Industry **2.00**

This course is designed as a complete program of business instruction for the barber/cosmetology student. It supplements the usual technical training required in career development.

502-325
Manicure/Nail Technician Illinois **1.00**

This course offers the specific content needed by an individual who wishes to become a licensed manicurist/nail technician in Illinois.

502-327
Manicure Nail Additional Hours **2.00**

For students who meet manicuring/nail technician training in other states wishing to complete 300 hours for Wisconsin licensure. Students are evaluated per Wisconsin requirements. They complete training on patron lab floor and complete a mock state board exam.

502-330
Barber/Cosmetology Additional Hours - 2 Credits **2.00**

For students who meet Barber/Cosmetology training requirements in other states who wish to complete additional hours for Wisconsin licensure. Students are evaluated per Wisconsin requirements, complete training on patron lab floor and complete a mock state board.

502-337
Manicure/Nail Technician I **4.00**

Theory and practical training in basic and advanced manicuring, pedicuring and nail art procedures and techniques. Students apply knowledge and skills on clients in a simulated salon environment to complete the competencies in subject area. Students completing both Manicure/ Nail Technician courses are eligible to take a state board examination for a manicurist license.

502-338
Manicure/Nail Technician II **5.00**

Theory and practical training in basic and advanced artificial nail procedures and techniques. Students apply knowledge and skills on clients in a simulated salon environment to complete competencies in subject area.

502-341
Barber/Cosmetology Additional Hours V **1.00**

For students who meet Barber/Cosmetology training requirements in other states who wish to complete additional hours for Wisconsin licensure. Students are evaluated per WI requirements, complete training on patron lab floor and complete a mock state board.

502-345
Basic Hair Color **2.00**

Theory and practical training in haircoloring techniques, procedures, and formulations.

502-346
Basic Manicuring **2.00**

Theory and practice training in basic and advanced manicuring, pedicuring, and nail art procedures and techniques

502-347
Bleaching **2.00**

Theory and practical training in bleaching techniques, procedures, and stages of lightening hair. PREREQUISITES: Course 502-345 - Basic Hair Color

502-348
Chemical Straightening **2.00**

Theory and practical training in chemical and related hair relaxing techniques and procedures. PREREQUISITES: Course 502-353 - Perm Techniques

502-349
Facials **2.00**

Theory and practice training in facial massage, skin care, basic and corrective makeup application, eyebrow arching, waxing, lash and brow tinting, and seasonal color analysis.

502-350
Hair Design 1 **2.00**

Theory and practice training in artistic design, setting, and finishing techniques. Use of blow dryer, curling iron, and rollers.

502-351
Hair Design 2 **2.00**

Theory and practical training in wigs and hair pieces, hair pressing, and long hair designs.

502-352
Men's Haircutting **2.00**

Theory and practice training in haircutting concept, basic form techniques, and mustache and beard trims. Use of clippers, scissors, and thinning shears is included. PREREQUISITES: Course 502-366 - Women's Haircutting

502-353
Perm Techniques **2.00**

Theory and practical training in basic and advanced permanent waving procedures.

502-354
Salon Service 1 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of facials and skin care. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-355
Salon Service 2 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of basic nail service skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-347 - Bleaching, 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-356
Salon Service 3 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of hairstyling and finishing techniques on long hair. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7

502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-357
Salon Service 4 **2.00**

Haircutting course is designed to assist students in learning how face shapes, body structure, texture or the hair, color and curl configuration play a part in finding the perfect hair cut for each clients individual needs. Identify and perform each of the 4 different haircuts using a shears, razor. Identify safety procedures to protect the client and the student. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-358
Salon Service 5 **2.00**

This course will provide the students with the knowledge and skills required to perform basic perming services in a licensed salon. Students apply knowledge and skills on customers in a simulated salon environment to complete competencies in perming techniques. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-359
Salon Service 6 **2.00**

Haircutting course is designed to assist students in learning how face shapes, body structure, texture or the hair. Color and curl configuration play a part in finding the perfect hair cut for each client's individual needs. Identify and perform each of the 4 different haircuts using a shears, razor and clipper. Identify safety procedures to protect the client and the student. Perform beard and mustache trims. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-360
Salon Service 7 **2.00**

This course explores theory and practice in hair coloring techniques. Students will apply knowledge and skills to create colors using their skills on customers in the client lab. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-361
Salon Service 8 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of hairstyling and finishing techniques. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-362
Salon Service 9 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of chemical straightening and texture skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-363
Salon Service 10 **2.00**

This course explores theory and practice in salon services. Students will apply knowledge and skills to provide all salon services on customers in the patron lab. Students will complete the Wisconsin Mock State Board Written Exam. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-364
Salon Service 11 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of bleaching and special effects skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-365
Salon Service 12 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and evaluation being on the performance of shampooing skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-366
Women's Haircutting **2.00**

Theory and practice training in hair cutting concepts and basic form techniques. Use of tools such as scissors, razors, and thinning shears.

502-367
Salon Service 4 **1.00**

In this course, students will be required to perform all client service skills in the student salon, with the concentration and

evaluation being on the performance of women's haircutting skills. PREREQUISITES: Courses 502-301 - Shampoo Treatments, 502-345 - Basic Hair Color, 502-320 - Basic Manicuring, 502-34,7 502-348 - Chemical Straightening, 502-349 - Facials, 502-350 - Hair Design 1, 502-351 - Hair Design 2, 502-352 - Men's Haircutting, 502-353 - Perm Techniques, and 502-366 - Women's Haircutting with a minimum grade of C or TR

502-370
Mock Board Skills **2.00**

The Mock Board skills course is designed to prepare the student for the practical portion of the Wisconsin Cosmetology State Board exam. Students will practice Practical skills on mannequins to gain accuracy and speed in each service area required to successfully pass the exam. Students will complete a final practical exam for the Cosmetology program.

502-371
Mock Board Theory **1.00**

The Mock Board Theory course is designed to prepare the student for the written portion of the Wisconsin Cosmetology state board exam. Students will acquire study skills and practice test taking skills on computers to retain information necessary to successfully pass the exam. Students will complete a final written exam for the Cosmetology program.

502-504
Barb/Cos Apprenticeship Haircutting **0.75**

This course is designed to enable the Apprentice students to acquire the theory requirements as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering and Cosmetology Examining Board. Instruction will be mainly theoretical and will follow a lecture/ discussion format. Some demonstrations of practical skills will be included within the lectures. Both individual and group assignments will be required to reinforce interaction.

502-505
Barb/Cos Apprenticeship Hairstyling **0.75**

This course will provide the Apprenticeship student with knowledge of Hairstyling set by the guidelines of the Wisconsin Statutes and Administrative Codes for the Barber/ Cosmetology Examining Board. The class will be taught by the following methods: lecture, discussion, demonstration, and hands-on performance.

502-506
Barb/Cos Department Rules **0.25**

This course is designed to enable students to acquire knowledge of the Wisconsin Rules of the Department of Regulations and Licensing.

502-507
Barb/Cos Administrative Codes **0.25**

This course is designed to enable students to acquire knowledge of the Wisconsin Laws and Administrative Code that governs the state Barber and Cosmologist. Instruction will be theoretical and will follow a lecture/ discussion format.

502-508
People Skills **0.25**

This course provides the student with the fundamental skills needed to understand and communicate with people. Instruction will be mainly theoretical and will follow a lecture discussion format.

502-509
Shaving/Male Facials **0.50**

This course is designed to enable the student to acquire the theory requirements for male facials as mandated by the Wisconsin Statutes and Administrative Codes. Instruction will be mainly theoretical and will follow a lecture/discussion format. Some demonstrations of practical skill will be included in the lectures.

502-514
Barb/Cos Professional Development/ Hygiene **0.50**

This course is designed to provide fundamental guidelines for lifelong professional development and lay a foundation for the consultation process between client and stylist. Instruction will be mainly theoretical and will follow a lecture/ discussion format.

502-515
Barb/Cos Salon Ecology **0.50**

This course is designed to give the student a foundation for safe infection control practices and procedures that will be used in all aspects of the student's education and future salon pursuits. Instruction will be mainly theoretical and will follow a lecture/ discussion format.

502-516
Barb/Cos Tricology/ Related Disorders **0.50**

This course provides fundamental knowledge regarding the phases of hair growth, common hair disorders, and causes and treatments of hair loss. Instruction will be mainly theoretical and will follow a lecture/discussion format.

502-517
Barb/Cos Shampoo/Hair Care **0.50**

This course provides the student with fundamental knowledge of hair care and the skills needed during draping, shampooing, and scalp massage procedures.

502-518
Haircutting for Cosmetology Apprentice **1.00**

This course is designed to enable the apprentice student with theory knowledge of haircutting as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

502-519
Hairstyling for Cosmetology Apprentice **1.00**

This course is designed to enable the apprentice student with theory knowledge of hairstyling as mandated by the Wisconsin Statutes and Administrative Code for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical sjkills will be included within lectures. Both individual and group assignments will be required to reinformce instruction.

502-522
COS Professional Development **0.50**

This course is designed to provide fundamental guidelines for lifelong professional development. Instruction will be

mainly theoretical and will follow a lecture/ discussion format.

502-523
Salon Ecology for Cosmetology App **0.50**

This course is designed to give the student a foundation for safe infection control practices and procedures that will be used in all aspects of the students' education and future salon pursuits as mandated by the Department of Safety and Professional Services. Instruction will be mainly theoretical and will follow a lecture/ discussion format.

502-524
Trichology for Cosmetology App **0.50**

This course provides fundamental knowledge regarding the phases of hair growth, common hair disorders, causes and treatments of hair loss as mandated by the Wisocnsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and will follow a lecture/discussion format.

502-525
Shampoo/Haircare for Cosmetology App **0.50**

This course is designed to enable the apprentice student with theory knowledge of Shampoo/Hair Care, and the skills needed during draping, shampooing, and scalp massage procedures as mandated by the Wisconsin Statues and Administrative Codes for the Cosmetology Examining board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

502-540
Barber/Cosmetology Chemical Relaxing Apprentice **0.25**

This course will provide the Apprentice Student with knowledge of chemical relaxing theory set by the Barber/Cosmetology Examining Board and the Wisconsin Statutes and Administrative Codes. This class will be taught by the following methods: lecture, discussion, demonstration, and hands-on performance.

502-541
Barber/Cosmetology Permanent Waving Apprentice **0.75**

This course is designed to enable students to acquire knowledge of Permanent Waving. Instruction will be theoretical and will follow a lecture/discussion format, with demonstrations and hands-on performance.

502-542
Barber/Cosmetology Haircoloring/ Bleaching Apprenticeship **1.00**

This course is designed to enable the Apprentice Student to acquire the theory requirements for Haircoloring/Bleaching as mandated by the Wisconsin Statutes and Administrative Codes for the Barber/ Cosmetologist Examining Board. Instruction will be mainly theoretical and will follow a lecture/discussion format. Some demonstrations of Practical Skills will be included within the lectures. Both individual and group assignments will be required.

502-543
Permanent Waving for Cosmetology App **0.75**

This course is designed to enable the apprentice student with theory knowledge of Permanent Waving as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discsussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

502-544
Chemical Relaxing for Cosmetology App **0.50**

This course is designed to enable the apprentice student with theory knowledge of chemical relaxing as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion and hands on performance format.

502-545
Haircolor/Hair Lightening for Cos App **1.00**

This course is designed to enable the apprentice student with theory knowledge of haircoloring/hair lightening as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

502-547
Facial/Makeup/Skin Disorders for Cos **1.00**

This course is designed to enable the apprentice student with theory knowledge of facial, makeup, skin disorders and massage as mandated by the Wisconsin Statutes and Administrative Codes for the Cosmetology Examining Board. Instruction will be mainly theoretical and follow a lecture/discussion format. Some demonstrations of practical skills will be included within lectures. Both individual and group assignments will be required to reinforce instruction.

502-548
Manicure/Pedicurei/Artif Nails for Cos **1.00**

This course will provide the Apprentice student with knowledge of Manicuring/ Pedicuring and artificial nails as mandated by the Wisconsin Statues and Administrative Codes for the Cosmetology Examining Board. The class will be taught by the following methods: lecture, discussion, demonstration and hands on performance.

502-551
Barber/Cosmetologist Facial/Makeup Massage Apprenticeship **1.00**

This course is designed to enable students to acquire knowledge of giving a facial and massage and applying makeup. Instruction will be theoretical and will follow a lecture/ discussion format, with demonstrations and some hands-on performance.

502-553
Barber/Cosmetology Manicure/ Pedicure/ Artificial Nails Apprenticeship **1.00**

This course will provide the Apprentice Student with knowledge of manicuring, pedicuring, and artificial nails. The class will be taught by the following methods: lecture, discussion, demonstrations, and hands-on performance.

502-560
Barber/Cosmetology State Board Preparation **0.25**

This course is designed to prepare the Apprentice Student for taking the State Board Exam. A practical mock exam will be given to acquaint the student with the procedures for testing. There will be a hands-on and a written test.

502-561
Mock State Board Prep **0.25**

This class is designed to help Barbers and Cosmetologists successfully pack for their state board. It is designed to leave the guessing at the door so you know up front what is needed for each portion of the practical test, and how to label and assemble tools and materials. COREQUISITES: Course 502-560 - Barber/ Cosmetology State Board Preparation

502-580
Tricology for Barbering **0.50**

This course provides fundamental knowledge regarding the phases of hair growth, common hair disorders and causes and treatments for hair loss. Instruction will be mainly theoretical and will follow a lecture/discussion format.

502-581
Professional Development for Barbering **0.25**

This course is designed to provide fundamental guidelines for lifelong professional development and personal development. Instruction will be mainly theoretical and will follow a lecture/ discussion format.

502-582
Hair Styling for Barbering **1.00**

This course will provide the Apprenticeship student with knowledge of Hairstyling set by the guideline of the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. The class will be taught by the following methods: lecture, discussion, demonstration, and hands-on performance.

502-583
Shampoo for Barbering **0.50**

This course provides the student with fundamental knowledge of hair care and the skills needed during draping, shampooing, and scalp massage procedures.

502-584
Skin Related Disorders for Barbering **0.25**

This course is designed to enable the Apprentice student to acquire the theory requirements for Skin/Related disorders as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. Instruction will be mainly theoretical and will follow a lecture / discussion format. Both individual and group assignments will be required to reinforce instruction.

502-585
Shaving/Male Facials for Barbering **0.25**

This course is designed to enable apprentice students to acquire the theory requirements for shaving/male facial as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining board. Instruction will be mainly theoretical and will follow a lecture/discussion format. Some demonstrations of practical skill will be included with in the lectures.

502-586
Hair Cutting for Barbering **1.25**

This course is designed to enable the Apprentice student to acquire the theory requirements as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. Instructional will be mainly theoretical and will follow a lecture/discussion format. Some demonstrations of practical skills will be included within the lectures. Both individual and group assignments will be required to reinforce interaction.

502-587
Barbering Codes **0.25**

This course is designed to enable students to acquire knowledge of the Wisconsin laws and Administrative Code that governs the state Barbers. Instruction will be theoretical and will follow a lecture/discussion format.

502-588
Barbering Laws **0.25**

This course is designed to enable students to acquire knowledge of the Wisconsin Rules of the Department of Regulations and Licensing.

502-589
Salon Ecology for Barbering **0.50**

This course is designed to give the student a foundation for safe and infection control practices and procedures that will be used in all aspects of the student?s education and future salon pursuits. Instruction will be mainly theoretical and will follow a lecture/ discussion format.

502-590
Chemical Relaxing for Barbering **0.25**

This course will provide the Apprentice student with knowledge of chemical relaxing theory set by barber examining Board and the Wisconsin Statures and Administrative Codes. This class will be taught by the following methods: lecture, discussion, demonstration, and hands-on performance.

502-592
Perming for Barbering **1.00**

This course is designed to enable students to acquire knowledge of Permanent Waving. Instruction will be theoretical and will follow a lecture/discussion format, with demonstrations and hands-on performance.

502-593
Hair Color for Barbering **1.00**

This course is designed to enable the Apprentice Student to acquire the theory requirements for Hair Coloring as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. Instruction will be mainly theoretical and will follow a lecture. Discussion format. Some demonstrations of Practical skills will be included with the lectures. Both individual and group assignments will be required.

502-594
Bleaching for Barbering **0.25**

This course is designed to enable the Apprentice Student to acquire the theory requirements for Bleaching as mandated by the Wisconsin Statutes and Administrative Codes for the Barbering Examining Board. Instruction will be mainly theoretical and will follow a lecture. Discussion format. Some demonstrations of Practical skills will be included with the lectures. Both individual and group assignments will be required.

502-595
People Skills for Barbering **0.50**

This course provides the students with fundamental skills needed to understand and communicate with people. Instruction will be mainly theoretical and will follow a lecture/ discussion format.

502-730
Client Services 1 **2.00**

This course introduces client services performed by the barber. Emphasis is on hair and scalp analysis, shampooing, haircutting techniques, shaving, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab. Skill development, increased speeds, and greater accuracy will be assessed in these lab courses. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

502-731
Client Services 2 **2.00**

In this course students explore client services performed by the barber. Emphasis is on hair and scalp analysis, shampooing, haircutting techniques, shaving, facial services, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab. Skill development, increased speeds, and greater accuracy will be assessed in these lab courses. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

502-732
Client Services 3 **2.00**

In this course students practice building speed and accuracy in client services performed by the barber. Emphasis is on haircutting techniques, shaving, facial services, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab. Skill development, increased speeds, and greater accuracy will be assessed in these lab courses. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

502-733
Client Services 4 **2.00**

In this course students enhance speed and accuracy in client services performed by the barber. Emphasis is on haircutting techniques, shaving, facial services, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab and begin preparation for Wisconsin State Barber licensing exam. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

502-734
Client Services 5 **2.00**

This course provides students with opportunities to acquire barbering skills in preparation for entry-level, licensed employment. Emphasis is on providing services with speed and accuracy including: hair and scalp analysis, shampooing, haircutting, shaving, facial services, and chemical services. Students will apply knowledge and skills to provide all barber services on customers in the client lab and complete preparation for Wisconsin State Barber licensing exam. PREREQUISITES: Courses 502-738 - Basic Haircutting, 502-735 - Advanced Haircutting, 502-741 - Hairstyling, 502-740 - Hair Color, 502-743 - Shaving, 502-739 - Chemical Texturing, 502-736 - Barber Industry, and 502-742 - Barbering, Intro to

502-735
Advanced Haircutting **2.00**

This course is designed to provide skills relating to mens haircutting. Course competencies include demonstrating draping; Afro haircuts; flat top and crew cut haircuts; fade haircuts; and head shaving. Learners perform four basic haircutting techniques using shears, razor and clippers. Learner will perform a variety of shorthair combination cuts using finger- and shear, comb-over-shear, shear-over-comb and freehand techniques. Additional techniques include long-layered haircut techniques; uniform layer haircut techniques; combination cut techniques; short taper cut using finger-and-shear techniques; short taper cut using shear-over-comb techniques; taper cut using clipper-over-comb techniques; and haircutting for tightly curled hair. PREREQUISITES: Course 502-738 - Basic Haircutting

502-736
Barber Industry **2.00**

This course guides the barber on a career path that includes skills related to career strategies and the job search, the basics of managing a successful establishment, developing a marketing plan, and the responsibilities of adhering to the Wisconsin Statutes and Administrative Code. This course also provides an overview of the profession of barbering, professional image, safety and decontamination in the barbershop. Course competencies include examining the importance of barbering organizations and the Department of Safety and Professional Services; comparing professional ethics and personal ethics; developing short term and long term goals; reviewing basic first aid, safety and decontamination principles for infection control; introducing current state statutes and rules as they apply to barber safety and sanitation; and learning decontamination procedures for tools, equipment and surfaces.

502-738
Basic Haircutting **2.00**

This course will provide students with knowledge of the art and science of haircutting. Students will identify principal tools and implements, apply haircutting terminology, recognize facial shapes and anatomical features, and learn techniques to create a variety of haircutting designs. Students will apply safety and sanitation procedures adhering to the Wisconsin Statutes and Administrative codes. This course also introduces a combination of haircutting techniques and tools. Learners perform four basic haircutting techniques using shears, razor and clippers. Learner will perform a variety of shorthair combination cuts using finger-and-shear, comb-over-shear, shear-over-comb and freehand techniques.

502-739
Chemical Texturing **2.00**

This course will provide students to acquire knowledge of permanent waving. Course competencies include performing hair and scalp analysis; follow safety and sanitation procedures; explaining the physical and chemical actions that take place during chemical texture services; perform the

basic perm wrap, curvature wrap, spiral wrap, bricklay wrap, and double-tool/piggy back wrap; hair relaxing applications and procedures, and reformation curl/chemical blow-out services. This class includes the following instructional methods: lecture, discussion, demonstration, and hands-on performance.

502-740
Hair Color **2.00**

Students study the color wheel and the theory behind the "Law of Color." Students mix and apply temporary, semi-permanent, demi-permanent and permanent colors; Students identify the chemicals used in hair coloring services. Students practice client consultations, analysis and follow safety and sanitation procedures. Students learn procedures related to lightening techniques. They identify the products used to create and maintain these types of services. Students learn the chemistry to lightening products. They learn cap, foiling and corrective color procedures.

502-741
Hairstyling **2.00**

This course emphasizes wet and dry hairstyling and includes hair analysis, shampooing, conditioning, reconditioning, scalp and hair treatments, and blow drying. Course competencies include analyzing the condition of a client's hair; personalizing scalp and hair treatments based on client needs; completing shampoo services; completing hair conditioning treatments; create blow-dry styles; and braid hair according to client needs. This course also emphasizes fingerwaves, pincurls, roller setting, thermal styling, and hair replacement techniques. Content also includes applying basic techniques and terminology used in hairstyling; creating fingerwaves; arranging hair using pincurls; performing roller sets; demonstrating thermal styling; and demonstrating hair replacement techniques.

502-742
Barbering, Intro to **1.00**

Students will study microbiology, electricity, anatomy, physiology and chemistry, along with properties and disorders of the skin and scalp as these apply to barbering. Course competencies include reviewing the human systems important to barbering, diseases, and conditions; learning about bacteria; categorizing chemicals and their use in the barbering establishment; verifying diseases and disorders of the hair and scalp; and examining common electrical devices used in barbering establishments. This course also introduces current state statutes and rules as they apply to barber safety and sanitation; and learning decontamination procedures for tools, equipment and surfaces.

502-743
Shaving **2.00**

Students will apply safety and sanitation, facial physiology, and techniques to create a variety of facial hair designs and complete facial hair removal. Course competencies include proper infection control procedures and client safety; draping clients for facial hair services; using facial hair service tools; analyzing skin types and conditions; adapting facial hair designs for individual facial features and physiology; completing facial hair designs; and completing facial hair removal. In this course the student will analyze the skin for diseases and disorders. The learner will identify facial muscles and nerves and explain the benefits of facial massage and treatments. Students will demonstrate a male facial using a variety of products and equipment based on skin analysis and complete male facials correctly.

503-101
Firefighting Concepts I, Advanced **4.00**

This course introduces students to advanced firefighting principles covering fire behavior, risk management, teamwork, leadership, and a systems approach to initial firefighting tactics at fires. All of the practical portions of this course are conducted in a performance-based, training in context manner to assure that students develop and master a principled, response methodology for all four positions on an engine company. Building construction, forcible entry, and basic driver operator skills are also covered in this course. "Nothing showing" investigations, outside fire attack and transitional positive pressure attack tactics are covered along with problem-solving for each tactic. PREREQUISITES: Course 503-142 - Firefighting Principles I with a minimum grade of C or TR

503-102
Firefighting Concepts II, Advanced **4.00**

This course introduces students to advanced firefighting principles. All of the practical portions of this course are conducted in a performance-based, training in context manner to assure that students develop and master a principled, response methodology for all four positions on an engine company. Building construction, forcible entry, and basic driver operator skills are also covered in this course. Transitional positive pressure attack above/below, vertical ventilation and 3 person staffed apparatus crew tactics are covered along with problem-solving for each tactic. PREREQUISITES: Course 503-101 - Firefighting Concepts I, Advanced with a minimum grade of C or TR

503-103
Fire Medic Health & Wellness I **1.00**

This course introduces students to fire service health and wellness issues, firefighter injury and death statistics along with risk managment strategies. Students begin their study and application of life-long nutrition and fitness habits. Students begin preparations for the candidate Physical Ability Test (CPAT).

503-104
Fire Medic Health & Wellness II **1.00**

Students continue to study fire service health and wellness issues and risk management strategies. Students build on their life-long nutrition and fitness habits. Students continue preparations for the Candidate Physical Ability Test (CPAT). PREREQUISITES: Course 503-103 - Fire Medic Health & Wellness I with a minimum grade of C or TR

503-106
Firefighting Principles II **3.00**

This course is structured for competency-based instruction meeting the requirements of Firefighter Level II. It includes classroom and practical training sessions and meets the objectives of the Wisconsin's Firefighter II certification course. Hazardous Materials Operations is included in this course. Upon completion, students are encouraged to take the certification exam for Firefighter II, State of Wisconsin. PREREQUISITES: Course 503-142 - Firefighting Principles I

503-110
Fire Safety Communications **3.00**

Students practice communication techniques needed to present fire safety messages to groups with special needs. How to identify and address unique concerns of communities and groups are outlined and practiced by the class as part of assignments and exercises.

503-117
Health and Wellness for Firefighters 3.00

Students gain an overview of the physical, emotional, intellectual, and social dimensions of health and sustained wellness. They apply physical training techniques developed for the specific occupational demands of the Fire Service. Students will prepare for the Fire Service Candidate Physical Ability Test (CPAT), which is designed to help fire departments measure the physical ability of candidates to perform routine fire fighting tasks.

503-120
Fire Science Student Internship 2.00

This course allows students to actively participate as a "working" member of a fire department. Students work the 24-hour shift schedule at a local fire department (excluding class times) and perform the same duties as the firefighters. Evaluation is determined by fire department officials and the course instructor. Instructor approval required to establish class schedule. PREREQUISITES: Course 503-142 - Firefighting Principles I

503-127
Fire Service Changing Technologies 2.00

This course concentrates on the identification and application of the ever-changing advancement in technology and its impact on the fire service. Students will investigate and use applications and equipment that are reflective of the most recent advancements in fire service technology including; computerized hardware, software, digital media and fire department equipment.

503-128
Fire Department Management 3.00

Principles of management applied to the fire department. Records, reports and personnel management. Various theories of motivation and types of management are explored. PREREQUISITES: Courses 503-139 - Principles of Emergency Services and 503-142 - Firefighting Principles I

503-139
Principles of Emergency Services 3.00

This course provides an overview of: fire protection; career opportunities in fire protection and related fields; philosophy and history of fire protection/service; fire loss analysis; organization and function of public and private fire protection services; fire departments as part of local government; laws and regulations affecting the fire service; and fire service nomenclature. This course is equivalent to 503-139 at other WTCS schools.

503-142
Firefighting Principles I 4.00

This course includes classroom and practical training sessions on the basic fundamentals needed by entry-level firefighters and meets the objectives of the Wisconsin's Firefighter I certification course. Practical training is a major part of the course. Upon completion, students are encouraged to take the certification exam for Firefighter I, State of Wisconsin. This course is equivalent to 503-142 at other WTCS schools.

503-143
Building Construction 3.00

A survey of building classifications and types discussing structural elements and weaknesses of each type. Emphasizing the additional damage done by fire and how fire hastens ultimate building collapse. This course is equivalent to 503-143 at other WTCS schools.

503-147
Fire Protection Systems 4.00

This course provides information relating to the features of design and operation of fire detection and suppression systems.

503-151
Fire Prevention 4.00

This course provides fundamental information regarding the history and philosophy of fire prevention, organization and operation of a fire prevention bureau, use of fire codes, and identification and correction of fire hazards. It meets all requirements for Fire Inspector I certification with the state of Wisconsin.

503-152
Hazardous Materials 4.00

This course examines characteristics relating to hazardous materials, including problems of recognition and mitigation. It prepares students to the Hazardous Material Operations and Technician levels. PREREQUISITES: Course 503-142 - Firefighting Principles I

503-155
Fire Protection Hydraulics 4.00

This course provides a foundation of knowledge in order to understand the principles of the use of water in fire protection. It meets all of the requirements for Driver Operator-Pumper certification with the state of Wisconsin. PREREQUISITES: Course 503-142 - Firefighting Principles I

503-156
Strategies, Tactics & Incident Mgmt 4.00

This course provides an in-depth analysis of the principles of emergency response through utilization of an incident management system and prepares students to pursue current national ICS training requirements. PREREQUISITES: Courses 503-139 - Principles of Emergency Services, 503-142 - Firefighting Principles I, and 503-143 - Building Construction

503-157
Fire Investigation 3.00

This course provides learners with the fundamentals and technical knowledge needed for proper fire scene investigations. PREREQUISITES: Courses 503-142 - Firefighting Principles I and 503-143 - Building Construction

504-116
Civil Law 3.00

This course covers the fundamentals of substantive and procedural civil law. Topics include the civil law court system, injury law, civil rights liability, property ownership, contracts and consumer protection, administrative agencies, family law, mental health commitments, public labor law, landlord/tenant, and general employment law. PREREQUISITES: Course 504-121 or 504-900 - Criminal Justice, Intro to

504-117
Police Administration 3.00

Provides an understanding of contemporary police principles and a detailed study of accepted administrative methods. Management problems acquaint the student

with the why of methodology issues. PREREQUISITES: Course 504-121

504-124
Forensics Science **3.00**

This course exposes students to the forensic methods commonly employed in the examination of physical evidence by a forensic scientist used for identification or comparison in civil or criminal crime scene investigation and legal proceedings. The various techniques and procedures used in forensic science investigation and the admissibility standards established by state and federal courts are examined. This survey course is not designed to train individuals in the highly technical field of forensic science research, which requires extensive education in biology, chemistry, and physics. Thecourse serves to familiarize those individuals majoring in criminal justice or related fields with the methods and techniques currently employed by forensic scientists so that students have a working knowledge and understanding of the technical world of forensic science. PREREQUISITES: Course 504-900 - Criminal Justice, Intro to with a minimum grade of C or TR

504-126
Firearms Training/Defense Tactics **2.00**

Teaches the fundamentals of firearms usage by police officers. Skills in safety, combat and defensive use of firearms are developed. Legal responsibilities and liabilities of a police officer with respect to firearms are addressed.

504-141
Interviews/ Interrogations/ Confessions **3.00**

Topics include purposes and objectives of a proper interview, mechanics of interviews, interrogations and confessions; importance of the fundamentals of report writing, methods and procedures for interviews and the securing of confessions in accordance with the rights of a citizen under the U.S. Constitution.

504-148
Rules of Evidence **3.00**

Emphasizes rules of admissibility of evidence in court trials involving various kinds and degrees of evidence to assist the police officer in proper performance of investigative duties. PREREQUISITES: Course 504-900 - Criminal Justice, Intro to with a minimum grade of C or TR

504-149
Criminal Law 1 **3.00**

Presents a detailed insight into the origins, nature and concept of various crimes. Philosophy of criminal law, historical sources and the common law, and present day practices employed by judicial processes in the United States -- with particular emphasis on the Wisconsin criminal code -- are addressed.

504-152
Police Science Internship **3.00**

The student will work in the environment of a police department or related agency. The student will experience the profession first-hand.

504-167
Phys Fitness for Law Enforcement **3.00**

This course is designed to introduce students to physical conditioning, aerobic capacity and wellness training as it relates to local and nationwide Law Enforcement entrance examinations. This course will further assist students to understand the need for a Law Enforcement Officer to maintain their physical conditioning, and how an officer needs to perform the basic physical skills and tasks required in the field.

504-173
Cyber Crime **3.00**

Study various criminal investigation techniques related to computer and internet related crime (theft, sex crimes, white collar crime and others). Focus on data recovery and digital forensic techniques utilized by modern law enforcement agencies. Demonstrate courtroom testimony skills related to cyber crimes, and participate in evidence recovery.

504-174
Security, Intro to **3.00**

Discuss historical, philosophical, legal and future trends of security. Define roles of the security professional in modern society. Study public/private security operations, and management concepts focusing on career preparation and opportunities in the field. Examine security challenges of internal theft, embezzlement, drugs and violence in the workplace.

504-175
Terrorism/Homeland Security **3.00**

Examine the history and current trends of terrorism. Discuss governmental responses and the global effect of international terrorism. Define domestic terrorism, active insurgency, and discuss the phenomenon of politically inspired violence. Evaluate statistical and analytical data of individual and state level of terrorism. Study governmental agencies assigned to the Department of Homeland Security.

504-176
Spanish for Law Enforcement **3.00**

Spanish for Law Enforcement is designed to enable Students who know little or no Spanish to communicate effectively with the Spanish speaking individuals. This course has been tailored for Law Enforcement students and professionals, and will teach students basic conversational Spanish to apply in the field. This course covers basic Field Interviews, Traffic Investigations, Medical Emergencies, Identification of subjects and preliminary investigations.

504-300
Policing in America **1.00**

Students will learn the rules of the academy, how the various elements of the criminal justice system relate, the role of law enforcement officers in a democracy, explore belief systems, social pressures, moral problems, decision-making and the consequences of decisions, resources available in their communities to assist law enforcement in their contacts with the community, explore issues involved in policing in a diverse society, identify strategies for working effectively with the community, the requirements under Wisconsin law for law enforcement agency policies and procedures, and why written policies and procedures are important to them in performing their job tasks properly.

504-301
Relational Skills **3.00**

Students will learn how to write a wide variety of law enforcement reports, the role of communication in law enforcement, to apply professional communication skills appropriately, proper law enforcement response to persons with possible mental disorders, alcohol or drug problems, dementia disorders, and/or developmental disabilities, the Wisconsin law for conducting emergency detentions and placements, legal requirements and guidelines for implementing these procedures, basics of effective court testimony, the role of problem solving, and evolving police strategies for effective law enforcement and community relationships, and the use of problem-oriented policing.

504-302
Patrol Procedures **4.00**

Students will become familiar with Wisconsin traffic laws, including how to properly complete Wisconsin Uniform Traffic Citations and how to direct and control traffic effectively. They will learn to manage a complex scene, to investigate traffic accidents, take appropriate enforcement actions, the legal context for law enforcement driving, including basic patrol operation, emergency vehicle response, pursuit driving, the legal bases for making vehicle contacts, how to conduct a threat assessment to help determine the appropriate type of contact, how to conduct different types of vehicle contacts, recognize and interpret evidence of a and to OMVWI violation, and how to administer and interpret standardized field sobriety tests.

504-303
Investigations **2.00**

Students will learn techniques and procedures necessary to interview or interrogate a variety of individuals, how to recognize, process, and preserve physical evidence; law enforcement's response to a victim of crime including the dynamics of victimization, victims' rights, and enforcement's professional responsibilities to victims. Students will also learn the statutory elements of "sensitive crimes" and the characteristics, effects, and investigative strategies unique to them.

504-304
The Legal Context **2.00**

Students will learn the legal bases for law enforcement action such as arrest, use of force, and search and seizure, as well as the limits on law enforcement activity, the classifications of crimes and other violations into felonies, misdemeanors, and ordinance violations, and the elements of crimes listed in the criminal code, and the laws and procedures that effect juveniles, including those related to taking a juvenile into custody.

504-305
Tactical Skills **3.00**

Students will learn the basis for and limits to use of force by Wisconsin Officers,specific techniques for intervention included in the Wisconsin System of Defense and Arrest Tactics, and to care for and maintain their primary duty handguns. They will learn to shoot quickly and accurately, including under low-light conditions, while moving and from behind cover, and necessary weapon-handling skills, the basics of room clearing, tactical movement, use of cover and concealment, and their application to emergency situations.

504-306
Overview of Criminal Justice **1.00**

Through classroom lecture and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following WI Department of Justice 720 Academy Phase I curriculum framework topics; Academy Orientation, Fundamentals of Criminal Justice, Ethics, Cultural Competency, Agency Policy and Professional Communication.

504-307
Overview of Investigation **2.00**

Through classroom lecture, on-campus lab and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics; Constitutional Law I, Crime I, Juvenile Law I, Interviews, Report Writing, and Physical Evidence.

504-308
Overview of Patrol Response **2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice integration exercises students will learn and apply skills addressed in the following WI Department of Justice 720 Academy curriculum framework Phase I topics: Critical Thinking and Decision Making, Basic Response (RESPOND), Radio Procedures, Introduction to TraCS, Traffic Law Enforcement, and First Aid/CPR/AED. This course will include the WI DOJ 720 Academy Integration Exercises.

504-309
Overview of Tactics **1.00**

Through classroom lecture, and on-campus lab and WI Department of Justice 720 Academy integration exercises, students will learn and apply skills addressed in the following Department of Justice 720 Academy curriculum framework Phase I topics; Fundamentals of Firearms, Vehicle Contacts I, Officer Wellness, and DAAT. The DOJ Phase I Written Examination will be administered in this course.

504-310
Princ. of Emergency Vehicle Response **2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Department of Justice 720 Academy Phase II topics: Emergency Vehicle Operation and Control (EVOC) and Vehicle Contacts II.

504-311
Principles of Investigations **2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following phase II topics of the WI Department of Justice 720 Academy curriculum Framework; Constitutional Law II, Crimes II, Domestics, and Report Writing.

504-312
Principles of Patrol Response **2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the

followng WI Department of Justice 720 Academy curriculum framework Phase II topics: Professional Communication Skills II, Incident Command Systems and NIMS, Hazardous Materials and WMD, Tactical Response, Crisis Management, and Tactical Emergency Casualty Care.

504-313
Principles of Tactics **3.00**

Through classroom lecture and on-campus lab students will learn and apply skills addressed in the following Phase II topics from the Department of Justice 720 Academy curriculum frameworks; DAAT and Firearms II. The Phase II Written Exmination will be administered during this course.

504-314
Application of Investigations **2.00**

Through classroom lecture, and on-campus lab, and WI Department of Justice 720 Academy integration exercises students will learn and apply skills addressed in the following Phase II topics of the Department of Justice 720 Academy curriculum framework; Ethics II; Moral Reasoning and Professional Responsibility; Cultural Competence II; Fair and Impartial Policing; Victims, Sexual Assault; Child Maltreatment; Interrogations; Testifying in Court and Crimes III.

504-315
Application of Traffic Response **2.00**

Through classroom lecture, and on campus lab, students will learn and apply skills addressed in the following Phase III topics from the WI Department of Justice 720 Academy curriculum Framework: Traffic Law Enforcement - Core and Radar, Traffic Crash Investigations and Incident Management, Operating a Motor Vehicle While Intoxicated (OMVWI), Standardized Field Sobriety Tests (SFST), and Report Writing. A Phase II Written Examination will also be administered in this course.

504-316
Health and Fitness **1.00**

Through classroom lecture and on-campus lab students will apply Phases I-III Health Fitness WI Department of Justice 720 Academy curriculum framework program requirements.

504-317
L.E. Academy Scenario Week **1.00**

This course will consist of one week of practical scenarios demonstrating the student's proper use of force and proper use scenarios will be those authorized by Dept. of Justice for use in police recruit training

504-900
Criminal Justice, Intro to **3.00**

In this course learners will distinguish between the roles and functions of courts with jurisdiction in Wisconsin; differentiate between the roles and functions of federal, state and local law enforcement agencies; apply professional principles as a law enforcement officer; determine modern police functions and policies from an historical perspective; identify the role of law enforcement officers in American society; utilize a decision-making model; identify the characteristics of a good decision maker; describe how professionalism, ethics, and moral standards relate to a law enforcement career; practice a code of behavior; incorporate ethical decision-making strategies; identify required law enforcement policies; defend the importance of written agency policies; and distinguish between "ministerial" and "discretionary"duties; describe how decisions are made; enhance an officer's critical thinking and police problem solving abilities; and apply principles of critical thinking, decision-making, and problem solving.

504-901
Constitutional Law **3.00**

In this course, learners will diagram the structure of the criminal justice system, identify situations where constitutional rules are applicable, identify situations where an officer may use reasonable suspicion to contact a subject, identify the elements of a lawful arrest, identify search-related activities where the 4th amendment is not applicable, identify the requirements that pertain to search warrants, analyze situations where an officer may conduct a search without a warrant, compare the requirements for conducting routine searches with those for searching disabled persons and strip searches, identify the requirements of the laws governing confessions and statements, and analyze the various requirements that evidence must meet before it can be admitted in court. PREREQUISITES: Course 504-902- Criminal Law COREQUISITES: Course 504-148 - Rules of Evidence

504-902
Criminal Law **3.00**

In this course, learners will identify basic concepts of criminal law; analyze facts, circumstances, and situations and determine which crimes against persons have been committed; analyze facts, circumstances, and situations and determine which crimes against property have been committed; and analyze facts, circumstances, and situations and determine which crimes involving drugs, alcohol or other criminal activity have been committed.

504-903
Professional Communications **3.00**

In this course, the learner will apply knowledge of the communication process, apply communication techniques, integrate verbal and physical intervention skills, develop strategies to obtain information in a variety of situations, differentiate between interview and interrogation, and analyze information for consideration of corroborative evidence.

504-904
Juvenile Law **3.00**

In this course, the learner will describe the juvenile justice system, describe the handling of cases of children in need of protection or services, describe the handling of cases of juveniles in need of protection or services or alleged to be delinquent, identify constitutional law issues that are relevant to juveniles, analyze the role of law enforcement in responding to child maltreatment, explain the issues involved in investigating incidents of child victimization, intervene and apply appropriate investigative strategies, describe the roles of other agencies in child maltreatment cases, and recognize the unique investigative issues for missing children.

504-905
Report Writing **3.00**

In this course, the learner will explain the context of report writing, take effective field notes, organize information in reports, write narratives, describe what information should be included in certain types of reports, complete various uniform citations and the paperwork accompanying arrests and other detentions, prepare for court, describe how to be an effective witness, and testify as a witness in court. PREREQUISITES: Courses

504-902 - Criminal Law and 801-136 - English Composition 1

504-906
Criminal Investigation Theory **3.00**

In this course, the learner will describe the role evidence plays in criminal investigations and prosecutions; apply the steps for processing crime scenes; apply appropriate strategies to locate, handle, and package evidentiary items; document the crime scene; recognize the unique investigative issues for crimes against life; apply appropriate strategies to secure the scene, collect and preserve evidence, and investigate a death; recognize the dynamics of victimization; apply knowledge of the definitions and responsibilities for law enforcement; apply appropriate interview techniques with adult or child victims; analyze the role of law enforcement in responding to domestic abuse; intervene and apply appropriate investigative strategies; respond to an officer-involved domestic violence incident; analyze the role of law enforcement in responding to sexual abuse; demonstrate investigative techniques in a simulated sexual assault case; and identify other resources that can assist in sexual assault cases. PREREQUISITES: Courses 504-902 - Criminal Law and 504-900 - Criminal Justice, Intro to COREQUISITES: Course 504-148 - Rules of Evidence

504-907
Community Policing Strategies **3.00**

In this course, the learner will identify community resources available in your area, describe the role of an advocacy group in the criminal justice community, demonstrate cultural self-awareness, interpret state and federal laws related to discrimination and diversity, utilize appropriate skills for interacting effectively and professionally with persons from culturally diverse backgrounds and lifestyles, identify and implement personal strategies that take into account cultural differences, identify the types of situations and the characteristics of individuals that are likely to be encountered in crisis management situations, apply Wisconsin statutory requirements and general guidelines regarding emergency detentions and emergency protective placements of persons, identify key concepts and elements associated with law enforcement response to people in crisis, apply crisis intervention principles and techniques, articulate the decision-making process taken to manage persons in crisis, incorporate community policing strategies into the community, illustrate problem-oriented policing strategies, evaluate other policing strategies, and apply principles of crime analysis and prevention. PREREQUISITES: Course 504-900 - Criminal Justice, Intro to

504-908
Traffic Theory **3.00**

In this course, the learner will enforce Wisconsin traffic laws, detect traffic violations, issue traffic citations, direct traffic, identify responsibilities of a first responding officer, manage the response to a scene, take necessary steps to enable effective follow-up as needed, conduct an initial investigation at a crash scene, identify the mechanics of measuring and documenting traffic crash scenes, complete the Wisconsin Motor Vehicle Accident Report, record the crash scene using photography, take appropriate enforcement action based on information gathered, and recognize and interpret indicators of impaired driving.

508-101
Dental Health Safety **1.00**

This course prepares dental auxiliary students to respond proactively to dental emergencies, control infection, prevent disease, adhere to OSHA standards, and safely manage hazardous materials. Students also take patient vital signs and collect patient medical/dental histories. Students will be required to show proof of certification before beginning this course.

508-103
Dental Radiography **2.00**

This course prepares Dental Assistant students to operate x-ray units and expose bitewing, periapical, extra oral, and occusal radiographs. Emphasis is placed on protection against x-ray hazards. Students also process, mount, and evaluate radiographs for diagnostic value. In this course, students demonstrate competency on a manikin. In addition, students expose bitewing radiographs on a peer, role-play patient.

508-113
Dental Materials **2.00**

This course prepares Dental Assistant students to handle and prepare dental materials such as liners, bases, cements, amalgam, resin restorative materials, gypsum products, and impression materials. They also learn to take alginate impressions on manikins and clean removable appliances.

508-120
Dental Office Management **2.00**

This course prepares Dental Assistant students to manage telephones, appointments, recall systems, and inventory. Students also develop the skills needed to process accounts receivable and payable, collections, and third party reimbursements. PREREQUISITES: Course 508-357

508-302
Dental Chairside **5.00**

This course prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations to and to assist a dentist with basic dental procedures including examinations, pain control, amalgam restoration, and cosmetic restoration. Students will also develop the ability to educate patients about preventative dentistry, brushing and flossing techniques, and dental procedures, using lay terminology. Throughout the course, students will apply decoding strategies to the correct use and interpretation of dental terminology. This course is equivalent to 508-302 at other WTCS schools. COREQUISITES: Courses 508-101 - Dental Health Safety, 508-113 - Dental Materials, and 508-304 - Dental and General Anatomy

508-304
Dental and General Anatomy **2.00**

This course prepares dental assistant students to apply fundamentals of general and dental anatomy to informed decision making and to professional communication with colleagues and patients. This course is equivalent to 508-304 at other WTCS schools.

508-306
Dental Assistant Clinicals **3.00**

Students apply skills learned in Dental and General Anatomy, Dental Health Safety, Dental Chairside, Dental Materials, Dental Radiography, and Professionalism in a clinical setting with patients. This course emphasizes integration of core abilities and basic occupational skills.

508-307
Dental Assistant Professionalism 1.00

This course prepares Dental Assistant students for professional success in a dental practice or other dental health care environment. Students develop professional appearance and image. More importantly, they learn to work within ethical guidelines and legal frameworks. In preparation for entering the workforce, students customize or develop their portfolios and lay out an ongoing professional development plan. This course is equivalent to 508-307 at other WTCS schools.

508-308
Dental Chairside - Advanced 5.00

This course prepares Dental Assistant students to adapt chairside skills to assisting with dental specialties as they are performed in general practice. It focuses on pediatric dentistry, orthodontics, oral maxillofacial surgery, endodontics, periodontics, and prosthodontics. Students will also develop the ability to assist with sealants, perform coronal polishing, and apply topical fluoride and topical anesthetics. This course is the equivalent to 508-308 at other WTCS schools. PREREQUISITES: Course 508-302 - Dental Chairside

508-309
Dental Laboratory Procedure 4.00

This course prepares Dental Assistant students to produce alginate impressions and fabricate diagnostic models, oral appliances, temporary restorations, and custom trays. Students also polish oral appliances. This course is equivalent to 508-309 in other WTCS schools. PREREQUISITES: Course 508-113 - Dental Materials

508-310
Dental Radiography - Advanced 1.00

This course builds on principles and skills developed in Dental Radiography. Dental Assistant students expose full mouth series, extra-oral, and specialized radiographs on adult and child patients. Emphasis is placed on protection against x-ray hazards. Students will also process, mount, and evaluate radiographs for diagnostic value. In addition, they will use radiographs to explain dental health and treatment plans to patients. This course is the equivalent of 508-310 at other WTCS schools. PREREQUISITES: Course 508-103 - Dental Radiography

508-311
Dental Assistant Clinical - Adv 2.00

Dental Assistant students apply skills developed in Dental Chairside - Advanced, Dental Lab Procedures, Dental Radiography - Advanced, and Dental Office Procedures in a clinical setting with patients that emphasizes integration of core abilities and basic and advanced occupational skills. This course is equivalent to 508-311 at other WTCS schools. PREREQUISITES: Courses 508-356 or 508-306 - Dental Assistant Clinicals

509-301
Medical Assistant Administrative Procedures 2.00

This course introduces medical assistant students to office management and business administration in the medical office. Students learn to schedule appointments, perform filing, record keeping, telephone and reception duties, communicate effectively with patients and other medical care staff, and keep an inventory of supplies. Students apply introductory medical coding skills and managed care terminology. COREQUISITES: Course 501-107 - Computing for Healthcare, Introduction

509-302
Human Body in Health & Disease 3.00

This course focuses on diseases that are frequently first diagnosed and treated in the medical office setting. Students learn to recognize the causes, signs, and symptoms of diseases of the major body systems as well as the diagnostic procedures, usual treatment, prognosis, and prevention of common diseases. COREQUISITES: Course 501-101 - Medical Terminology

509-303
Medical Assistant Lab Procedures 1 2.00

This course introduces Medical Assistant students to laboratory procedures commonly performed by medical assistants in a medical office setting. Students perform routine laboratory procedures commonly performed in the ambulatory care setting under the supervision of a physician. Students follow laboratory safety requirements and federal regulations while performing specimen collection and processing, microbiology, and urinalysis testing. This course is equivalent to 509-303 at other WTCS schools. COREQUISITES: Course 509-304 - Medical Assistant Clinical Procedures 1

509-304
Medical Assistant Clinical Procedures 1 4.00

This course introduces Medical Assistant students to the clinical procedures performed in the medical office setting. Students perform basic examining room skills, including screening, vital signs, patient history, minor surgery, and patient preparation for routine and specialty exams in the ambulatory care setting. This course is equivalent to 509-304 at other WTCS schools.

509-305
Medical Assistant Lab Procedures 2 2.00

This course prepares students to perform laboratory procedures commonly performed by medical assistants in the ambulatory care setting under the supervision of a physician. Students perform phlebotomy, immunology, hematology, and chemistry laboratory procedures. PREREQUISITES: Course 509-303 - Medical Assistant Lab Procedures 1

509-306
Medical Assistant Clinical Procedures 2 3.00

This course prepares students to perform patient care skills in a medical office setting. Students perform clinical procedures, including administering medications, assisting with minor surgery, performing an electrocardiogram, assisting with respiratory testing, educating patients/community, and maintaining clinical equipment in an ambulatory care setting. PREREQUISITES: Courses 509-303 - Medical Assistant Lab Procedures 1 and 509-304 - Medical Assistant Clinical Procedures 1

509-307
Medical Office Insurance and Finance 2.00

This course introduces students to health insurance and finance in the medical office. Students perform bookkeeping procedures, apply managed care guidelines, and complete insurance claim forms. Students use medical coding and managed care terminology to perform insurance related duties. PREREQUISITES: Courses 501-107 - Computing for Healthcare, Introduction and 509-302 - Human Body in Health & Disease with a minimum grade of C or TR

509-308
Pharmacology for Allied Health Pharm for Allied Health **2.00**

This course introduces students to classifying indications into correct drug categories and applying basic pharmacology principles. Students apply basic pharmacodynamics to identifying common medications, medication preparation, and administration of medications used by the major body systems. PREREQUISITES: Course 509-302 - Human Body in Health & Disease with a minimum grade of C or TR

509-309
Medical Law, Ethics, & Professionalism **2.00**

This course prepares students to display professionalism and perform within ethical and legal boundaries in the health care setting. Students maintain confidentiality, examine legal aspects of the medical record, perform risk management procedures, and examine legal and bioethical issues.

509-310
Medical Assistant Practicum **3.00**

This course requires students to integrate and apply knowledge and skills from all previous medical assistant courses in actual patient care settings. Learners perform medical assistant administrative, clinical, and laboratory duties under the supervision of trained mentors to effectively transition to the role of a medical assistant. This AAMA required externship lasts between 160 hours (AAMA minimum) and 216 hours.

509-350
Ophthalmic Pre-Testing 1 **3.00**

This course will teach clinical testing that is associated with eye examinations of all types. The student should be able to assist any eye doctor with the care of patients at the completion of this course. PREREQUISITES: Course 509-304 - Medical Assistant Clinical Procedures 1 with a minimum grade of C or TR COREQUISITES: Course 509-352 - Ocular Anatomy and Optics

509-351
Ophthalmic Testing 2 **3.00**

This course will teach clinical testing that is associated with eye examinations of all types. The student should be able to assist any eye doctor with the care of patients at the completion of this course. PREREQUISITES: Courses 509-350 - Ophthalmic Pre-Testing 1 and 509-352 - Ocular Anatomy and Optics wth a minimum grade of C or TR

509-352
Ocular Anatomy and Optics **3.00**

This course explores the form and function of the human eye, Basic ophthalmic optics and vision correction are presented. Students will learn about the physiology of the eye, vision correction, diagnostic pharmaceutical agents, and pathological conditions. COREQUISITES: Course 509-351 - Ophthalmic Testing 2

510-101
Emergency Room Nursing Theory **5.00**

This five credit (90 hour) theoretical course provides RNs with an appropriate entry level knowledge base that prepares them for the emergency room setting. This lecture/ discussion format will take a systems approach, based upon the core curriculum of the ENA (Emergency Nurses Association) for Emergency Nursing. This course may be taken for professional enrichment or used toward completion of the ER Nursing ATC.

510-104
Nursing Curriculum Transition **5.00**

This course meets the needs of students in the "old" curriculum as they transition from the second semester to the third semester of the state aligned curriculum. The course addresses competencies from health promotion, health alterations, and the community content from third semester. Students who have completed second semester take this course to prepare for entry into the state curriculum.

510-105
LPN Refresher I - Theory/Lab **3.00**

This course is designed to meet Wisconsin State Board of Nursing requirements to be licensed as an LPN and re-enter the work force. The student will learn current theoretical nursing practices. Topics included in the course are: trends, responsibilities and scope of practice, the nursing process, documentation, medication and pharmacy updates, infection control, supervision/ delegation, nursing care specific to the aging population, and communication skills.

510-106
LPN Refresher II - Clinical **1.00**

The clinical experience builds upon the theory and practicum reviewed in LPN Refresher I - Theory/Lab. This experience is determined by the student's preference and site availability and may be performed in a hospital or long term/sub-acute facility. It is highly recommended that the majority of the hours be spent in a long-term care facility. The course consists of 70 or more hours of directly supervised or precepted clinical experience. As the experience progresses, so does the independence of the student.

510-107
RN Refresher I - Theory/Lab **3.00**

This course is designed to update the RN on theoretical components of nursing practice and to meet Wisconsin State Board of Nursing requirements as an RN ready to enter the work force. Topics included in the course are: ethics, legal issues, trends, professional issues, the nursing process, documentation, physical and nutritional assessment, medication and intravenous fluid therapy, leadership, and communication skills.

510-108
RN Refresher II - Clinical **2.00**

This clinical experience builds upon the theory and practicum reviewed in RN Refresher I - Theory/Lab. This experience is determined by the student's preference and site availability and may be performed in a hospital, clinic, or long term/ sub-acute facility. The course consists of 100 or more hours of directly supervised or precepted clinical experience. As the experience progresses, so does the independence of the student.

510-134
High Risk Post Partum **2.00**

This course is designed to prepare the nurse to care for high risk and complicated post partum women. Content includes hemorrhage, thrombosis, infection medical and psychological alterations. Theoretical concepts will be applied in the laboratory setting with the use case scenarios and the human patient simulator. There will be a strong emphasis on physiology and evidence based practice. Application of theory and promotion of critical thinking will be supported through the use of realistic case scenarios in the lab. Human patient simulators will provide real-life experiences.

510-135
High Risk Neonatal **2.00**

This course is designed to prepare the nurse to care for high risk neonate. Content includes caring for the neonate who is experiencing complications of prematurity, postmaturity, meconium aspiration, persistent pulmonary hypertension, intrauterine growth restriction, large for gestational age, infant of the diabetic mother and infection. Theoretical concepts will be applied in the laboratory setting with the use case scenarios and the human patient simulator.

510-136
High Risk Antepartum **2.00**

This course is designed to prepare the nurse to care for high risk and complicated ante partum women and the unborn child. Content includes caring for the client with antenatal complications including placental and hemorrhagic alterations, hyperemesis, incompetent cervix, premature labor, premature rupture of members, intrauterine growth restriction, multiple gestations, diabetes infection and hypertensive disorders. Theoretical concepts will be applied in the laboratory setting with the use case scenarios and the human patient simulator.

510-137
High Risk Intrapartum **2.00**

This course is designed to prepare the nurse to care for high risk and complicated intra partum women and the unborn child. Content includes interpreting signs of fetal distress and interventions to improve fetal and newborn outcomes. There is a focus on caring for the client experiencing dystocia, obstetrical emergencies such as prolapsed of cord, uterine rupture and amniotic fluid embolism. Content includes caring for the client with labor interventions such as induction and amniotomy. Theoretical concepts will be applied in the laboratory setting with the use case scenarios and the human patient simulator.

510-151
Nsg: Endocrine & Electrolytes Disorders **1.00**

This course is designed to enhance the learning of nursing students in planning care for the client with disorders of the endocrine system, fluids, electrolytes, and acid-base balance. PREREQUISITES: Courses 543-105 - Nursing Health Alterations, 543-106 - Nursing Health Promotion, 543-107 - Nursing: Clinical Care Across the Lifespan, 543-108 - Nursing: Introduction to Clinical Care Management

510-152
NSG: Applied Pediatric Concepts **1.00**

This one credit seminar format course prepares the learner to expand knowledge from previous courses to the nursing care of children. Students will actively apply nursing concepts while focusing on issues of communication, intervention, development and current thematic issues in the care of children. PREREQUISITES: Courses 809-188 - Psychology, Developmental and 543-106 - Nursing Health Promotion

510-153
Nsg: Pharmacology Applications **1.00**

This course reviews the principles of pharmacology with emphasis on major drug classifications used to treat diseases. The pathophysiology approach will help the learner connect pharmacology and the nursing process to the medical/nursing treatment of a variety of clients. PREREQUISITES: Course 543-103 - Nursing Pharmacology

510-154
Pathophysiology for Health Professions **3.00**

This course prepares the learner to expand and reinforce knowledge as it relates to pathology across the lifespan. The course is designed to support the health care provider in understanding from a cellular level how functional and physiologic changes occur as a result of a disease. A comprehensive understanding of anatomy and physiology is addressed and promoted. Physiological alterations of focus will include: Neoplasms, Congenital and genetic disorders. Diseases related to the child, adult and elderly, Neurologic, cardiovascular, respiratory, digestive, genitourinary, endocrine, musculoskeletal, skin and reproductive disorders Special emphasis is placed on promoting a climate where the learner is expected to synthesize and apply previous learned concepts to physiologic adaptations because of a defined pathology. PREREQUISITES: Course 806-177 - General Anatomy and Physiology

510-155
Principles of Gerontological Nursing **3.00**

This course is designed to prepare the nurse to care for the complexity of caring for the aged client and family. Content includes physiologic changes in aging, theories of aging, medications and laboratory values specific to the aging client, management of illnesses, diseases and conditions commonly seen in the aging population, and ethical and legal considerations.

510-156
Assessment of the Older Adult **3.00**

This course is designed to prepare the nurse to develop key assessment skills, improve assessment insight, and utilize evidenced based tools to ensure best outcomes for the older adult. Theoretical concepts will be applied in the laboratory setting with the use case scenarios and the human patient simulator. PREREQUISITES: Course 510-155 - Principles of Gerontological Nursing

510-157
Rehab Care and Chronic Disease Mgmt **3.00**

This course is designed to prepare the nurse to care for the patient who needs rehabilitation to return to home. Content includes common events/illnesses that necessitate rehabilitation, orthopedic conditions, cardiovascular conditions, neuro/trauma conditions. Theoretical concepts will be applied in the laboratory setting with the use case scenarios and the human patient simulator. PREREQUISITES: Course 510-155 - Principles of Gerontological Nursing

510-158
Gerontological Capstone Clinical **1.00**

This course is a capstone experience in which the student is assigned to practice theoretical concepts in caring for the aged client. Nurses will have the opportunity to perform nursing interventions under the supervision of an experienced gerontological nurse in a setting that provides specialty care for the aged client. PREREQUISITES: Course 510-155 - Principles of Gerontological Nursing and 510-156 - Assessment of the Older Adult

510-301
Health Unit Coordinator Procedures **3.00**

Health Unit Coordinator Procedures I is an introductory course to the HUC profession. The course will introduce the student to the environment, communication, and managing client information in healthcare. PREREQUISITES: Courses 501-101 - Medical Terminology, 501-104 - Principles of

Customer Service in Healthcare, 501-107 - Computing for Healthcare, Introduction with a minimum grade of C or TR

510-302
Health Unit Coordinator Procedures II3.00

Health Unit Coordinator Procedures II is a more advanced course that introduces the student to the order process, transcription of medication and infusion orders, laboratory and diagnostic orders, interdisciplinary treatment orders, and specialty unit orders. PREREQUISITES: Course 510-301 - Health Unit Coordinator Procedures I

510-303
Health Unit Coordinator Clinical 3.00

This course provides opportunities for learners to apply the concepts and skills of a Health Unit Coordinator in a clinical setting. COREQUISITES: Course 510-302 - Health Unit Coordinator Procedures II

510-325
Certified Medication Assistant Assistant 3.00

Medication Assistants are Certified Nursing Assistants who have completed an approved training program and have received additional certification to administer medications and perform nonsterile treatments in a Skilled Nursing Facility in Wisconsin, following the policies and procedures of their organization. They perform the delegated function of medication administration under the supervision of a registered nurse. Routes of administration include oral, topical, eye, ear, and nose drops; vaginal; rectal; transdermal; and oral inhalers.

512-125
Surgical Technology, Intro to 4.00

Provides the foundational knowledge of the occupational environment. Principles of sterilization and disinfection are learned. Surgical instruments are introduced. Preoperative patient care concepts are simulated. Lab practice in included. PREREQUISITES: Course 806-177 - General Anatomy and Physiology COREQUISITES: Course 501-101 - Medical Terminology

512-126
Surgical Tech Fundamentals 1 4.00

Focuses on preparing the patient and operating room for surgery. Principles of sterile technique are emphasized as the student moves into the scrub role. Lab practice is included. PREREQUISITES: Course 806-177 - General Anatomy and Physiology COREQUISITES: Courses 501-101 - Medical Terminology and 512-125 - Surgical Technology, Intro to

512-127
Exploring Surgical Issues 2.00

Explores a variety of issues related to surgical technology. Emphasis is placed on becoming a professional member of the surgical team. COREQUISITES: Courses 512-125 - Surgical Technology, Intro to and 512-126 - Surgical Tech Fundamentals 1

512-128
Surgical Tech Fundamentals 2 4.00

Focuses on enhancing surgical technology skills while functioning as a sterile team member. Lab and/or clinical practice is included. PREREQUISITES: Courses 512-125 - Surgical Technology, Intro to, 512-126 - Surgical Tech Fundamentals 1, 512-127 - Exploring Surgical Issues, and 501-101 - Medical Terminology COREQUISITES: Courses 806-179 - Anatomy and Physiology, Advanced, 806-197 - Microbiology, and 512-129 - Surgical Pharmacology

512-129
Surgical Pharmacology 2.00

Basic study of drug classifications, care, and handling of drugs and solutions, application of mathematical principles in dosage calculations, terminology related to pharmacology, anesthesia, and drugs used in surgery. PREREQUISITES: Courses 512-125 - Surgical Technology, Intro to and 512-126 - Surgical Tech Fundamentals 1

512-130
Surgical Skills Application 2.00

Provides a transition from the academic to the clinical setting. Learners integrate the surgical technologist skills as they apply to various surgical procedures. PREREQUISITES: Courses 512-125 - Surgical Technology, Intro to, 512-126 - Surgical Tech Fundamentals 1, 512-128 - Surgical Tech Fundamentals 2, and 512-127 - Exploring Surgical Issues with a minimum grade of C or TR COREQUISITES: Course 512-129 - Surgical Pharmacology

512-131
Surgical Interventions 1 4.00

Provides the foundational knowledge of surgical core and specialty procedures. Examines the pathophysiology, diagnostic interventions, health sciences, and surgical techniques for a variety of procedures. PREREQUISITES: Courses 512-128 - Surgical Tech Fundamentals 2 and 512-130 - Surgical Skills Application

512-132
Surgical Technology Clinical 1 3.00

Apply basic surgical theories, principles, and procedural techniques in the operating room. Students begin to function as team members under the guidance of the instructor and authorized clinical personnel. PREREQUISITES: Courses 512-129 - Surgical Pharmacology, 512-128 - Surgical Tech Fundamentals 2, and 512-130 - Surgical Skills Application with a minimum grade of C or TR COREQUISITES: Course 512-131 - Surgical Interventions 1

512-133
Surgical Technology Clinical 2 3.00

Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical procedures. PREREQUISITES: Courses 512-129 - Surgical Pharmacology, 512-132 - Surgical Technology Clinical 1, and 512-130 - Surgical Skills Application with a minimum grade of C or TR COREQUISITES: Course 512-131 - Surgical Interventions 1

512-134
Surgical Interventions 2 3.00

Expands knowledge of core and specialty surgical procedures by incorporating pathophysiology, diagnostic interventions, health sciences, and surgical techniques. PREREQUISITES: Courses 512-131 - Surgical Interventions 1 and 512-133 - Surgical Technology Clinical 2

512-135
Surgical Technology Clinical 3 3.00

Further experience in a clinical setting allows the student to continue to improve technical skills while accepting more responsibilities during surgical

procedures. PREREQUISITES: Courses 512-131 - Surgical Interventions 1 and 512-133 - Surgical Technology Clinical 2 COREQUISITES: Course 512-142 - Surgical Interventions II

512-136
Surgical Technology Clinical 4 **3.00**

During this clinical course the student will function relatively independently. Serves as a transition from a student perspective to an employee by utilizing advanced skills for an entry level Surgical Technologist. PREREQUISITES: Course 512-135 - Surgical Technology Clinical 3 COREQUISITES: Course 512-142 - Surgical Interventions II

512-142
Surgical Interventions II **4.00**

Expands knowledge of core and specialty surgical procedures by incorporating pathophysiology, diagnostic interventions, health sciences, and surgical techniques. PREREQUISITES: Courses 512-131 - Surgical Interventions 1 and 512-133 - Surgical Technology Clinical 2 COREQUISITES: Courses 512-135 - Surgical Technology Clinical 3 and 512-136 - Surgical Technology Clinical 4

513-110
Lab Skills, Basic **1.00**

This course explores health career options and the fundamental principles and procedures performed in the clinical laboratory. You will utilize medical terminology and basic laboratory equipment. You will follow required safety and infection control procedures and perform simple laboratory tests. COREQUISITES: Courses 513-111 - Phlebotomy

513-111
Phlebotomy **2.00**

This course provides opportunities for learners to perform routine venipuncture, routine capillary puncture, and special collection procedures. COREQUISITES: Courses 513-110 - Lab Skills, Basic

519-324
Facilities Service OSHA **1.00**

Prepares students for custodial service employment. Introduces students to safety in the work place, hazard communication and bloodbourne pathogen protection. Students will gain knowledge of chemical fundamentals and safe handling of cleaning chemicals.

519-325
Cleaning Fundamentals **3.00**

Prepares students for custodial services employment. Develops knowledge and experience in general cleaning techniques, chemical usage, tools and equipment usage and identification of maintenance issues encountered by custodial staff. Includes common area, office/classroom, general kitchen, and restroom cleaning.

519-326
Floor Care **2.00**

Prepares students for custodial services employment. Introduces floor types, floor care chemicals and equipment. Develops knowledge and experience in assessment of current floor care needs and performance of floor care maintenance techniques (including routine, interim and restorative).

519-327
Carpet Care **2.00**

Prepares students for custodial services employment. Introduces carpet types, carpet care chemicals and equipment. Student will gain knowledge and experience in assessment of current carpet care needs and performance of carpet care maintenance techniques (routine, interim and restorative).

519-328
Green Clearning **1.00**

Prepares students for custodial service employment. Introduces students to effective cleaning techniques and chemicals used to protect the public health without harming the environment.

520-101
Human Services/Introduction **3.00**

An overview of human services, types of agencies and delivery systems and human service as a career field. Emphasis will be on developing the generalist concept and the role of the associate degree human service worker.

520-102
Crisis Intervention in Human Services **3.00**

Students will learn about crisis theory and its application to a variety of clientele and contexts. Students will also learn and practice a variety of verbal and non-verbal approaches to working with the client in crisis, steps in maintaining safety and will demonstrate their learning through direct, hands on approaches. Upon successful completion of the course students will be able to obtain a certificate in Non-Violent Crisis Intervention through the Crisis Prevention Institute. This course does not teach CPI restraint methods.

520-105
Interviewing Principles & Recordkeeping **3.00**

Introduction to interviewing and recordkeeping skills as practiced in human services agencies, including social history, summary recording, case assessment and planning.

520-106
Counseling the Criminal Offender **1.00**

This course will expose you to a theoretical model underlying criminal personalities and practice in counseling. Through lectures, demonstrations, small-group discussions, experiential activities, readings, and writing papers, you are assisted to critically evaluate the practical applications of contemporary counseling perspectives related to the criminal tactics and errors in thinking.

520-107
Mindfullness **1.00**

Students will learn mindfulness, a state of active open attention on the present that research has shown can reduce stress and emotional reactivity, improve ability to concentrate, boost working memory, increase cognitive flexibility, improve immune system, and much more. This course can show you how to change your life and your relationships by cultivating skills that lead to experiencing a better quality of life, both personally and professionally.

520-108
Trauma Sensitive Services **1.00**

This course identifies the various models of trauma sensitive services and how trauma sensitive services can benefit clients and behavioral health organizations. Students will learn the concepts behind trauma

informed care and how state and federal mandates expect trauma informed care to be implemented.

520-110
Community Resources and Services 3.00

This course seeks to expose the student to a wide variety of community agencies, resources, and programs through the use of guest speakers and site visits. The functions, funding, clients served, eligibility requirements, and referral procedures of the agency will be emphasized.

520-115
Counseling/Introduction to 3.00

This course is designed to provide the student with an overview of the major counseling theories, their techniques and the applications of these to various situations. The student will be able to practice the use of these counseling techniques in initiating, structuring and terminating a counseling session. PREREQUISITES: Courses 520-105 - Interviewing Principles & Recordkeeping

520-121
Human Service Field Experience II 3.00

The student is given the opportunity to demonstrate understanding of more advanced social work skills and techniques used in the field. This course will meet in a weekly seminar to monitor progress and address concerns. PREREQUISITES: Courses 520-124 - Human Service Field Experience

520-124
Human Service Field Experience 3.00

The student is given an opportunity to demonstrate an understanding of social work skills and techniques under supervision in a working situation. The class will meet in a weekly seminar to monitor progress and address concerns. PREREQUISITES: Courses 520-127 - Professional Practices in Human Services COREQUISITES: Courses 520-140 - Group Counseling

520-127
Professional Practices in Human Services 3.00

This course prepares students to enter the human services profession and maintain effectiveness as a human service practitioner. Emphasis will be placed on gaining a working knowledge of professional codes of ethics. Students will explore social/ethical issues that impact the profession. Professional credentialing, continuing education, and maintaining vitality within the field will be stressed.

520-128
Child Welfare Policy and Practice 3.00

This class helps the student examine the economic, social, and political aspects of children's issues. It also addresses the U.S. welfare system, including proprietary, private, voluntary, and governmental agencies.

520-140
Group Counseling 3.00

The focus of this course is on the group dynamics and group process. Various counseling approaches and their application to group work will be explored along with the developmental stages of groups. Individual behaviors and motivations in both task and counseling groups will be identified. Emphasis will be placed on extensive role-play situations for knowledge and skill integration. PREREQUISITES: Courses 520-115 - Counseling/Introduction to

520-141
Survey Public Service Organizations 3.00

This course will explore various programs provided through public services and go over eligibility requirements for each program. It is designed to survey the skills needed to serve as a financial assistant worker fior Racine Workforce Development.

520-142
Motivational Interviewing for Human Srv 1.00

This course will examine the theory and application of motivational interviewing as an intervention in human services. The course will examine the role of motivation, strategies to help clients resolve ambivalence about change, methods to assess readiness to change and traits in the human service worker which increases motivation to change.

520-143
Neuroscience in Human Services 1.00

This course will examine the theory and application of neurosciences in human services, to increase understanding of how the brain impacts, and is impacted by human behavior. Student's will: 1. Demonstrate a basic understanding of how the brain and nervous system works, 2. Recognize how the healthy brain organizes experiences into narratives, 3. Understand the concept of the social brain and its role in attachment, 4. Understand the link between neurobiological disorganization and psychopathology and 5. Understand how the human services relationship has the potential to re-organize brain functioning.

520-150
Gerontology/Introduction to 3.00

Identifies basic theories and facts about the aging process leading toward application of methods and techniques of serving the aged. Student will be encouraged to develop an understanding of the psychological and sociological experience of the older adult population.

520-151
Family Theory and Practice 3.00

Provides the student with a broad understanding of family systems theory. The student will apply knowledge of structural family theory and brief strategic family theory in case studies. The student will also analyze case situations involving violence within the family system.

520-152
Aspects of Disabilities 3.00

This course is an introduction to the history of services and legislative processes involved in provision of services to people with disabilities. It is a review of medical diseases and disabilities, including etiology, physiology, prognosis, and impact on disabled individuals and their environment.

520-160
Correctional Processes 3.00

A study of present correctional policies and processes in the criminal justice field as it affects today's society in terms of deterrents and rehabilitation and a look at future trends.

520-161
Child and Adolescent Mental Health 3.00

This course will examine the psychological, social/environmental, cultural and diagnostic aspects of children's mental health and mental illness. It will also address areas of intervention and resilience. Focus will be on identifying symptoms, treatment approaches and current trends affecting practice in this area.

522-101
IA: Teamwork in School Settings 3.00

This course introduces the learner to group dynamics, school and class policies, liability, confidentiality, and safety issues as they relate to the role of the instructional assistant as a member of a team.

522-102
IA:Techniques for Reading and Language Arts 3.00

This course focuses on the instructional assistant's role in reading and language arts. The learner gains an understanding of how to work with all children individually and in groups through questioning, listening, and guiding techniques. This course also addresses the use of current classroom materials plus enrichment and support activities. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

522-103
IA: Introduction to Educational Practices 3.00

This course addresses the fundamentals of teaching methodologies, learning styles, factors influencing teaching effectiveness, strategies to meet the needs of all learners, questioning techniques, and basic assessment practices.

522-104
IA: Technology and Media Resources 3.00

This course provides the opportunity for the learner to develop the knowledge and skills in the area of media and computer resources as it relates to the instructional assistant. Students in this course will gain hands-on computer and media experience and will learn how to operate a variety of equipment. A variety of school related documents will be prepared while using selected software. Students incorporate images into documents from a variety of sources, including digital cameras and scanners.

522-105
IA: Practicum 1 2.00

Field Experience I will introduce the student to the pre-kindergarten, kindergarten, elementary, middle, or high school classroom. The student will observe children and practice techniques under the direction of the classroom teacher.

522-106
IA:Child and Adolescent Development 3.00

This course provides an overview of growth and development from birth through adolescence. It acquaints the learner with the fundamental tasks of physical, motor, perceptual, cognitive, social/emotional, and language development.

522-107
IA:Overview of Special Education 3.00

This course provides training in the classifications of special education, pre-K to grade 12. Studies include causes of special needs and intervention strategies. The course examines key development milestones and how they relate to physical, mental, emotional, or social development of children.

522-111
IA:Guiding and Managing Behavior 3.00

This course focuses on guiding children's behavior to keep them safe and healthy. It includes strategies for improving behavior and problems of all levels in the inclusive classroom, on the bus, on the playground, and on field trips.

522-115
IA:Practicum 2 2.00

The second field experience will provide the student with further responsibilities in a classroom setting in pre-kindergarten, elementary, middle, or high school. The student will work with children or youth under the direction of the classroom teacher.

522-118
IA: Techniques for Math 3.00

This course will address techniques for the instructional assistant in assisting the classroom teacher in group and individual tutoring activities in math. Current practice. including manipulatives, problem solving, and assessment, will be covered within the framework of state and national standards. PREREQUISITES: Course 804-107 - College Mathematics

522-120
IA: Techniques for Science 3.00

This course is an introduction to the content and processes of science. Strategies of teaching science will be studied and practiced and will prepare you in assisting the classroom teacher in group and individual activities in science. Current science processes, strategies, procedures, assessment options, and factors affecting science learning will be explored.

522-122
IA:Advanced Reading and Language Arts 3.00

Students will gain the knowledge and skills needed to support and encourage children as independent, strategic readers as well as techniques to support children through the writing process. Children's literature will be integrated throughout the course. PREREQUISITES: Course 522-102 - IA:Techniques for Reading and Language Arts

522-123
IA: Positive Classrm Mgmt Tech Techniques 2.00

This course examines the impact of issues such as divorce, alcoholism, child abuse, youth suicide, stress, violence, and gangs on behavior in the classroom. It also examines conflict resolution techniques with an emphasis on de-escalation strategies and prevention. PREREQUISITES: Course 522-111 - IA:Guiding and Managing Behavior

522-124
IA:Supporting Students with Disabilities 3.00

This course includes strategies to manage the learning environment proactively to prevent behavior problems and promote learning for students with disabilities.

522-125
IA:Practicum 3 2.00

Practicum 3 allows students to put into practice the knowledge and skills learned from program courses under the direction and supervision of a certified teacher or

other qualified school personnel. Job search skills will also be addressed. PREREQUISITES: Course 522-115 - IA:Practicum 2

522-129
IA: Practicum 1 **3.00**

Practicum I will introduce the student to a diverse classroom setting at an elementary, middle school and/or high school level. The student will observe children and practice techniques under the guidance of a DPI certified teacher.

522-131
IA: Practicum 2 **3.00**

Apply the skills learned in previous program courses in a school setting while under the supervision of a DPI certified teacher. Students support children with special education needs and programming. Job search skills will be addressed and a professional portfolio will be completed. PREREQUISITES: Course 522-129 - IA: Practicum 1

522-132
IA: Positive Classroom Mgmt Tech **3.00**

This course examines the impact of issues such as divorce, alcoholism, child abuse, youth suicide, stress, violence and gangs on behavior in the classroom. Conflict resolution techniques and de-escalation strategies and with an emphasis on prevention will also be examined. PREREQUISITES: Course 522-111 - IA:Guiding and Managing Behavior

524-107
PTA/Proprioceptive Neuromuscular/ Advanced Facilitation Concepts for the Physical Therapist Assistant/ Advanced **1.00**

Advanced Proprioceptive Neuromuscular Facilitation for the PTA will enhance the student's knowledge of activities, patterns, and techniques initially addressed in previous coursework. The treatment of neurologic and orthopedic dysfunction and functional outcomes will be addressed. The course will consist of simulated patient practice in lab/lecture setting.

524-108
PTA Musculoskeletal Anatomy & Function **2.00**

This course is a preparatory and enrichment elective for students who are about to enter first semester PTA program core courses. It provides an in-depth look at musculoskeletal anatomy, including anatomical terms, bony anatomy, cardinal planes and motions, and joint and muscle structure and function. PREREQUISITES: Course 806-177 - General Anatomy and Physiology

524-138
PTA Kinesiology 1 **3.00**

This course introduces basic principles of musculoskeletal anatomy, kinematics, and clinical assessment. Students locate and identify muscles, joints, and other landmarks of the lower quadrant, in addition to assessing range of motion and strength.

524-139
PTA Patient Interventions **4.00**

This course is an introduction to basic skills and physical therapy interventions performed by the physical therapist assistant.

524-140
PTA Professional Issues 1 **2.00**

This course introduces the history and development of the physical therapy program, legal and ethical issues, the interdisciplinary health care team, and professional communication skills. This course is equivalent to 524-140 at other WTCS schools.

524-141
PTA Kinesiology 2 **4.00**

This course applies basic principles from PTA Kinesiology 1 to the axial skeleton and upper quadrant, including location and identification of muscles, joints, and other landmarks. Students assess range of motion and strength of the axial skeleton and upper quadrant and integrate analysis of posture and gait. This course is equivalent to 524-141 at other WTCS schools. PREREQUISITES: Course 524-138 - PTA Kinesiology 1

524-142
PTA Therapeutic Exercise **3.00**

This course provides instruction on the implementation of a variety of therapeutic exercise principles. Learners implement, educate, adapt, and assess responses to therapeutic exercises. PREREQUISITES: Course 806-177 - General Anatomy and Physiology COREQUISITES: Course 524-138 - PTA Kinesiology 1

524-143
PTA Therapeutic Modalities **4.00**

This course develops the knowledge and technical skills necessary to perform numerous therapeutic modalities likely to be utilized as a PTA. COREQUISITES: Course 524-139 - PTA Patient Interventions

524-144
PTA Principles of Neuromuscular Rehabilitation **4.00**

This course integrates concepts of neuromuscular pathologies, physical therapy interventions, and data collection in patient treatment. It is equivalent to 524-144 at other WTCS schools. PREREQUISITES: Courses 524-141 - PTA Kinesiology 2, 524-139 - PTA Patient Interventions, and 524-142 - PTA Therapeutic Exercise

524-145
PTA Musculoskeletal Rehabilitation **4.00**

This course integrates concepts of musculoskeletal pathologies, physical therapy interventions, and data collection in patient treatment. It is equivalent to 524-145 at other WTCS schools. PREREQUISITES: Course 524-139 - PTA Patient Interventions COREQUISITES: Courses 524-141 - PTA Kinesiology 2 and 524-142 - PTA Therapeutic Exercise

524-146
PTA Management of Cardiopulmonary and Integumentary Conditions **3.00**

This course integrates concepts of cardiopulmonary and integumentary pathologies, physical therapy interventions, and data collection in patient treatment. It is equivalent to 524-146 at other WTCS schools. PREREQUISITES: Courses 524-141 - PTA Kinesiology 2, 524-139 - PTA Patient Interventions, and 524-142 - PTA Therapeutic Exercise

524-147
PTA Clinical Practice 1 **2.00**

This course provides a part-time clinical experience to apply foundational elements, knowledge, and technical skills pertinent to physical therapy practice. It is the

equivalent of 524-147 at other WTCS schools. COREQUISITES: Courses 524-141 - PTA Kinesiology 2 and 524-143 - PTA Therapeutic Modalities

524-148
PTA Clinical Practice 2 **3.00**

This course provides another part-time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry level physical therapist assistant in various practice settings. It is equivalent to 524-148 at other WTCS schools. PREREQUISITES: Course 524-147 - PTA Clinical Practice 1

524-149
PTA Rehabilitation Across the Lifespan **2.00**

This capstone course integrates concepts of pathology, physical therapy interventions, and data collection across the lifespan. In addition, the PTA's role in health, wellness and prevention, reintegration, and physical therapy interventions for special patient populations will be addressed. This course is equivalent to 524-149 at other WTCS schools. PREREQUISITES: Courses 524-144 - PTA Principles of Neuromuscular Rehabilitation, 524-145 - PTA Musculoskeletal Rehabilitation, and 524-148 - PTA Clinical Practice 2 COREQUISITES: Course 24-146

524-150
PTA Professional Issues 2 **2.00**

This course incorporates professional development, advanced legal and ethical issues, healthcare management and administration, and further development of professional communication strategies. PREREQUISITES: Course 524-140 - PTA Professional Issues 1 COREQUISITES: Course 524-148 - PTA Clinical Practice 2

524-151
PTA Clinical Practice 3 **5.00**

This course provides a full-time clinical experience to apply foundational elements, knowledge, and technical skills required of the entry level physical therapist assistant in various practice settings. PREREQUISITES: Courses 524-144 - PTA Principles of Neuromuscular Rehabilitation, 524-145 - PTA Musculoskeletal Rehabilitation, 524-146 - PTA Management of Cardiopulmonary and Integumentary Conditions, and 524-148 - PTA Clinical Practice 2

524-156
PTA Applied Kinesiology 1 **4.00**

Introduces basic principles of musculoskeletal anatomy, kinematics, and clinical assessment. Students locate and identify muscles, joints, and other landmarks of the lower quadrant in addition to assessing range of motion and strength.

524-157
PTA Applied Kinesiology 2 **3.00**

Applies basic principles from PTA Kinesiology 1 to the axial skeleton and upper quadrant including location and identification of muscles, joints and other landmarks. Assess range of motion and strength of the axial skeleton and upper quadrant. Integrate analysis of posture and gait.

527-500
Wastewater Treatment Introduction to **1.50**

Provides an overview of the different processes used in wastewater treatment plants, as well as the collection system and sludge disposal procedures. Covers calculations used to determine plant loadings, detention times and percent removal efficiencies. Environmental regulations, preventive maintenance practices and basic safety precautions are covered.

527-503
Conventional Wastewater Treatment 1.50

Covers the basic biology, chemistry and operational controls of wastewater treatment processes: pre-and primary treatment of wastewater, activated sludge, trickling filters and RBCs (Rotating Biological Contactors). The structure and function of major equipment is explained. Various lab tests and the calculations associated with them are presented.

527-505
Advanced Wastewater Treatment **2.00**

Develops competence in management of wastewater treatment processes including disinfection treatment of wastewater, basic and advanced phosphorus removal, tertiary filtration, mechanical sludge handling, sludge dewatering, and sludge disposal. Students use the Internet to locate resources useful in managing wastewater treatment processes.

527-511
Water Chemistry **2.00**

Explores basic chemical concepts and principles such as elements, compounds, states of matter, and reactions that are applicable to evaluating and regulating water quality and applies them to water and wastewater treatment. Learners also examine laboratory techniques, equipment, quality assurance, and record keeping and reporting.

527-520
Hydraulics of Water & Wastewater **1.50**

Provides information and procedures necessary to predict and manipulate the hydraulics of water transmission and collection. The primary work assignments involve the reading and use of hydraulic principles and then applying them in a real-life case analysis as a laboratory project.

527-525
Industrial Wastes **1.50**

Focuses on the control of wastewater resulting from the processing of a variety of industrial materials. Methods of waste initiation, impact, minimization, and the treatment of waste process streams of metal, pulp and paper, and food and beverage industry operations are emphasized and analyzed.

527-530
Groundwater Supply & Distribution **1.50**

Provides environmental and treatment information necessary to operate a potable groundwater well system. Basic distribution system design and component use will also be detailed. Students examine a groundwater treatment plant and make operational assessments based on established industry criteria.

527-536
Equipment Maintenance & Instrumentation **2.00**

Develops skills in the identification and application of tools, correcting facility and system mechanical problems, and understanding the complete concept of preventative and predictive maintenance. Students will research preventative and predictive maintenance systems. Skills will be developed using instrumentation for

process control. Supervisory Control and Data Acquisition including control diagrams, designs and applications will be studied.

530-160
Healthcare Informatics **4.00**

Emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learner will develop skills to assist in information systems design and implmentation. PREREQUISITES: Courses 103-143 - Computers for Professionals 530-176 - Health Data Management

530-161
Health Quality Management **3.00**

Explores the programs and processes used to manage and improve healthcare quality. Addresses regulatory requirements as related to performance measurement, assessment, and improvement, required monitoring activities, risk management and patient safety, utilization management, and medical staff credentialing. Emphasizes the use of critical thinking and data analysis skills in the management and reporting of data. PREREQUISITES: Course 530-177 - Healthcare Statistics and Research

530-172
Healthcare Delivery Systems **2.00**

This course examines the organization, financing, and delivery of health care services, including the study of healthcare professionals.

530-176
Health Data Management **2.00**

This course introduces the use and structure of health care data elements, data sets, data standards, their relationship to primary and secondary record systems, and health information processing. PREREQUISITES: Courses 530-172 - Healthcare Delivery Systems and 530-181 - The Health Record, Introduction to

530-177
Healthcare Statistics and Research **2.00**

This course explores the management of medical data for statistical purposes. It focuses on descriptive statistics, including definitions, collection, calculation, compilation, and display of numerical data. Vital statistics, registries, and research are examined. PREREQUISITES: Course 530-176 - Health Data Management

530-178
Healthcare Legal and Ethical Issues Healthcare Law & Ethics **2.00**

This course examines regulations for the content, use, confidentiality, disclosure, and retention of health information. An overview of the legal system and ethical issues are addressed. PREREQUISITES: Course 530-176 - Health Data Management

530-181
The Health Record, Introduction to **1.00**

This course prepares students to illustrate the flow of health information and to locate and analyze health record documentation. Learners will be introduced to types of data found in a medical record and how that information flows in the health care facility from the point of entry to the point of discharge. Confidentiality and security of health information is emphasized.

530-182
Human Disease for Health Professions **3.00**

This course focuses on the common diseases of each body system as encountered in all types of health care settings by health information professionals. Emphasis is placed on understanding the etiology (cause), signs and symptoms, diagnostic tests, and treatment (including pharmacologic) of each disease. PREREQUISITES: Course 501-101 - Medical Terminology and course 806-189 - Anatomy, Basic or 806-177 - General Anatomy and Physiology

530-183
ICD-9-CM Coding **3.00**

This course explains the basic principles of coding diseases and operations, emphasizing this current classification system. Students are also introduced to miscellaneous coding systems that preceded the current system. A demonstration of encoder and impact of sequencing is included. COREQUISITES: Courses 530-181 - The Health Record, Introduction to and 530-182 - Human Disease for Health Professions

530-184
CPT Coding **3.00**

This course teaches coding of physicians' procedures and services using the HCPCS/CPT system, including basic coding principles and guidelines and coding from operative reports and other medical record documentation. PREREQUISITES: Courses 530-181 - The Health Record, Introduction to and 530-182 - Human Disease for Health Professions

530-185
Healthcare Reimbursement **2.00**

This course prepares students to compare and contrast health care payers and to comply with regulations related to fraud and abuse. Specific topics include inpatient and outpatient payment systems, fraud and abuse issues regarding coding of health care services, and an illustration of the reimbursement cycle. Students assign Diagnosis Related Groups (DRGs), Ambulatory Payment Classifications (APCs), and Resource Utilization Groups (RUGs) with entry-level proficiency, using computerized encoding and grouping software. PREREQUISITES: Courses 530-182 - Human Disease for Health Professions, 530-197 - ICD Diagnosis Coding, and 530-199 - ICD Procedure Coding COREQUISITES: Course 530-184 - CPT Coding

530-190
Healthcare Information Systems **3.00**

This course emphasizes the role of information technology in healthcare through an investigation of the electronic health record (EHR), business, and health information software applications. Learners will develop skills to assist in information systems design and implementation. PREREQUISITES: Courses 154-100 and 530-176 - Health Data Management

530-193
Healthcare Quality Management **2.00**

This course explores the programs and processes used to maintain quality in healthcare, addressing regulatory requirements as related to quality improvement, utilization (case) management,

risk management, and medical staff credentialing through the use of quality improvement methodologies and tools. PREREQUISITES: Course 530-177 - Healthcare Statistics and Research

530-194
HIM Organizational Resources **2.00**

This course is a study of the principles of management, including planning, organizing, human resource management, directing, and controlling as related to the health information department. COREQUISITES: Course 530-193 - Healthcare Quality Management

530-195
Applied Coding **2.00**

This course prepares students to assign ICD and CPT/HCPCS codes supported by medical documentation with an intermediate level of proficiency. Students will prepare appropriate physician queries in accordance with compliance guidelines and will assign codes to optimize appropriate reimbursement. COREQUISITES: Course 530-185 - Healthcare Reimbursement

530-196
Professional Practice 1 **3.00**

The first of a two-semester sequence of supervised clinical experiences in health care facilities, this course provides application of previously acquired skills and knowledge with clinical experiences in the technical procedures of health record systems and discussion of clinical situations. PREREQUISITES: Courses 530-177 - Healthcare Statistics and Research, 530-178 - Healthcare Legal and Ethical Issues Healthcare Law & Ethics, 530-197 - ICD Diagnosis Coding, and 530-199 - ICD Procedure Coding COREQUISITES: Course 530-184 - CPT Coding

530-197
ICD Diagnosis Coding **3.00**

Prepares students to assign ICD diagnosis codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD diagnosis codes to case studies and actual medical record documentation. PREREQUISITES: Courses 501-101 - Medical Terminology, 530-182 - Human Disease for Health Professions, 530-181 - The Health Record, Introduction to, and 806-177 - General Anatomy and Physiology

530-198
Professional Practice 2 **3.00**

The second of a two semester sequence of supervised technical and managerial clinical experiences in health care facilities, this course provides application of previously acquired skills and knowledge and discussion of clinical situations, preparation for the certification examination, and pre-graduation activities. PREREQUISITES: Courses 530-196 - Professional Practice 1 and 530-190 - Healthcare Information Systems COREQUISITES: Courses 530-193 - Healthcare Quality Management, 530-194 - HIM Organizational Resources, and 530-195 - Applied Coding

530-199
ICD Procedure Coding **2.00**

Prepares students to assign ICD procedure codes supported by medical documentation with entry level proficiency. Students apply instructional notations, conventions, rules, and official coding guidelines when assigning ICD procedure codes to case studies and actual medical record documentation. PREREQUISITES: Courses 501-101 - Medical Terminology, 530-182 - Human Disease for Health Professions, 530-181 - The Health Record, Introduction to, and 806-177 - General Anatomy and Physiology

531-103
EMT Intermediate/ Paramedic Theory I **2.00**

This first semester course will provide the lecture component and theory transitioning the certified EMT Intermediate to the EMT Paramedic level, with a focus on pharmacology and respiratory management.

531-104
EMT Intermediate/ Paramedic Clinical I **3.00**

This 1st semester course will provide the lab and clinical components transitioning the certified EMT Intermediate to the EMT Paramedic level, with focus areas including fundamentals, pharmacology, shock, and respiratory and cardiac management.

531-105
EMT Intermediate/ Paramedic Theory II Part A **5.00**

This 2nd semester course will provide the lecture component and theory transitioning the certified EMT-Intermediate to the EMT-Paramedic level, with a focus on medical emergencies and trauma emergencies.

531-106
EMT Intermediate/ Paramedic Theory II Part B **5.00**

This 2nd semester course will provide the lecture component and theory transitioning the certified EMT-Intermediate to the EMT-Paramedic level, with a focus on emergency care for specialists.

531-107
EMT Intermediate/Paramedic Theory II Part C **2.00**

This 2nd semester course will provide the lecture component and theory transitioning the certified EMT-Intermediate to the EMT-Paramedic level, with a focus on EMS operations.

531-108
EMT Intermediate/Paramedic Clinical II **3.00**

This 2nd semester course will provide the lab and clinical components transitioning the certified EMT-Intermediate to the EMT-Paramedic level, with focus areas including hospital clinical experience and ALS field clinical experience.

531-109
Emergency Medical Technician **5.00**

Emergency Medical Technician is a 180 hour entry-level training in emergency medicine. This program provides students the skills and knowledge needed to assess and manage all types of injuries and acute illnesses while providing safe and rapid patient transport to an appropriate medical facility. Components of the course include lecture, practical lab, and hospital clinical experience. Upon program completion, students are prepared to take the National Registry of Emergency Medical Technicians examination to be licensed as an Emergency Medical Technician in Wisconsin. Students wishing to pursue other levels of EMS licensure, such as Advanced EMT or Paramedic, must first be licensed as an Emergency Medical Technician before being eligible to register in subsequent EMS licensure programs.

531-118
Cardiology - Advanced **3.00**

This course will provide the student with the basic knowledge of 12 lead ECG interpretation. It provides the student with the knowledge and skills to integrate a field impression and implement a treatment plan for a patient with Acute Coronary Syndrome. PREREQUISITES: Courses 531-116 and 531-117

531-119
Medical Emergencies **3.00**

This course will provide the student with the knowledge and skills to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for patients experiencing neurology, endocrine, allergic or anaphylactic emergency, gastroenterology, renal/ urology, toxicology, hematology, environmental emergency, infectious and communicable disease, and behavior and psychiatric disorders. COREQUISITES: Course 531-118 - Cardiology - Advanced

531-120
Trauma **3.00**

This course will provide the student with the knowledge and skills to integrate the principles of kinematics to enhance the patient assessment and predict the likelihood of injuries based on the patient's mechanism of injury. This course includes soft tissue trauma, burns, head and facial trauma, spinal trauma, abdominal trauma, thoracic trauma, and mechanism of injury trauma systems. This course includes PHTLS certification. PREREQUISITES: Courses 531-118 - Cardiology - Advanced and 531-119 - Medical Emergencies

531-121
Emergency Care for Specialists **3.00**

This course will provide the student with the knowledge and skills to formulate a field impression and implement a treatment management plan for the patient experiencing a gynecological, obstetrical, neonatal, pediatric, or geriatric emergency. This course also covers the victim of abuse or assault, patients with special challenges, acute interventions in the home care patient, and life span development. COREQUISITES: Course 531-120 - Trauma

531-123
EMT-Paramedic Clinical II **3.00**

The student is required to complete 216 hours of documented practical skills application and observation at the beginning EMT-Paramedic level. The student will perform required skill competencies at a variety of clinical and field internship sites under the direct supervision of an approved preceptor. PREREQUISITES: Courses 531-118 - Cardiology - Advanced and 531-119 - Medical Emergencies

531-151
Paramedic Fundamentals **5.00**

This course provides the students with the basic knowledge of the EMS System, Roles and Responsibilities, Well-Being of the Paramedic, Illness and Injury Prevention, Medical-Legal Aspects, Ethics, General Principles, Pathophysiology, Therapeutic Communications, History Taking, Physical Exam Techniques, Patient Assessment, Clinical Decision Making, Verbal Communication, and Documentation. The student will gain and understanding of the basic principles of shock management.

531-152
Paramedic Pharmacology **4.00**

This course provides the opportunity for the student to develop the knowledge of basic pharmacodynamics. The student will gain the knowledge and skills required to safely and precisely access the venous circulation, and to select, prepare, and administer appropriate medications used in the treatment of disorders of the major body systems. PREREQUISITES: Course 531-151 - Paramedic Fundamentals

531-155
Respiratory Management **2.00**

This course provides the student with the knowledge and skills to establish and/or maintain a patient airway and oxygenate and ventilate a patient. PREREQUISITES: Course 531-152 - Paramedic Pharmacology

531-156
Cardiology I **3.00**

This course will provide the student with the basic knowledge and skills to integrate pathophysiological principles and assessment findings in order to formulate a field impression and implement the treatment for the patient with cardiovascular disease. This course includes Advanced Cardiac Life Support (ACLS) certification. PREREQUISITES: Course 531-155 - Respiratory Management

531-157
Clinical I **4.00**

The student is required to complete 288 hours of documented practical skills application and observation at the beginning EMT-Paramedic level. The student will perform required skill competencies at a variety of clinical and field internship sites under the direct supervision of an approved preceptor. PREREQUISITES: Course 531-155 - Respiratory Management

531-158
Cardiology II **3.00**

This course will provide the student with the basic knowledge of 12 lead ECG interpretation. It provides the student with the knowledge and skills to integrate a field impression and implement a treatment plan for a patient with Acute Coronary Syndrome. PREREQUISITES: Course 531-156 - Cardiology I

531-159
Medical Emergencies **3.00**

This course will provide the student with the knowledge and skills to integrate pathophysiological principles and assessment findings to formulate a field impression and implement a treatment plan for patients experiencing neurology, endocrine, allergic or anaphylactic emergency, gastroenterology, renal/ urology, toxicology, hematology, environmental emergency, infectious and communicable disease, and behavior and psychiatric disorders. PREREQUISITES: Course 531-158 - Cardiology II

531-164
Trauma Emergencies **3.00**

This course will provide the student with the knowledge and skills to integrate the principles of kinematics to enhance the patient assessment and predict the likelihood of injuries based on the patient's mechanism of injury. This course includes soft tissue trauma, burns, head and facial trauma, spinal trauma, abdominal trauma, thoracic trauma, and mechanism of injury trauma systems. This course includes

PHTLS certification. PREREQUISITES: Course 531-159 - Medical Emergencies

531-165
Emergency Care for Specialties **3.00**

This course will provide the student with the knowledge and skills to formulate a field impression and implement a treatment management plan for the patient experiencing a gynecological, obstetrical, neonatal, pediatric, or geriatric emergency. This course also covers the victim of abuse or assault, patients with special challenges, acute interventions in the home care patient, and life span development. PREREQUISITES: Course 531-164 - Trauma Emergencies

531-166
EMS Operations **3.00**

This course includes ambulance operations, medical incident command, rescue awareness, weapons of mass destruction, assessment based management, and NREMT-P prep. PREREQUISITES: Course 531-165 - Emergency Care for Specialties

531-167
Clinical II **3.00**

The student is required to complete 216 hours of documented practical skills application and observation at the beginning EMT-Paramedic level. The student will perform required skill competencies at a variety of clinical and field internship sites under the direct supervision of an approved preceptor. PREREQUISITES: Course 531-158 - Cardiology II

531-323
Law Enforcement Emergency Response **1.00**

This course is designed to prepare the primary responder to an accident or sudden severe illness in the appropriate lifesaving techniques to be carried out at the scene until regular emergency care and transportation can be obtained.

531-324
EMT - Intermediate Lecture **4.00**

This course will cover the didactic portion of the EMT-I program. Students will study components of advanced patient assessment, evaluation, treatment and protocols. COREQUISITES: Course 531-325 - EMT - Intermediate Lab

531-325
EMT - Intermediate Lab **3.00**

This course will cover the didactic portion of the EMT-I program. Students will study components of advanced patient assessment, evaluation, treatment and protocols. COREQUISITES: Course 531-324 - EMT - Intermediate Lecture

531-326
Emergency Medical Technician **5.00**

Emergency Medical Technician is a 180 hour entry-level training in emergency medicine. This program provides students the skills and knowledge needed to assess and manage all types of injuries and acute illnesses while providing safe and rapid patient transport to an appropriate medical facility. Components of the course include lecture, practical lab, and hospital clinical experience. Upon program completion, students are prepared to take the National Registry of Emergency Medical Technicians examination to be licensed as an Emergency Medical Technician in Wisconsin. Students wishing to pursue other levels of EMS licensure, such as Advanced EMT or Paramedic, must first be licensed as an Emergency Medical Technician before being eligible to register in subsequent EMS licensure programs.

531-327
Advanced EMT **4.00**

If you currently hold a State of Wisconsin licensure as an Emergency Medical Technician (EMT), you can pursue additional training in intravenous access, fluid and medication administration, clinical decision making skills, and patient assessment at this advanced level. Upon completion of the didactic, lab, and clinical components of this program, the participant will be eligible for testing and credentialing through the National Registry of Emergency Medical Technicians. PREREQUISITES: Course 531-326 - Emergency Medical Technician with a minimum grade of C or TR

531-911
EMS Fundamental **2.00**

This course provides the paramedic student with comprehensive knowledge of EMS systems, safety, wellbeing, legal issues, and ethical issues, with the intended outcome of improving the health of EMS personnel, patients, and the community. The students will obtain fundamental knowledge of public health principles and epidemiology as related to public health emergencies, health promotion, and illness/injury prevention. Introducing students to comprehensive anatomical and medical terminology and abbreviations will foster the development of effective written and oral communications with colleagues and other health care professionals. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or Achieve the required placement test score

531-912
Paramedic Medical Principles **4.00**

This course address the complex depth of anatomy, physiology, and pathophysiology of major human systems while also introducing the paramedic students to the topics of shock, immunology, and bleeding.

531-913
Adv. Patient Asses. Principles **3.00**

This course teaches the paramedic student to integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. By utilizing a structured and organized assessment process with knowledge of anatomy, physiology, pathophysiology, life span development, and changes that occur to the human body with time, the students will learn to develop a list of differential diagnoses through clinical reasoning, along with the ability to modify the assessment as necessary to formulate a treatment plan for their patient.

531-914
Adv. Pre-Hospital Pharmacology **3.00**

This course provides the paramedic student with the comprehensive knowledge of pharmacology required to formulate and administer a pharmacological treatment plan intended to mitigate emergencies and improve the overall health of the patient.

531-915
Paramedic Respiratory Mgt. **2.00**

This course teaches the paramedic student to integrate complex knowledge of anatomy, physiology, and pathophysiology into the

assessment to develop and implement a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation, and respiration for patients of all ages. Specific knowledge pertaining to the respiratory system is also provided to ensure the student is prepared to formulate a field impression and implement a comprehensive treatment plan for a patient with a respiratory complaint.

531-916
Paramedic Cardiology **4.00**

This course teaches the paramedic student to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a cardiovascular complaint. PREREQUISITES: Course 531-915 - Paramedic Respiratory Mgt.

531-917
Paramedic Clinical Field I **3.00**

This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course.

531-918
Adv. Emergency Resuscitation **1.00**

By teaching Advanced Cardiac Life Support ("ACLS") and Pediatric Advanced Life Support ("PALS") methodologies and protocols, this course prepares the paramedic student in the integration of comprehensive knowledge of causes and pathophysiology into the management of shock, respiratory failure, respiratory arrest, cardiac arrest, and peri-arrest states with an emphasis on early intervention to prevent respiratory and/or cardiac arrest if possible.

531-919
Paramedic Medical Emergencies **4.00**

This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a medical complaint.

531-920
Paramedic Trauma **3.00**

This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for an acutely injured patient.

531-921
Special Patient Populations **3.00**

This course teaches the paramedic student to integrate assessment findings with principles of anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for patients with special needs. Gynecological emergencies, along with special considerations in trauma are also included within this course.

531-922
EMS Operations **1.00**

This course is provides the paramedic student with the knowledge of operational roles and responsibilities to ensure patient, public, and EMS personnel safety.

531-923
Paramedic Capstone **1.00**

This course provides the student with a final opportunity to incorporate their cognitive knowledge and psychomotor skills through labs and scenario-based practice and evaluations prior to taking the National Registry written and practical examinations. Technical skills attainment for each student will be complied and/or documented within this course as required by the DHS-approved paramedic curriculum.

531-924
Paramedic Clinical/Field 2 **4.00**

This course provides the student with the opportunity to enhance his or her learning through the practice of paramedicine in field and health care environment experiences with actual patients under the supervision of approved preceptors. Students may also have the opportunity to participate in formal high-fidelity human patient simulator experiences as a part of this course. Successful completion of this course requires the student to meet all clinical and field competency requirements at the paramedic level as defined by DHS.

531-955
Paramedic Cardiology 1 **2.00**

This course will provide the student with the basic knowledge to integrate pathophysiological principles and assessment findings to formulate a field impression and implement the treatment for the patient with cardiovascular disease.

531-956
Paramedic Cardiology 2 **2.00**

This course teaches the paramedic student knowledge and skills to integrate assessment findings with principles of cardiovascular anatomy, physiology, epidemiology, and pathophysiology to formulate a field impression and implement a comprehensive treatment plan for a patient with a variety of cardiovascular complaints. PREREQUISITES: Course 531-955 - Paramedic Cardiology 1 with a minimum grade of C or TR

533-100
Deafness/Intro to **2.00**

This course is an overview of topics impacting the Deaf/Hard of Hearing communities. It is designed to assist those interested in learning about this diverse population of people.

533-109
Deaf Culture in America **3.00**

This course will expose the students to Deaf culture since its beginnings in the United States. It will discuss famous Deaf Americans and how they have impacted the lives of Deaf and hearing people in America.

533-125
Special Education And, Introduction to Deafness **3.00**

This course is an introduction to the educational process involving a deaf/hard of hearing child and a focus on deafness and how it impacts other aspects of disability.

533-126
American Sign Language 1 **2.00**

An introductory course in American Sign Language (ASL) used by the Deaf Community in North America including basic vocabulary, grammar/syntax, finger spelling, and Non-manual signals. Includes practice in vocabulary, sentence structure and elementary conversations. Introduces basic cultural knowledge and history of the Deaf Community.

533-127
American Sign Language 2 **2.00**

A continuation of the basic study of American Sign Language and Deaf culture; an opportunity to increase receptive and expressive vocabulary, ASL grammar skills including non-manual aspects such as facial expressions and body language/postures, use of signing space and introduction of conversation regulators. Discussions about sign variations and the socio-political aspects of the Deaf Community. PREREQUISITES: Course 533-126 - American Sign Language 1

533-128
American Sign Language 3 **2.00**

Focuses on extensive development of receptive and expressive communication skills in ASL. Introduces a variety of language forms and aspects of culture as displayed in literature, art and theater. Discusses translations of idiomatic phrases and global perspectives of deafness. PREREQUISITES: Course 533-127 - American Sign Language 2

533-129
American Sign Language 4 **2.00**

Implements an advanced study of the linguistic aspects of ASL. Use of advanced comprehension and production skills in a variety of discourse and narrative settings. Consider the significance of cross-cultural issues/controversies with Hearing Cultures and further analyze the culture and history of the Deaf Community and how it continues to impact the language, socio-political issues, and education of the Deaf in the world. Introduce other signed languages of the world. PREREQUISITES: Course 533-128 - American Sign Language 3

536-101
Sterile Techniques for Pharmacy Tech **3.00**

Prepares the learner to utilize aseptic technique in preparing parenteral products, compare parenternal solutions and routes, identify equipment used to prepare parenteral products, perform parenternal calculations, prevent parenteral incompatibilities, prepare cytotoxic medications, and apply safe disposal of hazardous products. PREREQUISITES: Courses 536-110 - Pharmacy Calculations, 536-105 - Pharmacy Community Clinical, 536-115 - Pharmacy Law, 536-121 - Fundamentals of Reading Prescriptions, 536-106 - Community Pharmacy Business Applications, 536-104 - Pharmacy Benefit Management with a minimum grade of C or TR and course 501-101 - Medical Terminology

536-102
Hospital Pharmacy Applications **2.00**

In this course, students participate in lab activities to simulate the daily tasks performed by pharmacy technicians in inpatient settings. Students' clinical sites will also be utilized to complete tasks in the second half of the course. Topics will include filling and maintaining drug stock on floors and in the pharmacy, interpreting prescriber orders, labeling patient specific orders, and medication reconciliation.

536-103
Pharmacy Hospital Clinical **2.00**

In this course, students will have the opportunity to experience the daily activities of a pharmacy technician in a hospital pharmacy setting. Students will learn how medication orders are prepared, processed, and delivered along with maintaining medication inventory in several areas, interacting with other medical staff and following policies and procedures of the hospital and pharmacy.

536-104
Pharmacy Benefit Management **1.00**

This course prepares the learner to utilize terminology pertinent to third party reimbursements in the field of pharmacy, analyze the various popular fomulary systems, calculate the selling price for a prescription based on the Average Wholesale Price (AWP) and the formula required by the Pharmacy Benefit Manager, analyze the role fo the Pharmacy Benefits Manager in the health care system, and summarize medical coverage provided by government agencies.

536-105
Pharmacy Community Clinical **2.00**

This course prepares the learner to apply policies and procedures in the pharmacy, complete the ordering process to meet inventory goals, bill third parties for patient prescriptions, process prescriptions, identify medical and surgical supplies for customers, process controlled substance prescriptions, compound extemporaneous products, maintain patient medical histories and fulfill duties in unique service areas.

536-106
Community Pharmacy Business Applications **4.00**

The course prepares the learner to summarize pharmacy policies dealing with the Health Insurance Portability and Accountability Act (HIPAA), analyze criminal activities in the pharmacy, assess the operation and location of pharmacy equipment, utilize information posted in the pharmacy, analyze the work culture of the pharmacy, analyze the steps in processing a prescription, analyze patient profile information, analyze issues affecting the practice of pharmacy, market employment skills, analyze patient safety issues, analyze pharmacy front of store operations, analyze methods used to prepare extemporaneous compounds, and anlyze customer service issues.

536-107
Pharmacy Distribution Systems **1.00**

Prepares the learner to analyze the changes occurring in institutional health care and the consequences for pharmacists and pharmacy tehnicians, analyze the unit dose packaging and distribution system, compare various hospital or nursing home pharmacy administrative and physical designs, compare different distribution systems used in hospital or nursing homes.

536-110
Pharmacy Calculations **3.00**

Prepares the learner to convert weights and volumes between the avoirdupois, the apothecary, and the metric systems of measurement; unitize ratios & proportions; reduce and enlarge pharmaceutical formulas; calculate medication quantities from percent w/w, w/v, v/v, ppm, and ratio concentrations; perform dilution calculations; utilize the "alligation" method; solve problems related to electrolyte

solutions; convert temperatures between the Fahrenheit and Celsius scales; convert military and standard time; and calculate individualized patient doses based on body surface area, age, and/or weight of the patient. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of B- COREQUISITES: Course 501-101 - Medical Terminology

536-112
Pharmaceutical Business Applications **3.00**

The course prepares the learner to summarize pharmacy policies dealing with the Health Insurance Portability and Accountability Act (HIPAA), analyze criminal activities in the pharmacy, assess the operation and location of pharmacy equipment, utilize information posted in the pharmacy, analyze the work culture of the pharmacy, analyze the steps in processing a prescription, analyze patient profile information, analyze issues affecting the practice of pharmacy, market employment skills, analyze patient safety issues, analyze pharmacy front of store operations, analyze methods used to prepare extemporaneous compounds, and analyze customer service issues. PREREQUISITES: Course 834-109 - Pre-Algebra COREQUISITES: Courses 536-115 - Pharmacy Law and 536-121- Fundamentals of Reading Prescriptions

536-115
Pharmacy Law **2.00**

This course prepares the learner to apply Federal laws to the practice of pharmacy; apply Wisconsin State laws to the practice of pharmacy; select appropriate drug products for substitution in accordance with the law; explain the Investigational New Drug (IND) process; explain pharmacy equipment, license, and floor plan legal requirement; apply controlled substance laws to the procurement, processing, and record keeping of controlled substances; analyze the history of pharmacy law; and summarize drug law enforcement agencies. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of B- COREQUISITES: Courses 536-110 - Pharmacy Calculations, 536-106 - Community Pharmacy Business Applications, 536-121 - Fundamentals of Reading Prescriptions, 536-104 - Pharmacy Benefit Management, 536-105 - Pharmacy Community Clinical

536-120
Fundamentals of Reading Prescriptions **1.00**

This course prepares the learner to match the brand name and generic name of commonly prescribed medications, determine the pharmacologic classes of commonly prescribed medication, determine the appropriate auxiliary labels to be placed on prescription bottles for commonly prescribed medications, determine if a prescribed medication is a controlled substance and to which schedule it belongs, analyze prescriptions for appropriateness of drug and dosing schedule, and interpret Latin abbreviations used in the practice of Pharmacology. COREQUISITES: Courses 536-112 - Pharmaceutical Business Applications, 536-115 - Pharmacy Law

536-121
Fundamentals of Reading Prescriptions **2.00**

This course prepares the learner to match the brand name and generic name of commonly prescribed medications, determine the pharmacologic classes of commonly prescribed medication, determine the appropriate auxiliary labels to be placed on prescription bottles for commonly prescribed medications, determine if a prescribed medication is a controlled substance and to which schedule it belongs, analyze prescriptions for appropriateness of drug and dosing schedule, and interpret Latin abbreviations used in the practice of Pharmacology. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade B- COREQUISITES: Courses 536-110 - Pharmacy Calculations, 536-106 - Community Pharmacy Business Applications, 536-115 - Pharmacy Law, 536-104 - Pharmacy Benefit Management, 536-105 - Pharmacy Community Clinical

536-122
Pharmacology for Pharmacy Technicians **3.00**

The purpose of this course is to provide a comprehensive overview of the principles of pharmacology and pharmacokinetics including the understanding of disease states within each body system and the effects of the medications in treating the conditions. Students will learn the cautions involved in adverse drug effects, food and drug interactions, and drug-disease contraindications. Students are expected to learn the brand and generic drug names from the TOP 200 Drugs List as well as their therapeutic classifications, indications, common strengths, and essential terminology needed to become a successful Pharmacy Technician. PREREQUISITES: Course 501-101 - Medical Terminology and courses 536-104 - Pharmacy Benefit Management, 536-105 - Pharmacy Community Clinical, 536-106 - Community Pharmacy Business Applications, 536-110 - Pharmacy Calculations, 536-115 - Pharmacy Law, 536-121 - Fundamentals of Reading Prescriptions with a minimum grade of C or TR COREQUISITES: Courses 536-101 - Sterile Techniques for Pharmacy Tech, 536-102 - Hospital Pharmacy Applications, 536-103 - Pharmacy Hospital Clinical, 536-107 - Pharmacy Distribution Systems

536-134
Managing Pharmacy Benefits **3.00**

This course prepares the learner to utilize terminology pertinent to third party reimbursements in the field of pharmacy, analyze the various popular formulary systems, calculate the selling price for a prescription based on the Average Wholesale Price (AWP) and the formula required by the Pharmacy Benefit Manger, analyze the role of the Pharmacy Benefits Manger in the health care system, and summarize medical coverage provided by government agencies. PREREQUISITES: Courses 536-112 - Pharmaceutical Business Applications, 536-121 - Fundamentals of Reading Prescriptions, 801-301 - Writing Principles, 536-115 - Pharmacy Law with a minimum grade of C or TR COREQUISITES: Course 536-122 - Pharmacology for Pharmacy Technicians and 536-110 - Pharmacy Calculations

536-138
Community Pharmacy Clinical **2.00**

This course prepares the learner to apply policies and procedures in the pharmacy, complete the ordering process to meet inventory goals, bill third parties for patient prescriptions, process prescriptions, identify medical and surgical supplies for customers, process controlled substance prescriptions, compound extemporaneous products, maintain patient medical histories, and fulfill duties in unique service areas. PREREQUISITES: Courses 536-112 - Pharmaceutical Business Applications, 536-115 - Pharmacy Law, 536-120 - Fundamentals of Reading Prescriptions, 536-110 - Pharmacy Calculations, 536-134 - Managing Pharmacy Benefits

536-139
Community Pharmacy Clinical **3.00**

This course prepares the learner to apply policies and procedures in the pharmacy, complete the ordering process to meet inventory goals, bill third parties for patient prescriptions, process prescriptions, identify medical and surgical supplies for customers, process controlled substance prescriptions, compound extemporaneous products, maintain patient medical histories, and fulfill duties in unique service areas. PREREQUISITES: Course 536-112 - Pharmaceutical Business Applications, 536-115 - Pharmacy Law, 536-121 - Fundamentals of Reading Prescriptions, 536-110 - Pharmacy Calculations, and 536-134 - Managing Pharmacy Benefits with a minimum grade of C or TR

543-101
Nursing Fundamentals **2.00**

This course focuses on basic nursing concepts that the beginning nurse will need to provide care to diverse patient populations. Current and historical issues impacting nursing will be explored within the scope of nursing practice. The nursing process will be introduced as a framework for organizing the care of patients with alterations in cognition, elimination, comfort, grief/loss, mobility, integument, and fluid/electrolyte balance. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of B-

543-102
Nursing Skills **3.00**

This course focuses on development of clinical skills and physical assessment across the lifespan. Content includes mathematic calculations and conversions related to clinical skills, blood pressure assessment, aseptic technique, wound care, oxygen administration, tracheostomy care, suctioning, management of enteral tubes, basic medication administration, glucose testing, enemas, ostomy care, and catheterization. In addition, the course includes techniques related to obtaining a health history and basic physical assessment skills using a body systems approach. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of B-

543-103
Nursing Pharmacology **2.00**

This course introduces the principles of pharmacology, including drug classification and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medication. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of B-

543-104
Nsg: Intro Clinical Practice **2.00**

This introductory clinical course emphasizes basic nursing skills and application of the nursing process in meeting the needs of diverse clients. Emphasis is placed on performing basic nursing skills, the formulation of nurse-client relationships, communication, data collection, documentation, and medication administration. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of B- COREQUISITES: Course 543-101 - Nursing Fundamentals, 543-102 - Nursing Skills, and 543-103 - Nursing Pharmacology

543-105
Nursing Health Alterations **3.00**

This course elaborates upon the basic concepts of health and illness as presented in Nursing Fundamentals. It applies theories of nursing in the care of clients through the lifespan, utilizing problem solving and critical thinking. This course will provide an opportunity to study conditions affecting different body systems and apply therapeutic nursing interventions. It will also introduce concepts of leadership, team building, and scope of practice. PREREQUISITES: Course 543-101 - Nursing Fundamentals, 543-102 - Nursing Skills, 543-103 - Nursing Pharmacology, and 543-104 - Nsg: Intro Clinical Practice

543-106
Nursing Health Promotion **3.00**

This course will cover topics related to health promotion in the context of the family. We will cover nursing care of the developing family, which includes reproductive issues, pregnancy, labor and delivery, post-partum, the newborn, and the child. Recognizing the spectrum of healthy families, we will discern patterns associated with adaptive and maladaptive behaviors, applying mental health principles. An emphasis is placed on teaching and supporting healthy lifestyle choices. Nutrition, exercise, stress management, empowerment, and risk reduction practices are highlighted. Study of the family will cover dynamics, functions, discipline styles, and stages of development. PREREQUISITES: Course 543-101 - Nursing Fundamentals, 543-102 - Nursing Skills, 543-103 - Nursing Pharmacology, 543-104 -Nsg: Intro Clinical Practice, and 809-188 - Psychology, Developmental

543-107
Nursing: Clinical Care Across the Lifespan **2.00**

This clinical experience applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to concepts of teaching and learning. Extending care to include the family is emphasized. PREREQUISITES: Course 543-101 - Nursing Fundamentals, 543-102 - Nursing Skills, 543-103 - Nursing Pharmacology, and 543-104 - Nsg: Intro Clinical Practice COREQUISITES: Course 543-106 - Nursing Health Promotion

543-108
Nursing: Introduction to Clinical Care Management **2.00**

This clinical experience applies nursing concepts and therapeutic nursing interventions to groups of clients. It also provides an introduction to leadership, management, and team building. PREREQUISITES: Courses 543-101 - Nursing Fundamentals, 543-102 - Nursing Skills, 543-103 - Nursing Pharmacology, and 543-104 - Nsg: Intro Clinical Practice COREQUISITES: Course 543-105 - Nursing Health Alterations

543-109
Nursing Complex Health Alterations I **3.00**

Complex Health Alterations I prepares the learner to expand knowledge from previous courses in caring for clients with alterations in musculoskeletal, cardiovascular, respiratory, endocrine, and hematologic systems, as well as clients with fluid/electrolyte and acid-base imbalances and alterations in comfort. PREREQUISITES: Courses 806-179 - Anatomy and Physiology, Advanced, 543-105 - Nursing Health

Alterations, 543-106 - Nursing Health Promotion, 543-107 - Nursing: Clinical Care Across the Lifespan, and 543-108 - Nursing: Introduction to Clinical Care Management with a minimum grade of C or TR COREQUISITES: Course 806-197 - Microbiology

543-110
Nursing Mental Health Community Concepts **2.00**

This course will cover topics related to the delivery of community and mental health care. Specific health needs of individuals, families, and groups will be addressed. Attention will be given to diverse and at-risk populations. Mental health concepts will concentrate on adaptive/maladaptive behaviors and specific mental health disorders. Community resources will be examined in relation to specific types of support offered to racial, ethnic, economically diverse individuals and groups. PREREQUISITES: Courses 806-179 - Anatomy and Physiology, Advanced, 543-105 - Nursing Health Alterations, 543-106 - Nursing Health Promotion, 543-107 - Nursing: Clinical Care Across the Lifespan, and 543-108 - Nursing: Introduction to Clinical Care Management COREQUISITES: Course 809-198 - Psychology, Introduction to

543-111
Nursing Intermediate Clinical Practice **3.00**

This intermediate level clinical course develops the RN role when working with clients with complex health care needs. A focus of the course is developing skills needed for managing multiple clients and priorities. Using the nursing process, students will gain experience in adapting nursing practice to meet the needs of clients with diverse needs and backgrounds. PREREQUISITES: Courses 543-105 - Nursing Health Alterations, 543-106 - Nursing Health Promotion, 543-107 - Nursing: Clinical Care Across the Lifespan, and 543-108 - Nursing: Introduction to Clinical Care Management with a minimum grade of C or TR COREQUISITES: Courses 543-109 - Nursing Complex Health Alterations I, 543-110 - Nursing Mental Health Community Concepts, and 543-112 - Nursing Advanced Skills

543-112
Nursing Advanced Skills **1.00**

This course focuses on the development of advanced clinical skills. Content includes advanced IV skills, blood product administration, chest tube systems, basic EKG interpretation, and nasogastric/feeding tube insertion. PREREQUISITES: Courses 543-105 - Nursing Health Alterations, 543-106 - Nursing Health Promotion, 543-107 - Nursing: Clinical Care Across the Lifespan, and 543-108 - Nursing: Introduction to Clinical Care Management with a minimum grade of C or TR COREQUISITES: Course 806-179 - Anatomy and Physiology, Advanced

543-113
Nursing Complex Health Alterations II **3.00**

Complex Health Alterations II prepares the learner to expand knowledge and skills from previous courses in caring for clients with alterations in the immune, neuro-sensory, musculoskeletal, gastrointestinal, hepatobiliary, renal/urinary, and reproductive systems. The learn will also focus on management of care for clients with high risk perinatal conditions, high risk newborns, and the ill child. Synthesis and application of previously learned concepts will be evident in the management of clients with critical/life threatening situations. PREREQUISITES: Courses 543-109 - Nursing Complex Health Alterations I, 543-110 - Nursing Mental Health Community Concepts, 543-111 - Nursing Intermediate Clinical Practice, 543-112 - Nursing Advanced Skills, and 806-197 - Microbiology with a minimum grade of C or TR

543-114
Nursing Management and Professional Concepts **2.00**

This course covers nursing management and professional issues related to the role of the RN. Emphasis is placed on preparing for the RN practice. PREREQUISITES: Courses 543-109 - Nursing Complex Health Alterations I, 543-110 - Nursing Mental Health Community Concepts, 543-111 - Nursing Intermediate Clinical Practice, 543-112 - Nursing Advanced Skills, and 806-197 - Microbiology with a minimum grade of C or TR

543-115
Nursing Advanced Clinical Practice **3.00**

This advanced clinical course requires the student to integrate concepts from all previous courses in the management of groups of clients facing complex health alterations. Students will have the opportunity to further develop critical thinking skills using the nursing process in making clinical decisions. Continuity of care through interdisciplinary collaboration is emphasized. PREREQUISITES: Courses 543-109 - Nursing Complex Health Alterations I, 543-110 - Nursing Mental Health Community Concepts, 543-111 - Nursing Intermediate Clinical Practice, 543-112 - Nursing Advanced Skills, and 806-197 - Microbiology with a minimum grade of C or TR COREQUISITES: Courses 543-113 - Nursing Complex Health Alterations II and 543-114 - Nursing Management and Professional Concepts

543-116
Nursing Clinical Transition **2.00**

This clinical experience prepares the student to assume the role of graduate nurse. The course promotes clinical decision-making, delegation, and collaboration to achieve client and organizational outcomes. Continued professional development is fostered. PREREQUISITES: Courses 543-109 - Nursing Complex Health Alterations I, 543-110 - Nursing Mental Health Community Concepts, 543-111 - Nursing Intermediate Clinical Practice, 543-112 - Nursing Advanced Skills, and 806-197 - Microbiology with a minimum grade of C or TR COREQUISITES: Courses 543-113 - Nursing Complex Health Alterations II, 543-114 - Nursing Management and Professional Concepts, and 543-115 - Nursing Advanced Clinical Practice

543-117
Contemporary Diabetes Care **4.00**

This course provides an overview of contemporary diabetes care. It is designed to increase the competency of care provided to individuals and groups affected by diabetes at multiple points of access in the health care system. The target audience is Registered Nurses, Advanced Practice Nurses, other interested health care providers, advanced health career students or other professionals that have frequent interaction with individuals and groups affected by diabetes. The course presents basic elements that are essential to diabetes care as well as the evolving research necessary to meet best practice standards. Learners will explore the epidemiology, pathophysiology, pharmacology, and lifestyle behavior changes related to

diabetes care. Concepts of theory and research will be examined by the learner to develop a culturally competent plan of care for individuals and groups in a variety of settings. The learner must have the ability to access and navigate the Internet as well as knowledge of common office software. Before the course begins the learner is to be responsible for and capable of using the college's online learning system by completing the tutorials available on the college website.

543-118
Periop Nursing Prof Role and Legal Cons **2.00**

In this course, the student will be introduced to the roles and responsibilities of the peri-operative nurse. Standards of patient care in the operating room are explored and identified. Assessment of patient needs and implementation of nursing interventions are emphasized. Theory includes patient admission, identification of risk factors, nursing process, asepsis, patient safety, documentation and legal considerations. Management and professional concepts will be explored.

543-119
Periop Nursing Surgical Environment **3.00**

Students will learn nursing care of the perioperative patient experiencing routine surgeries including general, ophthalmologic, ears/nose/throat, neurological, cardiovascular, gastrointestinal, gynecological, and orthopedic interventions. Students will explore care of patients receiving fluids, electrolytes, blood products, drugs and anesthesia. Specific surgeries will be reviewed including general, laparoscopic and endoscopic procedures. Disinfection and sterilization will be covered. The learner will demonstrate critical thinking and technical skills in the classroom and simulated laboratory experiences. PREREQUISITES: Course 543-118 - Periop Nursing Prof Role and Legal Cons with a minimum grade of C or TR

543-120
Periop Nursing Complications and Care **2.00**

In this course, the learner will acquire knowledge in caring for the patient with risk factors and health alterations that have the potential of significantly impacting the health and safety of the patient experiencing surgical procedures. Medical factors include cardio-respiratory, renal, hepatic diseases and alterations in fluids, electrolytes and/ or the auto-immune system. Common complications of surgical procedures will be presented, such as, hypoventilation, oral trauma, cardiac dysrhythmia, peripheral nerve damage, and malignant hyperthermia as well as complications occurring during the recovery period including venous thrombosis, pulmonary embolism, hiccoughs, paralytic ileus, urinary retention and urinary tract infection. Upon completion of the course, the learner will be able to identify risk factors and potential complications and implement nursing measures to prevent or mitigate long term effects of these occurrences. PREREQUISITES: Course 543-119 - Periop Nursing Surgical Environment with a minimum grade of C or TR

543-121
Periop Nursing Practicum **3.00**

In this course, the student will be introduced to the roles and responsibilities of the peri-operative nurse. Standards of patient care in the operating room are explored and identified. Assessment of patient needs and implementation of nursing interventions are emphasized. Theory includes patient admission, identification of risk factors, nursing process, asepsis, patient safety, documentation and legal considerations. Management and professional concepts will be explored. PREREQUISITES: Course 543-120 - Periop Nursing Complications and Care with a minimum grade of C or TR

543-122
Simulation for Healthcare Educators **3.00**

This course prepares educators to integrate human patient simulation into the classroom. Students will learn about the history, evolution, and educational theories of simulation. They will be introduced to modalities of simulation that can be used in healthcare programs to reinforce critical thinking skills in health occupations students in a safe environment. The course will include creation of high fidelity simulations, standardized patient scenarios, and have the opportunity to implement them. Explore concepts including evaluation, debriefing, and future research in simulation. The goal of the course is to promote excellence in simulation education.

543-123
Milit Med Fundamental and Pharmacology **4.00**

This course focuses on the integration of basic nursing fundamentals and pharmacology nursing concepts to provide evidenced-based care to diverse patient populations across the lifespan. Emphasis is on the use of the components of the nursing process when administering medications. Safety in the administration of medications to include knowledge of the methods of administration to individuals across the lifespan, modes of action of commonly used classifications of drugs, anticipated side effects, possible adverse effects, and evaluation of patient response to medication used for common health problems.

543-124
Transition Military Medic to PN **3.00**

This course is designed to facilitate the transition of military health care veterans into the Practical Nurse (PN) role. Topics include: introduction to the healthcare delivery system, nursing roles within the healthcare delivery system; communication and collaboration with the Registered Nurse and other members of the health care team. In addition to the exploration of the nursing process, documentation, safety, legal, ethical issues and information technology. The patient-needs framework of the curriculum, and nursing process will be explored. Students are presented with effective method of stress management, test-taking skills, and critical thinking concepts.

543-125
Milit Med Basic Skills and Simulation **5.00**

The course provides students with the opportunity while using simulation to demonstrate and perform skills commonly delegated to and within the scope of practice of the Licensed Practical Nurse (LPN) including collecting data and reporting patient responses relative to designated skills; skills include but are not limited to: utilization of the nursing process in collaboration with other health care team members and patient/families to address health care needs of individuals/ families across the lifespan; communication both verbal and written; the use of information technology; drug calculation and

administration of medications within the LPN scope of practice.

543-199
Clinical Reasoning in Nursing **3.00**

This course introduces basic concepts of critical thinking to the nursing student. Identification of critical thinking skills and common characteristics related to these skills will be applied to the the nursing process. The goal of this course is to enhance clinical reasoning skills through application and practice in human patient simulation. Students will gain skills in critical thinking to use in everyday life as well as their academic and nursing career. PREREQUISITES: Course 543-101 - Nursing Fundamentals with a minimum grade of C or TR

543-300
Nursing Assistant **3.00**

The Nursing Assistant course is 120 hours in total and is offered numerous times throughout the district. The course prepares students to perform basic nursing skills in caring for clients in various health care settings. A certificate is awarded upon successful completion of this course and graduates are eligible to competency test for placement on the Wisconsin Nursing Assistant/Home Health Aide Registry.

543-302
Acute Care Nursing Assistant **2.00**

Provides theory and occupational experience in intermediate level nursing assistant skills for employment in hospital and other acute care settings. PREREQUISITES: Course 543-300 - Nursing Assistant

550-130
Alcohol/Drug Abuse Rehabilitation **3.00**

This course is designed to offer the fundamental knowledge base for the drug and alcoholic field. Emphasis is on pharmacology, dual diagnosis counseling, self-help groups, levels of care, symptom identification and assessments. Through the use of case studies, worksheets and role-play, the student will integrate knowledge and skills in these areas.

550-138
Treating the Teenage Substance User **1.00**

This course will examine the unique challenges of effectively intervening with teenage substance users. This course will examine risky teen substance use, with strategies to prevent and treat teen clients with AODA issues from a developmental, family and cultural perspective.

550-150
Psychopharmacology **3.00**

This course is designed to provide an overview of the psychopharmacology of therapeutic drugs, over-the-counter drugs, illicit drugs, alcohol, nicotine and caffeine. Emphasis will be on the nervous system structure, brain function, site of action theory and on comprehending the effects of substances on these systems. Interactions, withdrawal, maternal and fetal effects will be addressed, as well as terminology and drug regulations.

550-154
Family and Chemical Abuse **3.00**

A comprehensive study of the problems associated with chemical abuse within the family. Course focus is on the psychological and physiological trauma as well as methods of motivation toward recovery.

550-156
Mental Health/Substance Abuse **3.00**

Diagnose dual disabilities of substance abuse and mental illness disorders. The impact of dual disability on assessment and treatment.

555-101
Emergency Dispatch **3.00**

This course covers topics found in the Public Safety Telecommunicator course materials from APCO. It is designed to train students in the following subject areas; interpersonal communications, telephone communication techniques, computer aided dispatch and related technologies, radio communications, call classification, NIMS, liability issues, and career preparation. The course includes dispatch simulation exercises and dispatch center observation opportunities. PREREQUISITES: Course 503-110 - Fire Safety Communications or 801-196 - Oral/Interpersonal Communication with a minimum grade of C or TR

601-110
Air Conditioning Fundamentals **3.00**

Topics covered include air conditioning principles and terms, physical principles of air movement and humidity, methods of conditioning air for comfort and health, the proper use of psychrometers, dry bulb thermometers, hygrometers, pilot tubes, recorders, manometers and barometers and the reading and interpretation of psychometric charts and scales.

601-111
Workplace Fundamentals **1.00**

This course will introduce the student to the diverse mechanical skills required in today's workplace environment. The student will demonstrate, through practical hands-on lab exercises, skills in complying with Lock-out/Tag-out procedures and the proper care and use of common hand and power tools. General drilling, tapping, threading, and aligning will all be covered. The student will also be required to use test instruments to gather data on length, volume, area, depth, and dimensions and use electrical meters on power circuits.

601-112
Environmental Systems **2.00**

This course will introduce the student to the maintenance and repair of HVAC/R equipment encountered in the workplace. Basic theory of heating, air conditioning, and refrigeration will be covered; emphasis will be placed on preventative maintenance. The student will apply theory in lab exercises demonstrating competency with general repair and the use of temperature and electrical meters, recording data, and performing adjustments to keep equipment at peak efficiency. COREQUISITES: Course 601-111 - Workplace Fundamentals

601-113
Facility Operating Engineer LP **5.00**

This lecture format course will introduce the student to the fundamentals of obtaining the Facility Operating Engineer 3rd Class certification. Principles of thermodynamics, boiler classification, construction, fuels, rating and efficiency, and firing methods will be covered.

601-114
Power Plant Operating Engineer 4.00

This lecture/lab format course will introduce the student to the fundamentals of obtaining the Power Plant Operating Engineer 3rd Class certification. Topics will include heat energy transfer, steam generators, boiler construction, and codes and fuel firing. PREREQUISITES: Course 601-117 - Facility Operating Engineer HP

601-116
Mechanical Fundamentals 3.00

Topics covered include learning the various types of piping and tubing used in air conditioning and refrigeration, types of fittings, bending, brazing and soft soldering tubing, black iron pipe work, sheet metal fundamentals, using hand tools, and the recognition and practice of safety procedures while working on air conditioning and refrigeration systems.

601-117
Facility Operating Engineer HP 3.00

In this course, advanced boiler operation and maintenance of mechanical heating and cooling systems will be discussed. Students will learn to understand the operations of ventilation system equipment, controls, heat exchangers, air compressors, AC & DC motors, and turbines. PREREQUISITES: Course 601-113 - Facility Operating Engineer LP

601-121
Heating Systems 3.00

Topics in this course include introduction to heat principles, temperature measurement, fuels and other sources of heat, combustion, basic heating systems, basic furnace design, gas furnace design and operation, venting of furnaces, chimney or exhaust gases and system controls. PREREQUISITES: Course 601-110 - Air Conditioning Fundamentals

601-122
Building Performance Instrument Cert 3.00

This course will focus on certification based activities utilizing BPI equipment will provide the participant with the skills needed to correctly analyze HVAC & R equipment, assess indoor air quality and perform correct combustion set up and analysis. PREREQUISITES: Course 601-121 - Heating Systems with a minimum grade of C or TR

601-128
Electrical Controls and Systems 3.00

Topics in this course include basic electricity review, control circuits, three phase motors, single phase motors, solid state devices, control components and troubleshooting using control schematics and solid state controls. PREREQUISITES: Course 605-107 - Fundamentals of Electricity/Electronics

601-129
HVAC Systems 3.00

Topics include the installation and proper startup procedures of residential HVAC systems. Areas covered will be the installation of forced air heating equipment with a focus on the sheet metal, gas piping, venting and electrical hookups necessary to meet all code requirements. Also covered will be the installation of refrigerant lines, evaporator coils, and placement of the condensing unit. Students will leak check, evacuate and perform startup checks verifying superheat, subcooling, airflow and other vital parameters. PREREQUISITES: Courses 601-110 - Air Conditioning Fundamentals and 601-116 - Mechanical Fundamentals

601-130
HVAC Blueprint Reading 2.00

Topics include blueprint reading, locating, interpreting and utilizing state building codes; understanding, interpreting and utilizing architectural working drawings.

601-131
Heating Systems Applications 3.00

Topics include installation and service of heating and humidifying systems, including steam and hydronic heat distribution systems, heat pumps and complete air conditioning systems and heat recovery systems. PREREQUISITES: Course 601-121 - Heating Systems

601-133
Refrigeration Fundamentals 3.00

Topics include refrigeration principles and terms, thermodynamic processes, refrigerants, vapor compression cycles, mechanical refrigeration system components, use of electrical controls, refrigeration applications and refrigeration tools and materials.

601-143
Refrigeration Applications 3.00

Topics include commercial refrigeration systems, applications, installation, servicing, troubleshooting, heat loads and piping, absorption systems and special refrigeration systems. PREREQUISITES: Courses 601-110 - Air Conditioning Fundamentals, 601-116 - Mechanical Fundamentals, and 601-133 - Refrigeration Fundamentals

601-145
Electronic Energy Management 3.00

Topics include an introduction to the role of computers in the heating, ventilation and air conditioning industry, microcomputer systems and applications, programming and direct digital control (DDC). PREREQUISITES: Courses 601-147 - Control Circuit Applications and 103-143 - Computers for Professionals

601-147
Control Circuit Applications 3.00

Topics include an introduction to control circuit terminology, measuring devices and control systems. The principles of self-contained, pneumatic and electronic-electric controls are examined and applied to control systems operation and design. PREREQUISITES: Course 601-128 - Electrical Controls and Systems

601-148
HVAC Electrical Troubleshooting and Repair 3.00

This course is designed for the advanced student who has already completed the theoretical and basic hands-on classes. In this class the student will be responsible for troubleshooting and repairing a variety of HVAC/R equipment in both lab exercises and computer simulated activities. The student will be required to diagnose the faulty equipment, select the proper replacement parts, return the equipment to a working condition and for preparing a detailed work order listing all work performed. PREREQUISITES: Courses 601-147 - Control Circuit Applications and 103-143 - Computers for Professionals

601-149
Heat Load Estimation 2.00

This course will teach how to use Manual J from ACCA. Students will develop the skills to do residential heating and cooling heat loads. Students will calculate not

only heat loss but also losses or gains due to infiltration, sun loads, etc. Students will do calculations on actual buildings in both long hand and using Right J, the computer software for Manual J. Students will also be responsible for developing recommendations for lowering heat loss by pricing energy upgrades such as insulation, window improvement, etc., and calculating payback and fuel savings.

601-156
Manual D Duct Design **2.00**

The student will use Manual D from ACCA to design ductwork to meet static and velocity requirements. The student will learn to calculate run lengths, pressure drop through fittings, and system components for supply and return ductwork.

601-157
Radiant Floor Heating **2.00**

The students will learn to design radiant floor systems for residential construction. They will select components, lay out hardware, and estimate piping lengths to meet load requirements.

601-171
Heating III **2.00**

This advanced course is for students who want to add residential/light commercial hot water boiler service and installation to their HVAC skills. This course covers cast iron sectional and copper finned boiler configuration, operation, and maintenance. The course will also cover common control schemes, boiler safety devices, and near boiler piping concerns. PREREQUISITES: Course 601-121 - Heating Systems

601-176
Codes I **2.00**

This advanced level course will assist workers in understanding and following the National Fuel Gas Code.

601-301
Basic Electricity & Circuits **2.00**

This introductory course covers electrical safety, the concepts of ohms, amps and volts as related to appliances. Series parallel and combination circuits are covered. The use of test instruments to properly measure electrical paramenters of motors, transformers, control devices and safeties are stressed.

601-302
Gas Appliance Control Systems **2.00**

This advanced course introduces the student to the common operational controls and safeties found on gas appliances in use today in a residential environment. Understanding sequence of operation, common troubleshooting techniques and testing to identify faulty components in practical lab exercises are stressed in this class.

601-501
Refrigeration Fundamentals Apprentice **1.00**

Topics include refrigeration principles and terms, thermodynamic processes, refrigerants, vapor compression cycles, mechanical refrigeration system components, use of electrical controls, refrigeration applications, and refrigeration tools and materials.

601-503
Steam & Water Boilers **1.00**

Students will learn to recognize how various types of boilers are constructed and what operating and safety controls are required for operation.

602-103
Engine Repair 1 **2.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair internal combustion engines. Emphasis is placed on in-vehicle repairs including engine cooling and lubrication systems. PREREQUISITES: Courses 602-107 - Auto Service Fundamentals and 602-122 - Auto IT for Transportation

602-104
Brake Systems **3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair vehicle braking systems with an introduction to ABS. (ABS diagnosis, service and repair will be addressed in the Advanced Chassis course.) PREREQUISITES: Courses 602-107 - Auto Service Fundamentals and 602-122 - Auto IT for Transportation

602-107
Auto Service Fundamentals **2.00**

This automotive course focuses on developing skills in professionalism, safety and the use of basic hand and power tools in accordance with industry standards. Students are introduced to the automotive service industry and learn to use both comprehensive and manufacturer's service information to perform basic under-hood and under-car services. PREREQUISITES: Course 602-122 - Auto IT for Transportation

602-109
Auto Transmission/Transaxle **4.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair automatic transmission/ transaxles including overhaul procedures. PREREQUISITES: Course 602-127 - Electrical & Electronic Systems 2

602-113
Automotive Diagnostics & Troubleshooting **2.00**

This course will introduce the student to the technical advancement of automotive industry. Hybrid vehicle and alternate fuel theory, design, operation and repair will be discussed. Application for the high school curriculum will be integrated in the content.

602-120
Auto Service Simulation **2.00**

This course will allow the student to perform acquired skills in the areas of engine repair, brakes, steering and suspension, electrical/electronic systems, heating, ventilation and air conditioning, and engine performance. The affected repairs are to be done on customer vehicles, simulating a shop environment. A strong emphasis will be placed on customer relations and communications. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Courses 602-104 - Brake Systems, 602-121 - Auto Instrumentation and Testing, 602-123 - Engine Repair 2, 602-124 - Steering & Suspension Systems, 602-128 - Electrical & Electronic Systems 3, 602-196 - Climate Control Systems, and 602-198 - Engine Performance 2

602-121
Auto Instrumentation and Testing 4.00

This course will develop the individual and technical skills required to perform advanced automotive diagnostics. Analytical skills will be developed and practiced to enable the technician to develop troubleshooting techniques. The basic theory and operation of diagnostic test equipment such as lab scopes and scan tools, will be covered including their application in the performance of field diagnostics. PREREQUISITES: Course 602-197 - Engine Performance 1

602-122
Auto IT for Transportation 2.00

Modern vehicles use on-board computers to control just about every function from accident avoidance to video navigation. Communication between computers is handled over sophisticated networks. The modern toolbox is not only filled with computer-based tools it is likely to have a PC on it or in it and is likely to be networked to the rest of the shop and the internet. Today's automotive technician needs a thorough understanding of PC's, networks, synchronizing PDAs and operating systems. This course covers IT topics the modern technician is likely to encounter such as hardware and software installations, implementing a peer-to-peer network, and troubleshoooting hardware, software, and network failures.

602-123
Engine Repair 2 3.00

This automotive course focuses on developing the skills needed to diagnose, service and repair internal combustion engines. Emphasis is placed on out-of-vehicle engine repair including overhaul procedures. PREREQUISITES: Course 602-103 - Engine Repair 1 COREQUISITES: Course 801-197 - Technical Reporting

602-124
Steering & Suspension Systems 3.00

This automotive course focuses on developing the skills needed to diagnose, service and repair steering and suspension systems including wheel alignment procedures. PREREQUISITES: Courses 602-107 - Auto Service Fundamentals and 602-122 - Auto IT for Transportation

602-125
Electrical & Electronic Systems 1 2.00

This automotive course focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems. Learners apply Ohm's Law to basic electrical circuit diagnosis. PREREQUISITES: Courses 602-107 - Auto Service Fundamentals and 602-122 - Auto IT for Transportation COREQUISITES: Course 804-107 - College Mathematics

602-126
Automotive Technology Implementation 2.00

This course will prepare the participant to certify a secondary auto program for the National Automotive Technicians education foundation (NATEF) certification. Additionally, the participant will receive instruction on the development of lesson plans and teaching methods utilizing electronic project boards that focus on the fundamentals of electrical troubleshooting.

602-127
Electrical & Electronic Systems 2 3.00

This automotive course focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems, including batteries, starting, charging, and lighting systems, and computer control systems. PREREQUISITES: Course 602-125 - Electrical & Electronic Systems 1 COREQUISITES: Course 801-136 - English Composition 1

602-128
Electrical & Electronic Systems 3 3.00

This automotive course focuses on developing the skills needed to diagnose, service and repair electrical and electronic systems including driver information, horn, wiper/washer, power accessories, cruise control, air bag, anti-theft and radio systems. PREREQUISITES: Course 602-127 - Electrical & Electronic Systems 2

602-142
Auto Electrical Systems 4.00

This course covers basic auto electrical circuit diagnosis, batteries, starting and charging systems, ignition systems (including conventional & electronic), and an introduction to computerized ignition systems. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Course 602-148 - Auto Mechanic Fundamentals and Service References COREQUISITES: Course 804-107 - College Mathematics

602-146
Auto Steering & Suspension 3.00

This course covers vehicle wheels, tires, alignment, steering, and chassis systems. Diagnosis, adjustment, and repair of related systems will be emphasized. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Course 602-148 - Auto Mechanic Fundamentals and Service References

602-148
Auto Mechanic Fundamentals and Service References 3.00

In this course, the student will learn the basic skills of an Automotive Technician. Those skills include automotive shop safety, hazardous material handling, hand tool identification, hand tool safety, use of precision measuring instruments, thread repair, wiring repair, introductory welding, and proper lifting techniques. Additionally, the course will include instruction on using electronic information services, hard copy shop manuals, and Wisconsin automotive trade practice regulations (ATCP 132).

602-149
Manual Drive Train and Axles 4.00

This automotive course focuses on developing the skills needed to diagnose, service and repair clutches, manual transmissions/transaxle, differentials, four wheel drive/all wheel drive, and drive axles. PREREQUISITES: Courses 602-107 - Auto Service Fundamentals and 602-122 - Auto IT for Transportation

602-150
Auto HVAC 2.00

This course covers the operating principles of the modern automobile heating, cooling, and air conditioning (HVAC) systems. Diagnosis and servicing of vehicle cooling and HVAC systems will be emphasized. Successful students will also receive their certification for Wisconsin ATCP 136 and Federal Clean Air Act Section 609 mobile air conditioning recovery. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Course 602-148 - Auto Mechanic Fundamentals and Service References

602-152
Auto Engine Minor **2.00**

This course covers the operating principles of the modern automobile engine, along with its mechanical and cooling systems. Disassembly, inspection, and reassembly of upper engine components will be accomplished. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Course 602-148 - Auto Mechanic Fundamentals and Service References

602-156
Auto Instrumentation and Testing **3.00**

This course covers the operation of diagnostic test equipment, including lab scope, scan tool, and dynamometer, and utilizes skills learned in Auto Engine Performance 1 and 2. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Course 602-159 - Auto Engine Performance

602-159
Auto Engine Performance **3.00**

This course covers the ignition system theory, diagnosis, and repair. It also gives an introduction to computerized engine control systems. The student will learn about input and output devices and computer self-diagnosis. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Course 602-142 - Auto Electrical Systems COREQUISITES: Course 602-188 - Auto Service Simulation II

602-172
Auto Chassis Dynamics **2.00**

This course covers theory and operation of computerized vehicle controls systems, including powertrain management, braking systems, and active suspension controls. PREREQUISITES: Courses 602-189 - Auto Brakes, 602-146 - Auto Steering & Suspension, and 602-156 - Auto Instrumentation and Testing

602-174
Auto Advanced Powertrain Controls **2.00**

This course covers theory & operation of computerized vehicle controls systems, including powertrain management, braking systems, and active suspension controls. PREREQUISITES: Course 602-156 - Auto Instrumentation and Testing

602-177
Auto Engine Major **3.00**

This course covers the operation, construction, testing, and overhaul of automotive gasoline internal combustion engines. The areas that will be covered are engine design, diagnosis, disassembly, inspection, machining, and reassembly. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Course 602-152 - Auto Engine Minor

602-178
Auto Service Simulation IV **3.00**

This course will allow the student to perform acquired skills in the areas of engine repair, brakes, steering and suspension, electrical/electronic systems, heating, ventilation and air conditioning, and engine performance. The affected repairs are to be done on customer vehicles, simulating a shop environment. A strong emphasis will be placed on customer relations and communications. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Courses 602-172 - Auto Chassis Dynamics and 602-174 - Auto Advanced Powertrain Controls COREQUISITES: Course 801-197 - Technical Reporting

602-187
Auto Service Simulation III **2.00**

This course will allow the student to perform acquired skills in the areas of electrical systems, computerized electronic systems, computerized fuel delivery and mixing systems, and emissions systems. The affected repairs are to be done on customer vehicles, simulating a shop environment. A strong emphasis will be placed on customer relations and communications. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Courses 602-156 - Auto Instrumentation and Testing and 602-159 - Auto Engine Performance COREQUISITES: Course 801-136 - English Composition 1

602-188
Auto Service Simulation II **2.00**

This course will allow the student to perform acquired skills in the areas of auto electrical systems, starting and charging systems, ignition systems, and basic computerized engine control systems. The affected repairs are to be done on customer vehicles, simulating a shop environment. A strong emphasis will be placed on customer relations and communications. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Courses 602-142 - Auto Electrical Systems, 602-152 - Auto Engine Minor, and 602-150 - Auto HVAC COREQUISITES: Course 801-196 - Oral/Interpersonal Communication

602-189
Auto Brakes **3.00**

This course covers automotive braking systems. Diagnosis, adjustment, and repair of related systems will be emphasized. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Course 602-148 - Auto Mechanic Fundamentals and Service References

602-190
Auto Service Simulation I **3.00**

This course will allow the student to perform acquired skills in the areas of vehicle wheels, tire alignment, and braking systems. The affected repairs will be done on customer vehicles, simulating a shop environment. A strong emphasis will be placed on customer relations and communications. Preparedness for the ASE (Automotive Service Excellence) exam is emphasized. PREREQUISITES: Courses 602-189 - Auto Brakes and 602-146 - Auto Steering & Suspension

602-195
Advanced Chassis Systems **2.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair antilock brake, vehicle stability enhancement, and electronic steering and suspension systems. PREREQUISITES: Courses 602-104 - Brake Systems, 602-124 - Steering & Suspension Systems, and 602-127 - Electrical & Electronic Systems 2 COREQUISITES: Course 801-136 - English Composition 1

602-196
Climate Control Systems **3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair climate control systems including heating, cooling, and air distribution. Upon successful completion of the Mobile Refrigerant Handling unit

(ATCP-136), a state certificate will be issued. PREREQUISITES: Course 602-127 - Electrical & Electronic Systems 2

602-197
Engine Performance 1 **3.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair powertrain control and ignition systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. PREREQUISITES: Course 602-103 - Engine Repair 1 and 602-127 - Electrical & Electronic Systems 2 COREQUISITES: Course 801-136 - English Composition 1

602-198
Engine Performance 2 **4.00**

This automotive course focuses on developing the skills needed to diagnose, service and repair fuel and emission control systems. Emphasis is placed on diagnostic procedures and the problem-solving techniques associated with automotive engine performance and drivability. PREREQUISITES: Course 602-197 - Engine Performance 1

605-107
Fundamentals of Electricity/ Electronics **3.00**

This course studies the behavior of electricity in terms of voltage, amperage, resistance, and impedance in various circuits. Lab instruction will include the application and usage of measuring and troubleshooting equipment.

605-109
Fabrication Techniques **1.00**

Emphasis is on the use of hand tools, soldering, shearing, forming, punching, chassis construction. Students construct a project in a hands-on situation.

605-113
DC/AC I **3.00**

This introductory course presents the scientific foundation used throughout electronics technology. Topics include DC/AC forms of current, voltage, resistance, capacitance, inductance, and power. Troubleshooting practices will be emphasized and computer technologies will be used to enhance abstract theory. Students perform laboratory experiments and prepare technical reports.

605-114
DC/AC II **3.00**

An extension of and enhancement to DC/AC I. More advanced topics, such as complex networks, applicable theorems, polyphase systems, and passive filters, will be discussed. Computer simulation software will be used to reinforce theoretical analyses. PREREQUISITES: Courses 605-113 - DC/AC I and 804-115 - College Technical Math 1 with a minimum grade of C or TR

605-118
Digital Electronics - Project Lead the Way **4.00**

This course in applied logic encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices.

605-119
Grounding and Bonding **2.00**

This course is for the electrician who wants to understand the concepts of grounding and bonding. We will investigate the proper way to do grounding and bonding as well as look at the results of improper grounding and bonding. You will learn about proper grounding requirements as stated in Article 250 of the National Electric Code. Proper grounding of sensitive electronic equipment will also be discussed.

605-120
Electronic Devices I **4.00**

The basic operating principles of diodes, transistors, and linear ICs are presented as they are used in rectifier, amplifier, and oscillator circuits. Lecture theory is reinforced with laboratory assembly, measurements, troubleshooting, and technical report writing. PREREQUISITES: Course 605-113 - DC/AC I

605-121
Electronic Devices II **4.00**

Introduction to unipolar transistors, JFETs, and MOSFETs being used in linear and nonlinear circuits. Students will use high frequency analysis with both bipolar and unipolar transistors. Operational amplifiers are used as linear amplifiers and in nonlinear circuits. Some circuits covered include voltage amplifiers, summing amplifiers, instrumentation amplifiers, active filters and oscillators. PREREQUISITES: Course 605-120 - Electronic Devices I

605-130
Digital Electronics **4.00**

Analysis of digital electronic circuits. Realization of logic gates, using TTL and CMOS devices. Verification of theory is accomplished through laboratory experiments with small and medium scale integrated circuits.

605-131
PLTW Digital Electronics Part 1 **2.00**

Digital Electronics TM is the study of electronic circuits that are used to process and control digital signals. The major focus of the DE course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Utilizing the activity-project-problem-based (APPB) teaching and learning pedagogy, students will analyze, design and build digital electronic circuits incorporating the use of computer simulation programs and the physical construction of live circuits. While implementing these designs students will continually hone their interpersonal skills, creative abilities and understanding of the design process.

605-132
PLTW Digital Electronics Part 2 **4.00**

Digital Electronics TM is the study of electronic circuits that are used to process and control digital signals. The major focus of the DE course is to expose students to the design process of combinational and sequential logic design, teamwork, communication methods, engineering standards, and technical documentation. Utilizing the activity-project-problem-based (APPB) teaching and learning pedagogy, students will analyze, design and build digital electronic circuits incorporating the use of computer simulation programs and the physical construction of live circuits. While implementing these designs students will continually hone their interpersonal skills, creative abilities and understanding of the

design process. PREREQUISITES: Course 605-131 - PLTW Digital Electronics Part 1

605-133
Industrial Data Communications **3.00**

This course introduces students to the latest technologies in industrial data communications with a focus on digital and analog signaling. Topics include topology, the principles of signaling on physical links, transmission media, data formatting, A-to-D conversion, multiplexing, modulation using digital data, error control, flow control and protocols. Special attention will be given to practical troubleshooting and problem solving of industrial data communications. PREREQUISITES: Course 605-113 - DC/AC I or 605-107 - Fundamentals of Electricity/ Electronics with a minimum grade of C or TR

605-134
Telecommunications Installer Operation **4.00**

This course is actual run time in the lab and field for hands-on telecommunication installation work. Students will work in groups and as individuals to gain experience in real and simulated telecommunications installations. Students bring together all of the theories and skills learned in the other classes and apply them to the installation process. COREQUISITES: Courses 605-166 - Telecom Safety & Installation and 605-197 - Telecom Fire Stopping

605-136
Programmable Controller System Design **3.00**

This course introduces the student to the design and implementation of an automated process controlled by a Programmable Logic Controller. PREREQUISITES: Course 605-130 - Digital Electronics with a minimum grade of C or TR

605-138
Circuit Construction and Repair **3.00**

Students will learn and apply the skills for the safe use of hand tools, soldering, desoldering, copper and fiber termination. These skills will be demonstrated in the construction of electronics based projects.

605-150
Industrial Electronics **3.00**

Covers industrial electrical control using motor starters, relays, pushbuttons, as well as variable speed control of DC motors and power distribution for industry. PREREQUISITES: Courses 605-114 - DC/AC II and 605-120 - Electronic Devices I

605-151
Electronic Communications **3.00**

An introduction course in analog communication systems. Topics covered are AM/FM/SSBX microwave and laser transmission and reception. Theory is covered in block diagram level with additional theory and labs on representative circuits from the major blocks of a communication system. PREREQUISITES: Courses 605-114 - DC/AC II and 605-120 - Electronic Devices I

605-154
Public Switched Telephone Network Hierar **1.00**

This course will define the different office classes, including 1 through 4 and class 5 end office functions. Interoffice signaling, including CCIS and SS7, along with trunking, will be covered.

605-156
Distribution Equipment & Cabling Systems **1.00**

The Distribution Equipment and Cabling Systems class teaches basic concepts of telecommunications equipment and cabling installation. These skills, abilities, and knowledge are beneficial for a student seeking employment in the telecommunications cabling field. This class meets some of the requirements for the proposed ETA-1 Telecommunications CET certification test.

605-162
Installation, Maintenance, and Testing **1.00**

The Installation, Maintenance, and Testing class teaches basic concepts of telecommunications wiring installation, maintenance, and testing. These skills, abilities, and knowledge are beneficial for a student seeking employment in the telecommunications cabling field.

605-163
ISP and OSP Safety in a Telecom Environ **1.00**

The Safety in the Telecomm Environment class teaches the importance of safety and safe practices and procedures. These skills, abilities, and knowledge, are beneficial for a student seeking employment in the telecommunications cabling field. This class meets some of the requirements for the ETA-I Residential Electronics Systems Installer (RESI) certification.

605-166
Telecom Safety & Installation **3.00**

The Safety and Installation class teaches the importance of safety, and safe practices and procedures. The course teaches basic concepts of telecommunications equipment and cabling installation and other skills needed in the telecommunication field. Students will have the opportunity to earn a Fire Stopping and a Copper Certification. This class meets some of the requirements for the ETA-I Residential Electronics Systems Installer (RESI) and Certified Data Cabling Installer Certification (DCIC). It also prepares students for BICSI Installer Level 1 Certification exam. These skills, abilities and knowledge, are beneficial for a student seeking employment in the telecommunications cabling field.

605-174
Digital Circuits II **3.00**

A study of the TTL logic family characteristics, CMOS series characteristics, MSI logic circuits, interfacing with the analog world and memory devices. PREREQUISITES: Course 605-130 - Digital Electronics

605-176
Optoelectronics **2.00**

The study of the integration of electronics, optics and light to control electromechanical or electronics operations. Topics include optical concepts, light sources, laser, fiber optics, photometry, radiometry and optoelectronic applications. PREREQUISITES: Courses 605-114 - DC/AC II and 605-120 - Electronic Devices I

605-178
Electrical Code Interpretation **2.00**

The course covers the basic layout of the National Electrical Code and interprets some of the basic articles within the code. Emphasis will be placed on the articles associated with an industrial environment. The course will prepare the student for further in-depth study of various articles,

within the code, specific to their work environment.

605-181
Computer Hardware Architectures 3.00

This course will introduce the hardware architecture of the personal computer platform. Topics covered are motherboard, BIOS system, extension buses, serial ports, parallel ports, and Universal Serial Bus, ports, hardware upgrade procedures, and troubleshooting hardware using electronic test equipment.

605-182
Computer Interfacing Techniques 3.00

This course will examine different hardware interfacing techniques used in the personal computer. Topics covered are programmable, plug-and-play, strobe, infrared, local-bus to Industry Standard Association, local-bus to serial devices, local-bus to parallel devices, and local-bus to universal serial bus.

605-183
Electronics/Future Trends in 3.00

This course will study the future trends in the electronics field. Topics covered are communications, controls, manufacturing, and newly developed technologies. Students will complete a project.

605-184
Data Acquisition 3.00

This course is a study of computer based data acquisition, utilizing both LabVIEW and Visual Basic as the method of control. Students are introduced to data analysis, utilizing computer based methods. A project will be developed by the student upon completion of the course.

605-186
Changes to the NEC 2.00

This course covers the changes that have been made to the National Electric Code. The student should be familiar with the 2005 National Electric Code.

605-188
Electrical Code Interpretation 2 2.00

This course covers the basic layout of the second half of the National Electric Code and interpretation of some of the basic articles within the code. Emphasis will be placed on the articles associated with an industrial environment. The course will prepare the student for further in-depth study of various articles within the code specific to their work environment.

605-190
Microprocessors 4.00

An introduction to microcomputer programming. Digital codes, registers, and register instruction, logic gates and truth tables are covered. The 7400 series of integrated circuit chips are studied. COREQUISITES: Courses 605-114 - DC/AC II and 605-121 - Electronic Devices II

605-197
Telecom Fire Stopping 2.00

The Fire Stopping class teaches the importance of fire stopping and fire safety procedures. This course teaches basic concepts of fire stopping and cabling installation.

606-102
Mechanical Systems Design 3.00

Students will create mechanical designs and CAD models to develop an efficient and effective manufacturing process. After developing the manufacturing process, students will utilize skills such as statics, strength of materials, and mechanisms to determine loads to evaluate the design and determine if it will function as planned. Using elements of machine design, students will then specify specific machine components to be used to build the manufacturing process system. These components will be incorporated into the design and the students will then mockup and test the manufacturing process system. The students will evaluate the viability of the manufacturing process after buildings and testing of the manufacturing process system. PREREQUISITES: Course 605-136 - Programmable Controller System Design

606-103
Material Properties 2.00

Students in this course learn and apply the mechanical strength, chemistry, and material basic characteristic properties, for materials including; metals, plastics, composites, nano-technolgies, powered metals, and non-metals. Students will have a basic understanding of how to select materials that fit the engineering product design requirements.

606-107
Drafting Seminar/CAD 2.00

Emphasis on latest developments in drafting methods, materials and applications. Projects are undertaken utilizing a variety of CAD systems other than those taught in 606-126 Computer Aided Drafting.

606-110
Geometry/Descriptive 2.00

Spatial relationships of points, lines, surfaces and solids. Auxiliary views, true-size constructions, revolution, developments, cutting planes, graphical treatments of vectors and classification of surfaces are included. PREREQUISITES: Course 605-132 - PLTW Digital Electronics Part 2

606-111
Blueprint Reading 2.00

Blueprint reading covers the interpretation of engineering drawings from a basic level to more complex topics. Topics covered include third-angle orthographic projection, sections, dimensioning, types of lines, auxiliary views, the title block and symbols. Lecture will be supplemented by individual class exercises to provide actual practice for participants.

606-116
Machine Design/Elements of 3.00

Procedures and consideration in design of simple machine elements such as shafts, bearings, couplings, keys, pins, springs, clutches, brakes, and pressure cylinders. Emphasis on neat, orderly procedure and a thorough consideration of design specifications. PREREQUISITES: Course 606-152 - Engineering Graphics w/CAD 1

606-118
Mechanisms 2.00

Kinematics of machinery, displacement, velocity and acceleration, analysis of linkages, cams and gears, geometry of involute gears, properties of standard spur, helical, bevel, and planetary gears. Practical problems develop an understanding of principles. PREREQUISITES: Courses 606-151 - Statics and 606-152 - Engineering Graphics w/CAD 1

606-119
Motor Controls 3.00

This course provides a practical approach to motor control of various machines for non-electrical or electronic technicians.

It discusses electrical and mechanical components and how they are connected together to control different types of motors. Many different types of control circuits are discussed.

606-121
Blueprint/Schematic Interpretation 2.00

This course will focus on providing the knowledge needed by maintenance professionals to extract information from blueprints and schematics. Sketching parts and drawing schematic circuits will also be explored. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications

606-122
Geometric Dimensioning and Tolerancing 2.00

Stresses the interpretation of geometric tolerances applying the five categories of feature control: form, orientation, runout, profile and position. Various inspection techniques, datum construction, feature control frames and material condition modifiers; least material condition, maximum material condition and regardless of feature size will be studied.

606-126
AutoCAD, Introduction 2.00

This course is an introductory course in the latest version of AutoCAD. No prior CAD or drafting experience is necessary. While it would be helpful to have some knowledge of computers, geometry, and design problems, this too is not necessary. This course is designed for students that have had no or very little exposure to CAD. Upon the successful completion of all assigned work in this course, a student should have an understanding of how to create basic geometric shapes and drawings as well as applying dimensions using AutoCAD software. While drawings will be created in this class, drafting is not taught. This course deals strictly with the basic use of AutoCAD software.

606-127
CAD Intermediate 2.00

In this course, students will use advanced CAD dimensioning concepts and edit and modify various types of entities, such as dimensions, hatch patterns, and text. Use of grips, attributes, and Xrefs, menu customization, and profiles are covered. PREREQUISITES: Course 606-126 - AutoCAD, Introduction

606-128
CAD - Solidworks 2.00

Students use Solidworks software to create solid models of various machine components. They also convert solid parts into conventional 2-D orthographic drawings which include sections, auxiliary views, and dimensions. Students create assembly drawings and configurations of various parts.

606-129
CAD/Solids Advanced 2.00

A continuation of the basic solids class that includes assembly drawings, exploded isometric drawings, customization, sheet metal drawings, import/export functions, thin features, and the use of Microsoft Office features to increase productivity. PREREQUISITES: Course 606-128 - CAD - Solidworks

606-130
SolidEdge, Introduction 2.00

In this course, students learn to use SolidEdge software to create solid models of various machine components, convert solid parts into conventional 2-D orthographic drawings, create section and auxiliary views with applied dimensions of various components, and create assembly drawings of various parts.

606-131
Strength of Materials 3.00

Internal stresses and deformation of elastic bodies resulting from external forces. Tables of properties of engineering materials are used. Analysis of simple and combined stresses relative to the properties of the materials to meet functional requirements. PREREQUISITES: Courses 606-151 - Statics and 806-154 - General Physics 1

606-136
Manufacturing Materials 1.00

The study of the properties of engineering materials in regards to strength, chemistry, and basic characteristics of both metals and non-metals.

606-137
Manufacturing Process Applications 2.00

Students spend part of the course in the Machine Shop learning basic lathe, mill, drill press, and grinder operations as well as layout. Part of the course is taught in the welding lab where students learn the operations of gas and arc welding.

606-138
Design Problems 2.00

Analyze problems, gather data, sketch ideas, do necessary mathematical calculations, and make working drawings of a design project. Judgment and initiative are developed.

606-139
AutoCAD Inventor, Introduction 2.00

In this course, students use AutoCAD Inventor software to create solid models of various machine components, convert solid parts into conventional 2-D orthographic drawings, create section and auxillary views with applied dimensions of various components, and create assembly drawings of various parts.

606-141
Autocad Mech Design Technician 3.00

This course is an introductory course in the latest version of AutoCAD. No prior CAD or drafting experience is necessary. While it would be helpful to have some knowledge of computers, geometry, and design problems, this too is not necessary. This course is designed for students that have had no or very little exposure to CAD. Upon the successful completion of all assigned work in this course, a student should have an understanding of how to create basic geometric shapes and drawings as well as applying dimensions using AutoCAD software. Students will use advanced CAD dimensioning concepts and edit and modify various types of entities, such as dimensions, hatch patterns, and text and output to paper views and drawings. Use of grips, attributes, and Xrefs, menu customization, and profiles are covered. While drawing will be created in this class, drafting is not taught. This course deals strictly with the basic use of AutoCAD software.

606-142
Creo-Pro/Engineering 2.00

In this course, students use Pro-E software to create solid models of various machine components, convert solid parts into

conventional 2-D othographic drawings, create section and auxilliary views with applied dimensions of various components, and create assembly drawings of various parts.

606-149
Mechanical Engineering, Introduction to Tech **2.00**

This course will instruct the student in manual drafting techniques; however, most of the material may be completed using CAD. It is designed to develop knowledge and basic mechanical drafting skills. Upon completion of this course, the student will have developed skills in the use of drafting tools, lettering, geometric construction, orthographic projection, sketching, visualization, dimensioning, and basic tolerancing.

606-151
Statics **3.00**

Study of forces in equilibrium; types of forces, couples, vector and scalar quantities, force systems, friction, centroids, centers of gravity, moments of inertia of areas. PREREQUISITES: Course 804-114 - College Technical Math 1B or 804-115 - College Technical Math 1

606-152
Engineering Graphics w/CAD 1 **2.00**

Advanced concepts of topics from Intro to MET are covered as well as several new topics. Lab assignments are done on a CAD workstation. Topics covered include drawing primary and secondary auxillary views, sections, threads and fasteners, and creating drawings of weldments. PREREQUISITES: Course 606-149 - Mechanical Engineering, Introduction to Tech

606-153
Engineering Graphics w/CAD 2 **2.00**

Advanced concepts from Engineering Graphics 1 are covered as well as several new topics. Lab assignments are done on a CAD workstation. Topics covered include creating working drawings of simple and complex assemblies, redesigning existing parts and assemblies, and creating welded assemblies. PREREQUISITES: Course 606-152 - Engineering Graphics w/CAD 1

606-154
Engineering Graphics w/CAD 3 **2.00**

Advanced concepts of topics from Engineering Graphics 1 are covered as well as several new topics. Lab assignments are done on a CAD workstation. Topics covered include creating gear, sprocket, and pulley drawings and cutting data, understanding the nomenclature associated with gear, sprocket, and pulley drawings, locating information about standard parts from tables and charts, creating cam displacement diagrams and profiles, and using vendor catalogs to select parts. PREREQUISITES: Course 606-153 - Engineering Graphics w/ CAD 2

606-159
Manufacturing Processes **2.00**

Basic methods of fabrication used in modern manufacturing, welding, electroforming, casting, metallic coating, anodizing, plating and chip removal, using numerical control, and hydraulic systems. PREREQUISITES: Course 606-103 - Material Properties or 606-136 - Manufacturing Materials

606-160
Fluid Power and Design **3.00**

This course is designed to give the student a foundation in hydraulics and pneumatics. The units of instruction will cover components, general operating characteristics and principles, fluid power systems, and problem solving techniques required to put these systems together.

606-186
Mechanical Design, Directed Study I **1.00**

Individualized instruction and project is assigned to the student in the appropriate subject as assigned by the instructor. Gives student an opportunity to work through a project that is practical and meaningful to the occupation for which they are preparing. Is also used for co-op learning.

606-199
Internship, Mechanical Tech **1.00**

A mechanical tech internship is an opportunity for students to get hands-on experience in the mechanical or electrical field. Students will apply to participating industries for an opportunity to work with their engineers and technicians. If accepted, they will have the opportunity to earn credit (note: some companies may only accept you if you are earning credit).

606-501
AutoCAD for the Trades **1.25**

This course has been added to enhance our existing apprenticeship program. It will also serve to familiarize our apprentices with some of the technological advancements that have already been implemented into the sheet metal field. AutoCAD has all but replaced the hand drafting methods that have been practiced for years. This course will teach the basic functions of the AutoCAD program and allow the students to apply these skills in practical field related applications. Work sheets, drawings and quarterly tests will be used to assess the student's progress.

607-101
Construction Sciences Group Orientation **1.00**

This course is an introduction to the various programs with the Construction Sciences Group (CSG). The various software and media used to teach the courses are introduced, and CSG students will develop a program plan to complete their classes over the next few years.

607-102
Conflict Resolution in Engineering/ Construction **2.00**

This course is designed to help students learn how to recognize, approach and defuse various confrontational situations on the construction job site and in the workplace.

607-103
Civil Engineering And, Introduction to Architecture **2.00**

This course is designed to introduce students to the wide variety of career opportunities within the fields of Civil Engineering Architecture, Land Survey, Fresh Water Resources and Construction Management.

607-104
Building Material & Construction Method **3.00**

This course is an introduction to common building materials and construction methods including soils, aggregates, pipes, cement, concrete, asphalt, steel, wood masonry and residential and commercial building materials.

607-105
Future Trends-CAD in Civil Engineering **1.00**

This one credit seminar is designed to expose and teach new technology within the areas of Computer Aided Design (CAD) in the areas of Civil Engineering and Architecture. Since the topic may vary depending on what the "new technology" is each semester, please consult with the instructor for the exact topic.

607-106
Building Materials **2.00**

This course covers an introduction into common building materials within construction, including soils, aggregates, pipes, cement, concrete, asphalt, steel, wood, masonry, residential and commercial building materials. covered. COREQUISITES: Course 607-107 - Construction Methods

607-107
Construction Methods **2.00**

This course covers an introduction into common methods of construction within Civil Engineering, including methods of construction regarding soils, aggregates, pipes, concrete, asphalt, steel, wood, masonry, residential and commercial building materials. COREQUISITES: Course 607-106 - Building Materials

607-108
Boundary Location and Research **3.00**

The principles and practices for boundary location and research are presented in this course. The public land system will be covered in detail along with the principles for performing surveys. PREREQUISITES: Course 607-173 - Land Surveying Fundamentals

607-117
Geographical Information Systems I **2.00**

This is an introductory course into GIS (Geographical Information Systems), GIS terminology, data structure, and data analysis based on spatial parameters. Students learn how to manipulate, parse, combine, and even build basic geographical databases. Applications ranging from land record management to marketing to political science are addressed.

607-118
Geographical Information Systems II **2.00**

This is the second course in the Geographical Information System series (GIS). Students explore the conceptual framework of geographic information systems and spatial modeling and develop GIS database abilities through group and self-selected projects. Emphasis is on independent learning and synthesis of GIS into the student's studies. PREREQUISITES: Course 607-117 - Geographical Information Systems I

607-119
Civil Technology Internship **1.00**

Satisfactory completion of at least 80 hours of relevant work experience in the field approved by the head instructor and documented by the employer.

607-127
Civil Engineering Drafting **3.00**

Using MicroStation, the student will prepare standard drawings typically used in the field of Civil Engineering...including Title Pages, Typical Sections, Plan & Profiles, Cross Sections, Sewer Profiles, Alignment Tie Sheets, etc.

607-128
Construction Estimating **3.00**

This course is designed to develop the skills for preparation of cost estimates using materials, labor, and equipment in construction. Time and cost components are also addressed in a unit production and a project scheduling evaluation using the critical path method. PREREQUISITES: Course 607-104 - Building Material & Construction Method

607-129
Future Trends in Civil Engineering/ Architectural Technology **2.00**

This two credit course is designed to expose and teach new technology within the areas of Civil Engineering and Architecture. Since the topic may vary depending on what the "new technology" is each semester, please consult with the instructor for the exact topic.

607-132
Structural Mechanics - Civil Engineering **3.00**

This course introduces students to basic principles of structural mechanics (statics and strength of materials), with special emphasis placed upon application of these principles in the design of simple beams used in commercial buildings. PREREQUISITES: Course 804-114 - College Technical Math 1B or 804-115 - College Technical Math 1

607-136
Construction Project Management **2.00**

This course is designed to introduce the concepts of overall construction project management including scheduling, resource allocation, cost and technical constraints.

607-137
Global Positioning Systems **2.00**

This course is designed to introduce students to the concepts of GPS in surveying and the equipment used in acquiring/processing survey grade information. PREREQUISITES: Course 607-169 - Land Surveying Basics

607-139
Material Testing & Inspection **4.00**

Students will conduct and evaluate standardized field and laboratory testing on civil engineering materials as required for inspection certifications.

607-143
Structural Design Concrete and Steel **3.00**

This course is designed so that students will understand the design and detail of structures using LRFD methods for steel and reinforced concrete. Simple beams, cantilevers, and axially loaded columns will be covered along with the design of structural connections. PREREQUISITES: Course 607-132 - Structural Mechanics - Civil Engineering with a minimum grade of C or TR

607-150
Survey Construction, Rte and Hwy **4.00**

Using Wisconsin Department of Transportation's Facility Design Manuals, students will learn the principles and designs of roadways...including horizontal/vertical curves, superelevations, pavement design, construction considerations, etc. Students will field survey an existing site and develop a preliminary plan set for a proposed roadway. The students will then stake out this proposed roadway. PREREQUISITES: Course 607-173 - Land Surveying Fundamentals

607-152
Elements of Inspections, Contracts, and Specifications 3.00

Using Wisconsin Department of Transportation's Construction Specification Manual and various other project specific specifications, students will learn the principles and basic techniques of highway and municipal inspection.

607-154
Sewer and Water Systems 2.00

Using the latest hydraulic software along with the Standard Specifications for Sewer and Water in Wisconsin, students will learn the basic applications of hydrology and hydraulics for various applications including run off calculations and design of culverts, storm sewers, detention basins, etc. Students will also be aquainted with the principles and software applications in designing roadway drainage, water and sewer lines.

607-161
Legal Aspects of Land Surveying 2.00

This course covers the legal concepts and doctrines related to land, land ownership, duties and responsibilities of surveyors, and Wisconsin statutes and local codes. COREQUISITES: Course 607-108 - Boundary Location and Research

607-162
Materials Testing 2.00

This course introduces students to various material testing methods used in road construction based on Wisconsin Department of Transportation's Highway Technician Certification Program. PREREQUISITES: Course 607-104 - Building Material & Construction Method

607-166
Capstone: CET Highway Technology 1.00

The Civil Engineering Technician Highway capstone course is designed to guide students in resolving related problems by applying skills and techniques acquired throughout the program. The capstone course will provide an overall program assessment opportunity aimed at showcasing a student's technical skills developed from the Civil Engineernig Technology Highway program courses. COREQUISITES: Course 607-154 - Sewer and Water Systems

607-167
Capstone: CET Freshwater Resources 1.00

The Civil Engineering Technician - Fresh Water Resources capstone course is designed to guide students in resolving related problems by applying skills and techniques acquired throughout the program. The capstone course will provide an overall program assessment opportunity aimed at showcasing a student's technical skills developed from the Civil Engineering Technology Fresh Water Resources program courses.

607-169
Land Surveying Basics 2.00

This course is an introduction to the basics of land surveying ranging from pacing/taping and level loops thru the use of a total station to accomplish basic traverses. This course also includes an introduction to drawing deed descriptions, basic surveying terms, and units of measure. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications

607-170
AutoCAD for Construction Sciences 2.00

This course teaches the participant the basics of Computer Aided Drafting (CAD) using AutoCAD and other design software within the various fields of construction sciences and interior design. Students develop their CAD skills while working on various real world construction type projects.

607-173
Land Surveying Fundamentals 3.00

This course includes instruction in the use of instruments used in the field of construction surveying, such as the transit, level, and chains, and their application in the solving of typical field problems. The student does the field work and office computations required in the solution of these problems. PREREQUISITES: Course 607-169 - Land Surveying Basics

607-174
Land Surveying - Data Processing 2.00

This course is designed to supplement the regular land surveying class with the advanced data processing skills required by full time surveyors. COREQUISITES: Course 607-173 - Land Surveying Fundamentals

607-180
AutoCAD for Architecture 2.00

This course teaches the participant the basics of Computer Aided Drafting using AutoCAD. Upon successful completion, the participants will be able to create drawings using various commands and apply text to their work. They will be able to open, modify, print, and save their drawings.

607-181
Watershed Hydrology and Conservation 2.00

Distribution and properties of waters on the earth. concept of the hydrologic cycle, and basic principles of meteorology, precipitation, streamflow, and groundwater flow. Introduction to erosion and urban stormwater pollution controls and conservation

607-182
Water Sampling and Testing 2.00

Review and application of technology and techniques for gathering data from water resources and water treatment processes. PREREQUISITES: Course 806-102 - Environmental Chemistry with a minimum grade of C or TR

607-183
Fresh Water Treatment 3.00

Review of water characteristics, drinking water, receiving water and effluent standards. Basic design methodology and operational features of common physical, chemical and biological processes for the treatment of water. PREREQUISITES: Course 806-102 - Environmental Chemistry with a minimum grade of C or TR

607-184
Environmental Impact Assessments 2.00

Review of process and content of environmental impact assessments including evaluation of environmental impacts and alternatives

607-185
Waste Water Treatment 3.00

Review of wastewater characteristics, receiving water and effluent standards. Basic design methodology and operational features of common physical, chemical and

biological processes for the treatment of wastewater. Introduction to the processing and disposal of sludges and other treatment plant residuals.

607-186
Erosion Control in Construction **2.00**

This course is designed to introduce students to environmental considerations, environmental rules and regulations pertaining to construction, impacts of construction on the environment, and methods for effective erosion control. Students will reveiew and apply the techniques for developing a stormwater plan including design, installation, inspection and maintenance of erosion and sediment control practices for construction sites. PREREQUISITES: Course 806-102 - Environmental Chemistry with a minimum grade of C or TR

607-187
3D Cad: Digital Terrain Modeling **2.00**

This course is an introduction to the concepts and creation of Digital Terrain Models (DTM) including the extrapolation of contours, profiles and cross sections from the DTM using Autodesk Civil3D software.

607-188
Capstone: Geospatial Surveying Tech **1.00**

The Geospatial Surveying Technician capstone course is designed to guide students in resolving related problems by applying skills and techniques acquired throughout the program. The capstone course will provide and overall program assessment opportunity aimed at showcasing a student's technical skills developed from the Geospatial Surveying Tech program courses.

607-189
Geospatial Data Processing **2.00**

This course is desgined to develop advanced data processing skills required by full time surveyors including data sets from remote sensing technologies. PREREQUISITES: Course 607-169 - Land Surveying Basics

607-190
Legal Research and Boundary **4.00**

This course is an introduction to the legal concepts and doctrines related to land, land ownership, duties and responsibilities of surveyors, Wisconsin statutes and local codes. This includes the principles and practices for boundary location and research. The public land system will be covered in detail along with the principels for performing surveys. PREREQUISITES: Course 607-169 - Land Surveying Basics

612-102
Pneumatics/Hydraulics - Introduction **3.00**

The fundamental principles and physical laws governing fluid power and pneumatics are studied. The operation of the various control valves and actuators will be explored through a combination of theory and practical lab exercises.

612-111
Servo and Proportional Controls/ Advanced **2.00**

This combined lecture/laboratory course will provide advanced training in hydraulic servo valve and pump control systems. Emphasis will be placed on design, assembly and troubleshooting of these systems.

612-115
Hydraulics/Advanced **3.00**

Analysis of the various selection factors for hydraulic components. Design of various components to determine how they meet specific duty requirements. Physical laws will be applied to determine how hydraulics can best be applied for maximum efficiency. Make component selections based on a given set of criteria. PREREQUISITES: Course 612-100

612-117
Fluid Power Systems/Applied **3.00**

Various areas of fluid power application will be studied including mobile hydraulics, hydrostatic drives, servo controlled systems and special circuit problems.

614-107
Residential and Commercial Inspection **3.00**

This course is designed to teach students the skills needed to become a residential and commercial inspector including a focus on Energy Audits.

614-108
Residential Code **1.00**

This course is a study of the Wisconsin Uniform Dwelling Code and its application to residential design.

614-110
Architectural Drafting/Residential **3.00**

This course is the capstone application class regarding residential design, including a full design of a residential building using BIM. Students develop set of working drawings and specifications for a residential building using Autodesk Revit. PREREQUISITES: Course 614-150 - 3D CAD:Building information Model COREQUISITES: Course 614-108 - Residential Code

614-114
Commercial Code **2.00**

This course is a study of the Wisconsin Commercial Building Code (including the International Building Code) and its application to commercial design.

614-115
Architectural Drafting/Commercial **3.00**

This course is the capstone appliction class regarding commercial design, including a full design of a commercial building using BIM. Students develop a set of drawings and specifications for a commercial building using Autodesk Revit. PREREQUISITES: Course 614-110 - Architectural Drafting/ Residential COREQUISITES: Course 614-114 - Commercial Code

614-123
Capstone: Architectural Structural Tech **1.00**

The Architectural-Structural Engineering Technician capstone course is designed to guide students in resolving related problems by applying skills and techniques acquired throughout the program. The course will provide an overall program assessment opportunity aimed at showcasing a student's technical skills developed from the Architectural-Structural Engineering Tech program courses. COREQUISITES: Course 614-115 - Architectural Drafting/Commercial

614-138
3D Modeling and Virtualization **1.00**

Using 3D modeling software and hardware, students will create and virtualize their construction project designs for presentations and portfolio development.

614-140
Mechanical Systems for Buildings 3.00

This course is an introduction to the broad field of mechanical systems and their implications on architectural form and design. It will provide students with the information and tools required to assess the need for an application of various building systems including mechanical, electrical, plumbing, vertical transportation, fire protection, etc. PREREQUISITES: Course 607-104 - Building Material & Construction Method

614-150
3D CAD:Building information Model 2.00

This course is an introduction to the concepts and creation of Building Information Modeling (BIM) projects including the extrapolation of schedules, plans, sections and elevations from the BIM using Autodesk Revit software.

620-100
Electro/Hydraulic Systems 2.00

Electro/Hydraulic Systems introduces the students to the control of hydraulic systems through the use of electrical controls. The student becomes familiar with the electrical elements used in the control system. The student learns to read and design electrical and hydraulic circuits using schematics, wiring diagrams, ladder diagrams, sequence charts. The course studies the use and design of hydraulic servo systems. The student will be required to design and build the hydraulic systems. This includes the design and troubleshooting of the circuits. PREREQUISITES: Course 605-113 - DC/AC I

620-101
Variable Speed Drives 3.00

This course covers the theory and operation of DC and AC variable speed drives that run electrical motors. Content will include servos, stepping motors, and control of general purpose motors. Feedback sensing devices in position and velocity control will be covered. Laboratory experiments will be used to help the student in understanding the complex nature of those systems. PREREQUISITES: Course 620-150 - Electromechanical Dr Systems

620-102
Process Controls 3.00

This course covers the equipment necessary for open and closed loop control of fluids in both flow and level environments. It describes the various production methods used in process industries and provides a background of basic regulating control strategies and controller tuning to accommodate the dynamics of various systems. Strategies include feedback (proportional, integral, derivative), feed forward, ratio, cascade, and adaptive control. Process plan trainers, which are immature versions of real industrial processes, are used to reinforce the theory portion of the course. COREQUISITES: Course 620-111 - Solid State Circuits, Introduction to

620-103
Industrial Controls, Introduction to 4.00

Industrial electrical hardware such as motors and controls are studied. Industrial electrical control circuits are developed and wired. Troubleshooting techniques are used to correct problems in wiring or controls. Motor starters, industrial control relays, timers, proximity switches, and electric eyes are studied, including proper selection and wiring techniques. Ladder logic and wiring diagrams are examined and drawn. This course is for an individual that already has a basic understanding of electricity. COREQUISITES: Course 605-113 - DC/AC I

620-104
Electro Hydraulic/
Mechanical Systems 3.00

This course brings together the information learned in the previous electrical, mechanical, and hydraulic/pneumatic courses. Circuits containing electrical, mechanical, and hydraulic/ pneumatic devices will be constructed and tested for proper operation. The topic of feedback devices and troubleshooting these complex units will also be explored. PREREQUISITES: Courses 462-103 - Mechanical Power Transmission and 620-103 - Industrial Controls, Introduction to

620-106
Introduction to Control Logix 2.00

The operation of the ControlLogix Programmable Logic Controller (PLC) is studied for the purpose of various applications. The hardware, including various I/O modules, is studied for applications and capabilities. Electrical ladder logic provides the documentation and programming means. The student will be able to write programs, load them into the PLC, troubleshoot any errors, and document the function and input and output of the control.

620-107
Industrial Communication Systems 3.00

This course provides comprehensive coverage of Data Communications and Computer/Device networking in an industrial environment. Topics range from simple serial communications to complex networks. This includes systems that are wired, wireless, and fiber optic based. Practical examples of networks will include Ethernet, WiFi, Data Highway, DH-485 , Remote I/O, Device Net, Control Net, EtherNET/IP, and the SERCOS fiber optic link. Devices discussed will include computers (PC's), Programmable Logic Controllers (SLC-500, ControlLogix, MicroLogix), and Panel View. Lecture theory is reinforced with laboratory exercises including assembly, monitoring, programming, and troubleshooting.

620-110
Robotics Mechanics I 3.00

In this course, the basic control elements of electromechanical machines will be studied. The application and simple control of power using pneumatics and electrical methods will be covered. Electrical control includes the use of simple push buttons, solid state power transistors, and thyristors to control electrical power. The use of air as a power transfer medium will be implemented along with the use of electro-pneumatic devices to control a pick and place robot. The operational amplifier will be studied as a control device in proportional, integral, and differential control circuits. PREREQUISITES: Course 605-113 - DC/AC I

620-111
Solid State Circuits, Introduction to 4.00

This course is an introduction to diode circuits, bipolar transistor circuits, and electronic testing equipment. Topics are semiconductor physics, biasing techniques, lead-line analysis of amplifiers, frequency

response, and realization of logic gates using TTL and CMOS devices. Verification of theory is accomplished through laboratory experiments with small and medium scale integrated circuits. PREREQUISITES: Course 605-113 - DC/AC I

620-113
Troubleshooting Electrical/Electronic Systems **3.00**

This course will teach the student proper troubleshooting techniques in the industrial setting. The student will be required to use electrical schematics and wiring diagrams along with proper troubleshooting equipment, such as meters and oscilloscopes, to locate problems with electrical/electronic systems. Areas of troubleshooting will include motor starters, relays, AC and DC motors, motor drives, lighting circuits, solid state equipment, and programmable controllers. PREREQUISITES: Course 620-102 - Process Controls with a minimum grade of C or TR COREQUISITES: Course 620-145 - Programmable Logic Controllers/Advanced

620-116
Introduction to Robotics **3.00**

This course is designed for the maintenance person who has no robotic experience. Basic control elements of robots will be studied. Basic robot programming will be studied and applied. Safeguards of working in the vicinity of robots will be discussed. PREREQUISITES: Course 620-111 - Solid State Circuits, Introduction to

620-120
Feedback and Control Systems/ Electromechanical **2.00**

The course in Feedback and Control Systems investigates devices and circuits used in the control of electromechanical systems. The student studies control diagrams and simple control systems and their applications. The student will become familiar with sensors and devices used in feedback circuits as well as accuracy and application of those sensors in control circuits. The course will help the student understand closed loop control systems. This knowledge will help the student to troubleshoot and repair these systems when encountered on the job. PREREQUISITES: Course 605-113 - DC/AC I

620-140
Programmable Controllers **2.00**

The operation of the Programmable Logic Controller (PLC) is studied for the purpose of various applications. The hardware, including various I/O modules, is studied for applications and capabilities. Electrical ladder logic provides the documentation and programming means. The student will be able to write programs, load them into the PLC, troubleshoot any errors, and document the function and input/output of the control. PREREQUISITES: Course 620-103 - Industrial Controls, Introduction to

620-145
Programmable Logic Controllers/ Advanced **3.00**

The advanced course in programmable logic controllers continues with the study of the programmable logic controller. The student studies the advanced instruction set of commands. The sequencer, file-to-file moves, data arrays, remote I/O, displays, and messages are part of the advanced instruction set. The student applies the old and new commands to an application in the lab. The student becomes familiar with diagnostics and troubleshooting through the lab applications. The student will learn to interface the PLC to other controls, networks, and devices. PREREQUISITES: Course 620-140 - Programmable Controllers

620-150
Electromechanical Dr Systems **3.00**

Electromechanical Drive Systems introduces the student to motor drive systems. This includes three phase, single phase, DC, stepper, and servo motors. The student will acquire a thorough understanding of the electrical principles involved with motor analysis. The student will apply this knowledge to hands-on work with motors and controls in the lab. The lab introduces the student to motor set-up, troubleshooting, and parameter measurements. PREREQUISITES: Course 605-113 - DC/AC I

623-104
Manufacturing Issues Seminar **2.00**

This course covers the application of the principles and techniques for analyzing and solving industrial situations learned in prior course work. Projects are undertaken utilizing a Microsoft Project format. A project focusing on a quality control situation is highly recommended.

623-146
Introduction to Lean/Six Sigma **2.00**

This introductory course will make students aware of all aspects of the manufacturing environment. The class will include overviews in the key aspects of Lean and Six Sigma. Various types of manufacturing and assembly processes will also be covered.

623-147
Manufacturing Shop Safety **1.00**

This class will cover general shop safety for a machining environment. The course will raise the awareness of workers to the hazards around them and explain work safety and how best to protect themselves. Other safety topics will be covered, including MSDS sheets, personal protective equipment, and lockout tag out.

623-153
Metrology-Applied Measurement **1.00**

This course is a study of the application of dimensional measuring tools, which stresses the hands-on use of common measurement instruments used in manufacturing, including gage blocks, micrometers, calipers, indicators, height gages, and optical comparators. Students utilize surface plate set-ups and accessories. This course covers the application of fixed gages, including plug, ring, thread, and radius. Students review specialized instruments and gages, such as snap gages, bore gages, electronic and pneumatic comparators, and profilometers. PREREQUISITES: Courses 623-185 - Precision Measuring and 606-111 - Blueprint Reading

623-154
Metrology - Geometric Dimensioning and Tolerancing **1.00**

This course is a study of geometric dimensioning and tolerancing based on ANSI Y14.5. It stresses the interpretation of geometric tolerances, applying the five categories of feature control: position, form, orientation, runout, and profile. It also covers applying datums, interpreting material condition modifiers, and concepts of fixed and floating fasteners. Measurement procedures and gaging are discussed. PREREQUISITES: Course 623-153 - Metrology-Applied Measurement

623-183
Statistical Process Control/CT **1.00**

A 20 hour course which introduces the methods and applications of Statistical Process Control (SPC) used in manufacturing operations. The history and objectives of SPC will be discussed to give students an appreciation for quality improvement through the application of statistical techniques. Emphasis will be placed upon the concepts of central tendency, variation and the normal distribution of data. The development/ application/interpretation of variable and attribute control charts will be the main focus of this course.

623-185
Precision Measuring **1.00**

This course is an introduction to precision measurement tools and their uses. Included are the micrometer, vernier calipers, gage blocks, and fixed gages.

623-187
Industrial Problem Solving **2.00**

The student will examine a variety of manufacturing scenarios posed as problems. Use of the scientific method of identifying root causes, data analysis, and solution tools is emphasized.

623-189
Metrology **3.00**

This course contains three units of instruction: measuring and gaging, geometric dimensioning and tolerancing, and an introduction to coordinate measuring machine setup and operation. The student may enroll in all three or in individual units. The course is conducted in a lab format and stresses development of hands-on skills.

623-191
Production Planning and Controlling **2.00**

This course is an examination of the tools and techniques that manufacturers use to plan effectively. Learners will explore how manufacturers determine their need for resources, how the availability of resources affects capacity, and how resources are allocated through the use of Gantt charts and CPM/PERT diagrams.

623-194
Continuous Improvement **1.00**

Students will examine the meaning of quality in a manufacturing environment, the cost of quality, the handling of non-conformance, the process of continuous improvement, and the identification of customer needs.

623-195
Quality Systems **2.00**

ISO 9000 is an international quality standard that helps businesses define and document their own quality procedures for production and/or services. These standards can be used in any type of business and are accepted around the world as proof that a business can provide assured quality. In this course you will explore the concepts of quality systems, study the requirements of the ISO 9000 standard, learn how to apply it to actual organizations, and develop skills at documenting quality procedures. COREQUISITES: Course 623-194 - Continuous Improvement

623-197
Statistical Process Control **2.00**

The course introduces the basic concepts and tasks of collecting data, calculating values, constructing values, constructing control charts, and interpreting variation. PREREQUISITES: Course 623-115

625-120
Human Side of Quality **3.00**

Habits and behaviors related to human aspects of continuous improvement provide the focus of this course. Activities allow participants the opportunity to demonstrate personal, team, and organizational practices which foster interdependence among workplace colleagues. Specific themes include self-mastery, team development, and organizational leadership for quality. PREREQUISITES: Courses 623-187 - Industrial Problem Solving and 623-194 - Continuous Improvement

625-121
MSSC Certification Preparation and Assessment **2.00**

This class prepares students to earn MSSC production certification. It will emphasize areas required in the certification that are not covered in other AMST coursework. The students will take the four MSSC certification modules as part of the class. Students may retake modules if needed. The Manufacturing Skill Standards Council (MSSC) certification system assesses worker skills and knowledge based on industry-validated skill standards for all manufacturing sectors. Leading to nationally recognized certification as a "Manufacturing Production Technician", the program includes assessments in four areas: manufacturing processes and production; quality assurance; maintenance awareness; and health, safety, and environmental assurance. Once students pass all four modules, they will receive their "MSSC Production Technician" certificate.

625-123
Workplace Safety-MSSC **2.00**

This course introduces the student to safety and loss prevention in the workplace with an emphasis on the workers awareness for maintaining a safe, productive environment. The student will study safety concepts, hazards controls, developing safety and health programs and Federal and State mandated regulations. This course will also focus on specific content in the MSSC Safety module.

625-125
Workplace Safety A - MSSC **1.00**

Introduces you to safety and team building skills with an emphasis on the workers awareness for maintaining a safe, productive environment. Studies safety concepts, hazard controls, developing safety and health programs, and federal and state mandated regulations. The class will also concentrate on the specific content covered in the MSSC Safety module to prepare students for taking the Manufacturing Skill Standards Council (MSSC) Safety Online assessment.

625-126
STEM Guitar Building **2.00**

Learn about design and manufacturing principles and techniques through the process of designing and building an electric guitar. Topics include body and headstock design, basic woodworking, finishing, fretting, electronics assembly, hardware assembly and guitar setup. Discover the processes that go into creating a consumer product and walk away from the class with a beautiful solid body electric guitar that you designed and built yourself.

625-130
Intro to STEM Guitar Building 1.00

Learn about disassembly and assembly techniques using an electric guitar. Topics include part identification, hardware disassembly and assembly, and guitar setup. Learn the process of intonation as you perform the final alignment to restore the guitar to playable condition.

628-100
Automated Manufacturing Concepts/Intro 2.00

An introduction to manufacturing processes with emphasis on manual machining to prepare students for further study in the Automated Manufacturing fields. Covers shop safety practices in a machine shop, the use of manual milling machines, lathes and drill presses to manufacture parts to print, and the use of basic metrology instruments to determine if the parts are to print. Calculation and application of correct cutting parameters of selected materials and tools is practiced.

628-105
Computer Integrated Manufacturing Applications 4.00

CIM techniques are used to analyze and implement actual or simulated manufacturing applications. Student teams will select, plan, and develop a project proposal which will incorporate application and integration of CIM subsystems to manufacture or process a part or product. Application solutions will require gathering and developing of data, planning and scheduling a process, a quality and process control plan, hardware and software engineering, actual or simulated application, and a project report. PREREQUISITES: Courses 628-103, 628-104, and 606-126 - AutoCAD, Introduction

628-108
Auto Manufacturing Systems Technology Field Experience 2.00

Provides the student with an opportunity to apply the technologies learned in earlier class work while experiencing actual work assignments. PREREQUISITES: Course 620-110 - Robotics Mechanics I

628-109
Mechanical Skills for Technicians 3.00

This course covers the basic mechanical skills needed by a technician. Skills covered include the use and care of hand tools and small power tools, drilling, tapping, removal of broken bolts, studs, and helicoil insertion. Basic measuring tools and techniques are also covered. Other topics include type and use of fasteners, lubricants and adhesives used in repair, and assembly of automated machines.

628-109F
Mechanical Skills 4 Tech 56 Hr 2.00

This course covers the basic mechanical skills needed by a technician. Skills covered include the use and care of hand tools and small power tools, drilling, tapping, removal of broken bolts, studs, and helicoil insertion. Other topics include lubricants, bearings, seals, and gaskets.

628-110
CNC/CAM Programming 3.00

This course is a study of computer assisted programming for computer numerical control (CNC) machine tools. The student will use a microcomputer CAD/CAM system for program creation, editing, and verification. It is recommended that studnets have bsic computer skills before enrolling in this course.

628-111
Computer Assisted Programming/ Robotics and FMS 3.00

This course is a study of computer assisted programming for robotics and Flexible Manufacturing Systems (FMS). Students will use microcomputers to program robots and a CAD/CAM system for program creation, editing, verification, and interfacing. The student will interface the CNC program with the program.

628-112
Computer Aided Manufacturing, Advanced 3.00

This course is an introduction to computer integrated manufacturing (CIM). The students will use microcomputers to write, edit, and verify programs for conversational controls and a CIM system. PREREQUISITES: Course 628-111 - Computer Assisted Programming/Robotics and FMS with a minimum grade of C or TR COREQUISITES: Course 620-145 - Programmable Logic Controllers/Advanced

628-121
Computer Integrated Manufacturing-PLTW 4.00

The purpose of the computer integrated manufacturing course is to expose students to the fundamentals of computerized manufacturing technology. The course is built around several key concepts, including computer modeling, CNC equipment, CAM software, robotics, and flexible manufacturing systems.

628-122
Engineering Design and Development 4.00

Engineering Design and Development is an engineering research course in which students work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply engineering principles and are guided by a community mentor. They must present progress reports, submit a final written report, and defend their solution to a panel of outside reviewers at the end of the school year.

628-123
Computer Integrated Mfg Part 1 PLTW 2.00

The purpose of the Computer Integrated Manufacturing course is to expose students to the fundamentals of computerized manufacturing technology. The course is built around several key concepts: Principles of Manufacturing Manufacturing Processes Elements of Automation Integration of Manufacturing Elements

628-124
Computer Integrated Mfg Part 2 PLTW 4.00

The purpose of the Computer Integrated Manufacturing course is to expose students to the fundamentals of computerized manufacturing technology. The course is built around several key concepts: Principles of Manufacturing Manufacturing Processes Elements of Automation Integration of Manufacturing Elements PREREQUISITES: Course 628-123 - Computer Integrated Mfg Part 1 PLTW

628-125
Quality for Automated Manufacturing **3.00**

This course will be heavy hands-on lab work using different measuring tools such as scales, calipers, micrometers, bore gauges, gauge blocks and height gauges. Automated gauging concepts will be covered with hands on experience along with theory based information. The major areas of Statistical Process Control will be covered. The symbols and basic understanding of Geometric Dimensioning and Tolerancing will also be covered.

662-101
Safety in Healthcare **1.00**

Safety in the Health Care environment is explored. Safety issues include; electrical, chemical, radiological, biological and fire. National codes and standards set forth by JCAHO, NFPA 99, FDA, and OSHA are examined.

662-102
Medical Devices; Function and Use 1 **3.00**

Medical instrumentation utilized in both monitoring and diagnostic capacities for the respiratory and circulatory systems are examined. The medical terminology associated with these two systems is also covered. The instrumentation for monitoring individual organs is also explored.

662-103
Medical Devices; Function and Use 2 **3.00**

Medical instrumentation utilized in both monitoring and diagnostic capacities for the Gastrointestinal, Nervous, Musculoskeletal, and Endocrine systems are examined. The medical terminology associated with theses systems is also covered.

662-104
PLTW Digital Electronics I **2.00**

This course will introduce basic DC and AC circuit analysis, bread boarding techniques for circuit construction, circuit simulation using Multisim, and proper use of digital multimeters, function generators, and oscilliscopes. In addition, both Camtasia and Excel will be introduced for use in the classroom.

662-105
PLTW Digital Electronics II **2.00**

This course will introduce the applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices.

662-112
DC/AC III **3.00**

This course introduces the student to the fundamental laws in electrical engineering technology and their application in advanced circuit analysis concepts and techniques. Topics include a brief review of Kirchoff's law, induction, capacitance, series-parallel circuits, power factor, impedance, and phasors. Then, superposition, Thevenin's theorem, Norton's theorem, mesh and nodal analysis, sinusoidal steady-state analysis, ideal transformers, and complex power are covered. The student will utilize both the "hands-on" approach and computer simulation, including swept AC frequency circuit analysis, in the laboratory, as the laboratory experiments are designed to support the topics presented. PREREQUISITES: Course 605-114 - DC/AC II

662-124
Electronic Circuit Analysis **3.00**

This course introduces the student to the fundamental laws in electrical engineering technology and their application in advanced circuit analysis concepts and techniques. Topics include frequency as a variable in the analysis of circuits with a sinusoidal excitation, Bode plots, and detailed analysis of resonant circuits. The student is introduced to small signal analysis of transistor amplifier circuits and examination of gain and frequency response of the circuit. The student will utilize both the "hands-on" approach and computer simulation, including swept AC frequency circuit analysis, in the laboratory, as the laboratory experiments are designed to support the topics presented. PREREQUISITES: Course 605-120 - Electronic Devices I

699-110
Communication Document Design **3.00**

This course gives students skills and practice needed to design and lay out communication products using Adobe InDesign software. Students explore and apply graphic design, technical communication, and usability theories to produce print and electronic communication products. COREQUISITES: Course 103-143 - Computers for Professionals

699-111
Communication Project Management **3.00**

This course gives students skills and practice needed to analyze, design, develop, implement, and evaluate communication products. Students use strategies for researching requirements, planning projects, tracking progress, testing usability, and revising communication products. In addition, they review methods to collaborate effectively with clients, coworkers, and vendors. The ethical practices of professional communications are also reviewed.

699-112
Editing **3.00**

This course gives students skills and practice needed to conduct various levels of edits, including comprehensive edits, copyedits, and proofs. Students edit communication products for correct usage in capitalization, grammar, punctuation, spelling and style. They apply theories and strategies to ensure communication products conform to style guides, to develop editor-writer relationships and to provide audiences with clear ethical content. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-113
Information Design **3.00**

This course gives students skills and practice needed to design and manage communication products using professional communications strategies. Students explore and apply strategies to structure communication products so that users can access information easily, understand it, and feel comfortable with its presentation. XML is also introduced. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-114
Professional and Technical Writing 3.00

This course gives students skills and practice needed to develop communication products for business, government, and not-for-profit organizations. Students are introduced to the professional communications field and career options. They use a professional process to develop and publish a variety of communication products. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-115
Professional Communications Internship 3.00

This course provides students an opportunity to apply professional communications skills and training in a professional setting. Students spend a minimum of 144 hours performing professional communications tasks and up to one hour per week in consultation with the instructor. Students work with a sponsor at an employer and the instructor to set up and complete the internship. PREREQUISITES: Courses 699-113 - Information Design, 699-114 - Professional and Technical Writing, and 699-117 - Research Fundamentals with a minimum grade of C or TR

699-116
Professional Communications Portfolio 1.00

This course provides students skills and practice needed to enter the professional communications profession or advanced education. Students review their progress throughout the program and prepare for careers. They develop portfolios of their work and explore career preparation, job hunting strategies, potential employers, and professional expectations in the workplace. They also review future education opportunities. PREREQUISITES: Courses 699-113 - Information Design, 699-114 - Professional and Technical Writing, and 699-117 - Research Fundamentals with a minimum grade of C or TR

699-117
Research Fundamentals 3.00

This course gives students skills and practice needed to conduct user and product research for a variety of professional communications projects. Students interview sources and perform usability tests as well as use traditional and Internet sources to locate information. They interpret and incorporate research findings into plans and communication products.

699-130
Writing and Publishing 3.00

This course gives students skills and practice needed to publish communication products through print and electronic media. Students learn their responsibilities, publishing techniques, and publishing software, such as Adobe Acrobat software, for preparing communication products for distribution using epublications, print, PDF, and the web.

699-131
Writing Copy for Sales 3.00

This course gives students skills and practice needed to develop sales promotion materials for print media, audiovisual media, the Internet, and the specialty media. Students plan a marketing strategy and create communication products for sales and marketing. They incorporate persuasive strategies in communication products for long and short-term. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-132
Writing for Orgs. 3.00

This course gives students skills and practice needed to develop various types of communication products for new or existing organizations. Students develop internal documentation to articulate an organization's strategies, define the organization's workings, recruit employees, attract customers, and address common issues. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-133
Writing for Social Media 3.00

This course gives students skills and practice needed to use social media for organizational purposes. Students explore techniques for effective writing in social media, including the elements of design, interaction, and usability. They investigate an array of social media options, including Facebook, LinkedIn, Tumblr, and Twitter. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-134
Writing for the Media 3.00

This course gives students skills and practice needed to develop various types of communication products for media outlets. Students use journalism strategies to create various types of communication products, including advertisements, articles, audiovisual scripts, newsletters, and press releases. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-135
Writing for the Web 3.00

This course provides students skills and practice needed to develop websites using Adobe Dreamweaver software. Students plan, write, develop graphics for, revise, and publish websites. They apply theories and strategies to design and create accessible, ethical, and usable websites. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-136
Writing Grant Proposals 3.00

This course gives students skills and practice needed to write grant proposals and related documents. Students explore government, corporate, and private funding sources and locate Requests for Proposals (RFPs). They use audience analysis, research methods, rhetorical strategies, and revision techniques to write competitive grant proposals. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-137
Writing Product Documentation 3.00

This course gives students skills and practice needed to develop various types of manuals and related communication products for a variety of products. Students plan, write, illustrate, revise, and publish

manuals. They apply theories and strategies to desgin and create accessible, ethical, and usable communication products. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

699-138
Writing Software User Assistance **3.00**

This course gives students skills and practice needed to develop user assistance and related documentation for software products using MadCap Flare software. Students plan, write, illustrate, revise, and publish user assistance and print documentation. They apply theories and strategies to design and create accessible, ethical, and usable communication products. PREREQUISITES: Course 699-112 - Editing with a minimum grade of C or TR

701-101
Broadcasting/Introduction to **3.00**

Provides a historical look at radio, tracing its development from the earliest public broadcast services through future trends. An examination of broadcasting equipment and the theory behind its operation and use is provided.

701-105
Radio News **3.00**

The course is devoted to advanced news reporting, writing, editing and exploring various news formats used in today's radio stations. Covers news, commercials, documentaries, commentaries and editorials for both script and on-the-spot content. Attention is given to local news and public affairs. PREREQUISITES: Course 701-160 - Radio Copywriting Production with a minimum grade of C or TR

701-110
Broadcasting and Public Policy **3.00**

Emphasizes communication ethics and law, licensing and regulation, trade unions and employment practices, freedom of the broadcast press, and invasion of privacy. PREREQUISITES: Course 701-101 - Broadcasting/Introduction to with a minimum grade of C or TR

701-115
Radio Workshop I **2.00**

A basic radio course designed to acquaint students with the fundamentals of program production, analog 2 track recording, editing and microphone techniques. Students are introduced to multitrack recording equipment. Students are assigned air shifts on student radio station KBLE. COREQUISITES: Course 701-101 - Broadcasting/Introduction to with a minimum grade of C or TR

701-120
Radio Workshop II **2.00**

Introduction to analog multitrack recording techniques. Students are introduced to digital recording and editing. Concentration on dynamic oral communication skills for acceptable and effective broadcast delivery. Students continue to develop broadcast skills by working on KBLE. PREREQUISITES: Course 701-115 - Radio Workshop I

701-125
Radio Workshop III **3.00**

Advanced production techniques on digital production system and use of audio processing devices for level control and special effects. Concentration on voice-over techniques for AV production. PREREQUISITES: Course 701-120 - Radio Workshop II

701-130
Radio Workshop IV **4.00**

Students will intern at area radio stations in areas of interest such as programming, promotion, sales, production and announcing. PREREQUISITES: Course 701-125 - Radio Workshop III

701-131
Radio Programming **3.00**

A course designed to introduce and familiarize the student with all aspects of the position of radio program director.

701-133
Radio Sales and Marketing **3.00**

This course is a comprehensive study of sales, strategies, and techniques used to sell radio time to businesses. Local and national sales, use of rate cards, and ratings are discussed. Students create sales presentations for class. Each student will represent a radio station from any of the following markets: Milwaukee, Chicago, Racine, or Kenosha. Each student will also represent a business buying radio advertising.

701-160
Radio Copywriting Production **3.00**

This is a course in writing and producing materials relevant to today's broadcasting needs including commercials, promos, features and program scripting. Logical thoughts, imagination, creativity and good taste are discussed. PREREQUISITES: Course 851-769 or achieve the required placement test score

701-180
Business of Broadcasting **3.00**

Emphasizes the administrative area of radio broadcasting. Advanced production and direction are addressed. Provides students with detailed experience in programming, sales, management, and station policy.

701-190
Video Techniques **3.00**

Introduces every phase of TV production including lighting, visual and aural effects, directing, camera operation, and set design. Involvement in basic program production and cable transmission is included.

801-102
Technical Writing: Online Help **1.00**

Students are provided the skills and practice to integrate the conceptual, artistic, and psychological skills of designing and developing online help using MadCap Flare. Emphasis is placed on the production of help systems, including designing, creating, and testing the help system.

801-106
Technical Writing/Layout and Design **2.00**

Students are provided the skills and practice to develop electronic layouts. Emphasis is placed on the use of layout skills, such as white space, graphics, type fonts and sizes, color, screens, and grids.

801-107
Technical Writing/Audio Visual **2.00**

Students are provided the skills and practice to write for audio visual production. Emphasis is on the preparation of the time, audio, and video sections of storyboards for the production of industrial, commercial,

and educational film, videotape, and CD programming.

801-108
Technical Writing/Sales Promotion 2.00

Students are provided the skills and practice in preparing and writing sales promotion materials for the print media, audiovisual media and the specialty media. Emphasis will be on the diversity of the sales promotion production and the need for long-range, multi-level programs, as well as the quick, attention getting programs.

801-111
Technical Writing/ Electronic Publishing For Windows 2.00

Students are provided the skills and practice in the conceptual, artistic, and psychological techniques of layout and design with the flexibility offered by Adobe InDesign on the Windows platform. Emphasis is on the creation of production-ready page layout.

801-113
Technical Writing/Online Documentation 2.00

Analysis and application of the technical writing skills needed to write and publish online documents. Emphasizes the different types of online documentation, the design and syntax requirements of online documentation, and the programming considerations of online documentation.

801-114
Technical Writing/ Safety Information And Product Liability 1.00

Students are provided the skills and practice to produce effective safety information and hazard warnings for use in technical publications. Emphasis is on the identification of hazards associated with product usage and development of hazard statements in accordance with ANSI standard Z535 and other applicable standards. The course provides skills required to implement a uniform safety information system in publications that will improve product liability loss prevention efforts.

801-117
Technical Writing/Technical Application 1.00

Apply the skills of interpretation and application of blueprints, schematics, circuit diagrams, and product data for technical publication.

801-120
Technical Writing/Grant and Proposal Writing 2.00

Familiarization and practice in writing program and funding proposals for grants. Emphasis will be on following the Request for Proposals (RFP) guidelines that enhance successful funding and program initiation from federal, state and local government, as well as private foundations.

801-121
Technical Writing/Print Production 2.00

Students are provided the skills and practice needed to develop an understanding of the non-writing steps required in the production of technical publications. Emphasis will be on using type and graphics, using color, using ink and paper, controlling photographs, using offset printing, and understanding finishing and binding.

801-122
Technical Writing/Manual Production 3.00

Practice in developing and revising technical manuals to complex commercial, industrial, or commercial specifications. Emphasis will be on the production of technical manuals from conception through research, writing, illustrating, layout, approval, and production. PREREQUISITES: Courses 801-106 - Technical Writing/Layout and Design, 801-111 - Technical Writing/ Electronic Publishing For Windows, 801-114 - Technical Writing/ Safety Information And Product Liability, 801-133 - Technical Writing/Introduction, and 801-197 - Technical Reporting with a minimum grade of C or TR

801-123
Technical Writing/Procedural Writing 2.00

Analyze and apply the skills required to prepare the various internal operational writings such as mission statements, job descriptions, job ads, standard operating procedures, employee evaluations, department reports, and marketing plans.

801-124
Technical Writing/ Edit and Proofreading 2.00

Students are provided the skills and practice to edit and proof technical publications. Emphasis is on the skills needed for self-editing as well as peer-editing. Principles of spelling, punctuation, and sentence structure are reviewed.

801-125
Technical Writing/ Vendor Management/ Ethics 1.00

Understand the technical communicator's management responsibilities towards the various vendors that are used in the production of audiovisual, online, printed, and specialty products. It emphasizes the creation of documents Emphasis will be on bidding, controlling costs, monitoring project progress, monitoring legal obligations of purchase order, and maintaining public relations with vendors. In addition, the ethics of the technical communication profession will be reviewed.

801-126
Technical Writing/ Externship/ Internship 3.00

Provides an opportunity to apply technical communication skills and training to an actual work situation. The student will spend a minimum of 8 hours per week at the work station performing technical communications tasks and up to one hour per week in consultation with the assigned instructor. Student contracts with the employer and the instructor regarding the work agreement. PREREQUISITES: Courses 801-106 - Technical Writing/Layout and Design, 801-111 - Technical Writing/ Electronic Publishing For Windows, 801-114 - Technical Writing/ Safety Information And Product Liability, 801-133 - Technical Writing/Introduction, and 801-197 - Technical Reporting with a minimum grade of C or TR

801-128
Technical Writing/ Forms Design 1.00

Students are provided the skills and practice to create effective and user-friendly forms. Emphasis is on identifying and meeting

the needs for the form by all users. Using computer software, students produce both paper and electronic forms.

801-129
Technical Writing/Technical Photography **2.00**

Analyze and apply technical photography skills needed to communicate information visually. Emphasizes the strengths and weaknesses of the various photographic formats, the effects of photographic technique on photo quality, and the planning requirements for a photo shoot.

801-131
Technical Writing/ Newsletter Writing **1.00**

Students are provided the skills and practice in publishing newsletters to publication specifications. Emphasis will be on the production of newsletters from conception through research, writing, illustrating, layout, editing, approval, and production.

801-133
Technical Writing/Introduction **2.00**

Analysis and application of the technical writing skills needed by technical communicators. Emphasizes the research, writing, and electronic publishing of technical manuals, promotional publications, and technical journalism. PREREQUISITES: Course 801-136 - English Composition 1

801-134
Technical Writing: Project Management **1.00**

Students are provided the skills and practice of planning, organizing, and monitoring all technical communication project related activities. This includes monitoring project status, providing project leadership, resolving project issues and conflicts, establishing project expectations, and building successful project teamwork.

801-135
Technical Writing: Portable Document Format **1.00**

Students are provided the skills and practice to create portable document files (PDF), optimize program settings, use the editing and annotation features, and prepare files for both commercial printing and the Web. Emphasis is on the use of PDF files in the technical communication workplace and for the employment search.

801-136
English Composition 1 **3.00**

This course is designed for learners to develop knowledge and skills in all aspects of the writing process. Planning, organizing, writing, editing and revising are applied through a variety of activities. Students will analyze audience and purpose, use elements of research, and format documents using standard guidelines. Individuals will develop critical reading skills through analysis of various written documents. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

801-141
Mass Communications, Intro to **3.00**

This course explores communication in media and media literacy by providing insight into the important issues that confront students as consumers and purveyors of mass media within the workforce and in society. The mass media revolution, including media technologies, the evolution of media content and platforms, including new media, the impact of media communications on business and society as a whole, media bias, and media law and ethics form the basis of the course. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro with a minimum grade of C or TR

801-150
English Composition II **3.00**

In this advanced writing course, students develop critical reading and writing skills and produce original compositions demonstrating critical thinking ability. Students also produce a documented research project using primary and secondary sources. PREREQUISITES: Course 801-136 - English Composition 1 with a minimum grade of C or TR

801-176
Games and Culture **3.00**

Games & Culture is an introduction to the study of video games, video game culture, and the relationship of each within broader contemporary social, media, and cultural practices. This course is a digital humanities-based inquiry into video games, as opposed to a computer science-or programming-based approach. This course will involve playing, examining, and analyzing games as rhetorical and narrative texts and as rule-based systems. PREREQUISITES: Course 801-136 - English Composition 1 with a minimum grade of C or TR

801-177
Creative Writing **3.00**

This course focuses on the study and production of written work in three genres: fiction, nonfiction, and poetry. Through the workshop method of instruction, students will complete writing exercises and other projects designed to enhance creativity. Students will also develop an awareness of their audience, build collaborative discussion skills, offer and use constructive feedback, analyze others writers' creative and critical thinking processes, and learn other skills transferable to their academic and professional lives. PREREQUISITES: Course 831-103 - College Writing, Intro with a minimum grade of C or TR or achieve the required placement test score

801-196
Oral/Interpersonal Communication **3.00**

This course focuses upon developing speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities, and other projects. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

801-197
Technical Reporting **3.00**

The student will prepare and present oral and written technical reports. Types of reports may include lab and field reports, proposals, technical letters and memos, technical research reports, and case studies. This course is designed as an advanced communication course for students who have completed at least the prerequisite introductory writing course. PREREQUISITES: Course 801-136 - English Composition 1

801-198
Speech **3.00**

This course explores the fundamentals of effective oral presentation to small and large groups. Topic selection, audience analysis, methods of organization, research, structuring evidence and support, delivery techniques, and other essential elements of speaking successfully, including the listening process, form the basis of the course. PREREQUISITES: Course 838-105 - Reading

& Study Skills, Intro or achieve the required placement test score

801-199
Written Communication II **3.00**

An advanced writing course which emphasizes the use of the writing process to explore various themes related to the world of work, ethics and life in a multi-cultural, global community. Students develop critical reading and writing skills and produce original compositions demonstrating critical thinking ability. Students will also learn the process for producing a documented research project using primary and secondary sources. PREREQUISITES: Course 801-136 - English Composition 1

801-301
Writing Principles **1.00**

Reviews the fundamentals of grammar. Emphasizes practical application of English in business correspondence. PREREQUISITES: Course 851-760 or 851-756 - Foundations of Writing with a minimum grade of C or TR or achieve the required placement test score

801-302
Speaking Principles **1.00**

Covers techniques of verbal and non-verbal communication. Presentation techniques in informative, demonstrative, persuasive and impromptu situations are stressed.

801-500
Apprentice Communications **1.00**

Discusses basic communications concepts relating to the workplace. Skills covered are giving instructions explaining technical processes.

801-991
Communication General Education Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 801 area.

801-992
Communication General Education Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 801 area.

801-993
Communication General Education Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 801 area.

801-994
Communication General Education Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 801 area.

801-999
Communication Elective Credit **3.00**

This course is used to award up to 12 credits to students transferring to Gateway without a previous Associates degree or higher. This credit can only be used to fulfill program elective requirements and cannot be used as a substitute for any other course.

802-104
German I **3.00**

Fundamentals of German grammar; drill in structure and pronunciation; development of vocabulary. Aural-oral and reading skills are introduced in the classroom.

802-114
Chinese 1 (elementary level 1) **3.00**

Chinese 1 presents listening, speaking, reading, and writing activities associated with everyday communication. Conversation skills are enhanced through in-class discussion. Students develop chinese character formation and interpretation. Chinese culture is explored.

802-115
Chinese 2 (elementary level 2) **3.00**

Chinese 2 presents listening, speaking, reading, and writing activities associated with everyday communication. Students build on the skills developed in Chinese 1. Conversation skills are enhanced through in-class discussion. Students continue development of chinese character formation and interpretation. Chinese culture is explored. PREREQUISITES: Course 802-114 - Chinese 1 (elementary level 1) or 802-113 with a minimum grade of C or TR

802-116
Chinese 3 **3.00**

Chinese 3 presents listening, speaking, reading, and writing activities associated with everyday communication. Students build on the skills developed in Chinese 2. Conversation skills are further enhanced through in-class discussion. Students continue development of chinese character formation and interpretation. Chinese culture is explored. PREREQUISITES: Course 802-115 - Chinese 2 (elementary level 2) with a minimum grade of C or TR

802-117
Chinese 4 **3.00**

Chinese 4 will help students build on the skills developed in Chinese 3. Their vocabulary and knowledge of grammar of the Chinese language will grow by learning more new words, expressions and sentence patterns needed for everyday communication and by consolidating their knowledge through oral and written practice in and out of class. In this course, students will participate in classroom discussions in Mandarin. Aspects of Chinese Culture will be further explored. PREREQUISITES: Course 802-116 - Chinese 3 with a minimum grade of C or TR

802-118
SPA IV: Fourth Semester Spanish **4.00**

Spanish IV is a continuation of Spanish III and further develops all basic language skills: listening comprehension, speaking, reading, and writing. Spanish IV is the fourth semester Spanish course at Gateway Technical College and is designed for those students who have completed Spanish III at Gateway or another college/university and for native Spanish speakers who would like to improve their grammar, reading, and writing. Classes will include an extensive study of intermediate vocabulary and grammatical structures as well as cultural studies of both Spain and Latin America. All Spanish classes taught at Gateway are immersion classes. PREREQUISITES: Course 802-119 - SPA III: Third Semester Spanish with a minimum grade of C or TR

802-119
SPA III: Third Semester Spanish 4.00

Spanish III reviews the material taught in Spanish I and Spanish II and further develops all basic language skills: listening comprehension, speaking, reading, and writing. Spanish III is the third semester Spanish course at Gateway Technical College and is designed for those students who have completed Spanish II at Gateway or another college/university and for native Spanish speakers who would like to improve their grammar, reading, and writing. Classes will include an extensive study of intermediate vocabulary and grammatical structures as well as cultural studies of both Spain and Latin America. All Spanish classes taught at Gateway are immersion classes. PREREQUISITES: Course 802-112 or 802-125 - SPA II: Second Semester Spanish with a minimum grade of C or TR

802-123
Spanish III 3.00

Spanish III will continue the study of the Spanish language using four components: listening, speaking, reading, and writing. It is a progressive study, using the knowledge gained through Spanish I and Spanish II. PREREQUISITES: Course 802-112

802-124
SPA I: First Semester Spanish 4.00

Spanish I will develop and emphasize all basic language skills: listening comprehension, speaking, reading, and writing. Spanish I is the first semester Spanish course at Gateway Technical College and is designed for those students with little or no previous knowledge of the Spanish language and for native Spanish speakers who would like to improve their grammar, reading, and writing. Classes will include an extensive study of basic vocabulary and grammatical structures as well as cultural studies of both Spain and Latin America. All Spanish classes taught at Gateway are immersion classes. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

802-125
SPA II: Second Semester Spanish 4.00

Spanish II is a continuation of Spanish I and will continue to emphasize the development of all basic language skills: listening comprehension, speaking, reading, and writing. Spanish II is the second semester Spanish course at Gateway Technical College and is designed for those students who have completed Spanish I at Gateway or another college/university and for native Spanish speakers who would like to improve their grammar, reading, and writing. Classes will include an extensive study of basic vocabulary and grammatical structures as well as cultural studies of both Spain and Latin America. All Spanish classes taught at Gateway are immersion classes. PREREQUISITES: Course 802-111 or 802-124 - SPA I: First Semester Spanish with a minimum grade of C or TR

802-126
Spanish for Healthcare Providers 3.00

This course is designed to enable students who know little or no Spanish to communicate at a rudimentary level with Spanish-speaking individuals in a healthcare setting. The course covers medical vocabulary, basic conversational skills, and a study of cultural issues related to Spanish speaking individuals in medical situations.

804-107
College Mathematics 3.00

This course is designed to review and develop fundamental concepts of mathematics pertinent to the areas of: 1) arithmetic and algebra; 2) geometry and trigonometry; and 3) probability and statistics. Special emphasis is placed on problem solving, critical thinking and logical reasoning, making connections, and using calculators. Topics include performing arithmetic operations and simplifying algebraic expressions, solving linear equations and inequalities in one variable, solving proportions and incorporating percent applications, manipulating formulas, solving and graphing systems of linear equations and inequalities in two variables, finding areas and volumes of geometric figures, applying similar and congruent triangles, converting measurements within and between U.S. and metric systems, applying Pythagorean Theorem, solving right and oblique triangles, calculating probabilities, organizing data and interpreting charts, calculating central and spread measures, and summarizing and analyzing data. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of C or TR or achieve the required placement test score

804-113
College Technical Math 1A 3.00

In this course, topics include: solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percents; proportions; and operations on polynomials. Emphasis will be placed on the application of skills to technical problems. Successful completion of College Technical Math 1-A and College Technical Math 1-B is the equivalent of College Technical Math 1. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications or achieve the required placement test score

804-114
College Technical Math 1B 2.00

This course includes the following topics: measurement systems; computational geometry; right and oblique triangle geometry; and trigonometric functions on the unit circle. Emphasis will be on the application of skills to technical problems. Successful completion of College Technical Math 1-A and College Technical Math 1-B is the equivalent of College Technical Math 1. COREQUISITES: Course 804-113 - College Technical Math 1A

804-115
College Technical Math 1 5.00

Topics include: solving linear, quadratic, and rational equations; graphing; formula rearrangement; solving systems of equations; percent; proportions; measurement systems; computational geometry; right and oblique triangle trigonometry; trigonometric functions on the unit circle; and operations on polynomials. Emphasis will be on the application of skills to technical problems. This course is the equivalent to College Technical Math 1A and College Technical Math 1B. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications with a minimum grade of C or TR or achieve the required placement test score

804-123
Math with Business Applications 3.00

This course covers real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, and

basic statistics with business/ consumer applications. Students learn to apply math concepts to the purchasing/buying and selling processes. PREREQUISITES: Course 834-109 - Pre-Algebra with a minimum grade of C or TR or achieve the required placement test score

804-133
Mathematics and Logic **3.00**

Students will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications with a minimum grade of C or TR or achieve the required placement test score

804-149
Math for Nursing Clinical Success **1.00**

Students will receive intensive review and supplementary instruction in areas of weakness demonstrated on the TEAS assessment, including but not limited to algebraic applications, metric conversions, ratio and proportion, and data interpretation.

804-181
Calculus 2 **4.00**

Students will develop techniques for differentiation and integration of transcendental functions and use the derivative and the integral to solve certain applied problems. They will also extend calculus techniques to curves in polar coordinates and three-dimensional surfaces and form a basic understanding of infinite series and associated applications. PREREQUISITES: Course 804-198 - Calculus 1

804-182
Calculus 3 **4.00**

Students will parameterize curves and polar coordinates, vectors in the plane and in space, vectors and analytical geometry in space, vector valued functions and motion in space, multivariable functions and their partial derivatives, evaluate multiple integrals. PREREQUISITES: Course 804-181 - Calculus 2 with a minimum grade of C or TR

804-189
Statistics, Introductory **3.00**

Students taking Introductory Statistics display data with graphs, describe distributions with numbers perform correlation and regression analyses, and design experiments. They use probability and distributions to make predictions, estimate parameters, and test hypotheses. They draw inferences about relationships including ANOVA. PREREQUISITES: Course 834-110 - Elementary Algebra with Applications and 804-107 - College Mathematics or 804-123 - Math with Business Applications with a minimum grade of C or TR

804-197
College Algebra and Trigonometry with Applications **5.00**

This course covers those skills needed for success in Calculus and many application areas on a baccalaureate level. Topics include the real and complex number systems, polynomials, exponents, radicals, solving equations and inequalities (linear and nonlinear), relations and functions, systems of equations and inequalities (linear and nonlinear), matrices, graphing, conic sections, sequences and series, combinatory and the binomial theorem. PREREQUISITES: Course 804-114 - College Technical Math 1B or 804-115 - College Technical Math 1

804-198
Calculus 1 **4.00**

Students analyze and graph algebraic expressions, especially conic sections, develop an intuitive understanding of limits, derivatives, and integrals, and apply the derivative and integral to certain physical problems. PREREQUISITES: Course 804-197 - College Algebra and Trigonometry with Applications

804-370
Mathematics I/Applied **2.00**

Reviews the four basic mathematical operations on whole numbers, fractions and decimals. Also covers basic algebra and trigonometry related to technical fields. PREREQUISITES: Course 854-760 - Mathematics/Pre Technical with a minimum grade of C or TR

804-371
Mathematics II/Applied **1.00**

Covers geometric principles along with calculations of linear, area and volume measurements. Includes interpreting and sketching graphs, the metric system, a method to solve technical conversions problems, and an introduction to statistics. PREREQUISITES: Course 804-370 - Mathematics I/Applied

804-502
Math 1 for Apprentice **1.00**

This course will cover fractions, decimal fractions, linear measurements (English and metric).

804-507
Intro to Math Apprenticeship **1.00**

This course will provide a foundation in the fundamentals of the application of mathematics. Emphasis is placed on achieving an understanding of general mathematical concepts, applications for the English and metric systems, direct measurement, algebra, and plane geometry. Each section will provide the student with the opportunity to apply mathematics to a practical shop situation.

804-509
Algebra Apprenticeship **1.00**

This beginning course covers basic mathematical operations applied to signed numbers and algebraic functions. Factoring linear and quadratic equations are included. Verbal problems, formulas, and formula manipulation are stressed.

804-511
Apprenticeship Math Review **0.50**

This course will teach students to apply mathematical fundamentals. Emphasis is placed on the achieving of an understanding of general mathematical concepts, applications for the English and Metric systems, direct measurement, algebra, and plane geometry. Each section will provide the student with the opportunity to apply mathematics to a practical shop situation.

804-999
Math Elective Credit **3.00**

This course is used to award up to 12 credits to students transferring to Gateway without a previous Associates degree or higher. This credit can only be used to fulfill program elective requirements and cannot be used as a substitute for any other course.

806-102
Environmental Chemistry **4.00**

This course is intended to provide students with a basic understanding of the chemical reactions and interactions that occur in the environment and the effect these chemicals have on the environment. Specifically, this course will examine atmospheric, water, and soil chemistry principles. Students will develop skills for sampling, quantitative detection and data analysis. Students will gain an understanding of biogeochemical cycles and human impact on these cycles. PREREQUISITES: Course 804-107 - College Mathematics with a minimum grade of C or TR

806-105
Principles of Animal Biology **4.00**

Introductory course focusing on general biological principles, cell structure and function, genetics, comparative anatomy and physiology, evolution, and ecosystems. Includes dissection of various fresh and preserved materials. This course is appropriate for OTA, AODA and other allied health students.

806-112
Principles of Sustainability **3.00**

Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

806-114
General Biology **4.00**

This course introduces general biological concepts and principles. Emphasis is on cell structure and function, genetics, evolution, and taxonomical relationships. Consideration is also given to diversity among the various kingdoms.

806-134
General Chemistry **4.00**

This course covers the fundamentals of chemistry. Topics covered include the metric system, problem solving, periodic relationships, chemical reactions, chemical equilibrium, properties of water, acids, bases, and salts, and gas laws. PREREQUISITES: Course 804-106 or 804-107 - College Mathematics or achieve the required placement test score

806-143
College Physics 1 **3.00**

This course presents the applications and theory of basic physics principles. It emphasizes problem solving, laboratory investigation, and applications. Topics include laboratory safety, unit conversions and analysis, kinematics, dynamics, work, energy, power, temperature, and heat. PREREQUISITES: Course 804-113 - College Technical Math 1A or 804-115 - College Technical Math 1

806-154
General Physics 1 **4.00**

This course presents the applications and theory of basic physics principles. It emphasizes problem solving, laboratory investigation, and applications. Topics include unit conversion and analysis, vectors, translational and rotational kinematics, translational and rotational dynamics, heat and temperature, and harmonic motion and waves. PREREQUISITES: Course 804-114 - College Technical Math 1B or 804-115 - College Technical Math 1

806-167
Science of Technology **3.00**

This course looks at the many devices we use in our everyday life and shows how they work. In the process, students learn the basic principles of science behind those devices, as well as how they are applied in other common objects. From levers to lasers, copy machines to computers, sensors to solenoids - virtually nothing is off limits in this class. Participants gain an awareness of the vast network of technology around them by exploring the history of technology, how technology affects society, great inventors and their inventions, as well as what the future can hold. When completed, students discover that devices don't work by "magic" but are carefully designed to take advantage of the behavior of matter and the laws of science. By exploring the world with this approach, you not only learn the basic principles of physics, but develop an understanding and appreciation of the many ways these principles may be applied.

806-172
Basic Nutritional Science **3.00**

This course provides an introduction into the science of nutrition. Basics concepts related to digestion and metabolism are presented. The significance of carbohydrates., lipids, proteins and vitamins to the human ogranism are discussed. The relationship of proper nutrition to selected pathological conditions throughout the human lifecycle is presented. The concept of sustainability and environmentally - conscious food production introduced.

806-177
General Anatomy and Physiology **4.00**

This course examines the basic concepts of human anatomy and physiology as they relate to health sciences. Using a body systems approach, the course emphasizes the interrelationships between structure and function at the gross and microscopic levels of organization of the entire human body. It is intended to prepare health care professionals who need to apply basic concepts of whole body anatomy and physiology to informed decision making and professional communication with colleagues and patients. PREREQUISITES: Course 806-134 - General Chemistry with a minimum grade of C or TR

806-179
Anatomy and Physiology, Advanced **4.00**

Advanced Anatomy and Physiology is the second semester in a two semester sequence in which normal human anatomy and physiology are studied, using a body systems approach, with emphasis on the interrelationships between form and function at the gross and microscopic levels of organization. Instruction is delivered both within a classroom and in a laboratory setting. Experimentation within a science lab includes analysis of cellular metabolism and the individual components of body systems, such as the nervous, neuro-muscular, cardiovascular, and urinary systems. Students examine homeostatic mechanisms and their relationship to fluids, electrolytes, acid-base balance, and blood. Integration

of genetics to human reproduction and development are also included in this course. PREREQUISITES: Course 806-177 - General Anatomy and Physiology with a minimum grade of C or TR

806-186
Biochemistry/Introduction **4.00**

This introductory course is designed for students in health sciences. Selected topics of inorganic and organic chemistry are applied to fundamental areas of biochemistry. Units of study include carbohydrates, lipids and proteins, enzymes, nucleic acids, bioenergetics, metabolic pathways, and body fluids. PREREQUISITES: Course 806-134 - General Chemistry

806-189
Anatomy, Basic **3.00**

This course examines concepts of anatomy and physiology as they relate to health careers. Learners correlate anatomical and physiological terminology to all body systems.

806-197
Microbiology **4.00**

Topics include structure and functions of microorganisms, microbial control, infectious diseases, immunity and resistance to disease, problems of sanitation and control in relation to microbiology of air, water, food and sewage. This course is equivalent to 806-197 at other WTCS schools. PREREQUISITES: Course 806-177 - General Anatomy and Physiology or 806-105 - Principles of Animal Biology with a minimum grade of C or TR

806-992
Science Gen Ed Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 806 area.

806-993
Science Gen Ed Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 806 area.

806-994
Science Gen Ed Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 806 area.

806-999
Science Elective Credit **3.00**

This course is used to award up to 12 credits to students transferring to Gateway without a previous Associates degree or higher. This credit can only be used to fulfill program elective requirements and cannot be used as a substitute for any other course.

808-101
Technical Reading **1.00**

This course is designed for students pursuing a degree in nursing and/or information technology. Students will learn strategies to aid them in critically comprehending and analyzing information presented in nursing and/or information technology textbooks, improve vocabulary, apply written text information to new situations, and improve recall of information. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-112
Principles of Sustainability **3.00**

Prepares the student to develop sustainable literacy, analyze the interconnections among the physical and biological sciences and environmental systems, summarize the effects of sustainability on health and well-being, analyze connections among social, economic, and environmental systems, employ energy conservation strategies to reduce the use of fossil fuels, investigate alternative energy options, evaluate options to current waste disposal and recycling in the U.S., and analyze approaches used by your community to promote and implement sustainability. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-128
Marriage and Family **3.00**

This course introduces the student to the sociological aspects of marriage and family life in contemporary American society. Emphasis is on the study of cognitive, emotional, and behavioral patterns associated with courtship, love, mate selection, sexuality, and marriage. Moreover, it discusses the life span development in the family life cycle, balancing work and family, and parenting. This course is based on the premise that human attitudes, feelings, and behaviors are largely shaped and influenced by philosophy, gender, communication, and personal beliefs. Therefore, success in the institutions of marriage and family require knowledge and skills in the roles of spouse and parent and ways to apply concepts to daily life. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-143
Microeconomics **3.00**

This course examines the behavior of individual decision makers, primarily consumers and firms. Topics include choices of how much to consume and to produce, the functioning of perfectly and imperfectly competitive markets, the conditions under which markets may fail, and arguments for and against government intervention. The student applies the fundamental tools of economics to real world problems. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-144
Macroeconomics **3.00**

Macroeconomics is an introductory course. Basic social choices regarding economic systems, basic economic aggregates, fiscal policy, the banking system, monetary policy, and international trade are the principle topics discussed in the course. Balance is drawn between theory, analysis, and a critique of the institutions that characterize modern mixed-capitalist economies. Conflicting social goals, economic constraints, and environmental concerns provide the framework through which macroeconomy is analyzed. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-159
Psychology, Abnormal **3.00**

This course in abnormal psychology surveys the essential features, possible

causes, and assessment and treatment of the various types of abnormal behavior from the viewpoint of the major theoretical perspectives in the field of abnormal psychology. Students will be introduced to the diagnosis system of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). In addition, the history of the psychology of abnormality will be traced. Cultural and social perspectives in understanding and responding to abnormal behavior will be explored as well as current topics and issues within abnormal psychology. PREREQUISITES: Course 809-198 - Psychology, Introduction to

809-166
Ethics: Theory & Applications, Intro to **3.00**

This course provides a basic understanding of the theoretical foundations of ethical thought. Diverse ethical perspectives will be used to analyze and compare relevant issues. Students will critically evaluate individual, social, and/or professional standards of behavior and apply a systematic decision-making process to these situations. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-172
Diversity Studies, Introduction to **3.00**

Race, Ethnic, and Diversity Studies is a course that draws from several disciplines to reaffirm the basic American values of justice and equality by teaching a basic vocabulary, a basic history of immigration and conquest, principles of transcultural communication, legal liability, and the value of aesthetic production to increase the probability of respectful encounters among people. In addition to an analysis of majority/minority relations in a multicultural context, the topics of ageism, sexism, gender differences, sexual orientation, people with disabilities, and the Americans with Disabilities Act (ADA) are explored. Ethnic relations are studied in global and comparative perspectives. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro with a minimum grade of C or TR or achieve the required placement test score

809-188
Psychology, Developmental **3.00**

Developmental Psychology is the study of human development throughout the lifespan. This course explores developmental theory and research with an emphasis on the interactive nature of the biological, cognitive, and psychosocial changes that affect the individual from conception to death. Application activities and critical thinking skills will enable students to gain an increased knowledge and understanding of themselves and others. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-195
Economics **3.00**

An introductory course which describes, analyzes, and critiques factors which influence the overall performance of the economic system. Topics include supply-demand analysis, national income determination models, fiscal and monetary policy, money, financial institutions, the federal reserve system, unemployment, poverty, international trade, economic growth, inflation, and environmental deterioration. The links between economic problems, theory, and public policy are emphasized. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-196
Sociology, Introduction to **3.00**

This course examines interpersonal relationships of humans and groups and the consequent structure of society. It details the various social processes and concepts which shape human behavior, analyzing such phenomena as organizations, deviance, race and ethnic relations, population, urbanization, social change, and social movements. Religion, education, and the family are studied. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-198
Psychology, Introduction to **3.00**

This course introduces students to some of the major theories and topics of psychology, including the physiological basis of behavior, personality and learning theories, memory, states of consciousness, stress, research methods, intelligence, human development, psychopathology, and social behavior. PREREQUISITES: Course 838-105 - Reading & Study Skills, Intro or achieve the required placement test score

809-365
Social/Occupational Interaction and Skills **2.00**

Introduces the student to the skills necessary to work effectively in a changing, interdependent world with its global economy. Job exploration and career development are seen in the context of self development and harmoniously working with others. PREREQUISITES: Course 858-760 or achieve the required placement test score

809-991
Social Science General Education Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 809 area.

809-992
Social Science General Education Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 809 area.

809-993
Social Science General Education Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 809 area.

809-994
Social Science General Education Credit **3.00**

This course is used to award up to 6 credits to students transferring to Gateway with a previous Associates degree or higher. This credit is then substituted for general education coursework in the 809 area.

809-999
Social Science Elective Credit **3.00**

This course is used to award up to 12 credits to students transferring to Gateway without a previous Associates degree or higher. This credit can only be used to fulfill program

elective requirements and cannot be used as a substitute for any other course.

831-103
College Writing, Intro **3.00**

Introduces basic principles of composition, including organization, development, unity, and coherence in paragraphs and multi-paragraph documents. PREREQUISITES: Course 851-769 or 851-756 - Foundations of Writing with a minimum grade of C or TR or achieve the required placement test score

834-109
Pre-Algebra **3.00**

Provides an introduction to algebra. Includes operations on real numbers, solving linear equations, percent and proportion, and an introduction to polynomials and statistics. Prepares students for elementary algebra and subsequent algebra related courses. PREREQUISITES: Course 854-760 - Mathematics/Pre Technical with a minimum grade of C or TR or achieve the required placement test score

834-110
Elementary Algebra with Applications **3.00**

This course offers traditional algebra topics with applications. Learners develop algebraic problem solving techniques needed for technical problem solving and for more advanced algebraic studies. Topics include linear equations, exponents, polynomials, rational expressions, and roots and radicals. Successful completion of this course prepares learners to succeed in technical mathematics courses. PREREQUISITES: Course 854-769 - Algebra Pre-College with a minimum grade of C or TR or achieve the required placement test score

835-104
College Success **2.00**

This course provides learners with strategies to develop skills for success in college. Learners will apply self management techniques, explore resource management strategies, and learn about ways to improve personal effectiveness.

836-113
Biology, Basic Prep **2.00**

Introduces learners to basic principles of biology. Students will become familiar with the nature of science, basic biochemistry concepts, and the structure and function of a cell.

836-133
Prep for Basic Chemistry **2.00**

Introduces basic principles of chemistry including the properties of matter, atomic structure, and the classification of chemical reactions. Students learn to characterize solutions, acids, and bases, and differentiate between elements and compounds.

838-105
Reading & Study Skills, Intro **3.00**

This course provides learners with opportunities to develop study skills and expand reading skills including comprehension, fluency, and vocabulary skills. Learners apply reading skills to academic tasks and read to acquire information from a variety of sources. PREREQUISITES: Course 858-760 or achieve the required placement test score

851-756
Foundations of Writing **2.00**

In this course, students will develop the writing skills needed for Intro to College Writing. Students will learn to structure effective sentences and compose unified, coherent paragraphs using the writing process. By the end of the semester, students should be able to write correct sentences, well-developed paragraphs, and multi-paragraph documents.

851-760A
Communications Skills/ Pre Technical 1CR **1.00**

851-761
Pre-Tech Vocational Communications **2.00**

In this class, you will learn to use English to achieve academically in Gateway vocational programs. Advanced ESL students will learn to: use English to interact in the college classroom, provide subject matter information in spoken and written form, and use learning strategies to better understand academic knowledge taught at Gateway vocational classrooms. Your English language skills will grow as you gain the self-confidence to succeed in college courses.

851-764
Communication Skills Review **1.00**

854-760
Mathematics/Pre Technical **2.00**

Pre-Technical Mathematics is a course designed to enable students to improve and enhance their mathematical skills in order to deal more effectively with mathematics in a future program. Material to be covered includes basic operations with fractions, decimals, and percents. Also included will be work with pre-geometry (measurement involving perimeter, circumference, area and volume). PREREQUISITES: Course 854-750 - Mathematics 200 with a minimum grade of C or TR or achieve the required placement test score

854-761
Algebra/Pre Technical **2.00**

A basic algebra course which covers algebraic expressions, polynomials, factoring, operations with integers, solving equations, and word problems. PREREQUISITES: Course 854-760 - Mathematics/Pre Technical with a minimum grade of C or TR or achieve the required placement test score

854-763
Mathematics Review **1.00**

854-765
Mathematics Review for the Sciences **1.00**

854-766
Algebra Review **1.00**

854-769
Algebra Pre-College **2.00**

Pre College Algebra is a beginning and/ or review course which prepares the student for college level mathematics. The course covers basic mathematical operations applied to signed numbers and algebraic functions and also includes operations with polynomials. Factoring, linear and quadratic equations, formulas, and formula manipulation are also included. PREREQUISITES: Course 854-761 - Algebra/Pre Technical with a minimum grade of C or TR or achieve the required placement test score

856-760
Science/PreTechnical **2.00**

856-760A
Science/Pretechnical Review-Animal Biology **1.00**

This course is a review of basic scientific concepts and scientific method in the areas of animal biology, to prepare students for postsecondary science courses.

856-760B
Science/Pretechnical Review-Plant Biology **1.00**

This course is a review of basic scientific concepts and scientific method in the field of plant biology, to prepare students for postsecondary science courses.

861-141
IEP: Intermediate Reading/Vocabulary **4.00**

In this course, students will use reading strategies, such as skimming and scanning, to increase reading comprehension and speed in academic and professional settings. Students will examine both oral and silent reading strategies, along with memory training techniques. Students will acquire skills to draw inferences and conclusions, and to distinguish fact from opinion. Students will interpret graphs, tables and diagrams. Students will increase vocabulary, develop word comprehension strategies and use multimedia resources, such as dictionaries and glossaries, independently. Upon completion of the course, students will be able to read and summarize academic and nonfiction texts by paraphrasing orally and in writing. Students will be able to use reading and vocabulary strategies, along with memory techniques, to study and prepare for exams.

861-142
IEP: Intermediate Grammar and Writing **4.00**

In this course, students will learn to use a variety of effective sentence structures to compose unified, coherent paragraphs using the standard American rhetorical style and will write multi-paragraph documents. Students will acquire intermediate grammar, punctuation and spelling skills to write clearly and effectively in academic or professional settings. Students will be introduced to american academic standards of intellectual property. Upon completion of the course, students will be able to write multiple drafts using the writing process, edit writing, and produce grammatically correct sentences, well-structured paragraphs and 5-paragraph essays utilizing standard punctuation and spelling rules. Students will be able to write paragraphs and essys both in and out of class. Students will be able to define American concepts of intellectual property, includign citations, and plagiarism.

861-143
IEP: Intermediate Speak/ Pronunciation **4.00**

In this course, students will learn and practice conversational skills with a partner, in a small group and will speak in front of the class. Students will acquire skills to speak extemporaneously and with preparation, including multimedia presentation tools. Students will develop intermediate level pronunciation knowledge, awareness and skills for clear communication. Expanding idiomatic language, students will develop paraphrasing techniques and the ability to express both facts and opinions. They will explore speaking strategies that show awareness of culture and bias. Upon completion of the course, students will be able to speak clearly and confidently with one or more conversational partners in academic and professional settings. they will be able to speak extemporaneously and prepare and give an intermediate level presentation.

861-144
IEP: Intermediate Listen/Note-taking 4.00

In this course, students will learn and practice active listening skills with a partner, in a small group and in front of the class. Students will anaylze elements of communication situations, including nonverbals, gender and cultural differences. Students will acquire skills to listen and respond in real time with and without prior knowledge and preparation. Students will develop a variety of note-taking techniques to increase speed and accuracy in listening comprehension. They will demonstrate listening comprehension by paraphrasing in speaking and writing. Upon completion of the course, students will be able to listen and demonstrate comprehension of a conversation with one or more partners and in front of the class. Students will be able to listen and respond to multimedia presentations for academic and professional situations. Students will be able to distinguish between facts and opinions and interpret nonverbal communication and body language.

861-145
IEP: Intermediate Amer College Culture **4.00**

In this course, students will integrate their skills in reading, vocabulary, writing, grammar, speaking, and listening to acquire knowledge of the American College Culture and improve study skills. They will explore higher education vocabulary and college student roles. They will learn American societal rules and perceptions about personal responsibility, dependence, independence, interdependence, passivity, aggression and assertiveness. Students will interact with the American College Culture in realtime in person, by phone and online. Students will be able to ask questions, seek answers, summarize interaction outcomes and formulate follow up questions and actions. Students will also be able to demonstrate personal effectiveness in the American College Culture through the use of a variety of study techniques for learning, memory and test preparation.

890-100
College Success Skills **1.00**

Designed to promote student academic success. Through a variety of awareness activities, students are introduced to study skills, time management techniques, health-related and relationship-building skills, as well as to programs, services, policies and procedures offered by Gateway.

890-103
Employability Skills **2.00**

After completion of course, students will demonstrate positive personal image, exhibit positive work attitude, practice good work habits and ethical behavior, accept responsibility, and cooperate with others in the workplace.

890-105
Serving to Learn Locally **2.00**

Students will collaborate with a community partner to design and perform a service project to address a community need. Students will gain an awareness of themselves and their community and develop an understanding of community diversity and civic engagement.

890-106
Serving to Learn Globally **2.00**

Through immersion in a global community, students will collaborate to identify a need, plan a service, perform the service and/or evaluate the result. They will apply principles of professionalism, team work, and critical thinking, as well as their chosen career's technical knowledge, attitude and skill. Through reflection and dissemination, students will integrate an increased sensitivity to the diversity of the community, global connectivity, civic engagement and their own professional career path.

890-155
The Gateway Experience **1.00**

This multi-session workshop is designed to give program students an overview of Gateway Student Service topics including advising, registration, the add/drop/withdrawal process. Support services, such as career services, advanced standing, finanacial aid, and student employment will be discussed. The Gateway Student Handbook will be used as the textbook/guide for the course.

890-156
Personal/Professional Success **1.00**

Learners in this interactive course will develop practical strategies for success to enhance personal and professional effectiveness. Topics will include problem solving, interpersonal skills, self-advocacy, adapting to workplace culture, personal responsibility, and managing transitions. This course can be counted as an elective credit towards your degree requirements at Gateway.

890-161
Critical Thinking **3.00**

This course will develop students' analytical and creative abilities for enhanced professional and academic performance, and for more positive social interaction. Focus will be on identifying reasoning fallacies, presuppositions of arguments, critical missing information and psychological barriers to sound thinking. The application of critical thinking to problem-solving, persuasion, consumerism and personal philosophy will be an integral part of this course.

Faculty and Administration

PRESIDENT

Bryan Albrecht
CEO/President
B.S., M.S., University Wisconsin–Stout
Ed.S., Ed.D. University of Minnesota

Kelly Bartlett
Assistant to the President
A.A., B.S., Upper Iowa University

Mary Harpe
Assistant to the President
A.A.S., College of Southern Nevada

EXECUTIVE VICE PRESIDENT/ PROVOST

Zina Haywood
Executive Vice President/Provost
B.A., University of Michigan
M.P.A., Oakland University

John Thibodeau
Assistant Provost/ Vice President, Institutional Effectiveness & Student Success
B.A., Marquette University
M.A., Creighton University
Ph.D., University of Nebraska-Lincoln

Jacqueline Schildhouse
Assistant to the Executive Vice President/Provost
A.A.S., Gateway Technical College

Denise Schneider
Assistant to the Assistant Provost/ Vice President, Institutional Effectiveness & Student Success
B.S. Elmhurst College

BUSINESS & WORKFORCE SOLUTIONS

Deborah Davidson
Vice President, Business & Workforce Solutions
B.A., Concordia University
M.A., National-Louis University

Gregory Herker
Manager, Fab Lab
B.S., Valparaiso University

Robin Hoke
Director, Business Development
B.S., Cardinal Stritch University
M.S., University Wisconsin–Milwaukee

Jane Kluchka
Administrative Assistant, Business & Workforce Solutions
B.A., Barat College

Michelle Talhami
Account Manager, Business & Workforce Solutions
B.S., Carroll College
M.S., University Wisconsin–Milwaukee

Stacia Thompson
Project Director
B.S., M.S., Concordia University

Katie Walker
Director Operations, Business & Workforce Solutions
B.A., University Wisconsin–Parkside
M.B.A., Cardinal Stritch University

COMMUNITY & GOVERNMENT RELATIONS

Stephanie Sklba
Vice President, Community & Government Relations
B.A., University Wisconsin–Parkside
M.A., Jones International University

Kallie Johnson
Program Manager, Center for Sustainable Living
B.S., Montana State University

Kristin Gunia
Manager, Student Communications & Marketing
B.S., Iowa State University
M.B.A., University Wisconsin–Milwaukee

Jayne Herring
Director, Marketing
B.S., University Wisconsin–Milwaukee

Susan Walther
Administrative Assistant to the Vice President, Community & Government Relations
A.A.S., Gateway Technical College

FACILITIES

William Whyte
Vice President, Human Resources & Facilities
B.A., Carthage College
M.B.A., University Wisconsin–Milwaukee

George Andrews III
Manager, Facilities

Lawrence Paruszkiewicz
Director, Building Services
B.S., University Wisconsin–Platteville

John Thielen
Director, Building Services
A.A.S., Gateway Technical College
B.A., University of Minnesota

FINANCE

Bane Thomey
CFO/Vice President, Finance & Administration
B.B.A., University Wisconsin–Whitewater
M.B.A., University Wisconsin–Parkside

Susan Debe
Assistant to the CFO/Vice President, Finance & Administration

Elizabeth Dulak
Grant Accounting Analyst

Sharon Johnson
Controller
B.S., University South Carolina

Debbie Lewis
Manager, Grant Accounting
B.S. University Wisconsin–Parkside

Jason Nygard
Director, Accounting
B.S., Northern Michigan University
M.A., Marquette University

FOUNDATION

Jennifer Charpentier
Executive Director, Foundation
B.A., Carleton College
M.A., Ph.D., University of Minnesota

HUMAN RESOURCES

William Whyte
Vice President, Human Resources & Facilities
B.A., Carthage College
M.B.A., University Wisconsin–Milwaukee

Selina Bohn
HRIS Analyst
A.A., College of Lake County
B.S., University Wisconsin–Parkside

Thomas Cousino
Director, Safety & Security
B.S., U.S Air Force Academy

John Frost, Jr.
Director, Employee/Labor Relations & Payroll
B.S., University Wisconsin–Parkside

Mary Halberstadt
HR Generalist

Alan Jelinek
Manager, Payroll
A.A.S., Gateway Technical College
B.S., Cardinal Stritch University

Paulette Jenrette
Assistant to the Vice President, Human Resources & Facilities
A.A.S., Gateway Technical College
B.S., University Wisconsin–Parkside

Magan Lawrence
Administrative Assistant, Staffing
A.A.S., Gateway Technical College

Judy McNamara
Administrative Assistant, Benefits

Debbie Miller
Director, Human Resources
B.A., Alverno College

Jacqueline Morris
Director, Staffing
B.S., University Wisconsin–Parkside
M.S., Cardinal Stritch University

Theresa Strash
Administrative Assistant, Benefits

INSTITUTIONAL EFFECTIVENESS

Anne Whynott
Associate Vice President, Research, Planning & Development
B.A., M.P.A., University Wisconsin–Parkside

Amy Anderson
Grants Administrator
B.A., University Wisconsin–Eau Claire

Nancy Chapko
Instructional Designer/Student Learning Coordinator
B.S., Carroll College
M.S., Ed.S. University Wisconsin–Stout

Jehan Ghuari
Grants Administrator
B.S., University Wisconsin–La Crosse
M.Ed., University Wisconsin–Milwaukee

Margaret Hunter
Learning Technologist
B.A., American University
M.S., South Dakota State University
Ed.D., Fielding Graduate University

Kamaljit Jackson
Manager, Quality Systems
A.A.S., Milwaukee Area Technical College
B.S., Cardinal Stritch University

Joshua Vollendorf
Manager, Employee Learning
B.S., M.S.E., University Wisconsin–Platteville

LEARNING INNOVATION DIVISION

Jeffrey Robshaw
CIO/Vice President, Learning Innovation
B.A., St. Norbert College
M.S., Illinois State University

Edwin Clark
State Reporting/Software Development Administrator
A.A.S., Gateway Technical College

Eric Doherty
Director, Server & Virtualization Technology
A.A.S., Gateway Technical College

Daniel Madsen
Director, Information Technology
B.S., Illinois Institute of Technology

Jennifer Olson
Administrative Assistant
B.S., University Wisconsin–Parkside

Alan Pinkerton
Director, Information Systems
A.A.S., Gateway Technical College

LIBRARY

Gary Flynn
Dean, Campus Affairs/Library Manager
B.S., University Wisconsin–Oshkosh
M.L.I.S., University Wisconsin–Milwaukee

Ellen Pedraza
Library Instruction and Reference Specialist
B.A., University Wisconsin–Milwaukee
M.L.I.S., University Wisconsin–Milwaukee

Rachel Rohlf
Library Instruction and Reference Specialist
B.A., M.L.I.S., University Illinois-Urbana Champaign
M.A., Penn State University

Jason Steagall
Library Instruction and Reference Specialist
B.A., University Wisconsin–Stevens Point;
M.L.I.S., University Wisconsin–Milwaukee

WGTD 91.1 FM

David Cole
General Manager
B.A., Luther College

ACADEMIC ADMINISTRATION

ELKHORN CAMPUS

Michael O'Donnell
Dean, Campus Affairs/Health/Veterinary Sciences
A.A., County College of Morris
RN, B.S., MPH., University South Carolina
M.Ed., University Florida

BURLINGTON CENTER

Terry Simmons
Burlington Center Administrator/Dean, Service Occupations
B.S., Northern Michigan University
M.A., Northeastern Illinois University
Ed.S., Northern Illinois University

KENOSHA CAMPUS/ HORIZON CENTER

Gary Flynn
Dean, Campus Affairs/Library Manager
B.S., University Wisconsin–Oshkosh
M.L.I.S., University Wisconsin–Milwaukee

Joseph Fullington
Associate Dean, Business
B.S., Columbia College
M.B.A., University Wisconsin–Parkside

Cyndean Jennings
Dean, Developmental Education
B.S.W., University Wisconsin – Green Bay
M.S.E., University Wisconsin–Oshkosh

Teresa La Macchia
Associate Dean, Academic Operations
B.S., Arizona State University

Diane Skewes
Dean, Nursing
R.N., A.A.S., Milwaukee Area Technical College
B.S.N., Marquette University
M.S.N., University Wisconsin–Milwaukee

Joseph Whiten
Director, Law Enforcement Training
B.A., Carroll College
M.S., Springfield College

RACINE CAMPUS

Manoj Babu
Dean, Manufacturing, Engineering, & Transportation (MET)
B.S., Texas A&M University
M.B.A., Marquette University
Ph.D., Case Western Reserve University

Ray Koukari, Jr.
Dean, Campus Affairs, Business & IT
M.B.A., Regent University

Kathryn Nordhaus
Dean, General Studies
B.A., University Illinois, Urbana-Champaign
M.A., DePaul University

LEARNING SUCCESS

Nicole Gustafson Binger
Counselor, Student Support
B.S., University Wisconsin–Madison
M.S., University Wisconsin–Whitewater

Michelle James
Director, Testing Services
B.A., Marquette University
M.A., Ohio State University

Katie Lohre
Counselor, Student Support
B.A., University Wisconsin–Parkside
M.S. Drake University

Amanda Pulda
Instructor, Learning Success Center
B.A., Carthage College
M.A., Alverno College

Tammi Summers
Dean, Learning Success
B.S., M.S.E., University Wisconsin–Whitewater
Ph.D., University Wisconsin–Milwaukee

Christine Tutlewski
Director, Tutoring Services
B.A., University Wisconsin–Parkside
M.A., University Wisconsin–Milwaukee

Vicki Wahler
Counselor, Student Support
B.S., M.S., Illinois State University

Jennifer Wiemero
Instructor, Learning Success Center
B.S., University Wisconsin–Madison
M.A., San Jose State University

STUDENT SUCCESS

Cynthia Beltran
Advisor, Academic
B.A., M.A., Lakeland College

Tanya Burton
Manager, Student Services Center
B.A. Indiana University
M.A. Ohio State University

Rachel Christman
Manager, Student Services Center
B.A., Miami University of Ohio
M.S., University Wisconsin–Milwaukee
M.S., Cardinal Stritch University

Janet Days
Advisor, Academic
B.A., University Wisconsin–Parkside

Jolanda Dinkins
Assistant Registrar: Registration & Transfer Credit
B.A., Illinois State University
M.H.A., Governors State University

Sheri Eisch
Counselor, Career
B.S., University Wisconsin–Parkside
M.S., University Wisconsin–Milwaukee

Jane Finkenbine
Director, College Connection
B.A., Franklin College

Kevin Gerou
Advisor, Academic
B.A., University Wisconsin–Madison

Andrew Goodman
Director, Academic Advising & Career and Employment Services
B.A., University Wisconsin–Parkside
M.S., Golden Gate University

Marshlli Hamilton
Advisor, Academic
A.A.S. Gateway Technical College
B.A., M.S., Concordia University
M.A., University Phoenix

Travis Jansen
Assistant Registrar: Degree Audit & Curriculum
B.A., Marquette University

Justin Kehring
Director, Financial Aid
A.A., University Wisconsin–Waukesha
B.A., University Wisconsin–Milwaukee

Jason Kemp
Advisor, Academic
B.A., Morehouse College
M.S., University Wisconsin–Milwaukee

Kenneth Loftus
Advisor, Academic
B.A., University Wisconsin– Whitewater

Kevin McCray
Counselor, Career
B.A., University Wisconsin–Madison
M.S., University Wisconsin – Whitewater

Desmar McDuffie, Sr.
Advisor, Academic
B.S., Springfield College

Monica McNaughton
Director, Student Finance
B.A., American Intercontinental University
M.B.A., Alverno College

Chrystal Moez
Registrar
B.A., Campbell University
M.B.A., Campbell University

Michelle Nevarez-Larkin
Advisor, Academic
B.A., University Wisconsin–Parkside
M.S.E., University Wisconsin–Platteville

Raquel Palacios
Advisor, Academic
B.A., University Wisconsin–Oshkosh
M.S., University Wisconsin–Whitewater

Stacy Riley
Associate Vice President of Student Success
Technical Diploma, Mid-State Technical College
B.A., University Wisconsin–Stevens Point
M.S., Capella University

Rosalva Santana
Advisor, Academic
B.A., University Wisconsin–Parkside
M.S., University Wisconsin–Whitewater

Julie Terasek
Manager, Student Finance Compliance
B.A., University Wisconsin–Milwaukee

Maria Torres
Advisor, Academic
B.A., University Texas-El Paso
M.A., University Wisconsin–Milwaukee

Edwardo Vargas III
Advisor, Academic
B.A., University Wisconsin–Parkside

Yoceline Vargas
Advisor, Academic
B.A., University Wisconsin–Parkside
M.S.Ed., Kaplan University

Barbara Wagner
Advisor, Academic
A.A.S., Waukesha County Technical College
B.A., Carroll College
M.A., Lakeland College

Steven Wilkes
Counselor, Career
B.S., University Wisconsin–La Crosse
M.S., University Wisconsin–Stout

Dwayne Windham
Advisor, Academic
B.A., M.B.A., University Wisconsin–Whitewater

Ann Witte
Director, Express Services
B.S., M.S., Northern Illinois University

DISTRICT FACULTY INSTRUCTIONAL STAFF

BUSINESS & INFORMATION TECHNOLOGY

Kari Aiello
A.A.S., Gateway Technical College
B.A., Carthage College

Mary Baldwin-Grimes
B.A., University Wisconsin–Green Bay

Richard Barribeau
B.A., Carroll College
M.A., University Wisconsin–Eau Claire

Michael Benoit
A.A.S., Bay De Noc Community College
B.S.I.T., Lake Superior State University
M.S.A., Central Michigan University

Kelly Brand
B.S., Northern Michigan University
M.B.A., Aurora University

Jill Buchmann
B.S., Marquette University; C.P.A

James Buck
A.A.S., Carl Sandburg College
B.A., Monmouth College

Ellen Burton
B.B.A., M.A.T., University Wisconsin–Whitewater

Jennifer Christianson
B.S.M.E., Kettering University
M.B.A., Northwestern University

Sharilyn Due
B.S., University Wisconsin– Parkside
M.B.A., University Wisconsin–Eau Claire

Paul Ehlers
B.A., Simpson College

Edward Grochowski
B.S., M.S., University Wisconsin– Stout

Ken Haling
A.A.S., Milwaukee Area Technical College
B.A., Lakeland College
M.B.A., University Wisconsin–Whitewater; C.P.A., C.M.A.

Jef Halverson
B.S., University Wisconsin–Parkside

Michael Hashek
B.A., St. Norbert College
M.B.A., University Wisconsin–Whitewater

Pamela Hillman
B.S., University Wisconsin–Parkside;
C.P.A.

Christian Hur
B.S., University Wisconsin–Oshkosh

Achille Infusino
A.A.S., Gateway Technical College
B.A., Carthage College
M.B.A., Marquette University

Takis Kinis
A.A., Milwaukee Area Technical College
B.A., M.S., Cardinal Stritch University

Wendy Klemp
A.A.S., Gateway Technical College
B.S., M.B.A., University of Phoenix

Cheryl Konwent
A.A.S., College of Lake County

B.S., M.B.A., University Wisconsin–Parkside
M.Ed., Concordia University; C.P.A.

Vivian Krenzke
B.S., M.B.A., University Wisconsin–Parkside

Susan LaCanne
B.S., University Wisconsin–Parkside
M.A., University of Phoenix

Christine Lazaro
A.A.S., Milwaukee Area Technical College
B.S., Regis University

Laura Laznicka
B.A., University Wisconsin–Parkside

Pamela Manning
B.A., Concordia University
M.S., University Wisconsin–Milwaukee

Rebecca Marschner
B.B.A., University Wisconsin– Whitewater
M.S.E., Concordia University

Linda McGee
B.S., University Wisconsin–Parkside
M.S., Cardinal Stritch University; C.P.A.

John Mizer
Certificate, Gateway Technical College

Paul Nelson
A.A.S., University Wisconsin– Waukesha
B.B.A., University Wisconsin–Whitewater

Sharon M. O'Reilly
B.A., University Wisconsin–Eau Claire
M.B.A., University Wisconsin–Madison; C.P.A.

Cristina Page
B.S., Northern Michigan University
M.S., University Wisconsin–Madison

Allen Pearson
B.S., University Wisconsin– Madison
M.B.A., Keller Graduate School

Peter Pham
B.F.A. University Wisconsin– Milwaukee
M.Ed, Carthage College

Michelle Quinn
B.F.A., University Wisconsin–Oshkosh

Pamela See
B.S., University Wisconsin–La Crosse

Alysia Ruiz
A.A.S., Gateway Technical College
B.A., Concordia University Wisconsin

Sara Skowronski
A.A.S., LPN, Gateway Technical College
B.S., Columbia College
M.B.A., University Wisconsin–Parkside

Tina Trainor
B.S., Methodist College

Cheryl Ucakar
B.A., Alverno College
M.S., Cardinal Stritch College

Christopher Venckus
B.S., University Wisconsin–Parkside
M.I.S.M., Keller Graduate School of Management

Syed Saad Yousuf
B.S., M.S., Roosevelt University
M.B.A., Keller Graduate School

BUSINESS & WORKFORCE & SOLUTIONS

Alberta Heinen
Diploma, Gateway Technical College

Matthew Janisin
B.S., M.S., University Wisconsin–Stout

Richard Lofy
B.S., Milwaukee School of Engineering

Craig Maeschen
A.A.S., University of South Dakota
B.S., South Dakota State University
M.S., Mankato State University

Daniel Neuman
A.A.S., Moraine Park Technical College
B.B.A., Marian University
M.S. Cardinal Stritch University

Elizabeth Oplatka
B.A., Illinois Wesleyan University
M.S., Medill School of Journalism of Northwestern University
M.A., Adler School Professional Psychology

Neil Petersen

Randal Reusser
A.A.S., Gateway Technical College
B.A., Carthage College
M.B.A., Marquette University

Kim Sanderson
A.A.S., Gateway Technical College
B.A., Carthage College

DEVELOPMENTAL EDUCATION

Elaine Asma
A.A.S. Ferris State University
B.S., Eastern Michigan University
M.B.A., Loyola University of Chicago
M.A.T., National-Louis University

Rudolph Collum
B.A. Coe College
M.S., University Wisconsin–Milwaukee

Iryna Faulk
B.S., M.A., Pedagogical University

Fawn Funderburg
B.A., M.Ed., C.A.S., National-Louis University

Deborah Hankel
B.S., M.S.; University Wisconsin– Milwaukee

Susan Henderson
B.S.E., University Wisconsin–Whitewater
M.A., University Wisconsin–Milwaukee

Ginger Karaway
B.A., University Wisconsin–Parkside
M.S., Silver Lake College- Graduate Studies

Larry Kirkwood
B.S., Jackson State University
M.A., National-Louis University

Laura Knudson
B.A., University Wisconsin–Parkside
M.A., University Wisconsin–Madison

Richard Malloy
B.A., University of St. Thomas
M.A.Ed., University of Northern Iowa

Dawn Marabella
B.S., Illinois State University
M.A., University of Illinois-Chicago
M.A., University of Phoenix

Sandra Monahan
B.A., Bethel College
M.A., Cardinal Stritch University

Aracely Mouradian
B.S., Loyola University
M.A., Northeastern Illinois University

Miriam Perales-Hadley
B.A. Normal Miguel Martinez
M.Ed., University of Texas-Austin
M.A. University of Texas-Pan American

Craig Schambow
B.A., Carthage College

Debra Solomon
B.A., Wellesley College
M.A., Middlebury Institute of Int'l. Studies
Ph.D., Cardinal Stritch University

Michael Troudt
B.A., Viterbo University
M.L.S. University Wisconsin–Milwaukee
M.S.E., Long Island University

Jeannine Volbright
B.S., University Wisconsin–Whitewater

DISABILITY SUPPORT

Pamela Herr
A.A.S., Joliet Junior College
B.S., Illinois State University
M.S.E., University Wisconsin–Whitewater

Dawn Kaiser
B.A., M.Ed., Carthage College

Elizabeth Mulhollon
B.S., University Wisconsin–Whitewater
M.A., Aurora University

Patty Nesheim
B.S., University Wisconsin–Stout
MS, MS/EdS., University Wisconsin–River Falls

Susanne Stokes-Nelson
A.A.S., Madison Area Technical College;
B.S., University Wisconsin– Stout

Barbara Yousefian
B.A., M.Ed., Southern Illinois University
M.Ed. University of Illinois-Chicago

GENERAL STUDIES

Colleen Aird
B.A., University Wisconsin–Stevens Point

Nicole Ayala
B.S., University Wisconsin–Madison
M.S., University of the Incarnate Word

Lori Baxa
A.A.S., Oakton Community College
B.S., M.S., Northern Illinois University

Soheila Brouk
B.S., M.S., University Wisconsin – Oshkosh
Ph.D., University Wisconsin–Milwaukee

Colleen Connolly
B.A., M.A., University Wisconsin–Milwaukee
Ph.D., University of South Florida

Michael Costello
B.S., University Wisconsin – Parkside
M.S., University Wisconsin– Milwaukee

Shahida Dar
B.S., M.S., University of Punjab
M.S., University Wisconsin – Parkside

Donnetta Davis
B.A., University Wisconsin – Parkside
M.A., National University

Michael Duprey
B.S., University Wisconsin – Oshkosh
M.S., University Wisconsin – Milwaukee

Tiffany Garrison
B.S., Quincy University
M.S., University Wisconsin–Madison

Jason Gerber
B.S., Illinois College
M.S. Illinois State University

Jessica Gleason
B.A., University Wisconsin–Whitewater
M.A., National University

Alfred Gomez
A.A.S., Gateway Technical College
B.S., University Wisconsin–Parkside
M.S., University Wisconsin–Stout

Dean Greve
A.A.S., Clinton Community College
B.S.I.E., Iowa State University

Thomas Halloran
B.A., Wheaton College
M.A., Mary Immaculate College
Ph.D., Louisiana State University

Amy Hankins
B.A., Purdue University
M.A., Northwestern University

Angelina Helt
B.A., M.A., University Wisconsin–Milwaukee

Heidi Jenkins
B.A., University of Alaska
M.Ed., Carthage College

Jay Johnson
B.S., University Wisconsin–Madison
M.A., University Wisconsin–Milwaukee

Matthew Johnson
B.S., University of Illinois
M.A., Indiana University

Kyle Kendall
B.A., M.A., University Wisconsin–Madison
M.S., Concordia University

Lisa Kusko
B.S., West Liberty State University
M.A., Marshall University

Dennis Landergott,
B.S., St. Francis College;
M.A., University of South Dakota
Ph.D., New Mexico Institute of Mining & Technology

Xiaoying Lin
A.A., Milwaukee Area Technical College;
B.A., M.A., Ph.D., University Wisconsin–Milwaukee

Richard McLaughlin
B.S., Roberts Wesleyan College
M.S., Queen's University
Ph.D., McGill University

Henry Meier
B.S., University of Ghana;
M.A., M.Sc., University of Florida

Randall Mueller
B.S., M.A., University Wisconsin–Milwaukee

Roxanne Norris
B.S., University of California-Irvine
M.S., University Wisconsin–Milwaukee

Lisa Packard
B.A., University Wisconsin–Milwaukee
M.A., National University

Joan Paradiso
B.S., B.A., M.A., University Wisconsin–Milwaukee

Manal Rizek
B.S., Kent State University
M.S., Marquette University

Robin Rupp
B.S., University Wisconsin–Whitewater
M.A., Trinity International University

Ronald Schultz
B.A., M.A., University Wisconsin–Milwaukee

Steven Sloan
B.S.E., University Wisconsin– Whitewater
M.S., University Wisconsin – Milwaukee

Karen Solliday
B.A., M.A.L.S., M.A., M.S., University Wisconsin–Milwaukee

Timothy Sorensen
B.S.N., University Wisconsin – Milwaukee
M.S., Northeastern Illinois University

Ann Stotts
A.A., College of Du Page
B.A., M.A., University of Illinois-Chicago

Suzanne Sublette
B.A., M.A., DePaul University MSSW
Ph.D., University Wisconsin–Madison

Stevie Summers
B.S., M.S., Ph.D., University Wisconsin–Milwaukee

Jennifer Vanags
B.G.S., M.A., University of Kansas

Kathryn Vopal
B.A., M.A., Indiana State University
Ph.D., University Wisconsin–Milwaukee

David Wang
B.S., Tianjin University
M.A., Nankai University
Ph.D., University of Minnesota

Manhui (Amy) Wang
B.A., Yantai Teacher's College
M.A., Shandong University
M.A., University Wisconsin – Milwaukee
Ph.D., Cardinal Stritch University

Qun Yu
B.S., Tainjin University
M.S., Ph.D., Louisiana Tech University

Gina Zainelli
B.S., Loyola University-Chicago
Ph.D., Loyola University-Stritch School of Medicine

Donald Zakutansky
B.S., M.S., Ph.D., Indiana University-Bloomington

Stephan P. Zambo III
B.S., Purdue University
M.S., Marquette University

HEALTH SCIENCES

Lori Andreucci
Diploma, Gateway Technical College
B.A., Concordia University
M. Ed., Carthage College

Paula Antifinger
B.S.N., Marian College
M.S.N., Concordia University

Jose Avila
A.D.N., Milwaukee Area Technical College
B.S., Carroll College
B.S.N., Cardinal Stritch University
M.S.N., Concordia University

Mary Kay Belcher
A.A.S., Gateway Technical College
B.S.N., Concordia University
M.S.N., Loyola University

Cory Busch
Vocational Diploma, Gateway Technical College
Vocational Diploma, Milwaukee Area Technical College

Julie Capelli
A.A.S., Gateway Technical College
B.S.N., Alverno College

Stacey Casey
A.A.S. Gateway Technical College

Sonya Cooks
A.D.N., Gateway Technical College
B.S.N., Marian College
M.S.N., Concordia University

Diane Cozzi
R.N., B.S.N., University of Illinois – Chicago
M.S.N., Concordia University

Marianne Douglas
L.P.N., A.D.N., Gateway Technical College
B.S.N., Alverno College

Cynthia Fickenscher
B.S., University Wisconsin–Milwaukee
M.B.A., University Wisconsin–Parkside

Robert Formanek
B.S., Marquette University
M.S., Cardinal Stritch University

Heidi Gottfried
C.D.A., Madison Area Technical College
B.A., Concordia University
M.S., University Wisconsin–Stout

Traci Gotz
B.A., M.P.T., Marquette University
D.P.T., College of St. Scholastica

Shronda Green
A.D.N., Gateway Technical College
B.S.N., Marian College
M.S.N., H.C.I., University of Phoenix

Jacquelyn Griesbach
A.A.S., North Central Technical College
B.S., University Wisconsin–Oshkosh

Doris Groom
B.S., Alverno College
M.S.N., University Wisconsin–Madison

Susan Guttschow
D.V.M., Iowa State University

Jo Hart
A.D.N., Gateway Technical College
B.S.N., Viterbo University

Helen Holder
L.P.N., A.D.N., Gateway Technical College
B.S.N., Viterbo University
M.S.N., Alverno College

Victoria Hulback
A.D.N., College of Lake County
B.S.N., South University

Margaret Isaacson
B.S.N., University Wisconsin–Oshkosh
M.S.N., Concordia University

Morgan Kaiser
B.S.N., Milwaukee School of Engineering

Iley Kelnhofer
A.D.N., Milwaukee Area Technical College
B.S.N., Marquette University
M.S.N., Cardinal Stritch University

Donna Kempf
Diploma, Gateway Technical College

Kelly Kniprath
PH.D, B.S., University Wisconsin–Milwaukee
A.A.S., Gateway Technical College

Vanessa Kramasz
B.S.N., Alverno College
M.S.N., Concordia University

Maryanne Kuiper
A.D.N., Gateway Technical College
B.A., Concordia University
M.S.N., University of Phoenix

Diane Labanowsky
B.S.N., University Wisconsin–Oshkosh
M.S.N., University Wisconsin–Milwaukee

Jennifer Lucas
B.S., University Wisconsin–Madison
Pharm.D., Midwestern University

Tedd Lupella
A.A.S., Wm. Rainey Harper College

Katrina McGovern
A.D.N., Gateway Technical College
B.S.N., Liberty University

Kristine Mueller
A.D.N., Gateway Technical College
B.S.N., Viterbo University

Patricia Ontko
A.D.N., Gateway Technical College
B.S.N., Marian College

Andrea Peterson
A.D.N., Gateway Technical College
B.S.N., M.S.N., Ed, University of Phoenix

Sophia Petraitis
B.S.N., University of Illinois-Chicago
M.S.N., St. Xavier University

Micheal Randolph
B.S., University of St. Francis
M.S. Cardinal Stritch University

Lauri Rogers
A.D.N., Gateway Technical College
B.S.N., Alverno College

Cheryl Rules
A.D.N., Gateway Technical College
B.S.N., M.S., Regis University

Daniel Russell
A.D.N., Cardinal Stritch University

Alysson Senica
B.A., University Wisconsin–Madison
M.S., University Wisconsin–Milwaukee

Renee Seymour
R.N., A.D.N., Gateway Technical College
B.S.N., Marian College
M.S.N., University of Phoenix

Christina D. Sima
B.S.N., Alverno College
M.S.N., University of Phoenix

Helene Stacy
B.S., Lewis University
M.S.N., Marquette University

Jodene Strommen
B.S.N., University Wisconsin–Milwaukee
M.S.N., University Wisconsin–Milwaukee

Julie Teeter
A.D.N., Gateway Technical College
B.S.N., M.S., University Wisconsin–Milwaukee

Cherie Tenfel
B.S.N., University Wisconsin–Oshkosh
M.S.N., Kaplan University

John Ujcich
B.S.N., M.S.N., Marquette University

Annamarie Vagnoni
A.D.N., Gateway Technical College
B.S.N., Marian College

Kristina Vines
A.A.S., Gateway Technical College
B.S., M.S., University Wisconsin–Stout

Kristine Voigt
B.S.N., University of Phoenix
M.S.N., Walden University

Ann Watry
L.P.N., Gateway Technical College
B.S.N., Marquette University
M.S.N., Concordia University

Anne Wilkinson
B.S.N., University Wisconsin– Madison
M.S.N., University Wisconsin–Milwaukee

Suzanne Williamson
B.S.N., University Wisconsin–Milwaukee

Susan Willing
B.S.N., University Wisconsin–Milwaukee
M.S.N., Marquette University

Elizabeth Wolf
M.S.N., University of Phoenix

Donna Zimany
A.D.N., Gateway Technical College
B.S.N., Marian College

Megan Zingelman
B.A., Marquette University

HORTICULTURE

Kathleen Field
B.S., Colorado State University
M.Ed., University of California

Courtney Greve
B.S., M.S., University Wisconsin–Madison

Kathleen Jerome
A.A.S., Gateway Technical College
B.A., Austin College
M.S., University Wisconsin–Madison

INTERIOR DESIGN

Rita Serpe
B.S., University Wisconsin–Madison

MANUFACTURING & ENGINEERING

Richard Buhnerkemper

Marshall Campbell

Gregory Chapman
A.A.S., B.S.M.E.T., Milwaukee School of Engineering

Jeremy Dutton
A.A.S., Gateway Technical College

Thomas Filipiak, Jr.
B.S., University Wisconsin–Madison

Kevin Fulsom

Jonathon Hardbarger
B.S., Ohio State University

Charles Herman
A.I.M., B.I.M., M.S., Milwaukee School of Engineering

Lawrence Hobbs

Robert Hoff
A.A.S., Gateway Technical College

Patrick Hoppe
A.A.S., Milwaukee Area Technical College
B.S., M.S. Milwaukee School of Engineering

James Jazdzewski
A.A.S., College of Lake County
B.S., Southern Illinois University

JD Jones
A.A.S., Richland Community College
B.S. Southern Illinois University

Robert Kaebisch
B.S., University Wisconsin–Milwaukee

Jerome Kobriger

Steven Lenz
A.A., University of Phoenix

Benjamin McFarland
Diploma; Master Craftsman, Gateway Technical College

John Nelson
B.S., M.B.A., University Wisconsin–Milwaukee

Tom Niesen
Certificate, Gateway Technical College

Erik Ogren
Diploma, Gateway Technical College

Joseph Palecek
Diploma, Chippewa Valley Technical College
Diploma, Gateway Technical College

Michael Renzoni
A.A.S., Gateway Technical College

Scott Rohde
B.S., University Wisconsin–Stout

Jill Sammons
A.A.S., Gateway Technical College
B.S., Milwaukee School of Engineering
M.B.A., Concordia University Wisconsin

Michael Schuck
B.S., Wayne State University
M.S., Milwaukee School of Engineering

Richard Shouse

Michael Skender
Diploma, Gateway Technical College

Patrick Stevens
A.A.S., Gateway Technical College

Kidia Tyler

Mark Uttech
Master Craftsman, Gateway Technical College

Kim Weckerly
Master Craftsman

Steven Whitmoyer
B.S., Purdue University
M.S., North Carolina State University

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R.N., Milwaukee County General Hospital School of Nursing

Michelle Barnes
B.A., St. Louis University
M.S., Nova Southeastern University

William Blandford
B.A., University Wisconsin–Madison
J.D., University of Virginia

John Dahms
B.S., Southern Illinois University
M.S., Cardinal Stritch University

Jack Jasperson
EMT-P, Gateway Technical College

David Kasulke

Gary Leyer
A.D.N., Gateway Technical College

Jeffrey R. Munson
A.A.S. Central Texas College
B.B.A., University Wisconsin–Oshkosh
J.D., University Wisconsin–Madison

Bernadette O'Connell
A.D.N., Milwaukee Area Technical College
B.S., Kaplan University
M.S., Nova Southeastern University

Steven Spingola
A.A.S., Milwaukee Area Technical College
B.S., Mount Senario College
M.A., Marquette University

Raul Terriquez
B.S., Mount Senario College

SERVICE OCCUPATIONS

Sandra Christman
Diploma, Gateway Technical College

Karen Comer
Stewarts School of Hairstyling, Master Craftsman

Christina Cook
B.A., Lakeland University
M.A., Nova University

Thomas Crawford
M.A., Chicago School Professional Psychology

Susan Curi
Diploma, I.B.A. Cosmetology School Diploma, Milwaukee Area Technical College; Master Craftsman

Susanna Elrod
A.A.S, Gateway Technical College

Natalie Griffin
B.S., University Wisconsin – Parkside
M.E., Carthage College;
M.S., Capella University

Adam Larkin
A.A.S., Gateway Technical College

Mary Mair
B.S., Edgewood College

R. Scott Meuret
A.A.S., Scottsdale Community College
B.A., Ottawa University
M.Ed., Northern Arizona University

Susan Nelson

Sharon Nelson
Diploma, I.B.A. Prestige Beauty College, Master Craftsman

Clairista Phifer
Diploma, I.B.A. Prestige Beauty School

Christine Spang
B.A., Alverno College
M.A., Carroll University

Gina Stoebe
B.A., University Wisconsin–Parkside
M.S., Capella University

Sherry Tucker
Diploma, Milwaukee Area Technical College

Steve Villalobos
A.A.S., Gateway Technical College

Seth Wollwage
B.A., Illinois College
M.S.W., University of Illinois
Ph.D., Loyola University

Paul Zenisek
B.A., Trinity College
M.A., Southwestern Baptist Theological Seminary
M.S., University of Texas

TRANSPORTATION

Kenneth Dotzler
A.A.S., University of Maryland
A.S., Community College of the Air Force

William Fell
A.A.S., Madison Area Technical College
B.S., University Wisconsin–Stout

Roderick Gordon
Diploma, Milwaukee Area Technical College;
B.S., Purdue University

Justin Hoffman
Vocational Diploma, Blackhawk Technical College

Kelly Martin
A.A.S., Nebraska Western College
B.S., Southeastern Oklahoma State University

Steve Semon
Diploma, Milwaukee Area Technical College

Brett Singleton
Apprenticeship, Blackhawk Technical College
B.S., St. Cloud State University

GATEWAY TECHNICAL COLLEGE

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(Highway H)
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Kenosha, WI 53144-1690

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(Highway H)
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