To Prospective Students...

Blackhawk Technical College is transitioning to a two-year printed credit course catalog in an effort to conserve and reallocate resources toward new program development. As we respond to a changing local economy and strive to assist those transitioning in the workplace, we have made a conscious decision to reduce the cost of producing this publication. The college is also transitioning from paper documents to online services that are convenient for the reader and more current and cost effective for the college.

We encourage you to visit InsideBTC, the college web site, at www.blackhawk.edu for the most current course descriptions and course schedules for both credit and non-credit (community and adult education) courses. The online course listings are the most definitive source of information for prospective students and those who are currently enrolled.

Thank you for your on-going support as the college transitions during a period of change within our community!
HOW TO REGISTER

USE ONE OF THE FOLLOWING OPTIONS

Online Registration at www.blackhawk.edu

If you have been previously enrolled or are currently enrolled and have a student identification number and personal identification number (PIN), visit InsideBTC, the BTC web site, at www.blackhawk.edu and select Log On: Banner Web. Enter your log on info with PIN and follow the easy instructions to register online.

NOTE TO NEW STUDENTS:
New students must apply for admission and set up an account with BTC prior to registering for classes using the online option. Once your account set up is completed, you will need your student ID number and personal identification number (PIN) to activate your online account.

REGISTRATION BY MAIL

Complete the registration form on the website at www.blackhawk.edu. Send in the form with your credit card information or a check made payable to Blackhawk Technical College for the exact amount of fees listed in this schedule.

Send to:
Registration Office
Blackhawk Technical College
P.O. Box 5009
Janesville WI 53547-5009

IN-PERSON REGISTRATION ON CENTRAL CAMPUS & MONROE CAMPUS*

July through August 15, 2008, you can register in person during the hours listed below:

Monday-Thursday
8:00 a.m.-7:00 p.m.
Friday
8:00 a.m.-4:30 p.m.

After August 15, you can register in person during the hours listed below:

Monday - Thursday
8:00 a.m.-7:00 p.m.
Friday
8:00 a.m.-5:00 p.m.

*see page 5 for Blackhawk Technical College Business Hours

REGISTRATION BY FAX

Dial (608) 743-4407 for Central Campus or (608) 329-8215 for Monroe Campus to fax your completed enrollment form and MasterCard or Visa information. In order for BTC to bill your employer, a letter of authorization for billing must be faxed with your registration form.

ADDITIONAL ASSISTANCE - Central Campus

Admissions: (608) 757-7665
Bookstore: (608) 757-7672
Financial Aid: (608) 757-7664
Information: (608) 757-7710
Multicultural: (608) 757-7719
Registration: (608) 757-7661
Switchboard: (608) 758-6900
Toll free (in 608 area code only) (800) 498-1282
TDD/TTY-Special Services Lab (608) 743-4422
Aviation Center: (608) 757-7743
Beloit Center: (608) 757-7669
Monroe Campus: (608) 328-1660
Center for Transportation Studies: (608) 743-4470

GOT QUESTIONS?
Get help anytime, all your FAQs answered on AskBTC at www.blackhawk.edu/askBTC

Smart Choice!

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BTC is an equal opportunity, equal access educator and employer.
How To Register ................................. 2
Table of Contents ........................................... 3-4
Overview of BTC ................................. 5-8
Overview of BTC ................................. 5-8
History ............................................................... 5
Business Hours .................................................. 5
Funding .............................................................. 5
Vision, Values, Mission, Philosophy, 
Civil Rights Legislation, Accreditation ................. 6-8
Facilities, Edventure ........................................ 8-9
Important Information ........................... 9-12
Orientation, Entrance Requirements, How to Apply,
Assessments ..................................................... 10
Educational Agreements ..................................... 10
Youth Options, High School Articulation ............. 10
International Students ..................................... 11
Program Wait Lists & Petition Process ............... 11-12
Financial ....................................................... 12-14
Tuition & Fees .................................................. 12
Financial Aid/Types of Financial Aid, Applying .... 12-14
Federal Work Study Program .......................... 13
Grants/Scholarships ........................................ 13-14
Veterans/Military Programs ......................... 14
Student Loans .................................................. 14
Students’ Rights & Responsibilities .................. 14
Disbursement of Financial Aid ....................... 14
Title IV .............................................................. 14
Helpful Websites ............................................. 14
BTC Foundation .............................................. 14
Registration & Records ............................. 14-17
Attendance ....................................................... 14
Registering for Classes ............................... 15
Adding/Dropping A Course, Refund Policy ........ 15
Full-Time/Part-Time Status ............................ 15
Pre-/Co-requirements ...................................... 15
Grading Procedures ........................................ 16
Account Holds .................................................. 16
Auditing Classes ............................................. 16
Credit For Prior Learning .............................. 16
Special Partnerships with Upper Iowa & Franklin Univ. 16
BW/WTCS Policy on Credit Transfer ............... 16
Distance Learning .......................................... 16
WI Caregiver Check ....................................... 17
Student Support Services ....................... 17-19
Advising/Counseling Services ..................... 17
Bookstore ....................................................... 17
Bus Transportation ......................................... 17
Career Center ................................................ 17
Children’s Learning Center ......................... 17
Disabilities Services ..................................... 17-18
Food Services .............................................. 18
Grievance Process ......................................... 18
Health Insurance ........................................... 18
Learning Center/Tutorial Services ................ 18
Library ........................................................... 18
Multicultural Affairs ...................................... 18
Parking .......................................................... 18
Student Identification Numbers/Cards .......... 19
Protective Services/Security .................... 19-21
Alcohol & Illegal Drug Policies ................... 19
Campus Safety ............................................. 19
Safewalk ......................................................... 19
Security of & Access To Facilities 
Criminal Offense/Arrests ......................... 19-20
Sex Offender Registry .................................. 20
Discrimination & Harassment Policy .......... 20
Privacy/Access To Student Records ........... 20-21
Retraining Guarantee Policy ..................... 21
Smoke/Tobacco Free Campus .................. 21
Unattended Children ............................... 21
Student Life ............................................... 21-22
Awards Program .......................................... 21
BTC Ambassadors ........................................ 21
Clubs & Organizations ............................... 21-22
Fitness Center .............................................. 22
Job Placement/Development ................. 22
Wisconsin Student Government ............... 22
Student Handbook/Planner....................... 22
Outstanding Student Achievement ............. 22
Special Recognition Award ..................... 22
Special Service ............................................. 22
Student Newspaper .................................... 22
Student Representative To The Board ......... 22
Program Information .............................. 23
Associate Degree Information, Apprentice Programs 23
Diploma and Certificate Programs ............. 23
Tech Prep ....................................................... 23
Academic Support Division .................... 24-32
Centers, Adult HS, Basic Skills Education .... 24
Course Listings & Descriptions .................. 24-31
CALC ........................................................... 31
English Language Learning ....................... 31
Family Literacy Programs ......................... 31
High School Contracting ......................... 31
Learning Centers ....................................... 31
RECAP Project ............................................. 31
Special Services for Students with Disabilities 32
Tutoring ....................................................... 32
GED/HSED .................................................... 32
Voc. Training for Special Needs/At-Risk Youth Program 32

For the most current schedule information, visit www.blackhawk.edu
TABLE OF CONTENTS

Wingspan ..................................................32

General Education/Course Descriptions ..........33-37
Outcome Assessment Statements ..................33
General Education Methods of Delivery ........33
General Education Course Descriptions ..........33-37

Outreach .................................................37-39
Outreach to Our Community .........................37-38
Continuing Education ....................................38
Outreach Continuing Education ......................38-39

Programs ...............................................39-121
Accounting .............................................39-41
Administrative Assistant ............................41-44
Agribusiness ............................................44
Air Conditioning, Heating & Refrigeration Technology .................................44-46
Airframe & Powerplant Mechanic ..................46-48
Apprenticeship ........................................49-50
Automotive Service Technician .....................50-51
Business Management ................................52-54
CNC Technician ........................................54-57
Computer Service Technician .......................57-58
Criminal Justice .......................................59-61
Culinary Arts ..........................................61-64
Dental Assistant .......................................64-65
Diagnostic Medical Sonography ..................66-69
Diesel & Heavy Equipment Technician ..........69-71
Early Childhood Education .........................71-73
Electric Power Distribution .........................74-75
Electro-Mechanical Technology .................75-77
Emergency Medical Technician ..................77-79
Farm Business & Production Management ......79-80
Fire Protection Technician ..........................80-81
Green Industry Technician ..........................81-83
Individualized Technical Studies ..................83
Industrial Engineering Technician ...............84-85
Industrial Mechanic ..................................85-87
IT-Information Systems Security Specialist ....87-88
IT-Network Specialist ................................88-91
IT-Web Analyst/Programmer ......................91-93
Laboratory Technician Assistant ..................93-94
Legal Administrative Professional ...............94-96
Marketing .............................................97-99
Mechanical Design Technology ..................99-100
Medical Administrative Specialist ...............101-103
Medical Assistant ....................................104-106
Medical Coding Specialist ..........................106-107
Nursing-Associate Degree .........................107-109
Nursing-Assistant .....................................109-110
Physical Therapist Assistant .......................110-112
Radiography ..........................................112-115
Supervisory Management .........................116-118
Technical Communications .......................118-119
Welding .................................................120-121

Certificates/Special Programs .....................121-129
Accounting Assistant ................................121
Basic Engine .........................................121
Brake & Lube ..........................................122
Business Technology ...............................122
CBRF ...................................................122
Computer Hardware Support ......................122
Basic Corrections Academy ......................122
Criminal Justice Academy ........................123
Part-Time Law Enforcement Academy ..........123
Basic Law Enforcement Academy ...............123
Civil Engineering ....................................123
Customer Service ....................................123-124
Database Management ..............................124
Healthcare Associate ...............................124-125
Industrial Engineering ..............................125
IT Info. Systems ......................................125
Java Developer .......................................125
Lodging & Hospitality Management ...........126
Network Support .....................................126
Personal Care Worker ..............................126
Phlebotomy .........................................127
Promotion ..........................................127
Quality Sciences ......................................127
Small Business Management ....................127
Supply Chain Management .......................128
Under Vehicle Spec. ................................128
VB.NET Developer ..................................128-129
Web Programming ..................................129
Welding Fabrication ................................129

Certificates/Shared Programs .....................129-134
Clinical Lab Technician ............................129-131
Dental Hygiene .......................................131
Civil Engineering ....................................132
Interp. Tech. .........................................133
Occupational Therapist Assistant ..............133-134

Campus Maps ........................................135-136

Catalog Course Index ..............................137-142

For more information, call: (608) 758-6900

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BLACKHAWK TECHNICAL COLLEGE
The Blackhawk Technical College Central Campus is located midway between the cities of Beloit and Janesville on over 80 acres of partially wooded rolling prairie. BTC offers approximately 50 programs leading toward an associate degree, technical diploma, certificate or apprenticeship. While the majority of classes are held at the Central Campus, classes are also offered at the Aviation Center at the Southern Wisconsin Regional Airport, the Center For Transportation Studies located north of Janesville, and at the Monroe Campus. An adult education center is also open in downtown Beloit, plus BTC has classrooms at the Rock County Job Center.

Modern, up-to-date facilities help to serve approximately 14,000 students annually—about 6,000 credit and 8,000 non-credit students each year in areas such as industrial and agricultural occupations, service occupations, business, marketing and continuing education programs.

Bus service is available to Blackhawk Technical College from both Janesville and Beloit. The Central Campus is the main transfer point between the two cities. Course listing available online at www.blackhawk.edu

Overview of Catalog

Since BTC continually evaluates program offerings and course content, information contained in this catalog should be interpreted only as an overview. Current curriculum sheets on all of BTC’s degree-granting programs are available at the counseling office.

General education, technical education, vocational education and related courses for apprentices are occupational entry offerings. Acceptance of transfer courses for credit is strictly a function of the receiving institution.

BTC reserves the right to cancel any tentatively scheduled class and also to combine class sections due to insufficient enrollment. In the event of class cancellation by BTC, refunds will be issued. Information regarding BTC’s refund policy for individual class drops is available from the Registration Office.

This catalog is published by Blackhawk Technical College’s Institutional Advancement Office. Course descriptions in this catalog are summaries of the actual course content. Blackhawk Technical College reserves the right to make changes in courses or regulations published in this catalog without obligation or prior notice.

History & Development

In 1911, six years before the use of federal funds for the promotion of vocational, technical and adult education throughout the nation, Wisconsin set up a special Board of Vocational and Adult Education.

As a result of this law, the cities of Beloit and Janesville took the steps necessary to establish vocational schools in their communities. These two schools have developed to form the nucleus of the present technical college system district which is now Blackhawk Technical College.

In 1965, the State of Wisconsin enacted a law designed to broaden the vocational, technical and adult education opportunities for youth and adults through the inclusion of the entire state into districts by July 1, 1970. The Beloit and Janesville schools, along with the major portions of Rock and Green Counties, were organized into a single system July 1, 1968.

Blackhawk Technical Institute, so named following this reorganizational process, became a reality. In August, 1987, along with the other 15 state technical institutes, Blackhawk Technical Institute became Blackhawk Technical College.

Business Hours

The general operating hours of Blackhawk Technical College are 7:30 a.m. to 10 p.m. Monday through Thursday; 7:30 a.m. to 4:30 p.m. Friday; and 8 a.m. to 2 p.m. Saturday. However, hours may vary for an individual department or division, such as the Children's Learning Center, or even outreach campuses or centers. In addition, hours are modified during the summer months. If in question, contact the department or campus/center to confirm their hours before your commute to that site.

Visit us online at www.blackhawk.edu.

Funding

The postsecondary and adult vocational education programs at BTC anticipate receiving federal funding in 2008-2009. These federal funds represent approximately six percent of the total projected operational costs for postsecondary and adult vocational education programs at BTC.
Our Mission and Purposes

The faculty, staff, and administration of Blackhawk Technical College, an institution of higher education, provide for the future of our community through excellence in technical education. We achieve this mission through:

Education for Employment by offering comprehensive occupational skills training which enables students to participate in the work force through Associate Degree, Technical Diploma, Certificate, and Apprenticeship programs;

Training, Retraining, and Upgrading for entry, retention, or advancement in a vocational or technical field;

General Education in core knowledge, skills, and attitudes which enable individuals to integrate learning into educational programs for personal and professional success;

Basic Education to help students achieve levels of proficiency to succeed in an increasingly complex society;

Economic Development by providing customized training and technical assistance to business and industry to foster the expansion of employment opportunities;

Equal Opportunities that remove barriers created by stereotyping and discrimination;

Personal Development to assist individuals who wish to enjoy personal growth;

Student Services which assist and support students to fulfill educational and occupational life goals as they relate to the current demands of the work force;

Interagency Cooperation for effective liaison between and among various private and public organizations;

Articulation and Transfer Opportunities with secondary schools and other educational institutions to facilitate the transition of students;

Community Service to provide benefits that help to build a strong and viable community.

Our Philosophy

The faculty, staff, and administration at Blackhawk Technical College believe that access to quality education and relevant hands-on experience are the first steps to professional and personal success in any endeavor. As a result, the development and maintenance of instructional offerings and related services focus upon maximizing the accessibility of these offerings to all students.

While the institution realizes that the acquisition of occupational skills is a critical factor in determining success, it also recognizes that today’s working environment demands social, scientific, and interpersonal skills which help the student to function in many other dimensions: personal, social, and cultural. Therefore, BTC recognizes the valuable contribution to personal and professional success made through its General Education course offerings.

Finally, Blackhawk Technical College recognizes that no education or experience takes place in a vacuum; rather, quality living demands that the educational process recognize the value of the individual and the unique contribution that each person makes to society today. As a result, your college seeks to maintain a high level of flexibility in its response to the individual training needs of every person enrolling in its programs.

BTC’s commitment to educational excellence is reflected in the adoption of a Guaranteed Retraining Policy.

The education and training offered at BTC is designed to enable students to acquire job entry occupational skills needed for full participation in the work force. BTC stands behind the training provided and will guarantee to provide at least six (6) additional credits of retraining, at no cost to the student, under certain conditions. Contact Student Services for more information.

BTC VISION

“BTC: Opening Doors to Life-Long Learning”

• Encouraging every student to develop his/her full potential
• Responding to the needs of the community and workforce
• Training people for employment
• Exploring, developing, and implementing new technology
• Providing educational opportunities to meet student needs
• Recognizing the impact of ideas and actions on others

BTC VALUES

BTC: Facing the future by promoting Trust, Diversity, Teamwork, & Empowerment

Facing the future by promoting Trust

• Acting with integrity and consistency
• Valuing yourself and others positively
• Acting with sincerity and honesty
• Keeping promises and following through
• Respecting the confidences of others

Facing the future by promoting Diversity

• Embracing the opportunities in diversity
• Seeking and celebrating uniqueness and differences
• Appreciating different viewpoints

Facing the future by promoting Teamwork

• Cooperating and considering the impact on all stakeholders
• Working together to provide better service
• Listening and participating actively

Facing the future by promoting Empowerment

• Accepting responsibility for actions and outcomes
• Encouraging positive interactions and creative solutions
BTC—Core Abilities

Historically, in many career and technical education programs, the focus has been on technical topics specific to the occupational area. Today’s fast-paced global marketplace is demanding more, and “soft skills” are emerging in importance. In today’s global workforce, soft skills are more directly related to professional success than ever before.

The faculty of Blackhawk Technical College has identified seven related topics of soft skills, or “core abilities” that are crucial to success both during school and after graduation. These essential skills are taught across programs and departments so that each Blackhawk Technical College student can expect to work towards improving and applying these critical soft skills and core abilities regardless of their program of choice.

1. Communicate Professionally
   • Demonstrate communication standards specific to occupational area
   • Write professionally
   • Speak professionally
   • Interpret professional documents
   • Demonstrate critical listening skills
   • Communicate using professional non-verbal behavior

2. Use Appropriate Technology
   • Select equipment, tools, and resources to produce desired results
   • Demonstrate proper and safe usage of equipment
   • Demonstrate occupational specific computer skills
   • Adapt to new technology
   • Use security measures to protect confidentiality

3. Work Effectively in Teams
   • Participate in identifying team goals
   • Respect the contributions and perspectives of all members
   • Work with others
   • Complete assigned tasks
   • Motivate team members
   • Resolve conflicts
   • Assess team outcomes

4. Demonstrate Professional Work Behavior
   • Follow policies and procedures
   • Meet attendance expectations
   • Manage time effectively
   • Dress appropriately
   • Accept constructive feedback
   • Take initiative
   • Work productively
   • Be accountable
   • Demonstrate organization/prioritization skills

5. Show Respect for Diversity
   • Interact with diverse groups respectfully
   • Treat everyone without bias
   • Seek information when necessary to interact effectively with others
   • Adapt to diverse situations
   • Demonstrate respect and common courtesy

6. Solve Problems Efficiently
   • Identify a problem to be solved
   • Select an appropriate problem-solving methodology
   • Recognize and gather relevant information
   • Apply mathematical reasoning
   • Utilize appropriate resources
   • Recognize when to change direction if needed
   • Recognize when the process is complete

7. Lead by Example
   • Recognize leadership qualities in others
   • Demonstrate legal and ethical standards of practice
   • Create and share a vision
   • Develop and implement a plan to accomplish a goal
   • Manage conflict, pressure, and change with constructive strategies
   • Be a colleague/peer others can depend on
   • Acquire the knowledge needed for success
   • Bring passion and energy to your work/project
   • Take risks when necessary or appropriate

Civil Rights Legislation

Services, financial aids, and other benefits of Wisconsin Technical College System schools are provided on a non-discriminatory basis as required by Civil Rights legislation.

Individuals applying for or receiving assistance through these schools who believe that there is any discrimination on the grounds of race, color, creed, sex, disability, national origin, sexual orientation, ancestry, age, pregnancy, or marital status should file a written complaint.

If it is felt that this discrimination is on the part of the Wisconsin Technical College Board, the complaint should be sent to the State Director, Wisconsin Technical College Board, 310 Price Place, P.O. Box 7874, Madison, Wisconsin 53707, (608) 266-1207.

If it is felt that the discrimination is on the part of Blackhawk Technical College, the complaint should be sent to the Affirmative Action Officer, Blackhawk Technical College, 6004 S County Road G, P.O. Box 5009, Janesville, Wisconsin 53547-5009, (608) 757-7773.
Approval/Accreditation

Blackhawk Technical College is accredited by the Higher Learning Commission, 30 N. LaSalle St., Suite 2400, Chicago, Illinois 60602, (800) 621-7440. Accreditation is vital because the accrediting body, such as the HLC, gives its approval to an institution of learning via an official review board after the school has met specific requirements. This approval determines the college’s eligibility to receive state and federal monies, such as grants for programs and financial aid for students. In December 2005, BTC was accepted as a participant in the Academic Quality Improvement Program (AQIP) by the HLC. Participating in AQIP involves continuous collaboration among BTC administration, faculty, staff, students, employers, and the HLC. Bringing this new accreditation process to campus has proven to be both challenging and rewarding.

AQIP at BTC was officially launched during the Fall 2006 in-service. Via the Appreciative Inquiry process and an on-line survey, information was mined from full-time and part-time faculty, administration, staff, and board members to discover potential areas for the college’s action projects. As a result, three action projects were selected, evaluated, and discussed at the November Strategy Forum by the participating AQIP colleges and by BTC’s Strategy Forum team members. Then, on December 6, 2006, approximately thirty BTC employees from across the college attended the AQIP Action Project Retreat, held off-campus, to discuss the three action projects. Final drafts of these projects were submitted to the HLC on March 1, 2007, and an AQIP external web site at http://www.blackhawk.edu/aqip/Default.htm was created and on-line by April 13, 2007. Simultaneously, to keep current and informed, BTC staff members continue to participate regularly in workshops and seminars, related to AQIP requirements.

Because AQIP is the accreditation track involving quality improvement, the process will continue to move forward at BTC. An AQIP Steering Team of nine members has been created, has met, and is planning strategies to complete the college’s upcoming accreditation requirements. As a result, BTC will continue to create and to maintain an excellent teaching and learning environment.

Blackhawk Technical College holds approval(*) or accreditation(•) by the following:

• Wisconsin Technical College Board
• Higher Learning Commission and a member of the North Central Association
• Wisconsin State Board of Nursing
• National League for Nursing Accrediting Commission
• Council on Dental Education/American Dental Assoc.
• Wisconsin Approval Board (for Education of Veterans & War Orphans)
• Federal Aviation Administration
• American Dietetic Association
• Division of Community Services
• Commission on Accreditation in Physical Therapy Education

Blackhawk Technical College-
COLLEGE FACILITIES

All programs offered by Blackhawk Technical College have also been approved by the Wisconsin Technical College System Board. The school is accredited to offer associate degrees, one and two-year technical diploma programs, and certificates, as well as apprenticeship programs. Programs offered by the college are approved by the State of Wisconsin Educational Approval Board for training veterans.

Renovated Facilities

Blackhawk Technical College has been able to substantially upgrade all of its major facilities through community support over the past several years. A large part of that came about through the passing of a $17.5 million building referendum in November of 2002. This allowed BTC to create additional space for a number of programs and classes at both its Central and Monroe Campuses, as well as renovate large portions of existing classrooms, offices and other areas.

Last summer, BTC’s Aviation Center underwent a $1.6 million renovation, which allowed it to be ready for the classes to start in the fall. In addition, renovations in the late 1990s and early 2000s to BTC’s Beloit Center and Center for Transportation Studies created facilities which greatly improved and enhanced the learning process.

Aviation Center

The Blackhawk Technical College Aviation Center is located at the Southern Wisconsin Regional Airport on U.S. Highway 51 between the city limits of Beloit and Janesville [at 4618 S. Columbia Drive, Janesville, WI. 53546-9120, (608) 757-7743].

The district-owned facility includes a 160-by-120-foot hangar featuring classrooms, a spray booth, shops, laboratories, student lounge, technical library, and faculty offices.

The Aviation Center is certified as an Airframe and Powerplant Mechanics School by the Federal Aviation Administration.
Beloit Learning Center

The Beloit Learning Center is conveniently located in downtown Beloit, in the building’s lower level at 444 East Grand Ave., Beloit, WI 53511-6270, (608) 757-7669). The Center provides basic academic and GED/HSED instruction, remedial education, and classes for English Language Learners.

Contact the Beloit Learning Center at (608) 757-7669.

Center For Transportation Studies

Located immediately (about one-quarter of a mile) west of the intersection of highways 14 and 51 north of Janesville [at 1740 Highway 14 West], this 30,000-square-foot newly remodeled facility houses two large shops for the Diesel and Heavy Equipment Technician and Automotive Technician programs; three classrooms; library; microcomputer lab; and a student lounge. Agricultural and apprenticeship classes are held at the center, as well as automotive, diesel, landscape, many non-credit offerings in computer applications and other areas of interest. Ample parking is available with access off U.S. Highway 14.

Central Campus

The Blackhawk Technical College Central Campus is located midway between Beloit and Janesville. Situated on over 80 acres of partially wooded prairie, the campus is home for most of BTC’s programs and services. The campus is easily accessible from Prairie Road (County Highway G) and Highway 51.

This comprehensive technical college facility comprises over 200,000 square feet. It includes instructional classrooms, shops and labs for accounting, marketing, word processing, administrative assistant, legal secretary, fire science, criminal justice, child care services, HVAC/R, welding, and machine tool. Also located on the Central Campus is a technical center integrating labs for electronics, electro-mechanical and mechanical design; and a health occupations complex for nursing, nursing assistant, dental programs, radiography, and healthcare associate. A technical library; media production and telecommunications center; child care center; bookstore; and food service, with seating for 600 are also housed on the Central Campus. Seminar and teleconferencing facilities are also available.

A Student Services Center is available to provide students with a variety of assistance programs. Facilities include offices for guidance, admissions and registration, placement, financial aids, veterans’ affairs, minority student services, and student activities. Vocational testing and career assessment are available through the Student Services’ Career Center. Facilities for individualized learning and remedial education are also located at the Central Campus.

Parking, accommodating approximately 1,200 vehicles, is available on the Central Campus, and bus service from Beloit and Janesville is also provided for students’ convenience.

Monroe Campus

The Monroe Campus of Blackhawk Technical College is located just off Highway 11 at 210 Fourth Avenue, Monroe, WI 53566-1033, phone (608) 328-1660. This friendly, full-service, handicapped-accessible campus has 4 computer labs equipped with state-of-the-art computer equipment, a distance learning lab designed for global classroom connections, fully equipped nursing, nursing assistant, phlebotomy and science labs, and general classrooms. The Campus offers a selection of full associate degrees, one year diplomas and short term certificates, as well as all general education core courses. A learning center offers GED/HSED and college prep courses and GED/HSED testing services. Over 150 continuing education courses are offered each year at the Campus. A full-time counselor provides students with academic advising, support and career planning assistance. BTC staff works with local businesses and industries to provide cutting edge training for Green County employees. Small class size and a personalized learning environment ensure the success of Monroe Campus students.

Ed-Venture Program Course:
Experiential Learning at Its Best

Located at the northeastern edge of the central campus of BTC, an experiential learning site known as the “Ed-Venture Course” is available to area businesses, organizations, community groups as well as BTC staff and students. The experiential learning activities conducted on the “Course” help individuals and groups build skills in the area of leadership, teamwork, awareness, trust, problem solving, strategic planning, confidence, change management and communication. With the training being coordinated through BTC’s Business & Community Development Division (BCD), events and training seminars can be customized to meet the goals of individuals and organizations. Pricing will vary depending on the users needs.

The “Ed-Venture Course” includes both low and high structures. In addition to the permanent structures, numerous portable learning activities are available to choose from which provide the convenience of allowing businesses and organizations to schedule events at their own sites. The mentally challenging elements are designed to provide opportunities for individuals and teams to learn about how they handle risk and challenge while practicing skills in teaming, problem solving, critical thinking, communication, and working effectively together.

Contact BCD today to discover how this exciting approach to training, personal, and corporate change will work for you. (608) 757-7630

Orientation

Group orientation sessions are conducted prior to the beginning of each semester. These sessions will acquaint students with the physical and social environment of BTC, including procedures, regulations, opportunities, and resources to facilitate student adjustment.

Contact the Beloit Learning Center at (608) 757-7669.
Entrance Requirements

Blackhawk Technical College maintains an open-door admissions policy for all prospective students. This means that anyone can enroll in courses and have the opportunity to learn new skills or improve existing skills. Admissions requirements may vary from program to program, but generally include high school graduation, GED/HSED, or ability to benefit as determined by standardized tests.

How to Apply

If you want to enroll in a program you should follow this process.

General Instructions

• Complete all sections of the application form.
• Please print clearly.
• Consult the catalog for specific program information and other details.

Application Fee

• Attach the $30 nonrefundable application fee to the form mailed to the college. Send a check or money order made out to the college.
• The $30 fee per college is a one time only fee.
• If you apply to more than one college, you must attach a $30 application fee to each application form.
• Do not send cash.

Transcripts

• Request official copies of all academic transcripts, including high school, GED, HSED, college or university. Contact each institution and ask to have your official transcripts mailed directly to the Admissions Office of the college(s) to which you are applying.
• If you are still enrolled in high school, send a transcript of the courses you have completed along with a list of the courses to be taken prior to graduation.

Testing/Assessment

• BTC may require testing for acceptance into the college. Test results are generally used to assist in placing you in courses and/or programs where you can succeed academically.
• If you have taken the ACT or SAT, please send your score report to the college.

All these steps must be completed in order to be accepted into the college.

To expedite the application process, it is recommended that you submit all of the above documentation together. Applications are handled on a first come, first serve basis. We cannot guarantee admission to the college for applications received and/or completed less than one month prior to the start of the semester. Applications received after noon of the first Friday following the start of a term will not be processed for that term; they will be processed for the next available term. Timely completion of all admission and registration requirements is also critical for those applying for financial aid.

Assessment

All associate degree and technical diploma programs at Blackhawk Technical College require pre-entry assessment. Most pre-entry assessments are advisory only; a limited number have mandatory cut-off scores.

In most cases students entering Blackhawk Technical College will take the Compass assessment instruments. The Compass is an untimed assessment taken on computer. The Compass is a basic skills assessments in reading, language usage, and numerical skills. A small fee will be collected at the assessment site. Accommodations are available for students. You will need to complete the Compass assessment unless you have graduated from a four-year college or university, earned an Associate Degree at a Wisconsin Technical College, or completed the ACT. (Some health programs have specific requirements for admission. See program information for details.)

Educational Agreements

A joint educational agreement exists between Rock Valley College, Rockford, Illinois and BTC. This agreement expands the number and types of programs available to BTC District residents. A list of approved programs is available at the Student Services office.

Youth Options

The Youth Options Program allows all public high school juniors and seniors who meet certain requirements to take postsecondary courses at a Wisconsin Technical College or the UW institution, or one of the state’s participating private, non-profit institutions of higher education. The program opens the door to greater learning opportunities for students who are considering a technical career, students wishing to begin college early, or students who want to prepare to enter the workforce immediately after high school graduation. Further information about this program can be obtained at area high schools or from the BTC Student Services office.

High School Articulation

Blackhawk Technical College and high schools in Rock and Green Counties now make it possible for high school students to earn an associate degree or technical diploma in less time. High school students can be awarded Blackhawk Technical College credits by enrolling in high school courses which have been approved for advanced standing. Some courses may have additional requirements. Students are advised to check with their high school guidance counselor or the BTC Tech Prep Specialist.

A number of courses in general education, business, and technology/industry may qualify for advanced standing. Basic requirements for the transcripted credit and advanced standing program may vary from high school to high school. Students wishing to apply for college credit or obtain a complete listing of the high school courses that qualify under the BTC agreement should contact their high school guidance counselor.
International Students

Blackhawk Technical College is authorized to issue I-20s for students attending under F-1 visas. However, enrollment of foreign students in the education programs at BTC will be based on space availability. BTC is not authorized to issue I-20s 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 out-of-state tuition. Required for admission include:

- Application to a credit program and application fee.
- TOEFL score of 500 (paper version) or 173 (computer version) or better.
- Satisfactory placement test - COMPASS or ACT.
- Secondary and post-secondary transcripts.
- Financial support verification.
- International student forms.
- Deposit toward tuition for the program in which student seeks to enroll.
- Students wishing to transfer - verification of good academic standing.

Issuance of an I-20 in contingent upon meeting all admission requirements.

Program Wait Lists

A program wait list may be established when there are more applicants than there are spaces available in a particular program. If your name is placed on a wait list, you will be notified by the Admissions Office. You can choose to remain on the wait list or withdraw your application. Students should contact the program advisor or counselor for additional information about the process.

FREQUENTLY ASKED QUESTIONS-
PROGRAM WAIT LISTS

What is a wait list and why do we have them?

Program Wait Lists are established when there are more applicants than there are spaces available in a particular program. For example, the Automotive Technician program can accommodate 25 students but 35 students have applied to the program. The first 25 students who applied will be admitted to the Automotive Technician program, the remaining 10 students are placed on a Wait List for the future. Please note: the following programs do not maintain wait lists - dental hygiene, diagnostic medical sonography, nursing, physical therapist assistant and radiography; students interested in these programs are required to go through the petition process. See Petition Process.

How does my name get on a wait list?

Students are added to a wait list at the point at which a program is declared (at the time that the application process has been completed or at the time a program change information form is filed in the Admissions Office).

How are names ordered on the wait list?

Students are added to the wait list in the order in which the application process is completed, or program change information form is submitted (i.e. first submitted, first added), or when all program ready requirements have met been met (note: it is the student’s responsibility to contact the designated counselor/advisor when all program ready requirements have been met).

Can my name be removed or move on a Program Wait List?

Yes, students on a wait list will receive a letter of intent each year (in early fall), which verifies continued interest in the designated program. This letter must be returned by the due date. If students do not return the letter, or request to be removed from a wait list, then all subsequent names are adjusted to reflect the change.

Occasionally there are computer and/or handling changes, which may require us to correct the numbering of students on a wait list. When this occurs, students may see their numbers change slightly. The counselors/advisors carefully consider and verify all changes before they are made to the list.

If my name comes up on a program wait list, can I choose to decline and wait for a future year/semester?

Yes, students can decline a spot in a program and can request to begin in a different semester. Students are allowed only one deferment to a future semester; students are encouraged to think carefully about which semester would be most appropriate. Should students decline a spot in a program a second time, they will forfeit their spot and be moved to the bottom of the wait list.

What does it mean when a program has a “limited application period”?

When a program wait list exceeds 200% of program capacity, the program is then “limited” in accepting new applicants. This means that new applications will not be accepted nor will students be able to change their program until a designated time during the year. In addition, names will not be added to the wait list until the time at which the program is open. Students should contact the program counselor/advisor to find out when programs will open for applications.

Can I check my status on a wait list?

Students should contact the admissions staff to determine their status on a wait list. This information is not sent to students through the mail.

If I am on a wait list, can I enroll in general education and/or elective courses?

Yes, students can begin taking the general education and elective courses that are required for their program, even if they are restricted from taking core program courses. Please make an appointment with the counselor/advisor to discuss this option.

If I have additional questions, whom should I ask?

Students should contact the designated counselor/advisor for the particular program that has the wait list.

Program Petition Process

Some programs have a greater number of students than available core course seats. For such programs, BTC utilizes a petition process. As directed by TCS 10, students residing in the BTC district receive first priority. Other criteria used are application completion date and the number of eligible petitions previously submitted.
FREQUENTLY ASKED QUESTIONS - PETITION PROCESS

Which programs require the petition process?
Students interested in Dental Hygiene, Diagnostic Medical Sonography, Nursing, Physical Therapy Assistant and Radiography are required to petition for clinical. The petition dates are determined annually and are available on the BTC website at www.blackhawk.edu or in the Counseling Center at the Monroe or Janesville campuses.

How do I begin the process?
Students should begin by completing the application process. Applications are available at each campus and on the BTC website at www.blackhawk.edu.

Is there a difference between applying to the College and petitioning to a program?
YES! All students, regardless of program, must complete the admission process. After a student is accepted into the college, students submit a petition form during the designated petition period when they are prepared to begin core clinical courses. These dates are determined annually and are available on the BTC website at www.blackhawk.edu or in the Counseling Center at the Monroe or Janesville campuses.

What requirements must I meet in order to petition?
Each of the five programs (Dental Hygiene, Diagnostic Medical Sonography, Nursing, Physical Therapy Assistant and Radiography) have unique “program ready requirements”. Program ready requirements may consist of specific coursework and minimum pre-admission test scores. Consult the BTC catalog or the website (www.blackhawk.edu) for specific program ready requirements.

Can students petition to more than one program?
NO! Students are allowed to petition to only ONE of the following programs in a year: Dental Hygiene, Diagnostic Medical Sonography, Nursing, Physical Therapy Assistant OR Radiography. Students are encouraged to explore these career fields or job shadow to determine the best fit. Students can also register for the Introduction to Health Careers course offered at the Monroe and Janesville Campuses. The Counseling and Career Center staff can assist students with career exploration.

If I petition this year and do not get in, do I need to petition again?
YES! Students MUST submit a petition form EACH year during the designated petition period. This is the students’ way of indicating their continued interest in the program.

With the petition process, how are students selected?
Students will be selected based on date of acceptance to the program (date students were placed on wait list for those already on a wait list), fulfillment of program ready requirements, and district residency.

Where can I obtain additional information on the process?
Students are encouraged to visit the BTC website at www.blackhawk.edu or stop in the Counseling Center at the Monroe or Janesville campuses.

FINANCIAL

Tuition And Fee Payment
You can pay your tuition and fees using one of the four methods below.

1 Cash: Pay full amount of tuition and fees by cash, check, MasterCard or VISA at time of registration.

2 Deferred Payment Plan: You must indicate your desire to participate in a payment plan at the time of registration. All payment plans require a non-refundable service charge. You will be billed for outstanding balances. *In some cases, Account Holds will be placed on a student’s account in an effort to alert a student that their attention to a matter is required. Such holds can impact their ability to register, get transcripts, or access Library resources until they are resolved.

3 Financial Aid: You must have completed your FAFSA (Free Application for Federal Student Aid). Once the application is completed and a valid student aid report (SAR) is released to BTC, you can defer payment of your tuition and fees until the financial aid award letter is returned and financial checks are received. You will be sent a monthly invoice until tuition is paid in full. Your outstanding balance will be paid as the financial aid is received. If financial aid does not cover the entire balance due, you will be liable for payment of the balance due.

4 Agency/Employer Funding: If a written authorization from the agency or employer is on file, you will be able to defer payment of tuition and fees. The sponsor will be billed for the authorized costs. If the sponsorship does not cover the entire amount of the tuition and fees, you will be responsible for paying the remaining balance.

5 Collection Issues: If you are delinquent in paying the outstanding balance, you will not receive any grades, transcripts or degrees, and will not be allowed to register for additional classes until all balances are paid. If you are delinquent in abiding by any portion of the plan you may be dropped from your courses and possibly sent to collections.

Out-of-State Tuition
Applicants who do not reside in Wisconsin and enroll in a program which is not covered under one of BTC’s reciprocity agreements will pay a higher tuition cost. A limited number of waivers may be granted.

Types Of Financial Assistance
There are four basic types of financial aid available for Blackhawk Technical College students:

• grants, scholarships, and part-time employment, loans.

The type of financial aid provided will differ for each student because the aid package is designed specifically for your individual needs and circumstances. A single type of financial aid rarely meets all educational expenses. Therefore, financial assistance generally must come in the form of a combination of financial aid.
Applying For Financial Aid
Applying for financial aid should be completed months before the start of the academic year. BTC has a priority deadline for applying and some types of aid are awarded quickly and may not be available if you submit your application late.

For information on how to apply for Financial Aid, you may go to www.blackhawk.edu/fa or call the Financial Aid Office at (608) 757-7664 or toll free at (800) 498-1282 ext 7664. (Financial aid assistance is also available at the Monroe Campus.)

Federal Assistance
(For current information and more details on the federal programs go to www.studentaid.ed.gov)

Pell Grant
The Pell Grant does not have to be repaid. It is a federal grant upon which all other aid is built. Assistance is given on the basis of need. Pell Grants may be paid to students attending less than half time.

Supplemental Education Opportunity Grant (SEOG)
The SEOG program is available to students if they are enrolled in at least 6 credit hours and have financial need. The SEOG is awarded to the students determined to have the most need. Individuals must qualify for a Pell Grant to be eligible. Assistance ranges from $200 to $400 per year.

Federal Work Study Program
Work study is based upon financial need. If eligible a student may work a maximum of 25 hours per week on campus. Funds for Work Study will be paid directly to the student based on the number of hours they have worked. “On-the-job” performance is a criterion for continuation. Summer work study is also available on a fulltime basis for those who qualify.

Federal Family Educational Loan (FFEL)/Stafford Loans
The federal Stafford loan program provides low interest loans through participating lenders. For information on how to apply for a Federal Stafford loan at Blackhawk Technical College, please refer to our website at www.blackhawk.edu/fa.

NOTE: First time borrowers are required by federal regulations to complete entrance loan counseling and sign the necessary forms and promissory note. For more information please go to www.mapping-your-future.org.

Students may be eligible for a subsidized or unsubsidized Stafford Loan. A subsidized loan is based on need, whereas an unsubsidized Stafford and PLUS Loans are not based on need. The PLUS Loan is an auxiliary type of loan that provides additional funds for educational expenses. PLUS Loans are available to parents of dependent students only.

State of Wisconsin Assistance
(For current information and more details on the Wisconsin state programs go to www.heab.state.wi.us/programs.html)

Wisconsin Higher Education Grants (WHEG)
The WHEG program can provide a grant to supplement the Pell program. To qualify, the person must be a Wisconsin resident for at least one year and have financial need. The Higher Educational Aids Board of Wisconsin determines eligibility based on the financial aid application. Students must be enrolled at least half-time (six credits) in order to be eligible.

Minority Retention Grant
The Minority Retention Grant is available to minority students who qualify through the Higher Educational Aids Board. Students must be enrolled in their second year of a two-year program, be a U.S. citizen (or eligible non-citizen), and show financial need. Application is made through the Minority Affairs and Financial Aid Offices on campus, located in the Student Services office.

TIP
A state grant used to supplement the WHEG Program, TIP is targeted for disadvantaged, first-year BTC students.

Native American Grants
These grants are available to students who are at least 25 percent Native American and show financial need. Application is made through your tribal office.

Private Scholarships
Many private scholarships are available to BTC students. Information may be obtained through the BTC Financial Aid Office, online at www.blackhawk.edu/fa or www.fastweb.com.

International Students
International students may file for financial aid given the following requirements:

1. U.S. permanent resident and have an Alien Registration Card (I-151 or I-551).
2. Other eligible non-citizen with a Departure Record (I-94) from the U.S. Immigration and Naturalization Service showing any one of the following designations:
   a. Refugee
   b. Asylum Granted
   c. Indefinite Parole and/or Humanitarian Parole
3. Other eligible non-citizen with a Temporary Resident Card (I-688).

Contact the Financial Aid Office on campus for further info.
Other Grants or Scholarships

There are a number of other grants and scholarships available through the Student Services office, the Blackhawk Technical College Foundation, Inc., and the Blackhawk Association for Career & Technical Education (BACTE). Individuals are encouraged to check with those offices located on the Central Campus (BACTE and Foundation offices in the Administration Building) for further information.

Veterans/Military Programs

Federal Department of Veteran Affairs

A variety of federal programs are available if you have participated in the Montgomery GI Bill program while serving in the military. You may also be eligible for Reserve benefits if you are currently an active member of the Reserves or National Guard. Dependents of disabled or deceased veterans may be eligible for benefits also.

For more information about Veteran education benefits through the Federal Department of Veteran affairs (Montgomery GI Bill) go to www.gibill.va.gov or call (888) 442-4551.

WI Department of Veteran Affairs

State programs in the form of tuition and fee reimbursement and part-time study grants may be available for Wisconsin veterans. National Guard members may be eligible for the National Guard Tuition Grant.

For more information about Wisconsin Veteran Education Benefits go to http://dva.state.wi.us or call the Rock County Veteran Service office at (608) 757-5552.

Veteran Benefits at Blackhawk Technical College

Once you have determined you are eligible to receive veteran education benefits and you would like to use them at BTC, you must:

- Fill out a Veteran Program/Term Requesting Benefits form each semester you would like to use your benefits at BTC
- Be accepted into and attending courses in a program approved for veteran benefits
- Be taking courses within your degree requirement
- Maintain academic progress within your program of study

For more information contact the Financial Aid and Veterans Coordinator at (608) 757-7716.

Students’ Rights and Responsibilities

For a complete list of your Rights and Responsibilities, please go to www.blackhawk.edu/fa under General Information, click on Students’ Rights and Responsibilities.

Disbursement of Financial Aid

All financial aid is disbursed through the Accounting Office. If the combination of grants and loans exceeds all costs to the college, a refund check will be issued to you.

Return of Title IV Financial Aid

Federal Law now states that if you receive Federal Financial Aid and withdraw, drop-out, or receive failing grades in all your classes before completing 60% of the semester, you may have to return some Federal Aid that you received. Failure to attend any of your classes will require you to repay 100% of all the aid you received. Please contact the Financial Aid Office for a copy of the Title IV Refund Policy or view the policy online at www.blackhawk.edu/fa.

Helpful Websites

www.blackhawk.edu • www.studentaid.ed.gov
www.mapping-your-future.org • www.fafsa.ed.gov
www.pin.ed.gov • www.finaid.org
www.dva.state.wi.us • www.gibill.va.gov
www.fastweb.com

Foundation

The Blackhawk Technical College Foundation, Inc. is a non-profit organization created to support the objectives of BTC. It is a convenient means for individuals and groups to make tax-exempt/deductible contributions for the support of the objectives of the college, and it provides a source of funds that may be used for purposes that cannot be supported by public funds or that might be more appropriately financed from voluntary contributions. One of the Foundation’s major activities is supporting BTC students with a variety of scholarship opportunities. Material gifts as well as monetary gifts are welcomed by the Foundation. Contact the Institutional Advancement Office, located in the Administration Building on the Central Campus or call (608) 757-7769.

Attendance

The purpose of education is to develop knowledge and skills in students. This can best occur through the act of involvement between you as a student and your teachers. For this reason, attendance in scheduled classes is important to your success.

Most faculty have attendance policies for their courses. You are strongly urged to attend all class periods as scheduled. When you fail to attend classes regularly and when poor attendance endangers satisfactory completion of the course, the instructor will notify the appropriate counselor so that you can be contacted regarding attendance concerns.

If you decide to withdraw, or if you cannot complete the term, it is your responsibility to contact the Registration Office to officially withdraw from your class(es). If you do not officially withdraw, you will receive the grade of “F.”
Registering for Classes

Registration is the process of enrolling for classes. Time schedules which include registration dates are available prior to registration. You must be registered for all classes that you attend. Registration is necessary in order for your official record to properly reflect your participation in educational activities.

A student does not have a guaranteed seat in a class unless all fees have been paid or a deferred payment agreement has been signed. It is your responsibility to keep informed of all registration requirements and procedures. By registering for courses, you accept responsibility of all fees. Non-attendance does not constitute a cancellation of that obligation, nor does it officially withdraw you from the class.

Continuing students will register for the next semester’s classes before new students. This gives students the first opportunity to enroll in the courses needed to complete program requirements. A registration schedule will be available to you providing specific procedures to be followed including the date and time of registration, estimated cost, and other applicable information. It is recommended that students register on-line as a matter of convenience by going to www.blackhawk.edu and choose “Banner for Students.”

Adding A Course

You can add courses to your schedule during the first week of the semester. You can add courses through the Web, or by completing a Course Change form and submitting it to the Registration Office. If you add a course, all additional tuition and fees must be paid at that time, or a payment plan must be established.

Dropping A Course

It is your responsibility to notify the College if you intend to drop a course. You may drop a course through the Web or by completing a Course Change form and mailing or faxing it to the Registration Office. Students will be charged a $2 drop fee per class. When dropping a course, you may be eligible for a refund consistent with the WTCS refund policy. Any refund will be mailed to you within two weeks.

Course withdrawal may affect your status in your program. Therefore, it is strongly recommended that you discuss course withdrawal with your instructor and/or counselor.

- Non-attendance does not constitute an official withdrawal. You will be responsible for fees not paid. It is particularly important for you to follow these procedures if you are dropping a course. If you do not officially withdraw, you will receive a grade of “F” for the course(s).
- You may not drop a course if less than 20 percent of the class remains. In the case of extenuating circumstances, you may obtain written permission from the appropriate dean.
- You may not drop a course if an academic misconduct issue is pending.

NOTE-Adding/Dropping Courses

You should be aware that adding or dropping a course may affect your eligibility for financial aid. If an agency or program is helping support your educational expenses, you may be required to have your schedule change approved by the agency or program staff.

Refund Policy

You may have a portion of your tuition and fees refunded if you drop or withdraw from a course. The amount of the refund will depend on when you leave the course. Refunds will be issued in accordance with the following state guidelines:

100% Refund

If a student applies for a refund before the first class meeting that the student is scheduled to attend, 100% of student fees shall be refunded.

A student who drops a course before or at the time 10% of the course’s potential hours of instruction have been completed, and adds another course on the same day, shall receive a 100% credit for all applicable student fees for the dropped class.

80% Refunds

80% of all applicable student fees are to be refunded if the application for refund is made after 10% but before more than 20% of the course’s potential hours of instruction have been completed.

60% Refunds

60% of all applicable student fees are to be refunded if the application for refund is made after 10% but before more than 20% of the course’s potential hours of instruction have been completed.

0% Refunds

No refund is to be made if the application for refund is made after 20% of the course’s potential hours of instruction have been completed.

In order to receive a refund, except in cases when BTC cancels or discontinues a course, you must request the refund. BTC will issue the refund within two weeks of your request. A charge per course may be retained to help defray processing expenses. Exceptions to this policy may be made in the case of death, extended illness, or other extenuating circumstances determined appropriate by the Program Counselor.

Full-Time/Part-Time Status

A full-time student is someone taking 12 or more credits during a semester. For summer sessions, it is someone who is taking six or more credits. A part-time student is one taking less than 12 credits per semester or fewer than six credits during the summer session.

Prerequisites/Corequisites

Certain classes may require that you take particular courses prior to (prerequisite), or in conjunction with (corequisite) other classes. Students must successfully complete these in order to move forward in their select program. Generally, a grade of C- or higher is required for a prerequisite. However, some classes have more stringent regulations and students should be aware of these requirements by discussing it with their program advisor or counselor.
Grading Procedures

Your GPA is computed by multiplying the point value of each grade by the credit value designated for each course. The sum of these figures is divided by the number of credits. A minimum 2.0 GPA is needed to maintain satisfactory academic standing and is required for graduation. Grade point averages (GPA) are figured on a 4.0 scale. The point equivalents are listed below. It is the student’s responsibility to consult with his/her instructors as to his/her progress.

Credit for Prior Learning

Blackhawk Technical College will grant credit for prior life or work experiences. Credit may be determined by proficiency examinations where the content and depth of study is parallel to that contained in BTC’s courses. In all cases, final determinations are reached by the Credit for Prior Learning Committee.

Account Holds

In some cases holds will be placed on a student’s account in an effort to alert a student that their attention to a matter is required. Such holds can impact their ability to register, get transcripts, or access Library resources until they are resolved.

Auditing Classes

You may audit a credit class with the consent of the appropriate Dean. If a student repeats a course, it must be for credit and course objectives must be met. A decision to audit must be made at the time of registration. A student taking a class for audit may not change to credit, nor may the student change from credit to audit after the class begins. Students electing audit status will be held responsible for tuition and fees. However, no credit will be granted for the course. Your transcript will show an “AU” as a grade. Tuition will be waived for senior citizens who are 60 years old and older. However, all other fees will be charged. Please call for more information.

Credit for Prior Learning

Blackhawk Technical College will grant credit for prior life or work experiences. Credit may be determined by proficiency examinations where the content and depth of study is parallel to that contained in BTC’s courses. In all cases, final determinations are reached by the Credit for Prior Learning Committee.

Special Partnerships With Upper Iowa, Franklin Universities

Blackhawk Technical College has special partnerships with both Upper Iowa University and Franklin University. Upper Iowa has an office on BTC’s Central Campus and offers most of their classes at BTC’s facilities during evenings and weekends. These courses are designed to lead to a Bachelor’s degree in any of several different majors. BTC’s arrangement with Franklin University allows students an online degree completion program, combining on-campus classes at BTC with online courses through Franklin. Contact Franklin at (888) 341-6237 or visit www.alliance.franklin.edu.

UW/WTCS Policy on Credit Transfer

Students enrolled in the Wisconsin Technical College System who wish to continue their education in the University of Wisconsin System may be eligible to transfer credit toward a bachelor’s degree. UW institutions may accept in transfer up to fifteen (15) BTC general education credits. In cases where UW institutions find such course work not acceptable for transfer, BTC students should have an opportunity to earn credit by examination if the UW institution offers a course which is generally comparable in content and/or title.

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 BTC’s Associate Degree program and a program offered at a UW System institution.

Students transferring from the WTCS may earn credits by earning appropriate scores on national standardized examinations (e.g., College Level Examination Program) or examinations developed by the UW System transfer institution.

For more information about transfer opportunities, you should consult with your counselor or contact the admissions office at the UW System institution or private college of your choice.

Distance Learning

BTC provides alternative delivery instruction in independent study, video-based courses, computer assisted-based courses, and interactive instructional television formats. These courses are identified in BTC course listings as ITV (interactive television), VID (Video-based), CAI and CBT (computer assisted-based instruction), and INDP (independent study). In addition, the VID and INDP courses are listed in special sections in the course schedule.
Wisconsin Caregiver Background Check

As of October 1, 1998, Wisconsin law requires Caregiver Background Check for education and employment in most hospitals, long-term care facilities, home health agencies, and childcare centers. Students accepted into programs with off-campus clinical/externship requirements must complete a background information form disclosing any acts, crimes, or convictions before entry into the program. Programs with Wisconsin Caregiver Background check requirements include:

• Certified Nursing Assistant (CNA) • Diagnostic Medical Sonography • Early Childhood Education • EMT
• Healthcare Associate • Medical Assistant • Nursing (ADN)
• Phlebotomy • Physical Therapist Assistant (PTA)
• Radiography

Students with any criminal history are placed in the clinical/externship setting at the discretion of the clinical agency. In cases of severe criminal background, the student may be denied placement.

The bookstore is open Monday and Tuesday from 9:00 a.m.-7:00 p.m., Wednesday and Thursday from 9:00 a.m.-5:00 p.m., and Friday from 9:00 a.m.-1:00 p.m. The bookstore is open additional hours, for your convenience, during the first week of classes. Call 757-7672 for more specific information or access their website www.efollett.com which is also linked to BTC’s website. Services you can access via Follett’s website include reserving and pre-paying online and then picking up in the store and buying online and having your books shipped. You must have a credit card to have the books shipped, or to prepay!

Bus Transportation

Public transportation is offered between Janesville and Beloit. There are twelve stops each weekday at Central Campus between 6:00 a.m. (first stop at BTC is 6:15 a.m.) and 6:15 p.m. (last stop at BTC is 5:40 p.m.). The schedule has been coordinated with the transit companies so the stops coincide with class schedules to the degree possible. Bus schedules, fare information, routes, etc. are available at the information Desk at the Central Campus.

Career Center

The Career Center can help you with your career planning and employment needs. Individual career counseling is available by appointment. A fee may be charged for selected testing services. Career Center resources include printed materials on occupations, career planning, resume writing, interviewing skills, college catalogs, and employers. Other resources include videos, computer software programs, and self-assessments such as interest, trait, work values inventories, and computerized job search. Computers are available for resume preparation, and the Internet may be accessed in the Career Center to assist you with employment opportunities. Staff is available to assist you in your use of the Career Center. These services are also available at the Monroe Campus.

The Career Center is open Monday through Friday. Some evening hours are available by appointment. Contact (608) 757-6329 for information or see your counselor.

Childcare Learning Services/CHILDREN’S LEARNING CENTER

The BTC Children’s Learning Center is for use by students attending Blackhawk Technical College. The center is licensed by the State of Wisconsin and employs a teaching staff certificed in early childhood education. Activities the children can engage in are large motor, language development, math, science, sensory, and small motor skills. Children from birth through six years of age are eligible to attend. The center is open daily during the school year, normally from 6:30 a.m.-5:30 p.m., but operating hours may vary throughout the year and are subject to change. You are encouraged to contact the Children’s Learning Center at (608) 757-7751 for more information about the hours and services provided.

Disabilities Services

BTC assists students with disabilities by providing special accommodations, when requested. If you have a disability for which you need accommodations, you should contact your instructor, a BTC Counselor or the Special Populations Instructor at (608) 757-7796. Reasonable accommodations, including academic and technical program adaptations, can be made to assist you in achieving your career goals.

For the most current schedule information, visit www.blackhawk.edu
Disabilities Services (cont.)

If you request an adaptation of a credit course, your counselor, instructor, and Special Populations Instructor will assist you in developing and implementing an educational plan. A Reasonable Accommodations Request Form will need to be completed and approved. This form can be obtained by contacting your counselor in Student Services or Special Services staff in room 2404 or the main reception desk at the Monroe Campus. BTC standards regarding course quality and academic progress must be maintained.

For individuals who are hearing impaired, TTY (text) telephones are available at each BTC facility. By calling the main telephone number at each center, you will be able to communicate directly from your personal TTY (608) 757-7761.

BTC can also provide accommodations for students and guests with disabilities participating in activities and using BTC facilities. If you require a special accommodation, you should contact the Student Services Office (608) 757-7713 or information desk at the Monroe Campus (608) 328-1660 to request accommodation services or equipment. In most cases, it is desirable to request accommodations at least two (2) weeks before the event, however, requests with shorter notice will be provided whenever possible.

Food Service

The Student Commons is the focal point for students on the Central Campus. The adjacent food service area (The Courtyard Grill) serves reasonably-priced breakfasts, lunches, and snacks through a contracted service with hours posted.

A number of student lounges are available for gathering and studying in a relaxed, quiet setting. Several of the lounges have vending services for snacks. Food and beverages are only allowed in the Commons, Blackhawk Room, and two designated student lounge areas. Food and beverages are not allowed in classrooms, hallways, lobby areas, or restrooms. You are encouraged to follow this rule and help keep the facilities clean and neat.

Grievance Process

A student can file a grievance if he/she considers a college practice, policy, rule or regulation to have been applied in an unfair, inequitable, improper, or discriminatory manner or in any other way that hinders the education process. Students with disabilities should contact the ADA Officer and follow steps in the Student Grievance Procedure.

Health Insurance

Student insurance programs are available on an individual basis for interested students. Brochures describing the coverage is inserted in the registration materials, which each student receives prior to the beginning of the school term. Students desiring further information may contact the Student Services Office on the Central Campus.

Learning Center/Tutorial Services

Learning Centers are available at the Central Campus, Monroe Campus, and Beloit Learning Center to assist you with academic and study skills. The centers will provide tutorial and remedial academic classes intended to help you successfully complete your program/course requirements and assignments. The Central Campus Learning Center is open from 8 a.m. to 3 p.m. and 5 p.m. to 8 p.m. Monday through Thursday, and

Friday from 8 a.m. to 11:30 a.m. Services are provided at no cost to you. Call the Monroe Campus at (608) 328-1660, Rock County Job Center (608) 741-3566, and the Beloit Learning Center at (608) 757-7669 for hours of operation.

BTC counselors coordinate with Learning Center staff to provide further assessment, career counseling, and referral to the Master Student course for those students who are not making satisfactory academic progress or who have limited English proficiency.

If you are interested in improving your basic academic skills, or need instruction to prepare for obtaining your GED/HSED or high school diploma, you may attend classes at a variety of outreach or community sites. Training is provided at no cost to you. For more information about class schedules and location, contact the Learning Center on Central Campus at (608) 757-7676.

Library

Three libraries are available to students at BTC. The Central Campus Library is open from 7:00 a.m.-9:00 p.m. Monday through Thursday and from 7:00 a.m.-3:00 p.m. on Friday. It is also open Saturdays from 9:00 a.m. to 1:00 p.m. The Aviation Center Library is aviation-oriented while the Center For Transportation Studies Campus Library is agriculture and diesel-oriented. Both of these libraries are open during class hours. Hours may vary.

If you have questions about any of the materials, please feel free to talk with the library staff. A library orientation program is also presented to students on an established schedule.

Multicultural Affairs

Blackhawk Technical College provides supportive services designed to assist multicultural students with many aspects of their educational experience at BTC. Services include advisement of entry requirements; orientation to college activities; program resources and procedures; and administration of various scholarships and loans for ethnic students. The main function is to enhance the success and retention of ethnic students attending BTC. The Multicultural Office is located in the Student Services area and is open by appointment or on a walk-in basis. Call (608) 757-7719 for more information.

Parking

The Central Campus usually has adequate parking for everyone. Please observe parking restrictions as posted. Otherwise, you may park on a first-come, first-served basis.

Parking for the disabled has been reserved at several locations. Only persons with a valid disabled license plate or handicapped sticker issued by the Wisconsin Motor Vehicle Department may park in those spaces. BTC cannot issue any kind of handicapped sticker.

Several designated areas have also been set aside for special purposes. There is short-term parking for parents dropping their children at the day care center. There is also a designated area for motorcycles. There is no parking in driveways (unless otherwise posted) or on the paved areas adjacent to the buildings. These areas need to be kept open for emergency vehicles. Anyone parking in a restricted area without an appropriate license may receive a parking citation issued by the Rock County Sheriff’s Dept.

On-site parking is available at the Aviation Center, Center for Transportation Studies and the Monroe Campus. The rules noted above also apply to these locations. The Beloit Center has public parking available within a reasonable walking distance.

For more information, call: (608) 758-6900
As of January 1, 2000, Wisconsin Act 128 limits the disclosure and release of student social security numbers. In order to comply with Act 128, BTC assigns a unique identification number to each student. This identification number does not incorporate the student’s social security number. However, BTC will continue to collect and report student social security numbers for state and federal reporting requirements. BTC procedures are designed to ensure that student social security numbers remain confidential.

Identification cards are available to all BTC students who are enrolled in credit or basic skills courses. The cards include BTC logo and address and student picture, name and nine digit identification number. The card also includes a bar code that allows students to access resources at the BTC library.

Photos will be taken during new student orientations and at the beginning of each semester. After this time, students can have pictures taken and cards issued through the Student Services department in the Counseling & Career Center. For more information contact the Student Services office.

The possession, and safe use of alcoholic beverages on BTC premises is strictly prohibited. In addition, the possession, use, and sale of alcohol is further regulated in accordance with applicable state and federal laws and Wisconsin Administrative codes. BTC cooperates with local police agencies to enforce underage drinking laws and other violations related to the possession, use, and sale of alcohol. As a BTC student you are expected to comply with all laws and District policies regarding the use of alcoholic beverages. Depending on the nature of the violation, you may face legal prosecution and/or disciplinary action in accordance with applicable laws and BTC procedures.

It is the intent of BTC to provide a safe, secure, and appropriate environment in which students can learn and employees can work. However, like all segments of society, situations may occur which threaten the security and safety of property and people.

If you feel threatened, see criminal actions, or observe behavior which jeopardizes the safety and security of property and persons at BTC, you should report the incident immediately to the Student Services Office or the designated center supervisor. BTC staff will assess the situation and determine if an emergency response is necessary. When, in the judgment of the BTC staff member on the scene, the situation warrants emergency intervention, local law enforcement will be contacted to resolve the problem and investigate the incident. Any non-emergency incident of property damage, theft, burglary, or other criminal actions should be reported to local law enforcement for investigation and disposition.

SafeWalk is a service provided by BTC for night students and staff. The service provides those wishing to use it with an escort to your vehicle. The SafeWalk personnel will have a telephone with them at all times, and when needed a jacket with SafeWalk printed on the front and back, will be wearing a cap with the SafeWalk insignia, and when needed a jacket with SafeWalk printed on it. The SafeWalk Person will have a telephone with them at all times, and can call for assistance from 911 directly if needed.

Access to and use of BTC facilities is governed by institutional policies and local statutes. Access to facilities is limited to BTC students, faculty, and staff for work, education, or other related purposes. Outside groups may use the facilities with special permission in accordance with district policy. Loitering or wandering through the facilities for unapproved reasons is prohibited.

Security of BTC facilities is provided through a number of mechanisms, including establishing hours of operation, locked doors, keys limited only to those persons with a direct need to access certain areas, and the provision of lighting for security purposes. Other security mechanisms may vary by facility. BTC utilizes local law enforcement agencies to patrol parking lots and other areas around the facilities. When an incident occurs, BTC utilizes the services of local police authorities who have the statutory power to enforce applicable laws and who possess arrest powers.

BTC must annually report the crime statistics in accordance with applicable laws. Following is a summary of crimes that occurred on BTC facilities during 2004, 2005, & 2006:

<table>
<thead>
<tr>
<th>Crime Type</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Murder and Non-Negligent</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Manslaughter</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Negligent Manslaughter</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rape</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forcible</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Non-Forcible</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Robbery</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Aggravated Assault</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Burglary</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Arson</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Local police agencies report the following information regarding arrests on BTC facilities during 2004, 2005, & 2006:

<table>
<thead>
<tr>
<th>Crime Type</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquor Law Violations</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Drug Abuse Violations</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Weapons Possessions</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

BTC encourages cooperation with local police to monitor and record information concerning criminal activity involving BTC students or recognized student organizations, but occurring away from BTC facilities. BTC will cooperate with local law enforcement authorities who may request BTC staff to verify information (e.g. students’ status, ages, residence, etc) about students.
PROTECTIVE SERVICES/SECURITY

SEX OFFENDER REGISTRY

Federal law requires BTC to provide information where students can obtain information about registered sex offenders in the state or community. The Wisconsin Sex Offender Registry is maintained by the Wisconsin Department of Corrections. Information is available on the department’s website at http://widocoffenders.org.

Discrimination & Harassment Policies

BTC, through its commitment, will affirmatively attempt to provide an environment free of harassment for all employees and students. Harassment of students and employees of BTC is unacceptable and will not be tolerated. BTC deplores such conduct as an abuse of authority. BTC, in compliance with Title VII of the 1964 Civil Rights Act; Title IX of the 1972 Education Amendments; Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act, prohibits harassment by supervisors, co-workers, students, and non-employees on the basis of sex, race, national origin, disability, or other protected status person.

BTC has no tolerance for discriminatory, harassing, or racist behaviors. Specifically, the Blackhawk Technical College District Board actively complies with all state and federal equal opportunity and affirmative action laws, rules, executive orders, and policies. It is the policy of BTC not to discriminate in employment on the basis of age, race, creed, color, religion, handicap, marital status, sex, national origin, ancestry, arrest record, conviction record, sexual orientation, or membership in the national guard, state defense force, or any reserve component of the military forces of the United States or this state. BTC does not discriminate against students on the basis of race, color, creed, religion, sex, national origin, disability, ancestry, age, sexual orientation, pregnancy, marital status, or parental status. Discrimination means the difference in treatment in any service, program, course, or facility of BTC on the basis of these protected statuses.

Inquiries regarding equal opportunity and possible discrimination may be directed to one of the following individuals. Their area of expertise, office location at the Central Campus, and telephone number are noted:

Brian Gohlke, Vice-President, Human Resources, Affirmative Action Officer, Administration Center (608) 757-7773

Linda Brown, Student Services, Title IX Officer, Central Campus, (608) 757-7670

Daniel Hartstern, ADA Officer, Administration Center, (608) 757-7700

Wanda Sloan, Diversity Specialist, Human Resources, Administration Center, (608) 757-7745

Your written concerns can be sent to any of these individuals at: Blackhawk Technical College, 6004 S County Road G • P.O. Box 5009 • Janesville, WI 53547-5009

Harassment is unwanted, deliberate, or repeated unsolicited comments, slurs, demeaning references, gestures, graphic materials, physical contacts, solicitation of favors, advances, or other adverse treatment based on a protected group status when:

1 Submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions affecting an individual.

2 Submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions affecting a third party.

3 The conduct has the purpose or effect of substantially creating an intimidating, hostile, or offensive environment which tangibly affects or interferes with an individual’s job performance or other employment or academic opportunities.

Alleged acts of harassment and discrimination may be violations of equal employment or educational opportunity policies under which BTC operates. Discipline may be imposed for violations of this policy in accordance with the procedures outlined in The Student Disciplinary Procedure.

Privacy/Access To Student Records

The Family Education Rights and Privacy Act (FERPA) affords you certain rights with respect to your education records. They are:

1 The right to inspect and review your education records within 45 days BTC receives a request for access.

2 The right to request the amendment of your education records that you believe are inaccurate or misleading.

3 The right to certain rights with respect to your education records.

You may ask BTC, in compliance with the requirements of Education concerning alleged failures by Blackhawk Technical 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. Dept. of Education, 600 Independence Avenue, SW, Washington, DC 20202-4605

One exception which permits disclosure without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by BTC in an administration, supervisory, academic or support staff position; a person or company with whom has contracted (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 responsibility. Upon request, BTC discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

4 The right to file a complaint with the U.S. Department of Education concerning alleged failures by Blackhawk Technical 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. Dept. of Education, 600 Independence Avenue, SW, Washington, DC 20202-4605

For more information, call: (608) 758-6900
PROTECTIVE SERVICES/SECURITY

Privacy/Access To Student Records (cont.)
The Blackhawk Technical College Board has designated the following information as directory information: your name, address, telephone number, date and place of birth, major field of study, dates enrolled, credits earned toward a degree/diploma, most recent prior school attended, degree/diploma, honors/awards and dates received, and participation in activities.

Directory information may be released without your prior written consent unless you specifically request that the information be withheld. Any requests to withhold directory information must be made in writing to the Registration Office. Your request will remain in effect until you state, in writing, that the information should no longer be withheld. Requests to withhold only certain categories of directory information cannot be accommodated. Parents of students do not have automatic access to their children's student records. Any student wanting to grant access to their records to another party can complete a Release of Information which is available at Student Services or can be accessed on the BTC website.

Retraining Guarantee Policy
BTC is committed to educational excellence. The education and training offered at BTC is designed to enable you to acquire job entry occupational skills needed for full participation in the workforce. BTC stands behind the training provided and will guarantee to provide at least six (6) additional credits of retraining, at no cost to you, under the following conditions:

- Your employer certifies that you lack the target job competencies specified in the educational program normally expected of a job entry-level employee, or
- You have not secured employment within six months following graduation

To be eligible for the guaranteed retraining you must have successfully completed and graduated from a one-year technical diploma, two-year technical diploma, or associate degree program. In addition, you must have registered for services provided through BTC's Employment Development Service located in the Career Center and actively pursued employment in your occupational field or a related field. Other guidelines may also apply. For more information on BTC's Guaranteed Retraining Policy, contact the Student Services Office at (608) 757-7713.

Smoke/Tobacco Free Campus
For the health and well-being of everyone using BTC's facilities, smoking and the use of any type of tobacco product is NOT PERMITTED in any of the buildings. Smoking outside of the buildings is allowed, but only in the areas designated for that purpose. Smokers are encouraged to use only the designated areas set aside for tobacco use and the receptacles located at those areas.

Unattended Children
Children may not be brought and left unattended, for any reason, in any of BTC’s buildings or facilities (including parking lots and surrounding areas). Children will also not be allowed in classrooms and instructional areas during the scheduled classes. Children are defined as minors under the age of 18 who are not enrolled in BTC programs or courses. Children found unattended in BTC facilities will be turned over to authorities for appropriate action. Parents need to make adequate arrangements for the care of child(ren) while attending classes.

STUDENT LIFE

Awards Program
The honors recognition program culminates in late April at the annual Awards Banquet & Reception sponsored by the Student Government Association. At the program, individuals are recognized for their academic achievements, participation in clubs and student organizations, and contributions to the community and BTC.

BTC Ambassadors
Student Ambassadors are a select group of students who represent BTC, as well as their own programs, to our student body and local communities. They serve as tour guides, speak to groups in area schools and community organizations, and assist with the many events that take place on campus. Ambassadors develop leadership and teamwork skills that will benefit them in their careers. In September, candidates are selected through a screening and interview process, and serve for the fall and spring semesters.

Clubs & Organizations
Student organizations provide valuable experiences to students by fostering leadership, personal development, career opportunity, and community relations. They are considered an integral part of the total educational experience at BTC. Students may choose from the following organizations:

- **Association of Information Technology Professionals (AITP)**
  - The AITP is open to students enrolled in the Computer Information Systems programs. During the year, as a member, you will be involved in community service projects, social functions, field trips, and fund raising projects.

- **Aviation Club**
  - The purpose of the Aviation Club is to promote aviation-related activities, both educationally and recreationally. Membership is open to any student, not just aviation students. As a member of the Aviation Club you will have opportunities to develop leadership skills while enjoying the excitement of aviation.

- **Criminal Justice Association**
  - This club is an organization of interested students and staff working together to enhance training and education in the Criminal Justice program, to develop interest in the many fields Police Science offers, and to have fun while attending BTC.

- **Early Childhood Education Club**
  - The Early Childhood Education Club provides students in the Early Childhood Program with opportunities to develop citizenship, leadership, and professional skills, become involved in career development programs, and participate in community service projects, while also offering students the opportunity to take part in professional growth activities. The club annually sponsors an educational seminar and thank you reception for early childhood educators.

- **Epicurean Club**
  - The Epicurean Club enables Culinary Arts students to participate in educational activities which enhance their program. Students have the opportunity to show off their talents at various competitions throughout the year.

- **Health Occupations Students of America (HOSA)**
  - The Health Occupations Students of America (HOSA) is available to all students in Health Occupations-related classes at BTC. The organization helps to develop leadership, citizenship, personal and professional responsibility, as well as promoting various service projects throughout the District. On-campus activities are also part of the organization’s programming.

For the most current schedule information, visit www.blackhawk.edu
STUDENT LIFE

Clubs & Organizations

- **Industrial Occupations Club**
  The Industrial Occupations Club gives students the chance to acquire a sense of belonging to American industry and an enthusiasm for learning. As a member of this club, you will have numerous opportunities for leadership development, community and school service, educational experiences, and socialization programs. As an Industrial Occupations Club member, you will be able to help promote and sustain American industrial technology.

- **Louis Porter Multicultural Achievement Club**
  The club was founded in 1978 in memory of Louis A. Porter, the first African-American program coordinator at BTC. Members of this club represent the diverse background of students involved in campus and community activities. Members are encouraged to promote goodwill, develop leadership skills, and achieve academically. Fund raising is a major function of the club to help sponsor annual scholarship awards for active members.

- **Outdoors Club**
  The Outdoors Club is open to all BTC credit students. It was formed in January, 1997 to promote and provide students with an educational experience outside the classroom, teach students lifelong sports and recreational skills while promoting lifelong health and wellness. The club participates in SGA and promotes on- and off-campus activities.

- **WMMA–Wisconsin Marketing & Management Association**
  The Wisconsin Marketing & Management Association Student Chapter is a co-curricular organization designed to develop technical competence in marketing, merchandising, and management education. Activities provide for leadership development, social development and citizenship training. Members are involved in community service projects, social functions, fund raising, field trips, guest lectures and other education projects. Students have the opportunity to participate in the WMMA Fall Leadership Training Conference, Regional, State and National conferences. Membership is open to any credit students at BTC and geared towards students enrolled in the Business Occupations coursework fields.

Fitness Center

The Blackhawk Technical College Fitness Center is located in the Central Campus and features over 16 pieces of modern fitness equipment. Credit students qualify to receive a free Fitness Center membership because of a generous donation by the Student Government Association. These funds came from segregated fees, which every BTC credit student pays in addition to regular tuition. All Non-Credit student memberships cost $25 per year. Faculty, staff and administration of Blackhawk Technical College can use the facility for only $50 per year. The fee is non-refundable and is valid from September-August of each year.

Job Placement/Employment Development

BTC provides a link between employers, students, and alumni. A listing of current employment opportunities, labor force information, and materials to help you be successful in a job search are available. Wisconsin and federal job listings are also available through the Internet.

If you are a prospective graduate, you are encouraged to contact the Career Center for more information.

Wisconsin Student Government

The Wisconsin Student Government (WSG) of the Wisconsin Technical College System is a statewide organization comprised of elected representatives from each of the 16 technical colleges in Wisconsin. The Board of Governors of WSG is an advocacy group for technical college students at the local, state, and national levels.

Student Handbook/Planner

The Student Handbook/Calendar-Planner contains important dates and occurrences throughout the year at BTC. Student Handbook/Calendars-Planners will be distributed one per student.

Outstanding Student Achievement

This award is for students in the top 10 percent of their program who are graduating with a 3.25 or above grade point average. Students must be nominated by instructors. Selection is also based on leadership qualities and class participation.

Special Recognition Award

This award is not based on academic standing. It recognizes students who have shown initiative in attaining their goals, provided leadership and support to their fellow students, and contributed toward the continued success of their program or BTC in general. Up to five students may be nominated per program. Nomination is done by instructors.

Special Service Award

This award is for students who have participated in the BTC student clubs/organizations. It is for service and is not based on academic standing.

Student Newspaper

The Blackhawk Flyer is a publication created and produced by volunteer students. All students are encouraged to submit articles and express their viewpoint on issues concerning them. The staff of editors, photographers, reporters, and salespeople strive to keep everyone informed of campus happenings and issues facing vocational/technical education.

Student Representative To The District Board

BTC was one of the first technical colleges in Wisconsin to formally have a student representative to the Board. Elected by the Student Government Association, the student representative serves in a non-voting position and acts as the liaison between the Board and the student body. The term of office is one year with elections held annually in May.

Occupationally-oriented instruction is afforded the student through concentration on individual courses or through full-time planned programs in the Business; Industrial Occupations and Agriculture; and Health, Human & Protective Services instructional divisions within the college.

For more information, call: (608) 758-6900
**PROGRAM INFORMATION**

**Associate Degrees**

These programs are organized to provide day and evening educational opportunities at the two-year associate degree level. The overall objective is the creation of an atmosphere of inquiry and learning in which students are guided in their pursuit of the understanding, appreciation, knowledge, and skills essential to their active and effective participation in their home, occupational, and civic lives.

The specific objective is to prepare students for entry into or advancement in occupations which depend on technical information and on an understanding of the laws and principles of mathematics, science, and technology relevant to modern design, production, distribution, and service.

Associate degree programs require successful completion of a minimum of 64 semester credit hours of course work of which 32 must have been courses dealing with the major field of instruction. At least 25 percent of these semester hours must have been earned at the institution awarding the degree. The distribution of course credits may vary according to the type of degree program in which the student is enrolled.

**Apprentice Programs**

Apprentice training allows you to learn while you earn through a formal training agreement that combines on-the-job training with related theoretical and practical classroom instruction. The term of training may vary from one to six or more years, depending on the trade. Upon completion of the apprenticeship, the student is issued a certificate of completion from the Bureau of Apprenticeship and Training. This certificate is nationally-recognized.

To become an apprentice, the first step is to select a trade or occupation. Application procedures vary by trade and location. Most apprentices begin at approximately 50 percent of the current skilled rate. There are currently over 300 apprenticeable occupations. A list of these may be obtained from: State of Wisconsin, Wisconsin Department of Workforce Development, Bureau of Apprenticeship Standards, 2125 Commercial Ave., Madison, WI 53704. Phone (608) 246-7900. For more information, please contact the BTC Apprenticeship Office at (608) 743-4472.

**Diploma and Certificate Programs**

Certificate programs include a grouping of only those courses which are essential to prepare a student for successful employment in specific occupations. Certificates may be awarded for completion of an educational offering not described under diploma or associate degree program criteria by the department that has responsibility for the program.

Diploma programs provide more extensive training on a broader base in a more complex work area. This training leads to greater employment opportunity and advancement possibilities.

Diploma programs may be less than one year, one year, or two years in length. Occupational skills course work comprises a minimum of 80 percent of the total class time spent in these programs. Supportive related course work may constitute the remaining curricular requirements. Related instruction for apprenticeship is included as a diploma program.

**Tech Prep-School-to-Work**

**MISSION:** To make education relevant so that all students find value in pursuing options to continue in post-secondary education and be successful in career and life-long learning.

Tech Prep is a federally funded program administered through the Wisconsin Technical College System. It works in coordination with School-to-Work, Work-based Learning and Youth Apprenticeship initiatives. The Blackhawk Tech Prep Consortium is comprised of 13 Public School Districts in Rock and Green Counties, UW-Whitewater, and CESA 2. The Tech Prep Consortium engages in activities that support partnerships between employers, labor, educators, and other community members to build a high quality educational system that is designed to focus students on a career path for the future. The consortium meets monthly to determine implementation of activities and to jointly share information and resources.

The Tech Prep initiative works closely with secondary students and educators, from grades 7-14, to create a seamless transition between consortium high schools and Blackhawk Technical College. This seamless transition is established through a variety of connecting activities. These activities include:

1. **The development of articulation agreements** between area high schools and the technical college.

   An articulation agreement grants high school students the opportunity to earn technical college credit while enrolled in high school, saving students (and parents) time and money while giving students a head start on their college degree.

2. **Career Exploration opportunities** are offered jointly by Blackhawk Technical College and Tech Prep for students in grades 6-12. These include: Sixth Grade On Campus Days, Tech Knowledge College for grades 7-10, “World Of” Career Exploration Days for grades 9-12, Preview Days for grades 11-12.

3. **Professional development** for area educators from grades 7-14 is also coordinated and provided through Tech Prep. These experiences are designed to emphasize rigorous and relevant applied learning, while connecting to the Wisconsin Model Academic Standards. Opportunities include: PK-16 Professional Development Summer Institute, Educator Externships, Joint Tech Prep Partnership Projects that are supported by $500 grants, Workshops on Assistive Technology, Self Advocacy, Industry Certifications like Microsoft Office Specialist or IC3 certifications, and other individualized training opportunities.

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*For the most current schedule information, visit www.blackhawk.edu*
Academic Support Division

The Academic Support Division faculty and staff provide basic skills education, GED/HSED instruction, classes for English Language Learners, and support services which assist students to prepare for and succeed in post-secondary education, employment, family, and community settings. The Division works closely with other divisions of Blackhawk Technical College as well as local schools and industry to develop programs to meet educational needs in the community.

The department provides an array of services in response to students’ unique circumstances, abilities, and goals. Instruction is provided via classroom, workshop, tutorial computer, CD Rom and personal individualized assistance through our Learning Centers. Our instructional staff is sensitive to the concerns of adult students who desire to complete or continue their education. We are equipped to provide students with supportive services and referrals as well as personal support.

A pre-assessment of academic needs (TABE) is required. Material fees may apply. Contact the BTC Learning Centers:

Central Campus
6004 S County Road G, Janesville  53546-9458–(608) 757-7676

Beloit Learning Center
444 East Grand Ave. (lower level), Beloit  53511-6270–(608) 757-7669

Green County/Monroe Campus
210 4th Ave., Monroe 53566-1033–(608) 328-1660

Rock County Job Center
1900 Center Ave., Janesville 53546-2801–(608) 741-3566

Adult High School

This program allows many adults to complete a High School Diploma in cooperation with their home high school. Students who did not finish high school may often be able to do so at BTC in one of several ways. In most high school districts, a student can plan with the local counselors and the BTC staff to complete the requirements for a high school diploma. This is done by combining Basic Skills Education instruction with past credits earned and work experiences. The course work can be offered solely at BTC, at the district high school, or both. The minimum age for participation is 18 years, 6 months and Wisconsin residency is required.

Basic Skills Education (BSE)

This program is open to all adults of the district who need to improve basic academic skills and/or self-confidence before or simultaneous to vocational program enrollment. Basic skills and career awareness classes are also components of several of the high school completion options which BTC provides. BSE classes are offered throughout Rock and Green Counties at various community and workplace sites in addition to BTC’s Central Campus and the centers at Monroe and Beloit.

Some Basic Skills Education courses are designed to give specific preparation for vocational or technical courses. These courses have been set up with the cooperation of a particular department to provide the basic skills necessary for entry into its programs.

For the student who has been away from school for a long time, or whose high school preparation was deficient, BSE classes can provide the review and basic skill development that may make the difference between success and failure in a vocational/technical program.

All programs in this section are offered at NO COST to the student; however, there may be an assessment or materials fee. Students may need to purchase books and materials.

Basic Skills Education courses can carry 1-3 credits and may meet from 2-6 hours per week. BSE credits do not transfer into degree programs.

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<tr>
<th>Course No.</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>73-851-713</td>
<td>BSE Communications 1</td>
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<td>73-854-713</td>
<td>BSE Math 1</td>
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<td>73-856-713</td>
<td>BSE Science 1</td>
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<td>BSE Reading 1</td>
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<td>73-859-713</td>
<td>BSE Social Science 1</td>
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<tr>
<td>73-862-713</td>
<td>BSE Employability Skills/Career Decisions</td>
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<tr>
<td>74-851-762</td>
<td>BSE Communications 2, Comm. Review Storefront</td>
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<tr>
<td>74-851-764</td>
<td>BSE Communications 2</td>
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<tr>
<td>74-854-762</td>
<td>BSE Math 2, Math Review Storefront</td>
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<tr>
<td>74-856-762</td>
<td>BSE Science 2, Science Review Storefront</td>
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<td>74-856-764</td>
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<td>74-858-762</td>
<td>BSE Reading 2, Reading Review Storefront</td>
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<td>74-859-762</td>
<td>BSE Social Science 2, Social Science Review Storefront</td>
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<td>74-859-764</td>
<td>BSE Social Science 2</td>
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<tr>
<td>74-860-764</td>
<td>BSE Computer Basics</td>
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<td>74-862-764</td>
<td>BSE Employability Skills/Career Decisions 2</td>
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<tr>
<td>75-861-711</td>
<td>ESL Beginning Literacy Communications</td>
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<td>75-861-714</td>
<td>ESL Beginning Literacy Math</td>
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<tr>
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<td>75-861-718</td>
<td>ESL Beginning Literacy Reading</td>
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<tr>
<td>75-861-731</td>
<td>ESL Low Beginning, Communications</td>
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<tr>
<td>75-861-734</td>
<td>ESL Low Beginning Math</td>
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<tr>
<td>75-861-735</td>
<td>ESL Low Beginning</td>
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<tr>
<td>75-861-738</td>
<td>ESL Low Beginning Reading</td>
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<tr>
<td>75-861-751</td>
<td>ESL High Beginning Communications</td>
</tr>
<tr>
<td>75-861-754</td>
<td>ESL High Beginning Math</td>
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<td>75-861-755</td>
<td>ESL High Beginning</td>
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<td>75-861-758</td>
<td>ESL High Beginning Reading</td>
</tr>
<tr>
<td>75-861-771</td>
<td>ESL Low Intermediate Communications</td>
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<tr>
<td>75-861-774</td>
<td>ESL Low Intermediate Math</td>
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<tr>
<td>75-861-775</td>
<td>ESL Low Intermediate</td>
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<tr>
<td>75-861-778</td>
<td>ESL Low Intermediate Reading</td>
</tr>
<tr>
<td>75-861-791</td>
<td>ESL High Intermediate Communications</td>
</tr>
<tr>
<td>75-861-794</td>
<td>ESL High Intermediate Math</td>
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<tr>
<td>75-861-795</td>
<td>ESL High Intermediate</td>
</tr>
<tr>
<td>75-861-798</td>
<td>ESL High Intermediate Reading</td>
</tr>
<tr>
<td>75-861-701</td>
<td>ESL Advanced Communications</td>
</tr>
<tr>
<td>75-861-704</td>
<td>ESL Advanced Math</td>
</tr>
<tr>
<td>75-861-705</td>
<td>ESL Advanced</td>
</tr>
<tr>
<td>75-861-708</td>
<td>ESL Advanced Reading</td>
</tr>
<tr>
<td>76-851-791</td>
<td>ASE High School English</td>
</tr>
<tr>
<td>76-851-793</td>
<td>ASE Literature and Composition</td>
</tr>
<tr>
<td>76-853-791</td>
<td>ASE American History A</td>
</tr>
<tr>
<td>76-853-792</td>
<td>ASE American History B</td>
</tr>
<tr>
<td>76-854-790</td>
<td>ASE General Math</td>
</tr>
<tr>
<td>76-854-791</td>
<td>ASE Intro to Algebra and Geometry</td>
</tr>
</tbody>
</table>
### Course Descriptions

#### 851-713 BSE Communications 1
Introductory course includes basics of punctuation, spelling, capitalization as needed for written expression in everyday situations. Basic sentence and paragraph construction will be included.

#### 854-713 BSE Math 1
Develops number concepts, mathematical language and whole number topics. This level introduces fractions, decimals, measurements and geometric shapes. Students use critical thinking skills to problem solve, perform computations, estimate results, interpret and develop data, work with appropriate technology and apply mathematics to real-world situations.

#### 856-713 BSE Science 1
Introduces basic science terminology and concepts. Students will explore general science topics using the scientific method to focus on relationships between the student's life experiences and job or learning goals.

#### 858-713 BSE Reading 1
Introduces basic reading skills needed by adults for everyday living. The students expand their vocabulary by learning to recognize and pronounce words. Emphasis is placed on understanding the material read, including books, computer software and newspaper articles. A variety of instructional approaches will be used.

#### 859-713 BSE Social Studies 1
An introduction to the basic concepts of social science, including history, geography, government, economics, political science and behavioral science. Emphasis is on general knowledge and application to everyday life, such as local government, community agencies and resources, geography and history as it relates to the immediate environment.

#### 862-713 BSE Employability Skills/Career Decisions 1
Introductory course designed to make the student aware of the skills needed for various careers. Students will have the opportunity to learn about careers, to explore their own basic skill needs and to review reading, writing and math skills with computer or textbook.

#### 851-762 BSE Communications 2, Commu. Review Storefront
This course develops communication skills needed for the math, social studies and science tests of the GED. The majority of the content and skill requirements will be in communications.
851-764 BSE Communications 2  
Develops conventions of English structure, usage, and mechanics in order to write and expand ideas. Includes practice in writing, correcting and revising as needed for the GED test at the pre-GED level. Stress will be on expressions of ideas and opinions.

854-762 BSE Math 2, Math Review Storefront  
This course develops math skills needed for the math, social studies and science GED tests at the pre-GED level. The majority of content skill requirements will be in math.

854-775 BSE Math 3, Pharmacology Math  
Designed for students entering Associate Degree Nursing program, specifically preparing for the Pharmacology Math Test that the ADN students take during Fundamentals. Topics include decimals, fractions, metric measurements, and calculating the amount of medication to be administered.

854-777 BSE Math 3, Radiography Math  
Designed for students entering the Radiography program. Topics include decimals, fractions, percents, metric measurements, conversions, significant figures, scientific notation, working with formulas and solving for the unknown. Special emphasis will be placed on problems related to the field of radiography.

854-778 BSE Math 3, Nursing Math  
Designed for students entering the Associate Degree Nursing program. Topics include decimals, fractions, percents, metric measurements, conversions, concentrations, significant figures, scientific notation, working with formulas, and solving for the unknown. Special emphasis will be placed on preparing for the math tests required by the ADN program.

854-779 Math 3, Geometry  
Designed for students entering business, industry and/or the health occupations. Topics include basic concepts in geometry such as signed numbers, powers and roots, equations, rectangular coordinates, polynomials, angles, triangles and plane and solid figures.

854-764 BSE Math 2  
Reviews Level I content and develops fractions, decimals, measurements, mathematical language, percents, ratios and proportions. This level introduces basic algebra and geometry concepts. Students will use critical thinking skills to problem solve, perform computations, estimate results, interpret and develop data, work with appropriate technology and apply mathematics to real-world situations.

856-762 BSE Science 2, Science Review Storefront  
This course develops science and reading skills needed for the GED tests at the pre-GED level. The majority of the content and skill requirements will be in science.

856-764 BSE Science 2  
Develops basic scientific knowledge as applicable to problems and experiences in our world. Will include biology, earth science, physics and chemistry concepts, and the application, analysis and evaluation of them. This course introduces students to the skills needed for the GED test at the pre-GED level.

856-777 BSE Science 3, Pharmacology Preparation  
This course prepares those students entering the Associate Degree Nursing program. The course will be an introduction to pharmacology, one of the hardest courses taken by nursing students. In addition, students will develop other skills needed for success (and survival) in the nursing program, such as test taking strategies and writing papers in APA format. (Students who need help with the math required for the nursing program should take “Algebra for the Health Professions,” informally known as “Nursing Math” or “Pharmacology Math.”)

858-762 BSE Reading 2, Reading Review Storefront  
Course focuses on reading in the content areas. Includes skills of comprehension, application, and analysis as needed for the GED content area tests at the pre-GED level.

858-764 BSE Reading 2  
Students use word analysis strategies, build vocabulary and comprehend at an inferential and critical level. These readers apply prior experience and knowledge to a variety of written and illustrative materials and transfer reading skills to the workplace, school and everyday life. These readers set goals and manage time and resources. The student is prepared to study for high school or high school equivalency requirements.

859-762 BSE Social Science 2, Social Science Review Storefront  
This course allows students to work on any area in the social sciences that they need to review to be successful in future course work, on the GED tests, or in their career.

859-764 BSE Social Science 2  
Develops general knowledge in the areas of history, economics, political science, geography and behavioral sciences, as they relate to realistic decision-making and problem solving. The content will be global in nature and include current events and issues that stress the interdependence of individuals and nations. It will introduce higher level thinking skills needed for the GED test.

860-764 Computer Basics  
This course is offered only to students enrolled in basic skills courses and covers elementary computer skills such as file management; document formatting, creating and management; using the Internet; basic e-mail and information management.

862-764 BSE Employability Skills/Career Decisions 2  
Develops general information involved with career choices including self-concept, values, needs and abilities. Occupational information and expansion of vocational choices are included. Outside speakers are invited to share information. Hands on experience includes filling out forms, interviews and study of resumes.

861-711 ESL Beginning Literacy Communications  
Instruction and practice in the use of formal and informal conversational language. Students build vocabulary and learn to use numbers, emergency and health language, identify types of jobs and classroom objects. Basic pronunciation, speaking, and listening strategies are developed. Basic grammar and writing skills are introduced and practiced. Programs are infused with and enhanced by technology.

861-714 ESL Beginning Literacy Math  
Develops language and skills needed for beginning math. Topics include number concepts, mathematical language and whole numbers. This level introduces fractions, decimals, measurements and geometric shapes. Students develop critical thinking skills to problem solve, perform computations, estimate results, interpret and develop data, work with appropriate technology and apply mathematics to real-world situations.
861-715 ESL Beginning Literacy
Students develop basic language skills in the area of speaking, listening, reading and writing in the context of real-life survival skills. It is aimed at developing the listening comprehension and oral skills of beginning level learners of English. Students at this level function minimally, if at all, in English.

861-718 ESL Beginning Literacy Reading
Instruction to teach discrimination and correct orientation of the English alphabet, to introduce symbol/sound relationships, and the meaning of common signs and symbols. Students learn to recognize personal information print, use maps, calendars, and picture dictionaries. Students also begin to develop basic comprehension strategies at this level.

861-731 ESL Beginning Communications
Instruction to improve basic communication skills including: speaking, listening, pronunciation, writing, and grammar. Students learn to write and speak using simple past, present and future verb forms, generate simple affirmative and negative statements and questions, discriminate sounds, and respond to simple imperatives. Computer technology will assist students.

861-734 ESL Low Beginning, Math
Reviews ESL Beginning Math content and develops language and skills needed for Beginning/Intermediate Math. Concepts covered include fractions, decimals, measurements, mathematical language, percents, ratios and proportions. This level introduces basic algebra and geometry concepts. Students will use critical thinking skills to problem solve, perform computations, estimate results, interpret and develop data, work with appropriate technology and apply math to real-world situations.

861-735 ESL Low Beginning
Classes at this level provide relevant language in real-life contexts. This class uses an experience centered approach to give student survival skills as quickly as possible. This program provides plenty of opportunity to use language, while developing grammatical skills. Students at this level will begin to form simple sentences and be able to communicate with others. Students learn about standard social norms in the United States, the work ethic in the Unites States, and how to apply basic study skills. Computer technology is infused into the curriculum.

861-738 ESL Low Beginning, Reading
Instruction to improve basic reading skills and expand vocabulary. Students learn to comprehend and respond to a range of printed material, employ a variety of comprehension strategies, recognize formal and informal language, and develop fluency.

861-751 ESL High Beginning, Communications
Instruction to improve speaking, listening, pronunciation, writing, and grammar skills. Students learn to use the writing process to compose short paragraphs and workplace reports, develop an awareness of language patterns, utilize rules of grammar, use formal and informal conversational language and respond to multi-step process directions. Computer technology is used to enhance the learning experience. Students will learn to use word processing tools.

861-754 ESL High Beginning, Math
This course introduces basic concepts and language skills needed in algebra and geometry such as signed numbers, powers and roots, algebraic expressions, equations, rectangular coordinates, polynomials, angles, triangles and plane and solid figures. This course allows the student to work on areas in math that they need to be successful in later course work or in their career.
861-798 ESL High Intermediate, Reading
Learners will analyze a variety of printed material and identify main ideas, supporting details, predict outcomes, make inferences, and draw conclusions. Sources will include textbooks, newspapers, magazines, school notices, schedules, nutrition labels, and consumer instructions. Learners will use the writing process to compose organized paragraphs.

861-701 ESL Advanced Communications
Learners will discriminate common stress patterns, reductions, intonation, pitch patterns, and thought groups. Learners will utilize rules of grammar to form affirmative and negative statements and questions using simple, continuous, perfect and perfect continuous tenses. The use of conditional sentences and active/passive voice will be explored. Learners will be expected to use sustained speech to participate in discussions about unfamiliar topics, share experiential stories, and present oral reports of various types.

861-704 ESL Advanced Math
This course focuses on the application of skills to solve word problems. Learners will apply concepts of whole numbers, fractions, decimals, percents, proportion, algebra, and geometry to solve multiple step word problems.

861-705 ESL Advanced
Learners in this course will analyze the systems in the world of work in the U.S. including chain of command, steps to filing a grievance, resolution of discriminatory practices, insurance options, and networking. All learners will develop resumes and practice writing cover letters as well as participate in mock interviews. Career options will be explored using a variety of materials and techniques.

861-708 ESL Advanced Reading
Learners will demonstrate comprehension of a variety of written work including short stories, consumer warnings, software instructions, newspapers, magazines, and college catalogues. Activities include identification of main idea and details, making inferences, identification of author’s bias, and the identification of characters, setting, and plot. The writing process will be used to construct multiple-paragraph compositions. Learners will use reference tools including the dictionary, thesaurus, atlas, encyclopedia, software and the Internet.

851-771 BSE Communications 3, GED
A continuation of Communications 2. Expansion of English structure, usage and mechanics with emphasis on writing skills needed for the essay component of the GED Writing Skills test.

851-772 BSE Communications 3, GED Review
This course develops communication skills needed for the math, social studies and science GED tests. The majority of content and skill requirements will be in communications. The content required in the science and social studies portion of the GED tests will be incorporated within this class.

854-771 BSE Math 3, GED
Introduction to algebra and geometry. A continuation of BSE, Math 2. Provides more advanced, higher level thinking and problem solving skills needed for the GED test.

854-772 BSE Math 3, GED Review
This course develops math skills needed for the math, social studies and science GED tests. The majority of content and skill requirements will be in math. The content required in the science and social studies portion of the GED tests will be incorporated within this class.
851-780/851-781 BSE Communications 3 Review
This course allows the students to work on any area in writing that they need to review to be successful in later course work or in their career. A variety of methods can be used in reviewing writing skills, including workbooks, work sheets, computer software and video tapes. An instructor will be available to guide students through their learning to achieve a predetermined goal.

851-782/851-783 BSE Communications 3, Composition Prep
This course is intended to prepare students for Communications courses at the vocational and college level. It covers basic grammar, punctuation, and spelling. Writing exercises throughout the course teach students to write sentences and paragraphs.

854-755 BSE Mathematics for WorkPlace Learning Centers
Participants in this course will learn how to effectively use the basic concepts of whole numbers, fractions and decimals as they apply to either professional or personal use. The course will also provide specific preparation in the areas of algebra and geometry that could be used in vocational/technical programs or employment. Instruction will also be available for site specific math needs (example: pre-S.P.C. training or metric conversion). Participants will also learn problem solving skills using work related materials when appropriate. Course work may also be used in preparation for the GED test.

854-780/854-781 BSE Math 3, General Math Review
This course allows students to work on any area in math that they need to review to be successful in later course work or in their career. A variety of methods can be used to learn math, including workbooks, work sheets, computer software and video tapes. An instructor will be available to guide students throughout their learning to achieve a predetermined goal.

854-782/854-783 BSE Math 3, Intro. to Algebra and Geometry
This course introduces basic concepts in algebra and geometry such as signed numbers, powers and roots, algebraic expressions, equations, rectangular coordinates, polynomials, angles, triangles and plane and solid figures. These concepts will be applied to problems in business, industry and/or the health occupations.

854-784-854-785 BSE Math 3, Allied Health Professions
Designed for students entering the Health Care Associate, Medical Assistant, Dental Assistant, and other health related programs. Topics include decimals, fractions, percents, metric measurements, conversions, temperature, blood pressure, and accounting.

854-786/854-787 BSE Math 3, Algebra and Geometry for Business and Industry
Designed for students entering business or industrial occupations that need an introduction to algebra and geometry. Provides problem-solving skills in using formulas that are used in business math, technical math and science courses.

854-788/854-789 BSE Math 3, Modu-Math, Algebra
This computer program uses practical video segments geared toward improving basic math skills. Students get the essential instruction, including drill and practice, required for complete mastery of basic operations involving whole numbers, fractions, decimals, percents, and signed numbers. The introductory algebra course covers basic concepts; order of operations; adding, subtracting and multiplying laws; problem solving; inequalities; graphing; factoring; quadratics and more. Students may use this for the Electrical Apprenticeship, AND, Radiography, Dental Hygiene, and PTA algebra requirements.

856-780/856-781 BSE Science 3, Science Review
This course allows students to work on any area in science that they need to review to be successful in later course work or in their career. A variety of methods can be used to learn science, including workbooks, work sheets, computer software and video tapes. An instructor will be available to guide students throughout their learning to achieve a predetermined goal.

856-782/856-783 BSE Science 3, Non-Human Biology
This course covers basic biological principles. Together with anatomy and physiology it is equivalent to a full-year of high school biology. The course will emphasize topics in microbiology and genetics.

856-784/856-785 BSE Science 3, Anatomy and Physiology Prep
Prepares students for the college level courses of anatomy and physiology needed by nursing, physical therapy, and other health related programs. Competency objectives are based on the skills needed to be successful in future courses in anatomy and physiology. Basic concepts in anatomy and physiology are covered along with study skills to help students become “self-learners.”

856-786/856-787 BSE Science 3, Chemistry Prep
Designed for students entering particular vocational/technical programs that require basic knowledge of chemistry. Students learn basic chemical principles by listening to lectures, participating in class discussions and laboratory experiments. Equivalent to a full-year of high school chemistry.

856-788/856-789 BSE Science 3, Physics Prep
Designed for students with an interest in vocational/technical programs with courses in physics, such as Technical Science 1 and 2, and Physical Therapy Assistant Physics. Competency objectives are based on particular program needs.

856-790/856-792 BSE Science 3, Electronics Prep
This course prepares students for courses in electronics offered by various programs. Basic scientific principles of electronics will be covered showing practical applications of various mathematical skills.

857-780/857-781 BSE Health
This course teaches the basics of health for the individual, family, and community. Mental and emotional health will be discussed as well as first aid, substance abuse, consumer health, environmental health, and death and dying.

858-780/858-781 BSE Reading 3, Efficient College Reading
This course concentrates on developing efficient college reading stressing vocabulary, reading, reading flexibility and rate, study skills and critical thinking needed for post-secondary and vocational programs.

858-782/858-783 BSE Reading 3, Reading for Health Professions
This course develops comprehension skills to the level needed for success in college and vocational course work. It also aims at developing higher level reading and thinking skills for personal development. Students learn a variety of strategies which they apply to readings on interesting contemporary health topics. Students utilize a wide range of printed and illustrative materials including articles from magazines and newspapers.

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30

For more information, call: (608) 758-6900

**ACADEMIC SUPPORT DIVISION - Basic Skills Courses**

858-784/858-785 BSE Reading 3, Medical Terminology Prep
This course is designed to prepare students to succeed in a credit medical terminology class. Students learn study skills and learning strategies such as concentration and memorization techniques. Individual learning styles are assessed and personal study plans are developed. Students learn and demonstrate time management and test taking techniques.

859-780/859-781 BSE Social Science 3, Social Studies Review
This course allows students to work on an area in the Social Sciences that they need to review to be successful in later course work or in their career.

862-789 Career Planning for Single Parents and Displaced Homemakers
This course assists single parents and displaced homemakers by helping them build self-esteem and by aiding them in career decision making. Participants will identify and prioritize their values, identify interests and skills through testing, consider career alternatives, including good wage occupations, and set career related goals. Students will also learn techniques for stress reduction, assertiveness, self-image improvement, goal setting, and decision making.

890-780/890-781 BSE Study Skills
This class is designed to assist new and continuing students in the development of affective and coping skills, and study skills. The students develop a variety of learning strategies including test taking and note taking skills, study skills, computer skills, and organization/time management skills. The course will also include an orientation to campus, information about other support agencies, training in self-advocacy, and development of an individualized educational plan.

851-791 ASE High School English
This course prepares students in writing concise and accurate sentences and paragraphs by focusing on basic grammar, punctuation, and spelling.

851-793 ASE Literature and Composition
This course helps students improve both basic reading skills and critical thinking skills. Specific skills covered include: recognizing words in context, recalling facts, keeping events in order, making inferences and understanding main ideas.

853-791 ASE American History A
Covers the time beginning with cultures existing on the North American continent prior to European exploration and discovery to the end of the 19th Century. Units include: Native Americans, independence, westward expansion, the Civil War, reconstruction and the rise of industry.

853-792 ASE American History B
Covers the time beginning with the turn of the century through the 1980’s. Units include: World War I, the Twenties, the Great Depression, World War II, the Cold War, civil rights and recent changes.

854-790 ASE General Math
This course provides students with a review of basic math principles addressing whole numbers, decimals, fractions, and units of measurement. Lessons include consumer math needs in the area of shopping, budgeting, maintaining household financial accounts, etc.

854-791 ASE Intro to Algebra and Geometry
This course introduces basic concepts in algebra and geometry such as signed numbers, powers and roots, algebraic expressions, equations, rectangular coordinates, polynomials, angles, triangles and plane and solid figures. These concepts will be applied to problems in business, industry and/or the health occupations.

854-792 ASE Pre-Algebra A
This course introduces algebraic equations and problem solving by reviewing topics in integers, number theory, fractions, probability, decimals and percents.

854-793 ASE Pre-Algebra B
This course is a continuation of Pre-Algebra A. Algebraic concepts are developed further in areas of analyzing data, number line, coordinate planes, square roots and right triangles, polynomials, and finding volume and surface area.

854-794 ASE Algebra 1A
This course introduces students to the concept of algebraic expressions and the use of equations and polynomials, and their practical application to solve problems in relation to real-life situations.

854-775 ASE Algebra 1B
This course continues the concepts of Algebra 1A and expands to the elements of analytical geometry, systems of equations, radicals and exponents, quadratics, relations and functions. Trigonometry and statistics are also introduced.

854-796 ASE Geometry A
This course covers plane geometry, proofs, parallelism, congruent triangles, polygons, special quadrilaterals and similarity.

854-797 ASE Geometry B
This course is a continuation of Geometry A and covers right triangles, coordinate geometry, circles, area, loci, figures in space and transformations.

854-798 ASE Algebra 2A
This course is continuation of Algebra 1 and will further develop concepts in linear equations and inequalities, functions, linear systems in two variables, polynomials, higher degree equations, rational expressions, radical and exponents, complex numbers and polynomial equations.

854-799 ASE Algebra 2B
This course is a continuation of Algebra 2A. This course covers coordinate geometry, conic sections, exponential and logarithmic functions, statistics, sequences and series, linear systems, determinants, trigonometric functions, solving triangles, graphing trigonometric functions and trigonometric identities.

856-791 ASE General Science
This course provides students with insights into biology, the human body, matter and energy, the earth and its place in the universe.

856-793 ASE Physical Science
This course introduces students to concepts in physics and chemistry. Topics include forces, motion, electricity, magnetism, sound, light, heat, energy, atomic structure, the periodic table, acids, bases, and organic chemistry.

856-794 ASE Biology Prep
This course provides an overview of biology. Topics include the diversity of life, body systems, animal and plant behavior, disease, genetics, change in living things and ecology.
856-797 ASE Anatomy and Physiology Prep
This course prepares students for a college course in anatomy and physiology. Basic concepts in studying the human body are covered along with study skills to help the student become a "self-learner."

856-799 ASE Chemistry Prep
Students learn basic chemical principles by listening to lecture, participating in class discussions and laboratory experiments.

858-790 ASE College Prep Reading
This course concentrates on developing high level comprehension and reasoning skills, stressing vocabulary development, reading flexibility and rate, study skills and critical thinking skills.

859-790 ASE Government
The civic course is an overview of the American government and how it impacts and influences the lives of American citizens. Areas of concentration are colonization, the constitution, branches of government, checks and balances, the Bill of Rights, state and local governments and citizen's responsibility.

859-791 ASE Social Studies
Concentrates heavily on content in the areas of history, economics, geography, political science and behavioral sciences.

859-792 ASE Current Social Issues
This course reviews the federal government and then moves on to look at major domestic policy issues followed by major foreign policy issues.

859-793 ASE Sociology
Introduces students to the basic social concepts of the intercultural discipline of sociology. Concepts include culture, localization, social stratification, and five institutions, including family, political, economics, religion, and education.

859-794 ASE Economics
This is a course in basic survival economics. It covers many of the basic theories such as: supply and demand, economic systems, scarcity, opportunity cost, markets, prices, etc. Besides theory, there will also be instruction in some personal survival economics as well.

859-794 ASE Economics
This is a course in basic survival economics. It covers many of the basic theories such as: supply and demand, economic systems, scarcity, opportunity cost, markets, prices, etc. Besides theory, there will also be instruction in some personal survival economics as well.

CALC-Computer Assisted Learning Center
CALC combines small group instruction and computer technology to teach a variety of basic skills in a way that develops the core abilities employers desire. Students demonstrate personal responsibility, time management, ability to work cooperatively, and the use of technology as they work through their individual learning plans within the framework of a structured curriculum. Flexible scheduling allows students to accelerate learning and meet individual goals. At one end of the CALC instructional program are basic language skills such as beginning reading, writing, and vocabulary for English and non-English speakers. Instruction continues across a range ending at higher level reading, language, and math competencies needed in many vocational programs. A trained instructor is always available to assist and guide students as they progress at their own pace in this personalized education program. This program is particularly effective for students who need non-traditional schedules and for those who prefer a lab setting over a formal class setting.

ELL-English Language Learning
ELL provides Basic Skills Education instruction in speaking, listening, reading, and writing skills for adults whose native language is not English. The stress is on speaking the English necessary for employment and to function in a new community. ESL classes are provided AT NO COST on a need basis in various community locations throughout the Blackhawk District.

Family Literacy Programs
Blackhawk Technical College works in cooperation with the Beloit and Janesville Public Schools to provide parenting, classes for English Language Learners (ELL), and basic skills instruction. The Even Start Family Literacy programs provide a family-centered learning model for parents who wish to improve basic literacy and to complete their GED or HSED testing program. Effective parenting skills are reinforced by bringing children and parents together for joint learning experiences.

High School Contracting
This is a cooperative effort to provide educational alternatives to at-risk students and to comply with the Compulsory School Attendance Laws. 118.15. It offers high school credit and GED/HSED courses for students referred by and enrolled in district high schools. This program aids the public schools by providing in-school youth with a chance to make up or add on credits.

Learning Centers
In the Learning Centers students study at their own pace to earn high school diplomas, prepare to take GED/HSED tests, prepare to enter vocational programs or post-secondary studies and obtain assistance with vocational studies.

Subjects are presented through self-study materials and audio-visual presentations. Individualized instruction allows the student to learn at his/her own rate. Students arrange their study schedules and study the number of hours per day that they wish. An instructor is available to offer guidance and assistance as needed or requested. The Learning Centers are open at convenient hours. Students are encouraged to stop in during their free time.

RECAP Project
The Rock County Education and Criminal Addictions Program (RECAP) is a cooperative program between Blackhawk Technical College and the Rock County Sheriff’s Department. With the goal of reducing recidivism, the program provides Basic Skills Education, counseling on overcoming addictions and criminal thinking, and vocational training, work, and community service.
Supplementary Services for Students With Disabilities

Appropriate assistance or program modifications for visually impaired, hearing impaired, learning disabled, cognitively disabled, emotionally disabled, or physically disabled students who need assistance to better insure success in their chosen vocational program. There is no cost to individuals or referring agencies for persons who meet the criteria listed. The Special Populations Instructor will also travel to outreach centers to assist in necessary adaptations. Please call (608) 743-4422 Voice/TTY for assistance.

Tutorial and Instructional Assistance

Tutorial and classroom instructional assistance is available for students enrolled in technical diploma and associate degree programs. Individual instruction helps students with their study skills and academic subjects at the Central Campus during weekdays and selected evenings.

GED-General Education Development Cert. HSED-High School Equivalency Diploma

This fulfills the high school diploma requirement for most jobs. It is acquired by successfully completing five exams. The GED/ HSED option is an attractive alternative for those non-high school graduates who have little or no high school credit accumulated. The General Education Development Certificate (GED) is issued by the State Department of Public Instruction (DPI) to a student upon satisfactory completion of five exams. A High School Equivalency Diploma (HSED) is also issued by the State through BTC based on attainment of three additional requirements to the GED. The minimum age is 18 years, six months.

State Department of Public Instruction-approved testing centers for the Blackhawk Technical College District are at the Central Campus, Beloit Learning Center, Monroe Campus, Rock County Job Center, and the Rock County Jail. A list of regularly-scheduled testing dates, times, and locations is available each semester. This information is also announced in the local media or may be obtained by contacting one of the Learning Centers.

Classes for GED/HSED preparation are available throughout the Blackhawk Technical College District. Call specific center for schedule.

Vocational Training for Special Needs/At Risk Youth Program

The Vocational Training for Special Needs/At Risk Youth program is a cooperative effort between CESA #2, BTC, and district high schools. This articulation program provides high school special needs/at risk students with “hands-on” exploration and experience through enrollment in mini courses. The mini courses are specifically designed to give a basic overview of skills needed to succeed in BTC technical programs.

Wingspan

Retention and career development services for nontraditional students, those students enrolled in programs comprised of 25% or fewer of their gender, and displaced homemakers those who are widowed, divorced, separated, or who have a disabled spouse. Services include brush-up classes, financial assistance, and job seeking skills assistance. All services are provided in a caring and confidential manner.

Services include:

- Career planning workshops
- Individual career development assistance
- Referrals to community and college-based resources
- Individual assistance for personal advocacy
- Academic and personal skills enhancement

Referrals to financial resources including scholarships, traditional financial aid resources, and other community resources available.

Contact the Wingspan Coordinator at (608) 757-7656.

GENERAL COLLEGE COURSES

Intro to College Writing (831-103) is required for students who need additional preparation in order to be successful in General Education's Written Communication (801-195). General College Reading (838-104) is required for students who need additional preparation in order to be successful in General Education's Intro to Psychology (809-198), Developmental Psychology (809-188), Economics (809-195), Sociology (809-196), and General Anatomy & Physiology (806-177). Students will be placed into these courses based on entry test scores. Students will be placed into these courses based on entry test scores. Intro to College Writing introduces the basic principles of composition in writing, paragraphs, and multi-paragraph documents. Specific writing principles covered include: development, unity, and coherence as well as a review of grammar, mechanics, and sentence structure. General College Reading introduces the basic principles of reading comprehension improvement including finding main ideas and supporting details, identifying relationships, making inferences. It also introduces the principles of vocabulary development. These courses are tuition fee bearing; however, the credits earned do not apply to a program.

GENERAL EDUCATION

Mission: General Education prepares students for life in the global community by helping them develop a core of knowledge, skills, and attitudes essential for personal and professional success.

Vision: Be a vital, integral partner in BTC’s programming.

General Education is an essential part of occupational programming and the institution as a whole. It is the role of General Education in the Associate Degree and Technical Diploma programs to provide an educational core of knowledge that enables students to integrate their education into the context of the larger society. Classroom activities in communication, social science, mathematics, and natural science are developed in an applied, integrated curriculum to reflect real world work situations specific to program areas while also preparing students to be lifelong learners.
The General Education Division prides itself on its flexibility. Classes are offered in a variety of formats including traditional, video-based (TV), IPTV, Accelerated Learning (ACCEL), Internet and web-enhanced. These alternative delivery systems should be selected carefully. The faculty is continually adapting curriculum and delivery systems to better meet the needs of our students.

### Traditional:
These courses meet several times weekly over a 17-week period. Instructors meet face-to-face with students in a traditional classroom setting.

### Telecourses (Video-based-Independent Study):
These courses require students watch selected programs over public television or on VHS tape and complete activities based on the programs and selected readings. These courses are becoming more web-enhanced so access to a computer is recommended. *These courses have a mandatory orientation session for which students must register.*

### IPTV (two-way video and audio):
Instructors meet face-to-face with students in studios both on- and off-site. Activities mirror regular classroom instruction with paperwork generally faxed between sites.

### Required For Associate Degree (21-30 Credits)
Students should check with their program advisor or counselor for the specific program requirements.

The General Education core for associate degree programs consists of 6-15 additional credits from the following disciplines:

#### Communication – 6 credits required
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>801-196</td>
<td>Oral/Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>801-197</td>
<td>Technical Reporting</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><em>(Prerequisite: Written Communication)</em></td>
<td></td>
</tr>
<tr>
<td>801-198</td>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><em>(May be substituted for 801-196)</em></td>
<td></td>
</tr>
</tbody>
</table>

#### Social Science – 3 credits required:
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>809-166</td>
<td>Introduction to Ethics: Theory &amp; App</td>
<td>3</td>
</tr>
<tr>
<td>809-172</td>
<td>Race, Ethnic &amp; Diversity Studies</td>
<td>3</td>
</tr>
<tr>
<td>809-174</td>
<td>Social Problems</td>
<td>3</td>
</tr>
<tr>
<td>809-195</td>
<td>Economics</td>
<td>3</td>
</tr>
<tr>
<td>809-196</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Behavioral Science – 3 credits required:
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>809-159</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>809-198</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>809-199</td>
<td>Psychology of Human Relations</td>
<td>3</td>
</tr>
<tr>
<td>809-188</td>
<td>Developmental Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

#### Math and/or Science – 3 credits required
*Check with your program advisor or counselor for the specific program requirements.*

Electives – 0-6 credits required.
*Check with your program advisor or counselor for the specific program requirements.*

### ACCEL:
These courses generally meet four hours one evening per week for six to eight weeks. Students are expected to work in learning teams and complete a significant amount of work outside scheduled class hours. These courses were designed for working adults whose knowledge and expertise are an important part of the learning process.

### Web-enhanced:
These courses may include classroom and lab experiences. To be successful students should have regular access to computers with Internet capabilities.

### Internet:
These courses are independent study courses with material delivered through the Internet. Some classes include testing online, while others require students to come to campus to complete the tests. *These courses have a mandatory orientation session for which students must register.*

Technical Diploma and Certificate programs also require certain General Education courses to fulfill program requirements. It is important for students to determine the General Education requirements for their particular programs.

Following is a list of current General Education courses and descriptions. Not every course is offered every semester and the number of students registering for a course determine whether or not the course is taught a particular semester.

### General Education Course Descriptions

#### 140-101 Spanish Language & Culture
3 Credits
This course is an introduction to the basic concepts of the Spanish language and culture.

#### 140-102 Spanish Language & Culture II:
Emergency Services Personnel
3 Credits
This is an intermediate level course for emergency services personnel to use the Spanish language in police-related and emergency situations. Also included is an introduction to aspects of Hispanic culture that will help effectiveness in police-related and emergency situations. *Prerequisite: 140-101 Spanish Language & Culture or demonstrated knowledge of basic Spanish*.

#### 801-195 Written Communication
3 Credits
Develops writing skills which include prewriting, drafting, revising, and editing. A variety of writing assignments is designed to help the learner analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content. Also develops critical reading and thinking skills through the analysis of a variety of written documents. *Word processed assignments and a 5-7 page research paper are required.*
801-196 Oral/Interpersonal Communication 3 Credits
Focuses upon developing speaking, verbal and nonverbal communication, and listening skills through individual presentations, group activities, and other projects.

801-197 Technical Reporting 3 Credits
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. Designed as an advanced communication course for students who have completed at least the prerequisite introductory writing course. Prerequisite: 801-195 Written Communication

801-198 Speech 3 Credits
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.

801-311 Communication 2 Credits
This course reviews the grammar and writing skills that an adult learner needs to write clearly, concisely, and persuasively on the job. Students will produce a variety of job-related documents such as: business memos, letters, and short reports. The course will provide techniques that will improve the effectiveness with which learners communicate interpersonally, and within small groups. Students will learn to prepare and deliver oral presentations.

801-390 Communication for Health Professions 2 Credits
This course reviews the grammar and writing skills that an adult learner needs to write clearly, concisely, and persuasively on the job. Students will produce a variety of job-related documents such as: business memos, letters, and short reports. The course will provide techniques that will improve the effectiveness with which learners communicate interpersonally, and within small groups. Students will learn to prepare and deliver oral presentations. Students will learn special skills needed to write an effective cover letter and resume. Students will learn skills that will help them communicate effectively with patients or customers.

804-105 General Mathematics 3 Credits
This one semester course is intended to give the student a review of the basic principles of arithmetic (which includes whole numbers, common and decimal fractions, ratios, proportions and percents), as well as an introduction to algebra, the metric system, scientific notation, powers and roots of numbers, properties of basic geometric shapes, graphing, and an introduction to trigonometry and vectors. Besides being a required program course many students use this an elective to review these topics. It serves as the foundation for additional study of mathematics. Recommended: One year of high school math

804-106 Introduction to College Math 3 Credits
This is an introductory level course designed to review and develop fundamental concepts of arithmetic, algebra, geometry, and statistics. Emphasis will be placed on computational skills and applications of rational numbers; problem solving skills with ratios, proportions, and percent; basic principles and application of algebra, geometry, graphing, and statistics; measurement skills in U.S. Customary and Metric Systems; and the use of calculators as a tool.

804-107 College Technical Mathematics 1 5 Credits
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. Recommended: High school algebra or equivalent

804-110 Elementary Algebra with Applications 3 Credits
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.

804-115 College Technical Mathematics 2 4 Credits
Topics include: vectors; trigonometric functions and their graphs; identities; exponential and logarithmic functions and equations; radical equations; equations with rational exponents; dimension of a circle; velocity; sine and cosine graphs; complex numbers in polar and rectangular form; trigonometric equations; conic sections; and analysis of statistical data. Emphasis will be on the application of skills to technical problems. Prerequisite: 804-195

804-117 Business Mathematics 3 Credits
This course is designed to build your knowledge of math including whole numbers, decimals, fractions, percents, formulas, equations, and statistics. These skills will be reinforced in business applications including bank records, payroll, discounts, markup and markdown, interest calculations, annuities, depreciation, inventory and more.

804-123 Math with Business Applications 3 Credits
This course covers...real numbers, basic operations, linear equations, proportions with one variable, percents, simple interest, compound interest, annuity, apply math concepts to the purchasing/buying process, apply math concepts to the selling process, and basic statistics with business/consumer applications.

804-133 Mathematics & Logic 3 Credits
Students will apply mathematical problem solving techniques. Topics will include symbolic logic, sets, algebra, Boolean algebra, and number bases. Recommended: One year of high school algebra

804-189 Introductory Statistics 3 Credits
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. Prerequisite: Introduction to College Math or 2 years of high school or higher algebra OR satisfactory placement test score
### GENERAL EDUCATION COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>804-196</td>
<td>Trigonometry with Applications</td>
<td>3</td>
<td>Topics include circular functions, graphing of trigonometry functions, identities, equations, trigonometric functions of angles, inverse functions, solutions of triangles complex numbers, DeMoivre’s Theorem, polar coordinates, and vectors. <strong>Prerequisite:</strong> 804-110 Elementary Algebra with Applications</td>
</tr>
<tr>
<td>804-304</td>
<td>Math Fundamentals</td>
<td>2</td>
<td>Offered in fall semester only. This one semester course consists of self-paced instructional units. It is intended to give the student a review of the basic principles of arithmetic (which includes whole numbers, common and decimal fractions, ratios, proportions and percents), as well as an introduction to algebra, scientific notation, powers and roots of numbers, and an introduction to trigonometry and vectors. <strong>(This course is similar to General Mathematics minus three units of study. General Mathematics may be used to satisfy the Math Fundamentals requirement.)</strong></td>
</tr>
<tr>
<td>806-108</td>
<td>Applied Anatomy &amp; Physiology</td>
<td>3</td>
<td>This course is designed to acquaint the PTA student with joint structure and function, human movement, normal posture, gait patterns and biomechanics. Critical thinking skills are encouraged so as to analyze the locations, relationships, and functions of the musculoskeletal systems. The central nervous system's influence on muscle tone and the integration of muscle action to produce motion are examined. The development of observation and palpation skills is emphasized. Goniometry as an evaluation tool is also introduced. <strong>Prerequisites:</strong> 806-131 Anatomy &amp; Physiology, 806-140 Physics</td>
</tr>
<tr>
<td>806-110</td>
<td>Forensic Science (Criminalistics)</td>
<td>3</td>
<td>Forensic Science is a course designed to provide students of law enforcement with an appreciation of the capabilities and limitations of scientific analysis of crime scene evidence. All functions of a basic crime lab are discussed with emphasis on relating methods of analysis to the proper collection and packaging of evidence. Laboratory exercises are designed to expand upon and reinforce lecture material.</td>
</tr>
<tr>
<td>806-118</td>
<td>Metal Science</td>
<td>3</td>
<td>Offered in spring semester only. This is a one-semester course in basic physics and metallurgy principles for the Technical College student. The course reviews accuracy and precision of measurements, introduces calculations with units and conversions within and between systems of measurements, formula rearranging, and applications in problem solving. Basic topics include properties of matter, metallurgy, material properties, material testing, force, motion (linear and circular), energy, power, and simple machines. The topics of heat, electricity, and magnetism are also introduced in the class. Emphasis is placed on the application of the laws and principles of physics to practical problems found in the machine shop and industry.</td>
</tr>
<tr>
<td>806-121</td>
<td>Basic Chemistry</td>
<td>3</td>
<td>Basic Chemistry is a general chemistry course primarily for students in the Fire Science program. A variety of topics will be covered spanning both inorganic and organic chemistry. Appropriate, specific issues dealing with combustion and hazardous material handling will be stressed.</td>
</tr>
<tr>
<td>806-131</td>
<td>Anatomy &amp; Physiology</td>
<td>4</td>
<td>Anatomy and Physiology teaches the fundamentals of structure and function of the human body to health occupations students. The learning process is accomplished through lecture, demonstration, and a “hands-on” laboratory experience. Anatomy and Physiology introduces the student to the location of all human organs and organ systems. It teaches the student the functional operation of each organ and organ system and how each of these functions relates to other organs and organ systems for the health and well being of the entire organism.</td>
</tr>
<tr>
<td>806-139</td>
<td>Survey of Physics</td>
<td>3</td>
<td>This course emphasizes understanding basic physics concepts through laboratory investigation and applications. Topics include kinematics, dynamics, work, energy, power, temperature, heat, waves, electricity, magnetism, electromagnetic waves, optics, and atomic and nuclear physics.</td>
</tr>
<tr>
<td>806-151</td>
<td>Technical Science I</td>
<td>3</td>
<td>This course is designed to give the student a background in the fundamental principles of physics and applications of those principles in the technical and industrial fields. The major areas of study include measurements, mechanical relations of forces and motions, work, power and energy (linear and circular). If time permits, basic machines and fluid mechanics will also be covered. Sufficient mathematical treatment is given to the materials so that the students can apply the principles in a quantitative manner. The laboratory work includes computer-aided study and the appropriate experiments to illustrate the application of the physical principles. <strong>Prerequisite:</strong> 804-115 College Technical Mathematics I</td>
</tr>
</tbody>
</table>

For the most current schedule information, visit www.blackhawk.edu
For more information, call: (608) 758-6900
809-166 Introduction to Ethics: Theory and Application 3 Credits
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.

809-172 Race, Ethnic and Diversity Studies 3 Credits
Race, Ethnic and Diversity is a course that draws from several disciplines to reaffirm the basic American values of justice and equality by teaching a basic vocabulary, a 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, the disabled and the American Disability Act (ADA) are explored. Ethnic relations are studied in global and comparative perspectives.

809-174 Social Problems 3 Credits
Explores the causes of and possible solutions to selected social problems such as inequality, crime and deviance, and poverty. Students will examine the interrelationship of social problems and their roots in fundamental societal institutions. Prerequisite: 806-196 Introduction to Sociology

809-188 Developmental Psychology 3 Credits
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.

809-195 Economics 3 Credits
This course is designed to give an overview of how a market-oriented economic system operates, and it surveys the factors which influence national economic policy. Basic concepts and analyses are illustrated by reference to a variety of contemporary problems and public policy issues. Concepts include scarcity, resources, alternative economic systems, growth, supply and demand, monetary and fiscal policy, inflation, unemployment and global economic issues.

809-196 Introduction to Sociology 3 Credits
Introduces students to the basic concepts of sociology: culture, socialization, social stratification, multi-culturalism, and the five institutions, including family, government, economics, religion, and education. Other topics include demography, deviance, technology, environment, social issues, social change, social organization, and workplace issues.

809-198 Introduction to Psychology 3 Credits
This introductory course in psychology is a survey of the multiple aspects of human behavior. It involves a survey of the theoretical foundations of human functioning in such areas as learning, motivation, emotions, personality, deviance and pathology, physiological factors, and social influences. It directs the student to an insightful understanding of the complexities of human relationships in personal, social, and vocational settings.

809-199 Psychology of Human Relations 3 Credits
Explores the relationship between the general principles of psychology and our everyday lives. Students are given the opportunity to achieve a deepened sense of awareness of themselves and others. This understanding enables students to improve their relationships with others at work, in the family, and in society.

809-352 Skills for Successful Employees 2 Credits
This course seeks to ready the student for employment by discussing specific “human” skills that lead to success on the job. The topics presented may include: the importance of having a good attitude; the need to recognize that customers “buy” much more than a clearly defined product or service; and knowing how to treat customers, how to influence them, how to handle complaints, and how to sell. Students will also become aware of the need for self-organization, for innovation, for teamwork, and for effective management.

Outreach to Our Communities
Each year more than 14,000 Green and Rock County incumbent workers, job seekers, and adult learners look to Blackhawk Technical College to fill their need to be lifelong learners. Whether you come as an individual, business, or community organization you can enter learning programs on the Janesville or Monroe campus, at one of the BTC Learning Centers, or at the business where you are employed.

The Business & Community Development Division, including Continuing Education Programs, provides an array of courses in a variety of settings. Continuing Education schedules learning opportunities for individuals seeking enrichment, furthering their knowledge and skills for work or fun. Business & Community Development works directly with business and industry, education and community organizations to custom design services that include classes, workshops and seminars as well as consulting services that can be delivered on-site at the business or on campus.

Patricia Kempinski, Director – (608) 757-7704
pkempinski@blackhawk.edu

Customized training and business consulting is the core of the services provided by the Business & Community Development Division (BCD). Our professional staff can assess your business and training needs and then design and deliver services that help your business or organization meet its goals. Training and consulting can be provided at your site or at any of the College centers or campuses.

The BCD Managers will work with you to match the right trainer or consultant to your needs. This individual will assist in creating solutions to your specific issues by custom designing curriculum and activities for you. The Managers can guide you to State of Wisconsin funding that may be available to offset your training costs.

Business seminars, organizational analyses, employee skills assessments, business planning assistance, and facilitation services are also available.

For the most current schedule information, visit www.blackhawk.edu
Examples of training and consulting services that have been provided through the Business & Community Development Division are listed below:

- Computer Skills Assessments & Testing Center
- Computer Topics
- Customer Relations Management
- Human Resource Management
- Information Technology
- Leadership & Development
- Maintenance
- MS Access Project Development (MOS)
- MSHA Compliance
- OSHA Training
- Personal Style Inventory
- Personnel Mentoring
- Process Picture Mapping
- Project Management
- Quality Management
- Ed-Venture Program Course Activities
- Sales & Marketing
- Shop Skills Training
- Strategic Planning
- Supplier Relations Management
- Time Management

Managers, Training & Consulting Services

BCD Managers are available to assist businesses and organizations with their training, consulting, and facilitation needs.

Rick Dannemiller – (608) 757-7728
rdannemiller@blackhawk.edu

Wendy Schultz – (608) 757-7726
wschultz@blackhawk.edu

Clients include businesses and organizations from the following sectors:

- Manufacturers
- Distribution Facilities
- Transportation Industry
- Construction
- Protective Services
- Community-based Residential Facilities
- Community-based Organizations
- Education

- Health Care
- Food Processing
- Finance
- Real Estate
- Insurance
- Appraisal

BCD Experiential Learning Coordinator is available to assist your team and you in the promotion of personal and group interaction through experiential education techniques that focus on the areas of trust, communication, group interaction, problem solving, and critical thinking.

Jeff Messer - (608) 757-6332 jmesser@blackhawk.edu

To learn more about how Business and Community Development can work with you please call (608) 757-7630 or send an e-mail to BusinessDevelopment@blackhawk.edu. In Green County call (608) 329-8221.

Continuing Education Programs

Explore the variety of non-credit vocational and enrichment classes designed for upgrading skills or personal development.

For a current listing of courses, visit our website at www.blackhawk.edu and click on the link for “Non-credit classes.” Or to learn about the more than 200 courses we now offer online, click on the “Non-credit Online” link.

For information about classes in Rock County, please contact: (608) 757-7629. In Green County, please contact: (608) 329-8203.

Develop and Upgrade Your Skills

Enhance your skills or jump start a new career by acquiring the tools needed to excel on the job. Continuing education classes offer an affordable option for exploring new areas of interest. Below is a sampling of non-credit courses offered at BTC:

Computers
- Website Development
- Graphic Arts
- Access
- Excel

Languages
- Spanish
- Sign Language

Business
- Starting a Small Business
- Writing a Business Plan
- QuickBooks

Industrial
- AutoCAD
- Basic Electricity
- Programmable Logic Controllers
- Welding

Teach a Class

Interested in teaching a class? Or perhaps you have an idea for a new course. If so, please contact our continuing education coordinator Mark Triller at (608) 757-7701.

For more information, call: (608) 758-6900
Try something different. Or do something you’ve always wanted to do but never had the time. Below is a sampling of personal enrichment classes:

**Arts & Crafts**
- Flower Arranging
- Drawing and Painting

**Foods**
- Cake Decorating
- Gourmet Cooking
- Middle Eastern Cuisine

**Sewing & Needlecraft**
- Quilting
- Turn a Sweatshirt into a Cardigan

**Health and Wellness**
- Aromatherapy
- Stress Relief Techniques

**Woodworking**
- Cabinetmaking
- Building Patio Furniture

**Home Furnishings**
- Reupholstery
- Refinishing

**Outreach Education**
Blackhawk Technical College has outreach centers in six locations throughout Rock and Green Counties. The Monroe Campus of Blackhawk Technical College is located just off the Highway 11 bypass in Monroe. This full-service, handicapped accessible center has three state-of-the-art computer labs and a distance learning lab linking it to Central Campus. At the Monroe Campus, students may choose from a selection of full associate degree, one year diplomas and short term certificates as well as the general education core courses for all associate degrees offered through the college. Additionally, annually more than 100 continuing education classes, educational and financial aid counseling, and GED/HSED preparation and testing services are offered. Up-to-date training for Green County employers and employees supports regional workforce development. Students are served in learning activities featuring small class size and a personalized learning environment at the Monroe Campus.

Outreach centers have their own full- or part-time center coordinators who are responsive to the training and educational needs of their communities. Following are BTC’s Outreach Continuing Education Centers:
- Beloit Center
- Edgerton
- Evansville
- Milton
- Rock County Job Center
- Monroe
- Center for Transportation Studies

In the smaller centers, classes are usually held in local school facilities and course offerings include both credit and non-credit classes in the areas of business, family and consumer education, industrial occupations, personal development and service occupations. Adult Basic Education and GED/HSED preparation courses are located in several centers throughout the district as well.

Through the outreach centers, BTC provides district residents the opportunity to upgrade job skills, begin credit programs, and take enrichment classes close to home in their local communities. More than 1,700 courses are offered annually through BTC’s Monroe Center, Continuing Education Programs, and Business & Community Development Division.

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**Accounting**

This Associate degree program prepares its graduates for entry-level positions in a variety of business enterprises. Students are provided with an opportunity to develop their intellectual, interpersonal, and communication skills, along with their professional orientation. Students learn to solve accounting problems both manually and with the aid of computers. In addition, the educational experience enables students to develop the motivation for life long learning.

**Program Outcomes—**
Upon completion of this program, you will be able to:
- Prepare financial statements and related schedules in conformity with generally accepted accounting principles
- Evaluate opportunities for improving a company’s financial performance
- Use computers as tools for solving problems, managing information, presenting ideas, and making decisions
- Apply accounting skills and principles creatively and innovatively in accordance with the standards of professional ethics
- Demonstrate the flow of information within an organizational structure
- Develop a comprehensive systems model of internal controls
- Synthesize research and principles of taxation in recommending options to minimize tax liabilities and prepare tax forms

**Graduates from this program have found employment as:**
- Accounts Payable/Receive clerk
- Payroll Clerk
- Accounting Clerk
- Assistant Accounting Manager
- Accountant
- Accounting Assistant
- Office Accountant

**Helpful High School Courses—**
The following are not required for admission into this program but help students prepare for this degree:
- Accounting
- Algebra
- Business Math
- English
- Bookkeeping
- Economics
- Computers
- DECA and FBLA Leadership

The Accounting Program is also offered as an on-line degree. Interested students should contact a Student Services advisor for information.
### Accounting Course Descriptions

**Accounting Assistant Certificate (32 cr.)**

Students may choose to receive a certificate as an Accounting Assistant upon satisfactory completion of the first two semesters of the Accounting Associate Degree Program. With this certificate, you will be better prepared for entry level positions related to accounts receivable, accounts payable, payroll, bookkeeping, and other related office functions. Students selecting this option may return to BTC at a later date (in accordance with the College’s advanced standing policy) to complete the Associate Degree in Accounting.

#### Course Descriptions

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td><strong>Semester 1</strong></td>
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<tr>
<td>101-105 Accounting Spreadsheets</td>
<td>3</td>
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<tr>
<td>101-111 Accounting I</td>
<td>4</td>
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<tr>
<td>103-106 Introduction to MS Office</td>
<td>3</td>
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<td>801-195 Written Communication</td>
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<td><strong>Semester 2</strong></td>
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<tr>
<td>101-112 Accounting II¹</td>
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<tr>
<td>101-130 Accounting Information Systems</td>
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<tr>
<td>101-135 Payroll Accounting²</td>
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<tr>
<td>101-136 Computerized Accounting³</td>
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<td>801-196 Oral/Interpersonal Communication</td>
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<tr>
<td>801-197 Technical Reporting³</td>
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<td><strong>Semester 3</strong></td>
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<tr>
<td>101-113 Accounting III¹</td>
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<td>101-123 Income Tax Accounting</td>
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<tr>
<td>101-125 Cost Accounting¹</td>
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<td>809-195 Economics</td>
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<td><strong>Semester 4</strong></td>
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<tr>
<td>101-109 Financial Analysis¹</td>
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<tr>
<td>101-124 Applied Income Tax² OR</td>
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<td>101-128 Supervised Occupational Experience¹</td>
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<tr>
<td>101-131 Accounting Databases¹</td>
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<td>101-137 Career Development in Accounting³</td>
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<td>809-196 Introduction to Sociology</td>
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<td>Elective³</td>
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</tbody>
</table>

**Total Credits** 67

¹Course has prerequisites.

²Recommended accounting-related electives include:

- 101-150 AIPB Certified Bookkeeper Review
- 102-160 Business Law
- 103-126 Introduction to Quickbooks
- 103-178 Advanced Excel
- 809-166 Introduction To Ethics: Theory & Application

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**Accounting, 101-136 Computerized Accounting**

This is a continuation of Accounting I. Account groups are studied for their composition, valuation, recognition, and appropriate accounting treatment. The accounting groups focused on are: receivables, inventory, fixed assets, and current liabilities. In addition, managerial/cost accounting concepts and principles, and cost-volume-profit analysis are introduced. **Prerequisites: 101-105 Accounting Spreadsheets, 101-111 Accounting I, 804-110 Elementary Algebra with Applications**

**101-113 Accounting III**

This is a continuation of Accounting II. The course focus is on accounting for long-term liabilities, partnerships, corporations, and preparing the statement of cash flows. A comprehensive practice set allows students a practical application of accounting theories. **Prerequisites: 101-112 Accounting II, 103-106 Introduction to MS Office**

**101-123 Income Tax Accounting**

Federal and state income tax laws are covered as related to the individual taxpayer. Emphasis is on learning to research and interpret tax laws and regulations. The student will study the law, then apply the law to illustrative cases and prepare appropriate tax forms. **Prerequisite: 101-124 Applied Income Tax**

**101-125 Cost Accounting**

This course focuses on the study of cost accounting, blending theory with practical application of problems and case studies. Cost systems presented include the job order cost system and the process cost system. Emphasis is on cost accumulation using actual and standard costing, as well as managerial cost decision making. **Prerequisites: 101-112 Accounting II, 101-135 Payroll Accounting**

**101-128 Supervised Occupational Experience – Second Year**

In this course, second-year students interview for accounting work-based learning placements within business and industry. Once selected, students will apply their knowledge and skills in an accounting work environment under the supervision of an employer. **Prerequisites: 101-112 Accounting II, 101-130 Accounting Information Systems, 101-135 Payroll Accounting, 101-136 Computerized Accounting**
101-130 Accounting Information Systems 3 Credits
This course helps students develop their professional judgment as accountants while studying the flow of information in an organization. Using scenarios, each transaction cycle is analyzed and studied for internal control weaknesses. Based on the analysis, the students are required to identify ways to strengthen any weakness identified. Students will learn flowcharting techniques and principles of system design.

101-131 Accounting Databases 2 Credits
Students learn Microsoft Access and then are divided into teams to apply database concepts in an accounting information system using Access. The system stresses the use of good internal controls. Emphasis is on teamwork and good design techniques. A working knowledge of Microsoft Windows is expected. Prerequisites: 101-130 Accounting Information Systems, 101-113 Accounting III, 103-106 Introduction to MS Office

101-135 Payroll Accounting 2 Credits
This course emphasizes methods of computing wages and salaries, methods for keeping payroll records and the preparation of government reports. Included is a project requiring the student to record all the payroll information for a business during a three-month operating period. Prerequisites: 101-111 Accounting I, 804-110 Elementary Algebra with Applications

101-136 Computerized Accounting 1 Credit
This course is designed to build the bridge between a manual accounting system and a computerized system, explaining the “behind-the-scenes” actions of the computerized system. A popular computerized accounting software package is used to record business transactions within a computerized system and produce financial statements and various other reports for management. This course is designed to provide the user with an intermediate level of proficiency in a computerized accounting software package. Prerequisite: 101-111 Accounting I or equivalent experience

101-137 Career Development in Accounting 1 Credit
This course prepares students to use strategies for seeking, obtaining, and retaining employment in accounting and finance related positions. Students develop a job search plan, prepare a resume and cover letter, complete application forms, and prepare for job interviews. Students build a professional profile and finalize a personal portfolio. Students critically review ethical issues in the accounting profession and research accounting topics using the Internet, library, and community resources. This course is intended for students who are in their fourth semester of the two year degree. Prerequisites: 101-113 Accounting III, 101-125 Cost Accounting

101-150 AIPB Certified Bookkeeper Review 3 Credits
This course is a preparatory course for the national American Institute of Professional Bookkeepers (AIPB) Certified Bookkeeper examination. Students will study adjusting entries, correction of accounting errors, payroll accounting, depreciation, inventory, and internal controls. Upon completion of this course, each student will have reviewed all six parts of the Certified Bookkeeper examination. Prerequisites: 101-111 Accounting I, 101-112 Accounting II, 101-135 Payroll Accounting or equivalent experience

102-160 Business Law 3 Credits
This course is designed to provide the student with a working knowledge of law as it relates to the rights and responsibilities of businesses and individuals. Emphasis is placed on contracts, torts, privacy, the digital age, business ethics, and social responsibility, particularly in the business context.

103-106 Introduction to MS Office 3 Credits
Intended for students with little or no prior computer experience. This course will introduce students to the Microsoft Office Suite and overview many of the core competencies of Outlook, Work, Excel, Access, PowerPoint, and Explorer. Students will develop the use of technology for both problem solving and decision-making and will be expected to learn to use the resources available to search for answer to problems.

103-126 Introduction to Quickbooks 1 Credit
This course is designed to provide the user with a basic level of proficiency in the popular Quickbooks software. Quickbooks is used to record business transactions and produce financial statements and various other reports for management. A working knowledge of Microsoft Windows and a basic knowledge of the accounting cycle are recommended.

103-178 Advanced Excel 2 Credits
This course covers advanced features of Microsoft Excel such as what if analysis, input tables, spreadsheet consolidation, data tables and queries, object linking and embedding, filters and pivot tables, macros, Visual Basic for Applications, and charting features. Prerequisite: 101-105 Accounting Spreadsheets

General Education Course Requirements:
(see course descriptions on pages 33-37):

801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Comm. 3 Credits
801-197 Technical Reporting 3 Credits
804-110 Elementary Algebra with Apps 3 Credits
809-166 Introduction to Ethics 3 Credits
809-195 Economics 3 Credits
809-196 Introduction to Sociology 3 Credits
809-198 Introduction to Psychology 3 Credits

BTC’s Administrative Assistant two-year associate degree is designed to prepare tomorrow’s executive secretaries, administrative assistants, project coordinators, and other administrative professionals who want to position themselves to take on greater responsibilities as vital members of the management team in the workplace. Students will become valued assistants equipped with the latest technology, research, communication, and professional skills.

Students will develop the knowledge and ability to complete core level and some expert level proficiency exams in MS Word, MS Excel, MS Access, MS PowerPoint, and MS Outlook, if they so choose. Since BTC is an authorized testing and certification center for Microsoft Office Specialist tests, these industry-recognized exams may be conveniently scheduled.
Program Outcomes–
Upon completion of this program, you will be able to:
• Compose business correspondence
• Conduct research
• Coordinate meeting activities
• Coordinate travel arrangements
• Demonstrate leadership in managing office projects and/or teams
• Design presentations, forms, and publications
• Maintain office equipment, hardware, and software
• Manage information in electronic and paper formats
• Process financial records
• Process incoming and outgoing communications

Graduates from this program have found employment as:
• Administrative Assistant
• Human Resources Assistant
• Administrative Coordinator
• Administrative Specialist
• Executive Assistant
• Office Manager
• Office Assistant
• Project Coordinator
• Secretary

Helpful High School Courses:
• Touch keyboarding skill of 40 wpm or higher for 5 minutes with 5 or fewer errors. Keyboarding, Skillbuilding and Keyboarding Applications courses are available at BTC
• English composition
• Computer applications
• Advanced standing may be available for some courses; check with your high school counselor
• Proficiency testing is available for some courses; check with BTC’s Student Services staff

Course Name Credits Lec-Lab
Semester 1
106-108 Proofreading and Editing 1 0 - 2
106-145 Information Technology Essentials 3 2 - 2
106-146 Word Processing Applications 3 1 - 4
106-157 Administrative Assistant Fundamentals 1 1 - 0
196-107 Professional Profiles 3 3 - 0
801-195 Written Communication 3 3 - 0
Elective 2 (106-131 Keyboarding Applications, if needed) 3 1 - 4
Semester 2
106-129 Business Filing 1 0 - 2
106-133 Document Formatting 3 1 - 4
106-153 Administrative Office Procedures1 3 2 - 2
106-159 Business Spreadsheets 3 2 - 2
106-165 Business Presentations 1 0 - 2
801-196 Oral/Interpersonal Communication 3 3 - 0
804-106 Introduction to College Mathematics OR
804-110 Elem. Algebra with Applications

TOTAL CREDITS 70

Business Technology Certificate (34 cr.)
All courses in this certificate qualify for the Administrative Assistant A.A.S. Degree. This certificate is offered at both Central Campus and the Monroe Campus.

Course Descriptions
101-102 Office Accounting 3 Credits
Office Accounting is a basic course in accounting principles and bookkeeping procedures. Topics include journalizing and posting transactions, preparing worksheets, adjusting and closing entries, and preparing the financial statements. Emphasis is on the service enterprise and accounting for cash.

102-160 Business Law 3 Credits
This course is designed to provide the student with a working knowledge of law as it relates to the rights and responsibilities of businesses and individuals. Emphasis is placed on torts, contracts, case analysis, ethics, and social responsibility, particularly in the business context.

106-108 Proofreading and Editing 1 Credit
Students will develop proofreading skills for identifying and correcting punctuation, grammar, spelling, and usage errors. This course also includes editing skills for improving format, consistency, clarity, conciseness, and completeness. Activities require applying proofreading and editing skills to realistic business communications in both print and electronic formats. Touch keyboarding and basic word processing skills are helpful.

106-129 Business Filing 1 Credit
Students learn the Association of Records Managers and Administrators (ARMA) filing rules through experience with various filing methods in a practice simulation. Students will also be introduced to file maintenance procedures, supplies, and equipment.
106-130 Transcription Technology  2 Credits
Activities include transcribing documents, utilizing voice recognition software, and consulting reference materials. Correct business communications will be reinforced with emphases on proofreading, punctuation, grammar, and spelling.  
**Prerequisites:** 106-108 Proofreading and Editing, 106-133 Document Formatting

106-131 Keyboarding Applications  3 Credits
Keyboarding Applications is designed to enhance keyboarding skills and to develop basic document formatting techniques while applying decision-making skills. Basic grammar and punctuation skills will be emphasized along with common word processing software.  Students can expect to possess keyboarding skills of 40 wpm or higher at the end of this course. Touch keyboarding skill (30 wpm for 3 minutes with 3 or fewer uncorrected errors) is assumed at the beginning of this course. This course is not required for students who can demonstrate this competency on a timed test.

106-133 Document Formatting  3 Credits
Document Formatting further develops keyboarding skills and emphasizes the efficient production of correctly formatted memos, e-mail messages, letters, business reports, manuscripts, legal and medical documents, and publications.  The ability to use word processing software is expected at the beginning of the course along with touch keyboarding skill (a minimum of 40 wpm for 5 minutes with 5 or fewer uncorrected errors).

106-137 Integrated Office Applications  3 Credits
Students will learn to integrate their word processing skills with Microsoft Outlook, PowerPoint, Excel, and Access to produce complex documents. Internet and Intranet activities are integrated within some projects. Students will also develop employment portfolios and prepare employment-related documents. Students are expected to have working knowledge of Microsoft Outlook and Word at the beginning of the course.

106-140 Keyboarding  3 Credits
Students will master the computer keyboard by touch including the letters and numeric keypad. Computer software is used to begin development of acceptable speed and accuracy levels. Students completing this course may be ready for 106-131 Keyboarding Applications, or may continue to develop their proficiency and keyboarding abilities in Skillbuilding.  This course is not required for students who can demonstrate keyboarding skills of 30 words per minute with 3 or fewer uncorrected errors on a 3 minute timing.

106-143 Skillbuilding  1 Credit
This elective course focuses on the development of keyboarding speed and accuracy. Diagnostic computer software allows students to determine their own particular weaknesses and error patterns and then select drills specifically designed to correct those weaknesses. This course may be taken more than once to further develop skills. Students should know the alphabetic keyboard by touch or have taken 106-140 Keyboarding.  Students completing this course may be ready for 106-131 Keyboarding Applications or may continue to develop their proficiency and keyboarding abilities by repeating the course.

106-145 Information Technology Essentials  3 Credits
This course provides an introduction to computers and information processing terms, hardware, software, networks, and buying a computer. Major topics also include effective use of a web browser, Microsoft Outlook’s electronic mail, calendar, and contacts modules, and the basics of Windows operating system. Touch keyboarding skills are recommended.

106-146 Word Processing Applications  3 Credits
Students use word processing software to create, format, and edit business documents applying features such as headers/footers, macros, merge, templates, tables, columns, outlines, fonts, and graphics. Software functions, theory and production will be assessed. Students will be prepared to take both the core level and expert level Microsoft Office Specialist certification exams. The pace of this course is based on touch keyboarding speed of 40 words per minute and basic computer skills.

106-153 Administrative Office Procedures  3 Credits
This course covers office procedures concepts and practices and includes practical experience in areas such as specialized office equipment, telecommunications, mail processing, telephone techniques, office supplies, ethics, ergonomics, and customer service. Critical-thinking, problem-solving, and job performance skills in a global business environment are also included.

**Prerequisite:** 106-145 Information Technology Essentials

106-155 Introduction to Desktop Publishing  2 Credits
Desktop publishing combines the technology of the personal computer, scanners, digital cameras, color printers, and desktop publishing software with specific design and layout concepts. Students will apply the proper use of typefaces, graphics, tables, text and user-defined boxes, horizontal and vertical rules to the design and layout of newsletters, brochures, and other documents. The pace of this course is based on touch keyboarding skill of 40 words per minute and basic computer skills.

106-157 Administrative Assistant Fundamentals  1 Credit
This orientation course provides an introduction to BTC’s Administrative Assistant program and its requirements, selected BTC and external resources, and requirements of a professional administrative assistant. Informational interviews at area companies and guest speakers will be part of this course. Whenever possible, this course should be taken during the student’s first semester.

106-158 Supervised Occup. Exp. - Admin. Asst.  2 Credits
This course consists of two components—a minimum of 72 hours of practical experience in an office environment and an hour per week of in-class instruction. Students will be expected to obtain a job and demonstrate technical and interpersonal skills necessary for office employment. BTC instructors will coordinate management of students in approved positions under the supervision and guidance of cooperating employers. Students will also finalize employment portfolios and other employment-related documents. Students should have satisfactorily completed all core courses in semesters 1, 2, and 3 of the Administrative Assistant Associate Degree program before taking this course.

106-159 Business Spreadsheets  3 Credits
Using Microsoft Excel, students will learn the elements of a spreadsheet: worksheet capabilities (create, modify, enhance, save, print, and erase worksheets), graphing capabilities (create graphs, bar charts, and pie charts), and database capabilities...
ADMINISTRATIVE ASSISTANT

For more information, call: (608) 758-6900

(candate, sort, and query). Students will be prepared to take both the core level and expert level Microsoft Office Specialist certification exams. Basic computer skills are expected.

106-160 Administrative Office Projects 3 Credits
This course enhances skills necessary to provide organizational and technical support in a contemporary office setting. Topics covered include project management, research, travel and meeting planning, financial information, emerging technologies, and career development. Successful completion of all core courses in semesters 1, 2, and 3 of the Administrative Assistant Associate Degree program is expected.

106-164 Specialized Software Applications 3 Credits
Intended to introduce students to advanced applications used by office professionals, this software-intensive course provides an introduction to programs such as Microsoft Publisher, Microsoft FrontPage, and/or other computer applications used by administrative professionals. Students will apply basic skills and strategies for designing and maintaining a website and/or of or class intranet. Prerequisites: 106-146 Word Processing Applications, 106-108 Proofreading and Editing

106-165 Business Presentations 1 Credit
Microsoft PowerPoint software will be used to create dynamic, professional-looking presentations. Students will be able to design an electronic slide show—format text; apply special effects; add graphics, sound, and video; integrate other software; print in a variety of formats and media; and deliver presentations they authored. Students will be prepared to take the Microsoft Office Specialist certification exam. Touch keyboarding and basic word processing skills are necessary.

196-107 Professional Profiles 3 Credits
The mission of the course is to empower students to enhance performance through personal self-management. The course, which is built around “The Seven Habits of Highly Effective People,” provides an opportunity to develop both personally and professionally in effectively dealing with change.

AGRIBUSINESS

NEW ONE-YEAR DIPLOMA
The Agribusiness Specialist Program is a new one-year technical diploma that will provide students with the skills and experience for future agriculture employment in a variety of settings including: agriculture service and supply, agriculture marketing and sales, agriculture research, as well as direct marketing and agricultural tourism. Emphasis will be on leadership skills, agribusiness management and marketing (including sales), agricultural policy, sustainable agriculture practices, and renewable energy applications.

AGRIBUSINESS

Course Name Credits
Semester 1
Agricultural Economics and Policy 3
Commodity Marketing 2
Agricultural Safety 1
Livestock Management 2
Agronomy and Soils 4
Oral Communications 3

Semester 2
Leadership Development 3
Contemporary Issues in Sustainability 2
Agricultural Entrepreneurship 3
Farm Business Analysis 2
Agricultural Finance 2
Farm Management 2
Agribusiness Management 2
Agriculture Externship 1

TOTAL CREDITS 32

AIR CONDITIONING, HEATING & REFRIGERATION TECHNOLOGY

HVAC/R is one of the fastest growing industries in the world today. With the changing laws involving refrigerants and the influx of digital control systems, there is a constant need for qualified service technicians to work on HVAC/R equipment. A service technician will have to continually update his/her skills to keep up with the changing industry.

This program will provide proper training for people interested in a career in the heating, ventilation, air conditioning and refrigeration (HVAC/R) field. The technician will be prepared for employment in a variety of areas including servicing, installing, designing, estimating, and selling HVAC systems for commercial and residential applications. The most modern equipment, test instruments, and computers are used for instruction.

After completing the HVAC/R associate degree program, students may wish to pursue additional training in heating, ventilation, and air conditioning engineering. Credit for many of the associate degree courses may be transferred to a four-year institution. The student needs to confirm which courses are transferable with the accepting college.

Program Outcomes–
Upon completion of this program, you will be able to:

• Perform HVAC/R service and repair operations in compliance with published safety standards
• Promote customer satisfaction
• Operate tools and equipment according to process published in operator’s manual and/or demonstrated in class
• Service and/or repair/replace defective components established in equipment specific repair manual and/or electronic service information systems
• Diagnose root cause of problems by comparing test results to an established standard
• Efficiently complete tasks within the expected time frame for an entry level technician
Graduates from this program have found employment as:

- HVAC/R Service Technician
- HVAC/R Service Installation Technician
- HVAC/R Sales Representatives
- HVACR Maintenance Technician

Career Outlook:
There is a constant demand for comfort systems, and trained HVAC/R technicians are sought to operate and maintain these systems. Graduates of this program often obtain work as installation technicians, service technicians, sales representatives, and maintenance technicians.

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<td><strong>Semester 2</strong></td>
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<td>601-120 Refrigeration Fundamentals</td>
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<td>601-135 Electrical Controls &amp; Systems</td>
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<td>801-195 Written Communication</td>
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<td><strong>Semester 3</strong></td>
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<td>601-140 Control Circuit Applications</td>
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<td>809-198 Introduction to Psychology</td>
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<td><strong>Semester 4</strong></td>
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<tr>
<td>601-145 Heating System Applications</td>
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<td>2-2</td>
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<tr>
<td>601-160 Hydronic Systems</td>
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<tr>
<td>601-165 Electronic Energy Management Systems</td>
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<td>2-2</td>
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<tr>
<td>601-175 Servicing &amp; Troubleshooting HVAC/R Equipment</td>
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<td>2-2</td>
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<tr>
<td>809-172 Race, Ethnic &amp; Diversity Studies</td>
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</tbody>
</table>

**TOTAL CREDITS** 63

1Course has prerequisites.

601-110 Air Conditioning Fundamentals 3 Credits
Air Conditioning Fundamentals is a course designed to teach the principles of operation of commercial and residential air conditioning systems as encountered in the HVAC/R servicing and installation business. This course is almost entirely theory with some laboratory covering the use of measuring instruments during operation of HVAC/R systems. All aspects of safety will be emphasized and reviewed throughout the course.

601-115 Electrical Fundamentals 3 Credits
A sound electrical background is essential in order to become a successful HVAC/R technician. Electrical Fundamentals provides experience with electrical theories, circuits, devices, and equipment. This is a combination lecture/lab course involving hands on experience with HVAC/R electrical components. There will also be an introduction to electrical diagram reading and drawing along with computer-aided tutorials. Electrical safety will be thoroughly discussed and reviewed during the course.

601-120 Refrigeration Fundamentals 3 Credits
This course will study the function and operation of the basic components in the refrigeration cycle along with learning the use of service tools the HVAC/R technician will utilize on the job. Refrigeration Fundamentals is a combination lecture/lab course in which the students will be able to apply theory to the lab using actual HVAC/R equipment. Computer simulators will be introduced as teaching aids. On the job and lab safety will be emphasized.

601-125 Mechanical Systems-Drawing and Interpretation 3 Credits
In this course, instruction will be given in design, application, blueprint reading, symbols and drawings of mechanical systems. Outlays of various heating and cooling systems in relation to architectural buildings are used. Proper mechanical schematics, isometric piping, and flow diagrams are discussed and drawn.

601-130 Heating Systems 3 Credits
The study of principles of the operation of commercial and residential heating systems, as encountered in the HVAC/R servicing and installation business, make up this course. Forced air systems utilizing gas combustion systems will be covered along with electric heating systems. This course is a balance of theory and application.

601-135 Electrical Controls and Systems 3 Credits
This course is designed to give the student an understanding of the operation of various types of control devices and how combinations of these devices can be applied and varied to secure the desired conditions in heating and cooling systems. Students will interpret and draw in depth wiring diagrams using actual HVAC/R equipment. Computers will also be utilized in the studying of wiring diagrams. This course is mostly application oriented, with a review of electrical theory and safety. **Prerequisite: 601-115 Electrical Fundamentals**

601-140 Control Circuit Applications 3 Credits
This course is designed to teach systems application of electrical controls in the HVAC/R field. Control Circuit Applications will continue to emphasize the understanding of wiring diagrams along with troubleshooting controls, mechanical and electro-mechanical controls, electronic control circuits, and HVAC/R control applications. This course is a combination of lab and theory. **Prerequisite: 601-135 Electrical Controls and Systems**

601-145 Heating System Applications 3 Credits
Heating System Applications covers the operation, maintenance and service of gas, propane and oil fired heating equipment. In addition, this class will also cover the operation and service procedure for heat pumps. This course is a balance of theory and application. **Prerequisite: 601-130 Heating Systems**

601-150 Air Conditioning Applications 3 Credits
This course includes the installation and service of air conditioning systems, including types of fan systems, duct service and fabrication techniques, load calculating and estimating and air and fluid measurements. This course is a combination of classroom presentation and lab. **Prerequisite: 601-110 Air Conditioning Fundamentals**

For the most current schedule information, visit www.blackhawk.edu
AIR CONDITIONING, HEATING & REFRIGERATION TECHNOLOGY

601-155 Refrigeration Applications 3 Credits
This course involves servicing of commercial refrigeration systems using meters and service tools. Studies and calculations are made of commercial refrigeration systems, along with the design and selection of equipment. Refrigeration Applications is primarily hands on with some theory. **Prerequisite: 601-120 Refrigeration Fundamentals**

601-160 Hydronic Systems 3 Credits
This course involves instruction and laboratory work on hydronic and steam systems. Students will be able to design, install, start-up and service gas and oil fired systems. This course is a combination of classroom presentation and lab.

601-165 Electronic Energy Management Systems 3 Credits
Major types of automatic electrical control systems are described and compared. Programs, sensing and control points, signal transmission and processing, and other peripheral equipment which make up a complete building monitoring and control automation system are also explored. Students will be able to utilize computer controls either on the HVAC/R equipment or at a computer station to evaluate equipment operation. This course is a mixture of lecture along with some lab work. **Prerequisite: 601-135 Electrical Controls & Systems**

601-175 Servicing and Troubleshooting HVAC/R Equipment 3 Credits
Various methods of troubleshooting and servicing of HVAC/R systems are studied. Utilizing manufacturer's guidelines and service tools, the student will demonstrate customer relations, mechanical aptitude and bookkeeping skills that are essential to becoming a well rounded service technician. The students will also perform computer simulated service calls to reinforce knowledge. This class is almost entirely hands on. **Prerequisites: 601-140 Control Circuit Applications, 601-150 Air Conditioning Applications, 601-155 Refrigeration Applications or equivalent work experience**

631-120 Industrial Computer Applications 3 Credits
The Industrial Computer Applications course is designed to meet the need for foundational computer training in industrial occupations. Using a self-paced, modular format, the ICA course is flexible to meet the needs of students with varying backgrounds in computer usage. Topics covered include: PC parts identification (including communications ports), operating system usage, file management, word processing, spreadsheet usage, and Internet usage.

**General Education Course Requirements:**
(see course descriptions on pages 33-37)

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<tr>
<th>Course Code</th>
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<th>Credits</th>
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<td>801-195</td>
<td>Written Communication</td>
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<td>Oral/Interpersonal Communication</td>
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<td>804-106</td>
<td>Introduction to College Mathematics</td>
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<td>809-172</td>
<td>Race, Ethnic &amp; Diversity Studies</td>
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<td>809-195</td>
<td>Economics</td>
<td>3</td>
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<tr>
<td>809-196</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>809-198</td>
<td>Introduction to Psychology</td>
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AIRFRAME & POWERPLANT MECHANIC

Airframe and powerplant mechanics keep aircraft in peak operating condition, perform scheduled maintenance, make repairs, and complete inspections required by the Federal Aviation Administration (FAA). Technicians may work on many types of aircraft, such as jets, propeller-driven airplanes, and helicopters, or, for efficiency, may specialize in one section of a particular type of aircraft, such as engine, hydraulic system, or electrical system. As a result of technological advances, technicians spend increasing amounts of time repairing electronic systems such as computerized controls.

In small, independent shops, technicians usually inspect and repair many different types of aircraft. The student learns to make decisions on the airworthiness of aircraft structures, systems, engines, propellers and components after performing inspections, repairs, alterations and maintenance on airworthy aircraft engines and components.

The student is trained to work on piston and jet powered aircraft, helicopters, piston and turbine engines. Students are required to do work of the highest airworthy standards. Maturity and ability to do precision work is essential for success in this program.

**Program Outcomes**

**Upon completion of this program, you will be able to:**
- Integrate safety protocol
- Locate and interpret repair specifications, processes, and procedures
- Operate tools and equipment
- Remove and replace components
- Repair defective components and systems
- Service components or systems
- Diagnose the condition of components or systems
- Maintain academic status
- Maintain attendance requirements per Federal Aviation Administration FAR 147 Manual

**Graduates from this program have found employment as:**
- Aircraft Mechanic
- Aviation Maintenance Technician
- Aircraft & Engine Mechanic
- Aircraft Apprentice
- Repairman
- Aircraft Inspector
- Aircraft Sheet Metal Technician

**Career Outlook:**
There is a high demand for qualified aviation maintenance technicians. Opportunities exist in both general and commercial aviation. Upon completion of this two-year program, graduates are qualified to take Federal Aviation Administration written, oral and practical tests. The program offers training on the same airworthy aircraft and engines as found in the field.
and make precision measurements. The student will gas weld, arc weld, solder and braze, and inspect welded joints.

402-308 Aircraft Metal Structures  3 Credits
In this course the student will study and use special fasteners for metal structures. The students will layout, bend, form, and repair sheet metal structures and components.

402-309 Basic Turbine Engines  2 Credits
This course will introduce the beginning student to the basic operation of turbine aeronautical power plants. The student will be introduced to turbine engines theory and study each section of the turbine engine. The student will disassemble an aircraft turbine engine and study and repair lubrication systems and components.

402-334 Aviation Basic Science II  2 Credits
During this course, the aviation student is introduced to aircraft drawings, weight, and balance. The student will use aircraft drawings, symbols and schematics. The student will make various drawings and sketches and will perform complete weight and balance checks on an aircraft using blueprints, charts and graphs, and record the data appropriately.

402-335 Aircraft Systems I  3 Credits
During this course the student will be introduced to hydraulic and pneumatic power systems as well as aircraft heating, cooling and pressurization systems. The student will study and repair hydraulic and pneumatic system components and service and troubleshoot hydraulic systems. The student will become familiar with aircraft air cycle machines as well as heaters and vapor cycle systems used for heating and cooling.

402-336 Aircraft Electrical Distribution Systems  3 Credits
This course uses the principles learned in Aviation Basic Electricity and applies them to the aircraft's electrical distribution system. The student will study and service lead acid and nickel cadmium batteries. The student will also select wires, crimp, splice, and repair pins and sockets of aircraft electrical connectors. The student will study and service wiring, controls, switches, indicators and protective devices in airframe and engine electrical distribution systems.

402-337 Materials and Processes II  3 Credits
This course will introduce the student to the process of corrosion and how to identify it, remove it, and treat it on aircraft. The student will also study aircraft finishing materials and apply trim, letters, and finishing materials and be able to identify defects in aircraft finishes.

402-338 Nondestructive Inspection Techniques  2 Credits
In this course the student will explore the rapidly expanding field of nondestructive testing. The student will study and select appropriate testing methods for aircraft applications and will also perform dye penetrant, eddy current, ultrasonic, and magnetic particle inspections on test samples and on aircraft and aircraft parts.

402-339 Turbine Engine System  3 Credits
This course is an extension of Basic Turbine Engines and further explores aircraft turbine engines. In this course the student will study starting systems, fuel metering and fuel systems. The student will study turbine engine ignition systems, as well as turbine driven auxiliary power units. The student will reassemble a turbine engine throughout the progress of this course.
AIRFRAME & POWERPLANT MECHANIC

402-344 Aircraft Assembly and Rigging  3 Credits
In this course the student will be introduced to basic aircraft aerodynamics so as to understand how and why aircraft are constructed the way they are. The student will study the theory of flight for both fixed wing and rotary wing aircraft. The student will balance, assemble, and rig aircraft structures as well as primary and secondary control surfaces. The student will be taught to check alignment of structures and how to rig both fixed wing and rotary wing aircraft.

402-345 Aircraft Propellers  2 Credits
In this course the student will study propellers driven by both reciprocating and turbine aircraft engines. The student will study, inspect, and service propellers and propeller control systems. The student will learn to install and remove propellers and repair aluminum blades.

402-346 Aircraft Electrical Charging Systems  2 Credits
This course builds upon Aviation Basic Electricity and Aircraft Electrical Distribution Systems. The student will study how electrical power is supplied to the distribution system. The student will study, disassemble, assemble and check generators and alternators. The student will study and inspect integrated constant speed drive generators. The student will inspect, adjust, and troubleshoot alternating and direct current electrical systems. The student will study how charging systems are regulated, and adjust regulators.

402-347 Aircraft Non-metal Structures  2 Credits
This course will introduce the student to airframe structures that are not made of metal. The student will review the use of wood and fabric materials in aircraft construction and then study the use of composite structures. The student will study and use special fasteners for non-metal structures. The student will study, inspect, and repair bonded structures, fiberglass structures, honeycomb, and composite structures. The student will study the use of plastics in aircraft and inspect and repair plastic components.

402-348 Basic Reciprocating Engines  4 Credits
This course will introduce the beginning student to the basic operation of aircraft reciprocating power plants. The student will be introduced to reciprocating engine theory and study each section of the reciprocating engine. The student will disassemble an aircraft reciprocating engine and study and repair lubrication systems and components.

402-349 Advanced Turbine Engines  3 Credits
This course will build upon Basic Turbine Engines and Turbine Engine Systems by requiring the student to install a turbine engine on an aircraft. Concurrently, the student will study and install or inspect induction systems, cooling, and exhaust systems. The student will be able to run, inspect, and check a turbine engine installation. The student will study and accomplish troubleshooting of operating turbine engine installations.

402-390 Aircraft Landing Gear  2 Credits
This course will introduce the student to aircraft landing gear, struts, wheels, tires, brakes, steering systems, and anti-skid systems. The student will learn to safely jack aircraft as they study and service each of these systems or components. Basic electricity skills are essential to properly understand and service anti-skid systems.

402-391 Aircraft Systems II  3 Credits
In this course, the student will draw upon previous knowledge of electricity, physics, drawing, turbine engines, and aircraft systems to study and understand various aircraft supporting systems. The student will study instrument systems, including flight and engine instruments, fluid, temperature, pressure, and quantity systems, remote position indicating systems, weather, and stall warning systems. The student will be able to remove and install aircraft instruments and perform instrument static system leak checks. The student will study landing gear position systems, and ice and rain protection systems, as well as fire detection and suppression systems. Basic electricity skills are essential to properly understand and service these systems.

402-392 Aircraft Electronics  2 Credits
This course will build upon Aviation Basic Electricity, Aircraft Electrical Distribution Systems, and Aircraft Electrical Charging Systems in order to help the student understand basic electronics as appropriate for an entry level Aviation Maintenance Technician. The student will study and interpret aircraft electrical circuit diagrams including solid-state devices and logic functions. The student will study electronic flight instrument systems, electronic flight communication and navigation systems, and autopilot and approach coupling systems. The student will study, inspect, and repair antenna installations.

402-393 Reciprocating Engine Systems  4 Credits
This course is an extension of Basic Reciprocating Engines and further explores aircraft reciprocating engines. In this course the student will study airframe and reciprocating engine fuel systems, and overhaul a carburetor. The student will study, service, and troubleshoot fuel metering and fuel injection systems. The student will study, install, and inspect ignition systems. Throughout the progress of this course, the student will reassemble a reciprocating engine.

402-394 Advanced Reciprocating Engines  3 Credits
This course will build upon Basic Reciprocating Engines and Reciprocating Engine Systems by requiring the student to install a reciprocating engine on an aircraft or run stand. Concurrently, the student will study reciprocating engine induction systems including heat exchangers, superchargers and turbochargers, air intakes, and induction manifolds. The student will study cooling and exhaust systems. The student will be able to run, inspect, and check a reciprocating engine installation. The student will study and accomplish troubleshooting of operating reciprocating engine installations.

402-395 Aircraft Inspection  2 Credits
This course will serve to encapsulate all of the skills the technician-in-training has learned up to this point. The student will study various FAA and manufacturer publications. The student will exercise the privileges of FAR Part 65, in a simulated setting, by inspecting an aircraft and its powerplant. The student will write descriptions of work performed, and accurately complete various forms, records, and reports.

General Education Course Requirements:
(see course descriptions on pages 33-37)

801-311 Communication  2 Credits
806-333 Aviation Physics  2 Credits

For more information, call: (608) 758-6900
Today the apprenticeship process is a formal arrangement involving employers, apprenticeship committees, state government, technical colleges, and individuals who want to learn a skilled craft through on-the-job training and applied classroom instruction. The State of Wisconsin recognizes more than 300 apprenticeable occupations. Many individuals, including women and minorities, have discovered that apprenticeship training offers an opportunity for a good-paying career.

More information on apprenticeship training in Wisconsin can be found at the Bureau of Apprenticeship Standards website (www.dwd.state.wi.us/dsw/appr/default.htm ) or by calling the field representative at (608) 246-7900. Information is also available through the U.S. Department of Labor Bureau of Apprenticeship and Training at (608) 441-5377.

How Do I Start?
Looking for an apprenticeship is like looking for a job. Start by learning all you can about the skilled occupation of interest. Talk to people who are currently employed in the trade, employers and employers’ associations, high school counselors, the local technical college, and labor unions.

To be eligible for apprenticeship, you must meet the application and testing procedures of the trade in which you wish to participate. The rules and policies for apprenticeship training vary depending on the requirements of the occupation. Apprenticeship is not an on-demand program. All applicants must apply and be accepted into a program through the respective committee or sponsor.

Application information for occupations served by BTC is available from the contacts listed under the specific trade areas below:

What apprenticeship related instruction does BTC provide?

BTC provides instruction in the following:

Electrical-
Electricians lay out, install, and test electrical fixtures; they also install electrical wire systems used to provide heat, light, power, air conditioning, and refrigeration in homes, office buildings, factories, hospitals, and schools. They install conduit, greenfield, and other materials and connect electrical machinery, equipment, and controls. Electricians use a wide variety of hand tools to perform various tasks. Journey-level electricians must master both mechanical and technical skills. They must understand the use of meters and specialized testing equipment, be adept at troubleshooting, and understand the theory behind the transmission of electrical energy. Work is performed both indoors and outdoors in a variety of weather conditions.

Applications and information on application procedures for construction electrical apprenticeships are available from:

- Associated Builders and Contractors of Wisconsin, Inc.
  5330 Wall Street • Madison, WI 53718
  (800) 829-9926 • www.abcwi.org

- South Central Area Electrical Joint
  Apprenticeship Committee

- Madison Area Plumbers, Sheet Metal, Steamfitters Joint
  Apprenticeship & Training Committees
  5940 Seminole Centre Ct., Suite #102
  Madison, WI 53711 • (608) 288-1414 OR

- Madison Area Plumbers, Sheet Metal, Steamfitters Joint
  Apprenticeship & Training Committees
  1058 Matheson Street
  Janesville, WI 53545 • (608) 754-3484

For the most current schedule information, visit www.blackhawk.edu
AUTOMOTIVE TECHNICIAN

Automotive Service Technicians diagnose and repair performance problems in cars. They also perform factory recommended maintenance procedures on new cars and trucks. The Blackhawk Technical College Automotive Technican Program is an Automotive Service Excellence (ASE) Certified two-year program aimed at preparing the student for passing ASE exams as the requisite professional experience is obtained. The program is designed to increase knowledge and skills in the areas of diagnostic testing, use of hand and machine tools, automotive parts, service references, computerized equipment and other technical equipment on ever more complex automobiles. Students are taught through practical shop and classroom experiences.

In the first year students learn to test the operation of the engine, transmission, steering gear and brakes; plan work; use charts and repair manuals; conduct tests on engines, cooling systems, electrical systems, and other parts; prepare records and costs; and fill out estimates of repairs for customers.

The second year of the program prepares the service technician for the challenging field of performance diagnostics. Special emphasis is placed on the development of problem-solving skills. The technician solves complex automotive problems through component analysis and functional testing. Experience is gained in advanced electronics through the use of service manuals, diagnostic computers, lab oscilloscopes and digital volt ohmmeters.

Program Outcomes–
Upon completion of this program, you will be able to:

• Operate tools and equipment
• Perform corrective required diagnosis/service/repair, returning vehicles to operational condition
• Demonstrate acquired technical knowledge
• Practice competencies on current technology

Graduates from this program have found employment as:
• Automotive Line Technician
• Automotive Specialty Technician
• Diagnostic Technician
• Service Manager
• Parts Manager
• Automotive Equipment and Part Sales
• Automotive Business Owner/Manager

Course Descriptions:

404-338 Service Fundamentals 2 Credits
Introduction to the automotive service facility. Safety, basic hand tool and power tools application is defined to help the prospective automobile technician work safely and efficiently. Students will learn how to use both comprehensive and manufacturer's shop manuals to perform basic under-hood and under-car services.

TOTAL CREDITS 55

The competencies developed for successful completion of this two-year automotive diploma program will satisfy the related standards required by ASE and their certificate program.
AUTOMOTIVE TECHNICIAN

404-339 Engine Service 3 Credits
This course is designed to introduce the student to the theory of gasoline engine operation and design. The course also includes methods of diagnosis, disassembly, measurement, and reassembly. Emphasis is placed upon diagnostic ability and skill development.

404-342 Heating and Air Conditioning Service 3 Credits
This course provides a basic understanding of the automobile cooling and air conditioning system. Theory of air conditioning is defined. Emphasis is placed on laboratory performance and related skills development.

404-343 Automotive Machine Shop 1 Credit
This course is designed to acquaint the student with automotive machine shop practices. It gives the student an opportunity to correctly use tools such as the outside micrometer, telescoping gage, drill press, brake rotor and drum lathe, and other measuring instruments. Both English and metric systems are covered in this course.

404-345 Brake Service 4 Credits
The student is introduced to the fundamentals of automotive brake systems including drum, disc, hydraulic, power, and antilock systems. Brake measurement is a high priority.

404-346 Steering and Suspension Service 4 Credits
The student is introduced to basic wheel alignment, suspension systems, and steering systems. Computerized four-wheel alignment is a high priority in this course.

404-347 Drive Train Service I 3 Credits
This course is designed to introduce the student to the fundamentals of the power train. Emphasis is placed on the diagnosis and repair of differentials and manual transmissions.

404-348 Service Simulation 2 Credits
This course is designed to introduce the student to shop operating procedures. Students can obtain credit for part-time employment in an automotive related work environment.

404-349 Service Management 1 Credit
The student becomes familiar with the use of service related documents and procedures in this course. Emphasis is placed on shop liability and state and federal laws concerning automotive servicing.

404-350 ASE Certification Review 1 Credit
This course is designed to prepare the student for ASE certification.

404-351 Electronic Engine Control Fund. 4 Credits
This course is designed to introduce the student to computerized engine controls and related electrical components. Emphasis is placed on theory of operation and diagnostics using state of the art diagnostic equipment. Special emphasis will be placed on skillfully understanding and using shop manuals for related systems.

404-352 Computerized Fuel Systems Service 2 Credits
The student is introduced to various computerized fuel systems. Topics covered are: electronic fuel injection, throttle body injection systems, port fuel injection, multi-port injection systems and sequential injection systems. Emphasis is placed on diagnostics and development of skills in using sophisticated diagnostic equipment.

404-353 Emission Control Service & Cert. 1 Credit
This course is designed to help the student develop skills necessary to diagnose, adjust, replace, or repair emission related component parts by skillfully demonstrating the use of diagnostic equipment.

404-354 Engine Performance Testing 4 Credits
This course is designed to maintain OBD II computerized vehicles and develop systematic repair procedures through the use of shop manuals and sophisticated diagnostic equipment. Emphasis is placed on driveability problems.

404-355 Drive Train/Transaxle Service II 2 Credits
This course is designed to introduce the student to automatic transmission and transaxle service.

404-356 Electrical Service 4 Credits
This course is designed to help the students learn how to diagnose and repair electrical problems related to automobile accessories. Emphasis is placed on skillfully understanding and testing procedures necessary for repair.

404-357 Electronic Engine Control Diagnosis 2 Credits
This course is a composite of all computerized systems. Emphasis is placed on electrical skills, diagnostic procedure, driveability problems, and repair. An overview of engine computer function, computerized fuel delivery, emission controls, and computer chassis control is included.

404-358 Service Internship 2 Credits
Students wishing for hands-on shop experience can obtain four credits for on-the-job training related directly and in cooperation with a service facility. Prior consent of automotive instructor is required. The student completes a comprehensive study after successfully completing the intern requirements.

450-315 Customer Service Fundamentals 2 Credits
This course is designed to instruct students on the principles of service calls and customer relations skills needed for the successful service technician.

General Education Course Requirements:
(see course descriptions on pages 33-37)

801-311 Communication 2 Credits
804-304 Math Fundamentals 2 Credits
806-315 Applied Science 2 Credits

For the most current schedule information, visit www.blackhawk.edu
BUSINESS MANAGEMENT

The Associate of Applied Science degree in Business-Management prepares students for entry-level careers in business related occupations. The training provides broad and foundational business skills in managing business operations, including marketing, finance, personnel, team leadership, business technologies and business communications. The program emphasizes the five functions of management: planning, organizing, staffing, directing, and controlling. General Education supporting outcomes include written, oral and interpersonal communications, mathematics, economics, psychology, social sciences, and ethics. Elective courses provide students with an opportunity to customize a degree to their career interests.

Students can expect many benefits from pursuing the Business-Management program at Blackhawk Technical College. For example you will find:

• A learner-centered environment that is conducive to learning entry-level career & technical skills
• Active learning through team projects and group activities
• Business leaders & professionals from the community are frequent guest speakers
• Career Center support services including resume writing and job search assistance
• Classroom case studies addressing lessons learned from small businesses and corporate settings
• Company tours and on-site classes bring the classroom to the business world
• Employer sponsored Internships and other work-based learning activities
• Employer advisory committee input into program design and implementation
• Faculty designed hands-on curricula designed to address real-world business applications
• Faculty members certified by the Wisconsin Technical College System
• Faculty members with typically both advanced degrees and related work experience

Career Preparation Helpful High School Courses:
A high school degree or GED/HSED diploma is required. Courses in business, marketing, accounting, computers, mathematics, written and oral communications, and related co-op programs are helpful.

Future Opportunities
If you are interested in a baccalaureate degree upon completion of the program, check with a program counselor or advisor and the institution you plan to attend regarding the transfer of credits from Blackhawk Technical College. This program may transfer to one or more four-year institutions, but the amount of credits may vary.

Short-Term Certificates & Related Program Options
Accounting AAS Degree & Accounting Assistant Cert. (1-year)
Customer Service Certificate (16 credits)
Lodging Management Certificate (33 credits)
Marketing AAS Degree
Small Business Certificate (18 credits)
Supervisory Management AAS Degree

Who Do I Contact:
Program Advising: (608) 757-7706
Business & Information Technology Division Office: (608) 757-7622
Business & Information Technology Dean: (608) 757-7723

Program Outcomes–
Upon completion of this program, you will be able to:

• Plan and prioritize work, including goal setting and resource allocation
• Direct workers, including recruiting, hiring, and supervision
• Lead others, including employees, customers and clients, and teams
• Control costs and demonstrate basic financial proficiency
• Develop and maintain customer relationship management skills
• Coordinate marketing and sales efforts
• Manage projects, tasks, and deadlines
• Apply knowledge of business laws and governmental regulations
• Practice appropriate business ethics and etiquette
• Communicate effectively; with tact and diplomacy
• Use appropriate business and computer technology solutions
• Apply analytical thinking and problem-solving skills
• Work effectively in teams and groups
• Manage time efficiently and meet organizational goals
• Work under the direction of a more senior employee such as a district or regional manager, owner, or agent

Graduates from this program may find employment as:
• Assistant Store Manager
• Branch Manager
• Buying and planning specialists
• Customer Service Manager
• Department or District Manager
• Distribution Center Manager
• Entrepreneur/Owner
• General management occupations
• Human Resources
• Shift Managers
• Store & Operations Specialties Managers

For more information, call: (608) 758-6900
### Technical Studies Course Requirements

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<tr>
<th>Course Name</th>
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<td>102-148 Introduction to Business</td>
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<td>104-102 Marketing Principles</td>
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<td>103-106 Introduction to MS Office</td>
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<td>102-110 Business Career Planning</td>
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<td>196-191 Supervision</td>
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<td>104-104 Selling Principles</td>
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<td>102-130 Business Finance &amp; Budget Management</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-193 Human Resource Management</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>102-125 Supervised Occupational Experience Business</td>
<td>2</td>
<td>0-8</td>
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<tr>
<td>Two Electives</td>
<td>6</td>
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</table>

### General Education Course Requirements:

(see course descriptions on pages 33-37)

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
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<tbody>
<tr>
<td>801-196 Oral/Interpersonal Communications</td>
<td>3</td>
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<tr>
<td>804-123 Math with Business Applications</td>
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<tr>
<td>801-195 Written Communications</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-166 Introduction to Ethics: Theory &amp; Application</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-195 Economics</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>809-198 Introduction to Psychology</td>
<td>3</td>
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</tr>
<tr>
<td>809-172 Race, Ethnic &amp; Diversity Studies</td>
<td>3</td>
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</table>

### TOTAL CREDITS

66

### Elective Course Recommendations

Two (3 credit courses) required for electives. For a complete listing of all the elective courses available, please call the Business & Information Technology Department at (608)757-7624.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>102-135 Lodging Management</td>
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<tr>
<td>102-150 Global Business Fundamentals</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-135 Team Building/Problem Solving</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>196-190 Leadership Development</td>
<td>3</td>
<td>3-0</td>
</tr>
</tbody>
</table>

### Course Descriptions

- **101-117 Accounting Fundamentals** 3 Credits
  This course is an introduction to accounting from a non-accountant's perspective. Learning objectives emphasize general accounting terminology and concepts, the effects of transactions on financial statements, the relationships between financial statements, and the interpretation of financial statement information using an analytical approach.

- **102-110 Business Career Planning** 1 Credit
  Students will focus on personal and professional preparation for a career in business related occupations. Course covers interpersonal and intrapersonal success skills including self-esteem, understanding human behavior, creative problem solving and decision making, effective communication skills time management, setting priorities, and organizational techniques. Job search strategies will be introduced.

- **102-115 Management Principles** 3 Credits
  Students will receive a comprehensive overview of the functions and principles of management that leads to success in the operating climate of modern businesses. The five functions of management will be introduced and applied to business operational problem-solving.

- **102-120 Small Business Management** 3 Credits
  The course provides a detailed study of all phases of managing a small business. Specific problems of small operations such as financing, developing, staffing, and growing a small business are analyzed. Management topics such as quality, leadership, applications of technology, legal issues and more will be applied to isolating significant problems and implementing solutions. Current issues and trends in entrepreneurship will be included.

- **102-125 Supervised Occupational Experience - Business** 2 Credits
  This course is a work-based learning program involving actual business operations in the community. It is intended to provide students with actual work experience. Students will obtain a position at an approved worksite, and work a minimum of 144 hours under the supervision of both their instructor and an onsite supervisor. **Prerequisite: 33 credits and academic good standing**

- **102-130 Business Finance and Budget Management** 3 Credits
  This is a basic finance course for managers and supervisors. 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. These finance/accounting principles will then be applied to the managers role in decision-making and includes problem-solving case studies. **Prerequisites: 101-117 Accounting Fundamentals and 103-106 Introduction to MS Office**

- **102-148 Introduction to Business** 3 Credits
  Students will be introduced to business operations, focusing on a basic understanding of the activities, functions, and principles of business enterprises. This course covers the responsibilities and challenges of operating a business. The course emphasizes human relations, management, marketing, finance, labor relations, franchising, forms of ownership and careers.

- **102-160 Business Law** 3 Credits
  This course is designed to provide the student with a working knowledge of law as it relates to the rights and responsibilities of businesses and individuals. Emphasis is placed on torts, contracts, case analysis, ethics, and social responsibility, particularly in the business context.

- **103-106 Introduction to MS Office** 3 Credits
  Intended for students with little or no prior computer experience. This course will introduce students to the Microsoft Office Suite and overview many of the core competencies of Outlook, Work, Excel, Access, PowerPoint, and Explorer. Students will develop the use of technology for both problem solving and decision-making and will be expected to learn to use the resources available to search for answer to problems.

- **104-102 Marketing Principles** 3 Credits
  This course introduces core marketing concepts and terminology for Marketing and non-Marketing students. In addition to developing the rational for a marketing approach to strategic planning, specific topics include: target market selection, and issues related to product, price, distribution, and promotion decisions.
**BUSINESS MANAGEMENT**

104-104 Selling Principles 3 Credits
Learners will cover the personal and occupational applications of selling (defined as “an interpersonal persuasive process designed to influence some person’s decision”). Selling is investigated from the following viewpoints: personal, industrial, wholesale, retail, door-to-door, and service. Students also learn and practice the professional principles involved in relationship selling.

104-130 Fundamentals of Customer Service 3 Credits
This course is designed for learners who desire training in the fundamentals of customer service as they relate to business. It introduces core customer service concepts and an overview of the essential skills needed to succeed in any organization. In addition to dealing with internal and external audiences, specific topics include: listening techniques, verbal and nonverbal communication, dealing with various customer types, use of technology, handling a variety of complex customer situations, as well as an overview of careers within the customer service industry.

196-191 Supervision 3 Credits
Course is designed to help participants build the skills required to effectively direct the work of others within the structure of organization. Emphasis is placed on the human behavioral aspect of supervision. Focus is on application of managerial process to the daily job of a supervisor.

196-193 Human Resources Management 3 Credits
This course establishes a foundation for development of employee effectiveness by focusing on the supervisor’s role in understanding, communicating, and implementing organizational policies. Focus is placed on: employee hiring; orientation and training; performance management; motivating employees and related topics that affect the supervisor’s work group.

**CNC TECHNICIAN**

This two-year technical diploma program is designed to provide students with a broad technical background in both job-shop and production machining. The CNC Technician program was developed using the National Institute for Metalworking Standards (NIMS) and National Tooling & Machining Association standards. The courses are delivered in such a way to allow the students to experience a “hands-on” approach to learning. Furthermore, each student will spend his or her time learning in a practical setting.

Using the CNC/CAM software and equipment, including a four axis machining center, you will learn to select the proper tools and fixtures required to machine parts. A graduate of the program should be proficient in metal machining operations and planning procedures, demonstrating practical machining techniques in accordance with engineering drawing specifications.

Topics of study include Computer Numerical Control (CNC) programming; Computer Assisted Manufacturing (CAM) software; precision measuring devices including a CMM; precision CNC mills, CNC training and machining centers; blueprint reading; and applied shop mathematics. To complete the program, an internship is required.

**Program Outcomes**
Upon completion of this program, you will be able to:
- Apply appropriate machine shop terminology
- Promote a safe and well-maintained work place
- Analyze information and formulate plans that will lead to the timely production of a quality product
- Utilize appropriate work holding techniques and cutting tool technology as governed by the work piece material properties
- Set up and operate common semi precision and precision metal cutting machines according to accepted national and international machining standards
- Verify product conformance to design specifications using in-process and post process measurement devices and techniques

**Graduates from this program have found employment as:**
- CNC Technician
- CNC Programmer
- CNC Machinist
- CNC Operator
- Machine Tool Operator
- Apprentice Machinist
- Machine Set-up Person
- Tool Room Machinist
- Maintenance Machinist

**Career Outlook:**
Job opportunities continue to look good for CNC Technicians, as employers continue to report difficulties in finding workers with the necessary skills and knowledge to fill machining and CNC programming openings. Many job openings will arise each year from the need to replace experienced CNC machinists and programmers who retire.

**Semester 1**

<table>
<thead>
<tr>
<th>Course Name</th>
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<tbody>
<tr>
<td>444-300 Shop Computing</td>
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<tr>
<td>444-301 Metrology</td>
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<tr>
<td>444-302 Semi-precision Machining</td>
<td>2</td>
<td>2-2</td>
</tr>
<tr>
<td>444-303 Turning Fundamentals</td>
<td>2</td>
<td>2-2</td>
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<tr>
<td>444-304 GD&amp;T Interpretations</td>
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<tr>
<td>804-306 Shop Math I</td>
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<td>804-308 Shop Math II</td>
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**Semester 2**

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<td>444-305 Milling Fundamentals</td>
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<tr>
<td>444-306 Turning Applications</td>
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</tr>
<tr>
<td>444-307 Manufacturing Support Systems</td>
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<tr>
<td>444-308 Milling Applications</td>
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<tr>
<td>444-309 CNC Fundamentals</td>
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<tr>
<td>444-310 Grinding &amp; Gear Techniques</td>
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<td>801-196 Oral/Interpersonal Communication</td>
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<td>806-118 Metal Science</td>
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**Semester 3**

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<td>444-311 CNC Turning - Operations</td>
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<tr>
<td>444-312 CNC Turning - Operations and Programming I</td>
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<tr>
<td>444-313 Tooling &amp; Workholding</td>
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<td>444-314 CMM Techniques</td>
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<td>444-315 CNC Milling - Operations</td>
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<tr>
<td>444-316 CNC Milling - Operations and Programming I</td>
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<tr>
<td>804-309 Shop Math III</td>
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For more information, call: (608) 758-6900
**Semester 4**

<table>
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<td>444-318</td>
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<tr>
<td>444-319</td>
<td>CNC Turning – Operations and Programming 2</td>
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<td>2 - 2</td>
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<td>444-320</td>
<td>CNC Milling– Operations and Programming 3</td>
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<tr>
<td>444-321</td>
<td>Basic CAD/CAM</td>
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<tr>
<td>444-324</td>
<td>Intermediate CAD/CAM</td>
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<tr>
<td>444-325</td>
<td>CNC Technician Internship</td>
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<tr>
<td>801-195</td>
<td>Written Communication</td>
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</table>

**TOTAL CREDITS** 60

1Course has prerequisites

**Note:** Program courses are to be taken in sequential order beginning with 444-300 (Shop Computing) unless other arrangements have been made with the instructor.

**421-385 Blueprint Reading** 2 Credits

Blueprint reading is really learning a new language where much of it is presented in graphic or symbolic form. Students will learn about different types of drawings, proper drawing structure, and drawing terminology. They will learn to produce simple sketches and visualize two and three-dimensional parts. The experienced machine operator must be able to decipher blueprints in order to produce parts to proper specification.

**444-300 Shop Computing** 2 Credits

The ability to use a computer has become one of the most basic skills. In this course the learner will learn to use a computer to navigate through the learning process as well as being able to use the computer to operate an assortment of software. Students learn how to operate the computer’s operating system to perform common tasks such as opening, closing, saving, and printing files. They will practice these operating system functions on files created from software used in the machine shop. The student will receive an introduction to CAM software, machine control software, CNC Workbook (textbook) software, and CMM software.

**444-301 Metrology** 2 Credits

Metrology is the study of measurement. The production of quality parts is impossible without adequate measurement. Therefore, this is a course that should be taken before any machining course. You will learn about an assortment of precision and semi-precision measuring instruments used for the job shop or where large numbers of parts are produced. Material will cover instrument care, types, components, scales, calibration, handling, and reading the instrument. You will have an opportunity to use and gain proficiency in most of the measuring instruments that are discussed.

**444-302 Semi-Precision Machining** 2 Credits

This course is designed to acquaint the student with the semi-precision/fabrication machines in the machine shop. These machines are easier to operate and provide a good starting point for the beginner. These machines should not be considered to be less important in the machine shop or to require less skill to operate. These drill presses, pedestal grinders, bench tools, and saws are extremely important tools. The associated work holding, cutting tools, processes, and measuring instruments are also taught.

**444-303 Turning Fundamentals** 2 Credits

This course covers the introduction to the engine lathe. Emphasis is on knowing the machine parts, their function, and performing simple lathe operations. Engine lathes are one of

the basic machines with the ability to produce cylindrical parts to specific tolerances. Introductory subjects such as related safety, maintenance, metal cutting theory, cutting tools, and work holding for lathes will be taught. There is an emphasis on safety. All of these subjects will be introduced and built upon as the learner progresses to higher levels of proficiency.

**444-304 GD&T Interpretations** 1 Credit

Geometric Dimensioning and Tolerancing is a system of symbols used to portray mechanical specifications and relationships on mechanical drawings. Industries using this system include large automotive, aircraft, and agricultural manufacturers, a growing number of smaller industries and most European manufacturers. Students will explore ANSI (American National Standard Institute) Standard symbols and methods of interpretation of these symbols to meet the expectations of the mechanical design engineer that specified them on the drawing.

**444-305 Milling Fundamentals** 2 Credits

This course covers the introduction to the milling machines. Emphasis is on knowing the machine parts, their function, and performing simple milling operations. Introductory subjects such as related safety, maintenance, metal cutting theory, cutting tools, and work holding for the mill will be taught. There is an emphasis on safety. All of these subjects will be introduced and built upon as the learner progresses to higher levels of proficiency.

**444-306 Turning Applications** 2 Credits

This advanced turning course involves performing more difficult turning operations, using different materials, and using different work holding devices. The material, work holding devices and setups will present the learner with challenging situations that require them to apply their past experiences along with what they have learned in theory to produce quality parts. In situations where the student is performing previously learned operations, the learner will be expected to develop their speed and accuracy. One of the requirements of an advanced course is that students apply their knowledge to problems through the trouble shooting process.

**444-307 Manufacturing Support Systems** 1 Credit

The purpose of this course is to acquaint the student with the manufacturing environment. Using groups, the students will learn how a factory is made up of various departments which must interact in order to create a functional company. Students will continue to learn by exploring the culture present in factory life. Students with work experience will be asked to share their experiences with other students who are unaware of the shop culture.

**444-308 Milling Applications** 2 Credits

The advanced milling course involves performing more difficult milling operations, using different materials, and using different work holding devices. The materials, work holding devices and setups will present the learner with challenging situations that require them to apply their past experiences along with what they have learned in theory to produce quality parts. In situations where the student is performing previously learned operations, the learner will be expected to develop their speed and accuracy. One of the requirements of an advanced course is that students apply their knowledge to problems through the trouble shooting process.
CNC TECHNICIAN

444-309 CNC Fundamentals 2 Credits
This class is geared for the beginner or the person wishing to brush up on the fundamentals. It will focus on NC terminology, basic machine operation, setup, and the fundamentals of manual programming for CNC lathes and mills. Participants will learn about rectangular systems, the word address programming format, and absolute/incremental tool positioning.

444-310 Grinding & Gear Techniques 2 Credits
The grinding portion of this course will start you out at the beginning with grinding terminology, machine types, control names and functions, and processes. The related grinding information, grinding theory, grinding, safety, and work holding will be taught. This course will result in the learner being able to setup and operate a surface grinding machine to perform simple grinding operation to typical grinding tolerances. The purpose of the gear cutting activity is to introduce the student to the terminology, math, tools, and techniques for cutting gears. Gear cutting besides being a specialized machining operation is an occupational discipline in itself. That is, students may find they would like to cut gears as a career. It is a highly specialized process so it is only possible for a student to get an introduction. This introduction should prepare the student adequately for a job entry level position.

444-311 CNC Turning - Operations 2 Credits
CNC turning centers produce many of the cylindrical shapes machined in production machine shops today. This course is the introductory course for CNC Turning Centers and includes machine/control familiarization, machine startup procedures, program transfers, work holder preparation, tooling installation, setting tooling offsets, and establishing a part origin. In addition, students learn how to safely run the first part and make minor adjustments to create quality parts.

444-312 CNC Turning-Operations and Programming 1 2 Credits
This course introduces the student to the programming process for CNC Turning Centers. The student will learn to create very simple programs and to run them on the machine. Students will learn about program structure and style. Students will start using the basic “G” codes necessary for program basic turned part features such as, faces, outside diameters, and holes. They will write/edit simple programs in order to create these common part features. The goal will be to start out simple and move to programs that are efficient, effective, and clearly written.

444-313 Tooling and Workholding 2 Credits
This module consists of competencies relating to work holding devices and methods. Students will learn about the basic work holding principles, work holding devices, and work holding methods. These topics will be discussed in depth so that the student will be able to select and apply the best work holding device for the situation. Advanced knowledge of work holding will promote safety, setup speed, and cutter/work rigidity. Cutting tool information is vital for an in-depth and complete understanding of the machining processes. The selection of cutting tools and cutting tool data may be one of the most complex areas of study. Students will learn to select tools based on part geometry and machining operation. The learner will acquire the cutting data from reference material, then using formulas, obtain additional cutting data. This is very important because one of the most common complaints from employers is that employees cannot set machine feeds and speeds resulting in either wasted time or damaged tooling. As the student becomes more proficient, they will gain the ability to troubleshoot machining problems that are related to cutting tools.

444-314 CMM Techniques 2 Credits
In this course you will learn about Coordinate Measuring Machines (CMM). You will learn about their types, care, limits, setup, and applications. The CMM is a high tech solution to many measuring situations with (as with all measuring instruments) limitations. Often it is as important to know when not to use a particular instrument as when to use it. Proper use of the CMM will result in good and consistent measurements. Students will be able to setup and measure parts.

444-315 CNC Milling - Operations 2 Credits
CNC mills produce many of the prismatic shapes machined in production machine shops today. This course is the introductory course for CNC Machining Centers and includes machine/control familiarization, machine startup procedures, program transfers, work holding preparation, tooling installation, setting tooling offsets, and the part origin. In addition, students will learn how to safely run the first part and make minor tool offset adjustments to produce quality parts.

444-316 CNC Milling - Operations and Programming 1 2 Credits
This course introduces the student to the programming process for CNC Machining Centers. The student will learn to create very simple programs and to run them on the machine. Students will learn about program structure and style. Students will start using the basic “G” codes necessary for program basic milled part features such as, faces, steps, slots, holes, improved holes, and circular contours. They will write/edit simple programs in order to create these common part features. The goal will be to start out simple and move to programs that are efficient, effective, and clearly written.

444-317 CNC Milling - Operations and Programming 2 2 Credits
Students will learn to program and machine more complex features using more advanced programming methods. The learner will program and machine rectangular/circular pockets, mill internal threads, and will use cutter compensation.

444-318 CNC Milling - Operations and Programming 3 2 Credits
Students will learn to program and machine more complex features. The learner will program and machine taper, radii, threads, use cutter compensation, and live tooling.

444-319 Basic CAD/CAM 2 Credits
Computer Aided Design (CAD) and Computer Assisted Manufacturing (CAM) have become standard tools used almost wherever CNC machines make parts. Students will use the Virtual Gibbs software to create geometry, setup tools, and produce machining operations. The learner will create machining operations for typical milled/turned part features such as faces, diameters, steps, slots, contours, holes, etc. Students will then post-process their CAD/CAM files to generate the CNC programs for specific CNC machines.
COMPUTER SERVICE TECHNICIAN

Prepare you for BOTH certifications. These certifications will become a requirement for success. The CST program will continue to merge, dual certification in both A+ and Network+. The Network+ Certification is the industry standard for network technicians. As PC and network technologies continue to evolve, demand for computer technicians will increase as the amount of computer equipment increases. Organizations throughout the economy will continue to automate in search of greater productivity and improved service. The development of new computer applications and lower computer prices will also spur demand. More technicians will be needed to install, maintain, and repair these machines.

Career Outlook
Employment of those who repair computers is expected to grow much faster than the average for all occupations. Demand for computer technicians will increase as the amount of computer equipment increases. Organizations throughout the economy will continue to automate in search of greater productivity and improved service. The development of new computer applications and lower computer prices will also spur demand. More technicians will be needed to install, maintain, and repair these machines.

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Communication 3 Credits
804-306 Shop Math I 2 Credits
804-308 Shop Math II 2 Credits
804-309 Shop Math III 2 Credits
806-118 Metal Science 3 Credits

The need for fully-trained, professional Computer Service and Network Technicians who are able to configure, troubleshoot, and support today's complex PC-based computing systems confidently and expertly is quickly evolving. This need is being driven by the rapid evolution in the power and complexity of PC hardware and software applications, as well as by the accelerating movement from stand-alone PCs to highly integrated networks.

This practical program provides extensive hands-on training with PC hardware, operating systems, and networks needed to keep PC-based systems operational and functioning at peak efficiency. Graduates of this program have the knowledge, attitudes, skills, and habits needed to guide and implement the systematic enhancement of PC-based systems as the technology continues to evolve.

In order to stay competitive, many technicians enhance their credentials by obtaining A+ Certification. A+ Certification is a nationally recognized, industry-wide standard that certifies the competency of service technicians and other individuals in the microcomputer industry. Independent technicians with this certification gain immediate credibility and a competitive edge.

The Network+ Certification is the industry standard for Network Technicians. As PC and network technologies continue to merge, dual certification in both A+ and Network+ will become a requirement for success. The CST program will prepare you for BOTH certifications.

444-324 Intermediate CAD/CAM 2 Credits
Using Virtual Gibbs, students will learn to create more complex machining operations for additional milled/turned part features. They will create machining operations for threading, pockets, bored holes, and text. The student will then learn to create simple 3-D shapes (solids) and create the machining operations necessary to machine them. Once the file has been created and post processed, the student will run the part on a CNC machine.

444-325 CNC Technician Internship 1 Credit
Students will have three options. Students may choose to find a company to do an externship with, do an externship at the company they are already working at, or perform the externship at the machine shop at their school. In all cases the purpose of the externship is to provide an opportunity for the student to take what they know and apply it. The student will be given minimal assistance from the instructor so that they learn to work on their own. This is a course that will prepare the student for the type of environment they will encounter on the job.

Program Outcomes—
Upon completion of this program, you will be able to:
• Apply effective customer satisfaction and field service techniques
• Evaluate and repair PC hardware components
• Evaluate and administer PC software applications
• Evaluate and apply PC system and peripheral communication
• Repair PC peripheral hardware and related systems
• Compare LAN and WAN physical and logical fundamentals
• Evaluate, administer, and repair network hardware
• Apply PC system evaluation, installation, configuration, diagnosis and repair skills in the workplace

Graduates from this program have found employment as:
• Computer Service Technician
• Computer Support Specialist
• Service Support Specialist
• Service Engineer
• Help Desk Specialist
• Field Service Engineer
• Field Service Technician
• Communications Technician
• LAN Support Specialist
• Network Technician
• Network Installer

For the most current schedule information, visit www.blackhawk.edu
COMPUTER SERVICE TECHNICIAN

Occupational Support

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<th>Course Code</th>
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<tr>
<td>631-117</td>
<td>PC and Networking Technology Update</td>
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<tr>
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</tr>
<tr>
<td>804-133</td>
<td>Math and Logic</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Certificate Options

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Hardware Support Certificate</td>
<td>15</td>
<td>13 - 10</td>
</tr>
<tr>
<td>Network Support Certificate</td>
<td>20</td>
<td>17 - 14</td>
</tr>
<tr>
<td>Computer Service Technician Tech. Diploma</td>
<td>37</td>
<td>31 - 26</td>
</tr>
</tbody>
</table>

Course Descriptions

450-315 Customer Service Fundamentals            2 Credits
This course is designed to instruct students on the principles of service calls and customer relations skills needed for the successful field service technician. Practical documentation and role playing are included in this course, with emphasis on phone and electronic support skills. Like most CST courses, this course contains a self-paced study portion (text, video and computer-based) and a hands-on lab and assessment portion, where the learners work with the instructor and one another to perfect their skills.

450-316 Microcomputer Software Service           2 Credits
This course covers a number of different software topics: familiarization with popular business applications, computer virus eradication, software licensing, and application troubleshooting.

450-317 Troubleshooting Microcomputer             2 Credits
This course is an advanced diagnosis and repair course that, on completion, will mark the achievement of the Computer Hardware Support Certificate for the learner. Hands-on PC troubleshooting skills are emphasized.

450-319 Microcomputer Peripherals                2 Credits
This course focuses on printers, the specialized functions of various kinds of printers, and printer troubleshooting. Digital input and telephony devices will also be examined.

450-320 Troubleshooting Comm. Systems             2 Credits
This course focuses on communications systems diagnosis and repair. Emphasis is placed on connection troubleshooting with technologies such as SCSI, USB and FireWire.

450-321 Troubleshooting Network Hardware          2 Credits
This course covers network hardware installation, configuration and troubleshooting in both peer-to-peer and server-based environments, cable installation, certification, and troubleshooting are emphasized. Wireless networking is also utilized.

450-322 Service Support Techniques                1 Credit
This course provides an opportunity to apply concepts, principles and skills learned in the CST program in the workplace. Emphasis is placed on applying skills to job tasks, modeling core abilities and seeking a job.

631-100 Microcomputer Fundamentals                3 Credits
This course first covers the binary functionality of the personal computer. The computer industry itself is then examined before the course moves to hands-on construction and troubleshooting of PC hardware.

631-101 Troubleshooting Operating Systems         3 Credits
This course focuses on Windows 98, Me, 2000 and XP. The learner will be able to install, use, customize and troubleshoot each operating system.

631-102 Microcomputer Hardware Service            3 Credits
In this course the learner examines PC hardware components in-depth, covering the history of the technologies, the current technologies, installation techniques, and selection criteria. The learner then incorporates this knowledge into actual installation and troubleshooting scenarios.

631-115 LAN/WAN Fundamentals                     3 Credits
This course covers the basic theories and technologies involved in local and wide area networks. Both the physical and logical aspects of networks will be studied, with emphasis placed on the common office LAN.

631-116 Troubleshooting Network Operating Sys.     3 Credits
This course centers on the installation, configuration and troubleshooting of network operating systems on client PCs. Windows 2000, Windows XP and Linux are utilized in this course that is designed to prepare the network technician for a variety of networked environments. Security, resource sharing and troubleshooting are emphasized.

631-117 PC and Networking Technology Update       3 Credits
As PC and Network technology evolves, so must the PC and/or Network technician. This course provides detailed hands-on training in those technologies that are emerging in the home and enterprise environment. Theory and hands-on training combine in this self-paced course designed for the soon-to-be CST graduate as well as those already in the workplace.

General Education Course Requirements:
(see course descriptions on pages 33-37)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>804-110</td>
<td>Elementary Algebra with Applications</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>804-133</td>
<td>Mathematics &amp; Logic</td>
<td>3</td>
</tr>
</tbody>
</table>

Visit Us On The Web At: www.blackhawk.edu
Persons interested in careers in criminal justice will receive theoretical and practical information in the program. Criminal justice is becoming increasingly complex and important. Today's criminal justice employees must be trained to meet the challenges of our changing society. The Criminal Justice Program courses, as well as support and general education courses, will prepare the student for a position as a law enforcement officer (state, county, municipal), correctional officer, juvenile detention officer, police dispatcher, or many other occupational areas in the criminal justice system.

Program Outcomes–

Upon completion of this program, you will be able to:

- Interpret applicable criminal statutes
- Explain the criminal justice process and juvenile justice process
- Recommend strategies for effective community/police relationships
- Complete required documents and reports
- Conduct preliminary investigations
- Choose lawful and ethical courses of action in professional and personal situations
- Reference and utilize resources in decision making

Criminal justice professionals are charged with the responsibility of protecting life and property, preserving the peace, and monitoring those convicted of crimes. Police officers carry out this charge through patrol, detection, arrest and their critical role in prosecution of criminal offenders. Officers also aid in public safety through traffic law enforcement, accident prevention and investigation, juvenile guidance and many other specialized enforcement tasks. Correctional professionals carry out this charge by effective in-custody monitoring and community supervision. The program provides an opportunity for students to choose a law enforcement or corrections emphasis during the second year of the program.

A job in the field of criminal justice requires a comprehensive background check on the individual applying for such a job. State and Federal laws prevent any person from becoming a police officer who has an unpardoned felony conviction. In Wisconsin, a domestic violence related conviction can prohibit a person from becoming a police officer. People interested in a career in criminal justice should be of good character as determined by interview and a comprehensive background check.

Hands-on training is a significant part of the Criminal Justice Associate Degree program at Blackhawk Technical College.

As a BTC Criminal Justice Student you will:

- Use a computerized, user-interactive automated firearms training simulator to hone your skills in making split second decisions on whether the use of deadly force is appropriate in a particular situation.
- Conduct interviews of “suspects.”
- Take statements and present written documentation of investigations.

- Write police reports.
- Fully process crime scenes, including collection and preservation of evidence.

***NOTE: All Criminal Justice Program courses should be taken in sequential order by semester.***

### Semester 1

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>504-100 Introduction to Criminal Justice System</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>504-136 Constitutional Law</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>504-122 Juvenile Law</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>801-196 Oral/Interpersonal Communication</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>801-198 Introduction to Psychology</td>
<td>3</td>
<td>3 - 0</td>
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</tbody>
</table>

### Semester 2

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>504-124 Organization and Management in Criminal Justice</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>504-118 Interview and Interrogation</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>504-121 Criminal Law</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>801-195 Written Communication</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>804-106 Introduction to College Math</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>809-159 Abnormal Psychology</td>
<td>3</td>
<td>3 - 0</td>
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</table>

### Semester 3

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>504-137 Introduction to Corrections (Corrections Emphasis students) OR 504-165 Community Policing Strategies (Law Enforcement Emphasis students) AND 504-141 Report Writing</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>504-167 Strategies for Peace Keeping in a Diverse Society</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>809-174 Social Problems</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>809-195 Economics OR 809-196 Introduction to Sociology Elective</td>
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<td>3 - 0</td>
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</tbody>
</table>

### Semester 4

<table>
<thead>
<tr>
<th>Course Name</th>
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<th>Lec-Lab</th>
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<tbody>
<tr>
<td>504-112 Criminal Investigation Theory</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>504-101 Police Patrol Procedures (Law Enforcement Emphasis students) OR 504-119 Introduction to Probation and Parole (Corrections Emphasis students) AND 504-142 Advanced Report Writing in Law Enforcement (Law Enforcement Emphasis Students)** OR 504-143 Advanced Report Writing in Corrections (Emphasis Students)**</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>806-110 Forensic Science (Criminalistics) Elective</td>
<td>3</td>
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</table>

**TOTAL CREDITS** 66

### Elective offered by the Criminal Justice Department:

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>504-102 Police Issues and Functions</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>504-170 Criminal Justice Internship</td>
<td>3</td>
<td>0 - 12</td>
</tr>
<tr>
<td>504-108 Academic Success for Criminal Justice Students</td>
<td>1</td>
<td>1 - 0</td>
</tr>
<tr>
<td>504-109 Career Exploration for Criminal Justice Students</td>
<td>1</td>
<td>1 - 0</td>
</tr>
<tr>
<td>504-110 Fitness and Nutrition in Criminal Justice</td>
<td>1</td>
<td>1 - 0</td>
</tr>
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</table>

### Other suggested electives for Criminal Justice Students:

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>140-101 Spanish Language &amp; Culture</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>140-102 Spanish Language &amp; Culture: Emergency Services Personnel</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>103-106 Introduction to Microsoft (MS) Office</td>
<td>3</td>
<td>3 - 0</td>
</tr>
</tbody>
</table>
CRIMINAL JUSTICE-
Law Enforcement

*Must have earned a grade of 75% or higher in 801-195 to enroll.
** Must have earned a grade of 75% or higher in 504-141 to enroll.

(The Protective Services Division at BTC also offers full 520 hour police recruit academies (See page 123 of this catalog).

Potential Employment Opportunities
Police Officer, Correctional Officer, Private Security, Conservation Warden, Probation/Parole Agent, Police Dispatcher and Juvenile Detention Worker.

Course Descriptions

504-109 Career Exploration for Criminal Justice Students  1 Credit
This one credit elective is the second in a series of three one-credit electives that address student success that will translate into professional success in the area of criminal justice employment. This course focuses on the exploration of personal professional goal setting and exploring the many career paths available in the criminal justice system. Students will develop a personal career development plan to help guide them in attaining their person and professional goals.

504-110 Fitness and Nutrition in Criminal Justice 1 Credit
This one credit elective is the third in a series of three one-credit electives that address student success that will translate into professional success in the area of criminal justice employment. The course focuses on the importance of fitness and nutrition as it relates not only to the criminal justice professional but also to the individual's overall wellness. Also explored are the common physical agility testing requirements many departments use in the hiring process.

504-112 Criminal Investigation Theory  3 Credits
Students learn the importance of how to recognize and preserve potential physical and statement evidence as an initial responding officer. The emphasis is on the investigation of death, domestic violence, sexual assault and crimes against children.

504-118 Interview and Interrogation  3 Credits
This course familiarizes the student with the various components of effective interviewing of victims, witnesses and suspects the criminal justice professional may come in contact with on a daily basis. The analysis of verbal and non-verbal behavior during interview/interrogation is explored in depth as well as statement analysis related to indicators of truth and deception.

504-119 Introduction to Probation and Parole (Corrections Emphasis students)  3 Credits
This course will provide the student with an overview and description of the probation and parole system and assist the student in developing the skills for applying professional knowledge and current concepts in practice.

504-121 Criminal Law  3 Credits
This course is a study of the basic concept of criminal law from its beginnings to the present day. Also covered are the fundamentals of criminal law, issues of jurisdiction, the mental element, matters affecting criminal responsibility, and related Wisconsin Statutes regarding crimes against persons, property and public order.

504-122 Juvenile Law  3 Credits
This course examines the philosophies and differences between the juvenile justice system as compared with the adult system. The course also addresses constitutional issues and juvenile custody procedures. Also examined is the investigation, reporting, custody and referral of juvenile offender related incidents.

504-124 Organization and Management in Criminal Justice  3 Credits
Using and exploratory and interactive structure, this introduction to criminal justice supervision course covers all the latest supervisory concepts and practices with an emphasis on character, teamwork, problem solving, and conflict resolution. It is also a study of coordination and management of resources in the field of law enforcement. The basic guidelines of administrative policy and unification of personal and organizational goals are also explored and applied.
504-136 Constitutional Law 3 Credits
This course explores the history and development of criminal evidence law and the necessity of legally obtained evidence. Students will analyze constitutional procedures for arrest, search, and seizure by examining court decisions and applying them to scenarios presented in class.

504-137 Introduction to Corrections (Corrections Emphasis students) 3 Credits
This course will provide the students with the necessary fundamental knowledge of correctional philosophies as well as the structure of American correctional systems. Current issues in corrections will also be discussed.

504-141 Report Writing 3 Credits
This course is designed to supply the student with a working knowledge of the purposes and the acceptable principles of police report writing. Attention is given to the improvement of spelling, sentence structure, punctuation, vocabulary and the use of police jargon. Emphasis is placed on the police report narrative as a powerful investigative tool, and its position in the criminal justice system. Attention will also be given to completing various uniform law enforcement report forms. Prerequisite: Completion of 2nd semester courses and 75% in 801-195 Written Communication

504-142 Advanced Report Writing in Law Enforcement (Law Enforcement Emphasis students) 3 Credits
Advanced Report Writing in Law Enforcement is designed to enhance and build upon the student’s writing skills developed in through Written Communications and Report Writing, both of which are prerequisites for this course. Practice and practical application in writing reports that are direct, grammatically correct, and contain the appropriate content for prosecutorial action will be the foundation of this course. Reports generated in this course will focus on common incidents officers in the field are faced with as well as more in-depth investigations carried out by officers. Prerequisite: 504-141 Report Writing

504-143 Advanced Report Writing in Corrections (Corrections Emphasis students) 3 Credits
Advanced Report Writing in Corrections is designed to enhance and build upon the student’s writing skills developed in through Written Communications and Report Writing, both of which are prerequisites for this course. Practice and practical application in writing reports that are direct, grammatically correct, and contain the appropriate content for prosecutorial action will be the foundation of this course. Reports generated in this course will focus on corrections related incidents common to both in-custody and community based correction environments. Reports common to probation and parole are also explored. Prerequisite: 504-141 Report Writing

504-167 Strategies for Peace Keeping in a Diverse Society 3 Credits
This course examines current issues related to social problems related to the administration of justice in a culturally diverse society. Special focus of this course will be on the changing ethnicity of communities and related changes in social and institutional public policy. Also discussed is cross cultural communication, implementing cultural awareness training, multicultural representation in law enforcement, and criminal justice interaction with various racial and ethnic groups.

504-170 Criminal Justice Internship 3 Credits
This course involves professionally planned and supervised program of experience in one of several criminal justice related occupational areas. Prerequisites: Completion of 50% of Criminal Justice Program courses with a grade of B or above, no more than 6 hours of absence in any CJ course, the approval of the faculty internship coordinator based on student performance in the Criminal Justice program

806-110 Forensic Science (Criminalistics) 3 Credits
Forensic Science is a course designed to provide students of law enforcement with an appreciation of the capabilities and limitations of scientific analysis of crime scene evidence. All functions of a basic crime lab are discussed with emphasis on relating methods of analysis to the proper collection and packaging of evidence. Laboratory exercises are designed to(expand upon and reinforce lecture material.

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Communication 3 Credits
804-106 Introduction to College Math 3 Credits
806-110 Forensic Science 3 Credits
809-159 Abnormal Psychology 3 Credits
809-174 Social Problems 3 Credits
809-195 Economics OR 3 Credits
809-196 Introduction to Sociology 3 Credits
809-198 Introduction to Psychology 3 Credits
The Culinary Arts program combines elements of artistry, science and business skills to prepare you for an exciting career in Food Service. You’ll study principles of food preparation, quantity production, equipment layout and operation management skills.

Students are involved in preparation and serving experiences in the food service lab and receive additional opportunities in catering, ice sculpting and food presentation.

The Culinary Arts program at Blackhawk Technical College has been honored by the Wisconsin Board of Vocational Technical and Adult Education with the Exemplary Educational Service Award. The Blackhawk Technical College Culinary Arts Program is accredited by the American Culinary Federation.

Program Outcomes—
Upon completion of this program, you will be able to:

- Enforce health and safety standards
- Demonstrate food prep skills
- Apply principles of nutrition
- Adapt restaurant procedures to meet changing needs
- Manage food purchases, facility layout, storage, inventory and cost control
- Supervise kitchen employees
- Design menus
- Recommend new or modify business planning

Potential Employment Opportunities

- Kitchen Manager
- Executive Sous Chef
- Executive Chef
- Restaurant Manager
- Lead Cook
- Kitchen Supervisor

Course Name | Credits | Lec-Lab
--- | --- | ---
Semester 1
804-123 Math with Business Applications | 3 | 3 - 0
316-103 Food Service Industry | 2 | 2 - 0
316-104 Orientation to Quantity Food Prep | 1 | 1 - 0
316-108 Food Science I | 3 | 1 - 4
316-147 Food Service Sanitation | 2 | 2 - 0
531-102 Safety Emergency Procedures for the Workplace | 1 | 1 - 0
801-195 Written Communication | 3 | 3 - 0
809-172 Race, Ethnic & Diversity Studies | 3 | 3 - 0
Semester 2
103-106 Introduction to Microsoft Office | 3 | 3 - 0
196-101 Principles of Supervision | 3 | 3 - 0
316-109 Quantity Production of Soups, Sauces, Salads & Dressings | 4 | 1 - 6
316-115 Nutrition | 2 | 1 - 2
801-196 Oral/Interpersonal Communication | 3 | 3 - 0
809-198 Introduction to Psychology | 3 | 3 - 0

Semester 3
316-114 Quantity Production of Entrees, Veg. | 4 | 1 - 6
316-119 Baking for Chefs | 3 | 1 - 4
316-125 Beverage Management | 1 | 1 - 0
316-166 Specialized Foods | 3 | 3 - 0
809-195 Economics | 3 | 3 - 0
809-196 Introduction to Sociology | 3 | 3 - 0

Semester 4
102-139 Business Administration/Food Service Operation | 3 | 3 - 0
316-159 Food Purchasing, Inventory & Cost Control | 2 | 2 - 0
316-131 Management of Short Order Service | 2 | 1 - 4
316-136 Catering/Special Events/Contract Food Service | 2 | 2 - 0
316-142 Ice Sculpturing/Decorative Food Display | 2 | 1 - 2
316-160 Gourmet Stocks/Sauces | 3 | 2 - 2
316-165 Gourmet Foods | 3 | 1 - 2

TOTAL CREDITS 67

Course Descriptions

102-139 Business Administration in Food Service 3 Credits
This course introduces the student to basic bookkeeping, and management reporting. The student is taught how to establish and maintain a basic bookkeeping system.

103-106 Introduction to Microsoft Office 3 Credits
This course is an introduction to the Microsoft Office Suite intended for students with little or no prior computer experience. An overview of many of the Core competencies of Microsoft Outlook, Word, Excel, Access, PowerPoint, Windows, and Explorer will be explored. Students will develop the use of technology for both problem solving and decision making and will be expected to learn to use the resources available to them to search for answers to problems using the technology available. Students will need additional lab time to complete assignments outside of class.

196-101 Principles of Supervision 3 Credits
This course as designed to give the student an overview of such supervisory skills as leadership and interpersonal skills, motivation communications, decision-making and training at the first-line supervision level. The duties and responsibilities of supervisors, the rule of supervisors, the role of supervision in an organization and making the transition to supervision are also included.

316-103 Food Service Industry 2 Credits
An introduction to the Food Service industry, past and present, with an overview of all types of food service. Several facility tours are included. Menu terminology is stressed, and an actual working menu will be developed by each student.

316-104 Orientation to Quantity Food Prep 1 Credit
Study of standardized recipes, equivalents, abbreviations, weights and measures, food presentations, and appropriate substitutions. The technical aspects of extending and reducing recipes and menu costing will also be a component.

316-108 Food Science I 3 Credits
An overview of the sciences involved in cooking and preparing food. The science involved with fruits, vegetables, eggs, cheese, meats, and meat cutting, fish, seafood, and baking will be discussed, demonstrated and experienced. Corequisite: 316-147 Food Service Sanitation
316-109 Quantity Production of Soups, Sauces, Salads & Dressings 4 Credits
Included in this course is a study of the fundamentals and principles of preparing all types of soups, salads, and dressings and an understanding of the ingredients and terminology used in the quantity production of soups, salads, and salad dressings. The student will develop competence in production of soups, salads, garnishes, and salad dressings to meet industry standards. Prerequisites: 316-104 Orientation to Quantity Food Prep., 316-108 Food Science 1 (or instructor approval), 316-147 Food Service Sanitation

316-114 Quantity Production of Entrees, Vegetables 4 Credits
This course includes a study of fundamentals and principles of preparing all types of entrees, sauces, and vegetables. The student will gain a working knowledge of terminology and ingredients used in quantity production of these foods. The student will develop competence in production of entrees, sauces, and vegetables to meet industry standards. Prerequisites: 316-104 Orientation to Quantity Food Prep., 316-147 Food Service Sanitation

316-115 Nutrition 2 Credits
This course is geared for the culinary field. Students will study and practice nutritional principals while evaluating and modifying menus and recipes. Studying the importance of nutritive elements and the affect to the human body.

316-119 Baking for Chefs 3 Credits
Baking production from simple to artistic and complex will be taught, demonstrated to, and later produced by culinary students. Fundamentals and principals of baking are included with the production of yeast products, cakes, pies, cookies, and quick breads. Also included is the proper use and care of baking equipment. Competence in bakery production must meet industry standards. Prerequisites: 316-108 Food Science 1, 316-147 Food Service Sanitation

316-125 Beverage Management 2 Credits
Beverage Management includes history, geography, and marketing as well as responsible beverage service, cost control, and the study of bar set-up and management. A review of equipment use and care, current products available, production standards, and merchandising principles is also included.

316-131 Management of Short Order Service 2 Credits
This course includes the study of franchising, specialty breakfast and lunch items, sandwich preparation, marketing of food and increased sales. Students will prepare Tapas and “quick courses” utilizing a la minute cooking techniques. Prerequisite: 316-114 Quantity Production of Entrees, Vegetables

316-136 Catering/Special Events/Contract Food Service 2 Credits
This course includes a study of all special facets of Food Service, analysis of challenges special to each one, organizing and managing the catering process, needs of specific segments of the population (i.e., elderly, children), government regulations for funded/reimbursed food service, satellite food service for central production area and banquet production. Prerequisites: 316-104 Orientation to Quantity Food Prep., 316-114 Quantity Production of Entrees, Vegetables, 316-147 Food Service Sanitation

316-142 Ice Sculpturing/Decorative Food Display 2 Credits
This course allows students to develop competence in ice sculpturing, designing and producing decorative items for food service and special events, applying aspic, and creating, arranging, and preserving food displays. Prerequisite: 316-114 Quantity Production of Entrees, Vegetables

316-147 Food Service Sanitation 2 Credits
A complete study of food sanitation, safe food handling practices, practice of high standards of personal health and hygiene, rules of safety in working with equipment, sanitation regulations and enforcement.

316-159 Food Purchasing, Inventory & Cost Control 2 Credits
The basic principles of food purchasing and purchasing procedures, including all foods and usual marketing forms. Also included will be procedures for inventory control, including the use of the computer, guidelines for selecting purveyors, procedures for receiving orders, basic storage principles, and accurate cost computations on a per order basis as well as a per serving basis.

316-160 Gourmet Stocks Sauces 3 Credits
A concise study of mother sauces and their derivatives along with sauce history, making stocks for the specialty kitchen, and dessert sauces are covered.

316-165 Gourmet Foods 3 Credits
Gourmet Foods are foods at their finest. Students will learn food terminology, the specialized methods of preparation and serving techniques associated with gourmet dining. A variety of gourmet appetizers, soups, salads, entrees, desserts, and beverages are prepared and served. Prerequisite: 316-114 Quantity Production of Entrees, Vegetables (or instructor approval)

316-166 Specialized Foods 3 Credits
Specialized foods involves history, culture, traditions, and cooking. Research of food background and hands-on experience are stressed. Term papers and recipe accumulation are also activities in this elective class.

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Comm. 3 Credits
804-123 Math with Business Applications 3 Credits
809-195 Economics 3 Credits
809-196 Introduction to Sociology 3 Credits
809-198 Introduction to Psychology 3 Credits
CULINARY ARTS

Food Service Aide Certificate

The Food Service Aide program is designed to prepare kitchen helpers for supervised entry-level positions in restaurants and institutional food service.

The student develops competencies in the following self-paced units of study: salad helper, short order cookery, bakery helper, ware handler, table service, sidework and busing.

The program emphasizes principles of sanitation and safety, communication and teamwork, and interpersonal relationships and job-seeking skills.

An off-campus internship experience may be included to develop skills appropriate to the employment objective of the student. Students are awarded competency certificates each semester specific to the skill area of achievement.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>303-330</td>
<td>Food Production I</td>
<td>4</td>
</tr>
<tr>
<td>303-332</td>
<td>Food Production II</td>
<td>4</td>
</tr>
</tbody>
</table>

Food Service Aide Class Descriptions

303-330 Food Production I 4 Credits
Orientation and application of entry-level skills in food preparation and service. Communication skills, sanitation and safety practices, and the development of interpersonal relationships are emphasized in the classroom experience, prior to lab work. Modules are self-paced and provide the student with experience in quantity food preparation of soups, salads, and sandwiches, as well as dishroom/busing and table service.

303-331 Food Production II 4 Credits
A continuation of the lab training in 303-330 providing the student with the opportunity to expand skills in salad preparation, short-order cookery, bakery helper, ware handler, table service, and busing. An off-campus experience may be provided to develop individual student employment objectives. 
Prerequisite: 303-330 Food Production I

DENTAL ASSISTANT

The 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 Veteran’s Administration, United States Public Health Services, the Armed Forces, or a state, county or city health facility.

Following education as a dental assistant, some individuals may pursue additional education as a dental hygienist. Training as an assistant can be very useful in preparing individuals for this additional education.

Program Outcomes–
Upon completion of this program, you will be able to:

- Collect diagnostic and treatment data
- Manage infection and hazard control
- Perform clinical supportive treatments
- Take diagnostic radiographs
- Perform dental laboratory procedures
- Provide patient oral health instruction
- Model professional behaviors, ethics, and appearance
- Carry out dental office procedures

Potential Employment Opportunities:

- Dental Assistant
- Dental Receptionist
- Dental Office Manager
- Dental Practice Manager
- Dental Lab Technician
- Dental Insurance Claims Processor
- Dental Sales Representative
- Dental Treatment Coordinator
- Dental Specialty Assistant.

Accreditation Standards for Dental Assisting Education Programs: Commission on Dental Accreditation; American Dental Association; 211 E. Chicago Ave, Chicago, IL 60611. (312) 440-4653; www.ada.org

Course Name Credits Lec-Lab
Semester 1*
508-101 Dental Health Safety 1 0 - 2
508-302 Dental Chairside 5 5 - 5
508-113 Dental Materials 2 2 - 2
508-304 Dental and General Anatomy 2 4 - 0
508-103 Dental Radiography 2 2 - 2
508-306 Dental Assistant Clinical 3 0 - 8
508-307 Dental Assistant Professionalism 1 2 - 0
Semester 2*
508-308 Dental Chairside – Advanced 5 3 - 2
508-309 Dental Lab Procedures 4 2 - 2
508-310 Dental Radiology – Advanced 1 0 - 2
508-311 Dental Assistant Clinical – Advanced 2 0 - 12
508-120 Dental Office Management 2 4 - 0
801-390 Communication for Health Professions 2 4 - 0
TOTAL CREDITS 32

*The statewide curriculum for Dental Assisting is currently under revision.
Course Descriptions

508-101 Dental Health Safety 1 Credit
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. CPR certification is a prerequisite; students will be required to show proof of certification before the beginning of the course. Prerequisites: Admission to the Dental Assisting Program, current CPR certification for the Health provider.

508-302 Dental Chairside 5 Credits
Prepares dental assistant students to chart oral cavity structures, dental pathology, and restorations 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 preventive 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. Prerequisites: 508-101 Dental Health Safety, 508-304 Dental & General Anatomy.

508-113 Dental Materials 2 Credits
Prepares dental auxiliary 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. Prerequisites: 508-101 Dental Health Safety, 508-304 Dental & General Anatomy.

508-304 Dental and General Anatomy 2 Credit
Prepares dental assistant students to apply fundamentals of general and dental anatomy to informed decision-making and to professional communication with colleagues and patients. Prerequisite: 508-101 Dental Health Safety.

508-103 Dental Radiography 2 Credits
Prepares dental auxiliary students to operate x-ray units and expose bitewing, periapical, extra oral, and occlusal 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. Prerequisites: 508-101 Dental Health & Safety, and 508-304 Dental & General Anatomy.

508-306 Dental Assistant Clinical 3 Credits
Students apply skills developed in Dental and General Anatomy, Dental Health Safety, Dental Chairside, Dental Materials, Dental Radiography, and Professionalism in a clinical setting with patients. Emphasizes integration of core abilities and basic occupational skills. Prerequisite: 508-101 Dental Health Safety, 508-113 Dental Materials, 508-302 Dental Chairside, 508-304 Dental & General Anatomy.

508-307 Dental Assistant Professionalism 1 Credit
Prepares dental assistant students for professional success in a dental practice or another 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 work force, dental assistants customize or develop their portfolios and lay out an on-going professional development plan.

508-308 Dental Chairside-Advanced 5 Credits
Prepares dental assistant students to adapt chairside skills to assisting with dental specialties as they are performed in general practice. Focuses on pediatric dentistry, orthodontics, oral maxillofacial surgery, endodontics, periodontic, and prosthodontics. Students will also develop the ability to assist with sealants, perform coronal polishing, and apply topical fluoride and topical anesthetics. Prerequisites: All first semester courses.

508-309 Dental Lab Procedures 4 Credits
Prepares Dental Assistant students to produce alginate impressions and fabricate diagnostic models, oral appliances, temporary restorations, and custom trays. Students also polish oral appliances. Prerequisites: All first semester courses.

508-310 Dental Radiography-Advanced 1 Credit
Builds on principles and skills developed in Dental Radiography. Dental Assisting students expose full mouth series, 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. Prerequisites: All first semester courses.

508-311 Dental Assistant Clinical-Advanced 2 Credits
Dental Assisting students apply skills developed in Dental Chairside-Advanced, Dental Lab Procedures, Dental Radiography-Advanced, and Dental Office Procedures in a clinical setting with patients. Emphasizes integration of core abilities and basic and advanced occupational skills. Prerequisites: All first semester courses.

508-120 Dental Office Management 2 Credits
Prepares dental auxiliary 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: All first semester courses.

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-390 Communication for Health Professions 2 Credits
Diagnostic Medical Sonography, commonly called ultrasound, is a diagnostic medical procedure that uses high frequency sound waves to produce medical images of organs, tissues, or blood flow inside the body.

The profession of diagnostic medical sonography includes general sonography, cardiac sonography, vascular technology, and various subspecialties. The profession requires critical thinking and good judgment to provide appropriate health care services. Sonographers/vascular technologists are highly skilled professionals qualified by education to provide patient services using diagnostic techniques under the supervision of a physician. Although most sonographers work in hospital based medical imaging departments performing abdominal, pelvic and vascular examinations or cardiology departments performing cardiac and vascular examinations, sonographers are also employed in dedicated vascular departments or obstetric departments, where specialized ultrasound examinations are performed, and many sonographers work outpatient clinics and mobile imaging services.

Program Mission: The mission of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program is to prepare the student to become a highly qualified sonographer who will practice Diagnostic Medical Sonography with competence.

The didactic and clinical education, as well as the critical thinking framework presented to the students will prepare them to successfully write the American Registry of Diagnostic Medical Sonography examinations in Abdomen, Obstetrical/Gynecological and Vascular Technology, as well as their respective Physics examinations.

Program Goal: The Goal of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program is to fulfill the program mission through the achievement of the following Program Outcomes:

Academic Outcome: The graduate of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will possess the knowledge and academic skills necessary to practice Diagnostic Medical Sonography in the clinical setting as well as successfully write the ARDMS certification examination in Abdomen, Obstetrical/Gynecological, and Vascular Technology.

Clinical Education Outcome: The Graduate of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will be able to competently practice general and vascular Diagnostic Medical Sonography in any clinical setting.

Graduate Certification Outcome: Upon Completion of the Associate Degree Diagnostic Medical Sonography Program, learners will successfully complete the certification examination in Abdomen, Obstetrical/Gynecological and Vascular Technology prepared by the American Registry of Diagnostic Medical Sonographers (ARDMS) within ARDMS eligibility requirements at a rate that meets or exceeds National and State averages.

Student Retention Outcome: Students of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will complete the program at a rate of 75% of all students starting the Diagnostic Medical Sonography curriculum within 1.5 times the normal program completion time.

Patient Care and Safety Outcome: The graduate of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will provide patient care and comfort as well as recognize emergency patient conditions and initiate emergency life saving first aid and basic life support.

Patient Interaction Outcome: The graduate of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will communicate effectively and professionally in the medical environment and function as a team member in the sonography and/or vascular labs.

Critical Thinking and Problem Solving Outcome: The graduate of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will possess the critical thinking and problem solving skills necessary to act appropriately in non-routine and emergency situations.

Professional Development Outcome: The graduate of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will participate in professional activities and continuing education, and utilize insights gained in general education courses to promote continued professional and personal growth.

Graduate Placement Outcome: The graduate of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program seeking employment will be placed in the workforce as a Diagnostic Medical Sonographer and/or a Vascular Technologist, or continuing the educational process in a specialty area of Sonography, i.e.: Echocardiography.

Graduate Satisfaction Outcome: The graduate of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will be satisfied with the educational experience with respect to both academic and clinical abilities.

Employer Satisfaction Outcome: Employers of graduates of the Blackhawk Technical College Associate Degree Diagnostic Medical Sonography Program will be satisfied with the content knowledge, affective behaviors, and clinical skills of these graduates. Knowledge, affective behaviors, and clinical skills of the graduates.

Prerequisites for program admission: Successful completion of a JRCERT accredited program in Radiologic Technology and/or ARRT certification in radiography. One year of high school or one semester of college algebra. (C- or better)

ACT composite of 18, or SAT = 900 or above for math and reading or COMPASS scores of; Writing: 75; Reading: 82; Numerical: 49. The COMPASS test is administered at BTC.

Program Prerequisite Requirements:
- Participate in program orientation session.
- Complete physical examination & program health requirements.

A caregiver background check is required for the clinical portion of this program. All DMS program core courses (prefix 526) require program entry for enrollment. Please contact the Student Services department to ensure “program-ready” status.
the first trimester, second trimester, and third trimester. This course will give the sonography students an introduction to obstetrical ultrasound protocols and familiarize the student with normal fetal anatomy, as demonstrated on ultrasound.

The laboratory portion of this course permits the student to simulate ultrasound examinations of anatomical structures for the purposes of identification of structures and pathology, and to reinforce scanning technique in preparation for performing these examinations in the clinical setting. **Prerequisite: Admission to the Sonography Program**

526-133 DMS Clinical I 2 Credits

In the first clinical course for the Diagnostic Medical Sonography Program, students become acclimated to the clinical environment, become familiar with policies, procedures and protocols at the departmental and institutional level. Students begin the performance of Diagnostic Medical Sonography procedures under the direction of staff sonographers or program faculty in accordance with all program and institutional requirements. **Prerequisite: Admission to the Sonography Program**

526-133 DMS General Procedures II 4 Credits

This course prepares Diagnostic Medical Sonography Students to perform ultrasound evaluations of the spleen, renal structures, and the gravid uterus. The abdominal portion will cover the anatomy, physiology, pathology, pathophysiology and the sonographic appearance of the spleen and renal structures. The obstetrical portion of the course will cover labor, fetal presentation, and fetal anomalies as visualized on ultrasound during the first trimester, second trimester, and third trimester. This course will familiarize the sonography student with abnormal fetal anatomy to include central nervous system anomalies, GI anomalies, GU anomalies, skeletal dysplasia, thoracic anomalies and placental pathology.

The laboratory portion of this course permits the student to simulate ultrasound examinations of anatomical structures for the purposes of identification of structures and pathology, and to reinforce scanning technique in preparation for performing these examinations in the clinical setting. **Prerequisites: 526-130 Introduction to Diagnostic Medical Sonography, 526-131 DMS General Procedures I, 526-132 DMS Clinical I, 526-146 Introduction to Cross-Sectional Anatomy Sonography**
### Diagnostic Medical Sonography

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>526-134 DMS Clinical II</td>
<td>2</td>
<td>The second clinical course for the Diagnostic Medical Sonography Program builds on the knowledge and skills acquired during the first clinical course. Students continue to perform basic sonographic examinations of the abdomen, pelvis, and OB/GYN structures under the direct supervision of a registered sonographer, and begin to perform examinations with increased independence. <strong>Prerequisites:</strong> 526-130 Introduction to Diagnostic Medical Sonography, 526-131 DMS General Procedures I, 526-132 DMS Clinical I, 526-146 Introduction to Cross-Sectional Anatomy Sonography</td>
</tr>
<tr>
<td>526-135 DMS General Procedures III</td>
<td>3</td>
<td>This course prepares Diagnostic Medical Sonography Students to perform ultrasound evaluations of the adrenals, male pelvis, gastrointestinal tract, anterior abdominal wall, musculoskeletal system, thyroid, breast, scrotum, and the gravid uterus. The abdominal portion of this course will cover the anatomy, physiology, pathology, pathophysiology, and the sonographic appearance of the adrenals, male pelvis, GI tract, anterior abdominal wall and musculoskeletal ultrasound. The small parts portion will discuss the anatomy, physiology, pathology and pathophysiology of the thyroid, breast and scrotum as visualized on ultrasound. The diagnostic medical sonography student will be familiarized with the scanning protocols and normal and abnormal sonographic findings. The obstetrical portion will cover fetal anomalies as visualized on ultrasound during the first trimester, second trimester, and third trimester. This course will cover abnormal fetal development to include discussion of pathology, pathophysiology and teratogens. The laboratory portion of this course permits the student to simulate ultrasound examinations of anatomical structures for the purposes of identification of structures and pathology, and to reinforce scanning technique in preparation for performing these examinations in the clinical setting. <strong>Prerequisites:</strong> 526-133 DMS General Procedures II, 526-134 DMS Clinical II, 526-136 DMS Physics I, 526-156 Pathophysiology</td>
</tr>
<tr>
<td>526-136 DMS Physics I</td>
<td>3</td>
<td>This course explores the principles of general wave physics as they apply to the application of Diagnostic Medical Sonography. The student will learn the physical factors that make the production necessary for the performance of diagnostic sonographic examinations. Biological effects of ultrasound energy are also explored. <strong>Prerequisites:</strong> 526-130 Introduction to Diagnostic Medical Sonography, 526-131 DMS General Procedures I, 526-132 DMS Clinical I, 526-146 Introduction to Cross-Sectional Anatomy Sonography</td>
</tr>
<tr>
<td>526-137 DMS Clinical III</td>
<td>1</td>
<td>In the third clinical education course for the Diagnostic Medical Sonography Program, students continue the process of performing routine examinations of the abdomen, pelvis, small parts, and OB/GYN structures more independently, continuing the process of attaining clinical competency in these various procedures. <strong>Prerequisites:</strong> 526-133 DMS General Procedures II, 526-134 DMS Clinical II, 526-136 DMS Physics I, 526-156 Pathophysiology</td>
</tr>
<tr>
<td>526-138 DMS General Procedures IV</td>
<td>4</td>
<td>This final general DMS procedures course permits the student to attain mastery of all sonographic anatomy, physiology, and pathophysiology of all anatomical parts and systems of the abdomen, small parts, and OB/GYN systems. This course will also focus on completing the process of sonoanatomic visualization of all identified anatomical parts and systems with respect to correct anatomical presentation as well as the appearance of pathological processes. The laboratory portion of this course permits the student to attain mastery of the scanning techniques of all ultrasound examinations of anatomical structures and associated with the abdomen, small parts, and OB/GYN systems. <strong>Prerequisites:</strong> 526-135 DMS General Procedures III, 526-137 DMS Clinical III</td>
</tr>
<tr>
<td>526-139 DMS Physics II: Instrumentation</td>
<td>2</td>
<td>This course provides the student information on the equipment used to perform examinations and produce images using Diagnostic Medical Sonography. Topics include transducer construction and operation, components of the ultrasound machine, display modes, image recording systems, quality assurance procedures, and an introduction to Doppler scanning. <strong>Prerequisites:</strong> 526-135 DMS General Procedures III, 526-137 DMS Clinical III</td>
</tr>
<tr>
<td>526-140 DMS Clinical IV</td>
<td>2</td>
<td>In the fourth clinical education course for the Diagnostic Medical Sonography Program, students work towards attaining mastery of all ultrasound procedures of the abdomen and pelvis, small parts, and OB/GYN structures by performing these examinations with increased independence. <strong>Prerequisites:</strong> 526-135 DMS General Procedures III, 526-137 DMS Clinical III</td>
</tr>
<tr>
<td>526-141 DMS Vascular Procedures I</td>
<td>4</td>
<td>This course introduces the Diagnostic Medical Sonography student to the principles of vascular sonographic imaging. Topics include vascular physics and terminology, arterial, venous, and cerebrovascular applications of ultrasound, and normal, abnormal and pathologic sonographic presentation of vascular anatomy. The laboratory portion of this course permits the student to simulate ultrasound examinations of anatomical structures for the purposes of identification of structures and pathology, and to reinforce scanning technique in preparation for performing these examinations in the clinical setting. <strong>Prerequisites:</strong> 526-138 DMS General Procedures IV, 526-139 DMS Physics II: Instrumentation, 526-140 DMS Clinical IV</td>
</tr>
<tr>
<td>526-142 DMS Clinical V</td>
<td>2</td>
<td>In the fifth clinical education course for the Diagnostic Medical Sonography Program, students continue the process of performing routine examinations of the abdomen and pelvis, small parts, and OB/GYN structures. Students also begin the process of observing and performing examinations of the peripheral vascular system under the direct supervision of a registered sonographer. <strong>Prerequisites:</strong> 526-138 DMS General Procedures IV, 526-139 DMS Physics II: Instrumentation, 526-140 DMS Clinical IV</td>
</tr>
</tbody>
</table>
Diesel and heavy equipment technicians repair and maintain transportation equipment, such as heavy trucks, buses, locomotives, ships, and automobiles; construction equipment such as bulldozers, cranes, and road graders; and farm equipment such as tractors and combines. They also service a variety of other diesel-powered equipment, such as electric generators and forklifts. Many technicians perform a broad range of repairs from engines to electrical systems. Others specialize in repairs such as fuel and starting systems. Diesel and heavy equipment technicians use a variety of computerized testing equipment to pinpoint and analyze malfunctions as well as numerous power and hand tools to perform repairs.

The Diesel and Heavy Equipment Technician program is a two-year program providing job entry skills in service and repair of transportation, construction, industrial, and farm equipment. In addition to providing a foundation in the latest diesel technologies, the program improves skills needed to interpret technical manuals and communicate with coworkers and customers. Students in the program develop a broad base of skills, allowing them to enter the large and ever-expanding field of diesel and heavy equipment service and repair.

Program Outcomes—
Upon completion of this program, you will be able to:
- Practice shop and work safety habits
- Locate and interpret repair specifications, processes, and proper procedures
- Remove and replace components
- Operate tools and equipment
- Service components or systems
- Repair defective components or systems
- Diagnose condition of components or systems
- Complete tasks efficiently

Graduates from this program have found employment as:
- Diesel Mechanic
- Diesel Mechanic Apprentice
- Engine Maintenance Mechanic
- Farm Equipment Mechanic
- Service Engine Repairer
- Tune-up Mechanic
- Industrial and Construction Equipment Mechanic
- Truck Mechanic
### DIESEL & HEAVY EQUIPMENT TECHNICIAN

#### Course Descriptions

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semester 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>070-341 Electrical Systems</td>
<td>4</td>
<td>4 - 3</td>
</tr>
<tr>
<td>070-345 Service Policy and Procedure</td>
<td>2</td>
<td>3 - 0</td>
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<tr>
<td>412-347 Inspection &amp; Maintenance Proc.</td>
<td>4</td>
<td>4 - 3</td>
</tr>
<tr>
<td>412-349 Equipment Welding</td>
<td>2</td>
<td>1 - 2</td>
</tr>
<tr>
<td>801-311 Communication</td>
<td>2</td>
<td>3 - 0</td>
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<tr>
<td><strong>Semester 2</strong></td>
<td></td>
<td></td>
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<tr>
<td>070-318 Drive Train Service</td>
<td>4</td>
<td>3 - 4</td>
</tr>
<tr>
<td>070-321 Air Conditioning and Refrigeration</td>
<td>2</td>
<td>1 - 2</td>
</tr>
<tr>
<td>412-316 Brake Service</td>
<td>4</td>
<td>3 - 4</td>
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<tr>
<td>412-311 Steering and Suspension</td>
<td>2</td>
<td>1 - 2</td>
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<tr>
<td>804-304 Math Fundamentals</td>
<td>2</td>
<td>3 - 0</td>
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<tr>
<td><strong>Semester 3</strong></td>
<td></td>
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<tr>
<td>070-308 Small Gas Engines</td>
<td>3</td>
<td>3 - 2</td>
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<tr>
<td>412-342 Electrical Systems Troubleshooting</td>
<td>4</td>
<td>4 - 3</td>
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<tr>
<td>070-343 Hydraulic Systems</td>
<td>3</td>
<td>2 - 3</td>
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<tr>
<td>412-344 Hydraulic Systems Troubleshooting</td>
<td>3</td>
<td>2 - 3</td>
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<tr>
<td>809-352 Skills for Successful Employees</td>
<td>2</td>
<td>3 - 0</td>
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<tr>
<td><strong>Semester 4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>412-304 Diesel Fuel Systems</td>
<td>4</td>
<td>4 - 3</td>
</tr>
<tr>
<td>412-351 Diesel Engine Service - Heads*</td>
<td>4</td>
<td>3 - 4</td>
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<tr>
<td>412-352 Diesel Engine Service – Blocks*</td>
<td>4</td>
<td>3 - 4</td>
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<tr>
<td><strong>TOTAL CREDITS</strong></td>
<td><strong>55</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Course has prerequisite.

### DIESEL & HEAVY EQUIPMENT TECHNICIAN

#### 412-304 Diesel Fuel Systems 4 Credits

This course begins with a review of basic diesel principles and design. Students then begin a comprehensive study of fuel injection systems, pumps, and injectors. Lab activities include the disassembly, inspection, and reassembly of fuel systems components. Some time is spent on pump and injector calibration, proper timing, tune-up procedure, and dynamometer testing of diesel engines. Troubleshooting is emphasized throughout the course.

#### 412-310 Brake Service 4 Credits

This course covers air, hydraulic, and manual brake applications; including maintenance, servicing, repair, troubleshooting, and wheel bearing replacement and adjustment for farm equipment, light-duty, medium-duty, and heavy-duty truck applications.

#### 412-311 Steering and Suspension 2 Credits

Study will include the maintenance and repair of the following areas: solid, leaf spring, coil spring, rubber, air and torsion bar suspension systems, manual and power steering, frames, ball joints, control arms and drag links. Caster and camber, toe-in, toe-out and alignment are also covered.

#### 412-342 Electrical Systems Troubleshooting 4 Credits

Electronic application, testing, test results and their interpretation, reading voltmeters, systems analysis, printed circuits, troubleshooting and the use of specialized tools are highlighted. The overall purpose of this course is to develop troubleshooting skills.

#### 412-344 Hydraulic Systems Troubleshooting 3 Credits

Troubleshooting hydraulic failures on trucks, farm implements, and other equipment.

#### 412-347 Inspection and Maintenance Proc. 4 Credits

Inspection and maintenance of bearings, seals and clutches. Maintenance and inspection of engines, transmissions, and rear ends of trucks, farm equipment and other heavy-duty equipment.

#### 412-349 Equipment Welding 2 Credits

This course is designed to orient the student with the field of metals. The course provides students with basic experiences in the fields of welding and cutting. Topics covered include Shielded Metal Arc Welding (SMAW), Oxy-Fuel Cutting (OF), and Gas Tungsten Arc Welding (GTAW).

#### 412-351 Diesel Engine Service - Heads 4 Credits

Provides the student with both a theoretical and practical background in the basic operating principles of diesel engine heads. Practical experience in rebuilding, testing, and troubleshooting. Students disassemble a diesel engine heads, inspect parts, explain the function of each part and system, reassemble, run engines, and learn maintenance procedures.

**Prerequisite: 070-308 Small Gas Engines**

#### 412-352 Diesel Engine Service - Blocks 4 Credits

Provides the student with both a theoretical and practical background in the basic operating principles of diesel engine blocks. Practical experience in rebuilding, testing, and troubleshooting. Students disassemble a diesel engine blocks, inspect parts, explain the function of each part and system, reassemble, run engines, and learn maintenance procedures.

**Prerequisite: 070-308 Small Gas Engines**
Early Childhood Education is a career option that has increased in demand. This expanding field is seeking potential students with keen observation skills, a talent for human insight, clear communication skills, and respect for children and families.

At Blackhawk Technical College, you will develop the skills needed to address the creative challenges you will face in working with young children:

- Apply child development theory to practice.
- Observe, record, and assess child growth and development.
- Implement developmentally appropriate curriculum.
- Incorporate developmentally appropriate guidance strategies.
- Integrate health, safety, and nutrition practices according to local, state, and national standards.
- Provide a respectful, diverse, and inclusive program.
- Use interpersonal skills to develop respectful relationships with children and adults.
- Demonstrate professional and ethical standards.
- Advocate for children, families, and the profession.

Early Childhood Associate Degree graduates will meet the state educational requirements to be a Child Care Teacher in a licensed group early childhood center for children ages 2 weeks to 10 years old.

Career Outlook
As an early childhood professional, you will enjoy a growing field of opportunity that puts you in touch with the challenge and delight of a child’s world.

A wide variety of employment choices awaits you:
- Nannies
- Nursery Schools
- Day Care Centers
- Head Start Classrooms
- Infant Toddler Center
- Before & After School Child Care Centers
- Instructional Services Aide in public schools
- Early Childhood Centers Administration positions

Physical information needs to be completed before the start of school. Practicum students must meet DHFS requirements for information disclosure records and background record checks.

<table>
<thead>
<tr>
<th>Quarter 1</th>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>307-148</td>
<td>ECE: Foundation of Early Childhood Education</td>
<td>3</td>
</tr>
<tr>
<td>307-151</td>
<td>ECE: Infant Toddler Development</td>
<td>3</td>
</tr>
<tr>
<td>307-166</td>
<td>ECE: Curriculum Planning</td>
<td>3</td>
</tr>
<tr>
<td>307-174</td>
<td>ECE: Practicum I</td>
<td>2</td>
</tr>
<tr>
<td>809-172</td>
<td>Race, Ethnic, Diversity (Gen. Edu.)</td>
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<table>
<thead>
<tr>
<th>Quarter 2</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>307-167</td>
<td>ECE: Health, Safety &amp; Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>307-178</td>
<td>ECE: Art, Music &amp; Language Arts</td>
<td>3</td>
</tr>
<tr>
<td>307-179</td>
<td>ECE: Child Development</td>
<td>3</td>
</tr>
<tr>
<td>307-192</td>
<td>ECE: Practicum II</td>
<td>3</td>
</tr>
<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
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<table>
<thead>
<tr>
<th>Quarter 3</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>307-187</td>
<td>ECE: Children With Differing Abilities</td>
<td>3</td>
</tr>
<tr>
<td>307-188</td>
<td>ECE: Guiding Children’s Behavior</td>
<td>3</td>
</tr>
<tr>
<td>307-194</td>
<td>ECE: Math, Science &amp; Social Studies</td>
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<td>307-197</td>
<td>ECE: Practicum III</td>
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<td>809-198</td>
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<tr>
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<td>307-195</td>
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<td>307-198</td>
<td>ECE: Administering An Early Childhood Education</td>
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<tr>
<td>307-199</td>
<td>ECE: Practicum IV</td>
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<td>801-196</td>
<td>Oral/Interpersonal Communication</td>
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<td>804-106</td>
<td>Introduction to College Math</td>
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<tr>
<td>Elective</td>
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</table>

TOTAL CREDITS 68

Program can be successfully completed in 1-1/2 to 2 or 3 years.
+ Class taught in accelerated learning (8 weeks).
- Contact program Lead Instructor or Program Advisor for information on credit given for work experience and previous class work.
- A minimum grade of “C-” or better is required in all program classes for Placement in Practicum Centers.
- It is STRONGLY recommended that students attend a Student Orientation before registering.
- Practicum courses are required to be taken the year of graduation.
- Practicum students must meet DHFS requirements for information disclosure records and background record checks.
- Students must obtain a physical exam with immunization record before the start of practicum.

Course Descriptions
10-307-148 ECE: Foundations of Early Childhood Education 3 Credits
This 3-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; explore early childhood curriculum models.
EARLY CHILDHOOD EDUCATION

10-307-151  ECE: Infant & Toddler Development  3 Credits
In this 3-credit course you will study infant and toddler development as it applies to an early childhood education setting. Source 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; examine culturally and developmentally appropriate environments for infants and toddlers.

10-307-166  ECE: Curriculum Planning  3 Credits
This 3-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; analyze early childhood curriculum models.

10-307-167  ECE: Health, Safety, and Nutrition  3 Credits
This 3-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; incorporate health, safety, and nutrition concepts into the children's curriculum.

10-307-174  ECE: Practicum 1  2 Credits
In this 2-credit 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; practice positive interpersonal skills with adults.

10-307-178  ECE: Art, Music, & Language Arts  3 Credits
This 3-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 art activities; create developmentally appropriate music and movement activities.

10-307-179  ECE: Child Development  3 Credits
This 3-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 age eight; summarize the methods and designs of child development research; analyze the role of heredity and the environment. 
Prerequisite: 10-307-151 ECE: Infant & Toddler Development

10-307-187  ECE: Children with Differing Abilities  3 Credits
This 3-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; cultivate partnerships with families who have children with developmental differences.

10-307-188  ECE: Guiding Children's Behavior  3 Credits
This 3-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; create a guidance philosophy.

10-307-192  ECE: Practicum 2  3 Credits
In this 3-credit 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 behaviors; utilize caregiving routines as curriculum; utilize positive interpersonal skills with children; utilize positive interpersonal skills with adults. 
Prerequisite: 10-307-174, ECE: Practicum 1

10-307-194  ECE: Math, Science & Social Studies  3 Credits
This 3-credit course will focus on beginning level curriculum development in the specific content 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; create developmentally appropriate social studies activities.
### EARLY CHILDHOOD EDUCATION

**10-307-195 ECE: Family and Community Relationships 3 Credits**

In this 3-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; work collaboratively with community resources.

**10-307-197 ECE: Practicum 3 3 Credits**

In this 3-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; utilize positive interpersonal skills with adults. **Prerequisite:** 10-307-192, ECE: Practicum II

**10-307-198 ECE: Administering an Early Childhood Education Program 3 Credits**

This 3-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; advocate for the early childhood profession.

**10-307-199 ECE: Practicum 4 3 Credits**

In this 3-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; explore professional options in early childhood education. **Prerequisite:** 10-307-197, ECE: Practicum III

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**BTC’s Children’s Learning Center**

**Sign up for Fall Semester Daycare Today!**

**Hours:**

7:00 a.m. – 5:30 p.m.

Stop in, or call (608) 757-7751 for more details!
Vast networks of wires and cables transmit the electric power produced in generating plants to individual customers, connect telephone central offices to customer's telephones and switchboards, and extend cable TV to residential and commercial customers. These networks are constructed and maintained by line installers and cable splicers. To install new electric power or telephone lines, line installers or line erectors install poles and terminals, erect towers, and place wires and cables. Power equipment is typically used to dig holes and set poles. Line installers climb the poles or use truck-mounted buckets (aerial work platforms) and use hand tools to attach the cables. When working with electric power lines, installers bolt or clamp insulators onto the pole before attaching the cable. They may also install transformers, circuit breakers, switches, or other equipment. To bury underground cable, they use trenchers, plows, and other power equipment.

The Electric Power Distribution program prepares a student to advance to an electric line technician apprenticeship and related occupations. Students learn how to properly climb poles and install line hardware and equipment. Safety policies and procedures will be taught and strictly adhered to. Students will learn motor vehicle operation and maintenance, attain a working knowledge of ropes and rigging, proper application of rubber protective equipment and use of hot sticks. Students will also study and apply mapping and laying out lines for construction. Students will set poles at proper depth, install guys and anchors of the required strength to hold various lines.

AC and DC current will be taught along with Introduction to Fundamentals of Electricity.

**Program Outcomes—**

Upon completion of this program, you will be able to:

- Perform installation, maintenance and repair operations in compliance with published safety standards
- Acquire appropriate resources to perform necessary procedures and/or troubleshoot sequence
- Operate tools and test equipment according to the process published in equipment manuals and/or demonstrated in class
- Install poles and related equipment using proper specifications and accepted procedures
- Install underground lines and related equipment using industry accepted methods and practices.
- Recognize faulty or damaged equipment and repair or replace
- Document investment and retirement work orders, record equipment nameplate information and fill out daily time sheets.

**Graduates from this program have found employment as:**

- Electric Utility Lineman
- Telephone Repairman
- Cable TV Installer

**Career Outlook:**

Technological advances will result in divergent trends within this occupation. Job prospects will be best for electrical line workers employed by electric utilities and construction firms because the impact of technology is expected to be less for telephone line workers.

### Course Descriptions

**413-303 Industrial Electricity for line Technicians 2 Credits**

This course, an introduction to industrial electricity, covers such topics as principles of electricity, switching devices, magnetism and electromagnetism. Maintenance and repair of electrical equipment is discussed as it applies to electric utility situations in industry. *Corequisite: 413-310 Electric Power Distribution 1A and 413-315 Electric Power Distribution 1B*

**413-304 Safety Procedures I – Line Technicians 1 Credit**

This course concentrates on personal overhead and underground line safety. The main emphasis will be on safety rules and procedures and their practical application in hands-on situations.

**413-305 Safety Procedures II – Line Technicians 1 Credit**

This course continues and expands on Safety Procedures I. Additional subjects covered are a line technician’s responsibility in protecting work areas and the public in everyday work and emergency situations.

**413-310 Electric Power Distribution 1A 5 Credits**

This course introduces basic electrical theory including AC and DC circuits. The different types of power distribution systems such as direct current, single phase and polyphase are studied. Special skills related to power distribution such as pole installation, climbing, safety, ropes and rigging, chainsaw repair and operation, structural design and installation will be covered during the laboratory sessions at the pole field. *Corequisite: 413-315 Electric Power Distribution 1B*

**413-315 Electric Power Distribution 1B 5 Credits**

This course provides a variety of hands-on experiences with electric apparatus to increase proficiency in construction and maintenance of power distribution. Types of switching procedures, underground systems, and the use of hot sticks are covered. *Corequisite: 413-310, Electric Power Distribution 1A*

**413-320 Electric Power Distribution 2A 5 Credits**

This course introduces the theory of three-phase electrical power systems, including wye and delta systems. Students will study single and three phase transformer; construction, principles of operation, connections as well as secondary power supply systems. Skills in electrical system grounding principles and over voltage equipment will be developed. Safety topics related to electrical line work will be highlighted. *Corequisite: 413-325 Electric Power Distribution 2B*

**Semester 1**

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<tr>
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**TOTAL CREDITS**

30

^1Course has Corequisite
ELECTRIC POWER DISTRIBUTION

413-325 Electric Power Distribution 2B 5 Credits
This course introduces electrical power line machinery such as
over current equipment, voltage regulators and kilowatt hour
meters. Components and functions of an electrical substation,
underground distribution systems, street lighting equipment,
along with the sources of communication interference from
electrical sources will be studied. Safety related topics are also
included. Corequisite: 413-320 Electric Power Distribution 2A

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-311 Communication  2 Credits
804-304 Math Fundamentals  2 Credits
806-315 Applied Science  2 Credits

ELECTRO-MECHANICAL
TECHNOLOGY
(Automated Systems Technology)

The study of Automated Systems will give graduates the ability
and skills to work with today's computer integrated systems and
robotics. The student will acquire knowledge and the ability to
build and service equipment that is in high demand. The student
will learn problem-solving skills to build and repair equipment.

The demand for automated systems technicians is high and
many area companies are hiring technicians to design, construct,
and support their computer systems. Graduates from this
program fill positions in companies that use computer-driven
control systems and mechanisms. This program emphasizes
programming, design, updating, servicing, and operation of
automated equipment and robotics systems. The technician is
involved with many stages and aspects of an automation system.

Program Outcomes–
Upon completion of this program, you will be able to:
• Integrate safety protocol
• Locate & interpret specifications, processes, schematics and
  procedures
• Operate power and hand tools and standard test equipment
• Remove and replace system and component parts correctly
• Repair defective components or systems
• Diagnose the operation condition of components or systems
• Service systems and components
• Modify systems and components
• Complete and maintain appropriate documentation for
  systems and processes

Graduates from this program have found employment as:
• Automation Engineering Technician
• Medical Electronics Technician
• Pharmaceutical Process Technician
• Electronics Process Technician
• Robotics Technician

For the most current schedule information, visit www.blackhawk.edu
# ELECTRO-MECHANICAL TECHNOLOGY
(Automated Systems Technology)

Students study basic theories, concepts, elements, and principles of AC circuits. Students advance from simple circuits to circuits that are more complex. Topics include: reactance, impedance, resonance, inductors, capacitors and combination circuit analysis. A combination of lecture, multiple delivery modes and laboratory work are utilized.  

**Prerequisite:** 605-102 Fundamentals of DC Circuits

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tr>
<td>605-104</td>
<td>Fundamentals of AC Circuits</td>
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<td>605-106</td>
<td>Analog Circuits</td>
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<td>620-100</td>
<td>Hydraulics</td>
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<td>620-110</td>
<td>Introduction to PLC's</td>
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<tr>
<td>620-115</td>
<td>Computer and Robotic Programming</td>
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<tr>
<td>620-120</td>
<td>Motors and Drive Systems</td>
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<tr>
<td>620-125</td>
<td>Servos and Process Controls</td>
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<tr>
<td>620-129</td>
<td>Automated Cell Design and Planning</td>
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<td>620-130</td>
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<tr>
<td>620-135</td>
<td>Power Devices</td>
<td>3</td>
</tr>
<tr>
<td>620-140</td>
<td>Robotic Systems</td>
<td>3</td>
</tr>
</tbody>
</table>

## 605-104 Fundamentals of AC Circuits
This course provides the student with the concepts and fundamental circuit design material to create several types of analog circuits. This course also explores the principles and concepts needed for solid-state devices to operate correctly. Course study includes: the use of solid-state devices such as diodes, transistors field-effect devices, and op-amps. Areas covered include: amplification, comparing, summing, wave shaping, regulating, and oscillation circuits. Analog to digital conversion and several types of integrated circuits are investigated and applied. Characteristics and application of each device type is verified in laboratory experiments.  

**Corequisite:** 605-102 Fundamentals of DC Circuits

## 605-106 Analog Circuits
This course provides the student with concepts and fundamental circuit design material to create several types of analog circuits. This course also explores the principles and concepts needed for solid-state devices to operate correctly. Course study includes: the use of solid-state devices such as diodes, transistors field-effect devices, and op-amps. Areas covered include: amplification, comparing, summing, wave shaping, regulating, and oscillation circuits. Analog to digital conversion and several types of integrated circuits are investigated and applied. Characteristics and application of each device type is verified in laboratory experiments.  

**Prerequisite:** 605-102 Fundamentals of DC Circuits

## 620-100 Hydraulics
This course introduces the fundamental principles in the operation of fluid power, and how it is used in the transmission of power through various hydraulic components. This class will examine the components of a hydraulic system. Components studied include: cylinders, motor types, pumping systems, petroleum fluids, filters, directional and control valves. This course includes the analysis of several hydraulic circuits. Laboratory activities are designed and performed to verify these theories.  

## 620-105 Pneumatics
This course uses fundamental principles of compressed gases that operate and power industrial equipment. Principles are applied in transmission of power through the various components such as cylinders, motors, compressors, distribution systems and valves. It also includes the analysis of pneumatic circuits.  

**Corequisite:** 605-104 Fundamentals of AC Circuits

## 620-110 Introduction to PLC's
This course provides the student with basic understanding of the principles and concepts involving logic circuits. Concepts to be studied include: waveforms, number systems, gates and concepts of microprocessor interfacing. Laboratory experiments use Programmable Logic Controllers (PLC) to cover multiple digital circuit concepts. Introduction to ladder logic and block instructions are explored. In addition, the use of registers, counters, timers and other instructions are applied and utilized in lecture and laboratory. Verification of the theory is accomplished through laboratory experiments. Emphasis will be placed on troubleshooting techniques used in servicing PLC's.  

**Corequisite:** 605-102 Fundamentals of DC Circuits

## 620-115 Computer and Robotic Programming
This course is primarily for students with little or no programming background. The course includes the fundamentals of computer operations. Students will be exposed to programming and logic principles that apply to industrial programming applications. The programming language will be employed to program microprocessors and robotic controls. The language and instruction sets will be studied and used to control devices with a special emphasis on industrial applications. The course includes hands-on laboratory sessions.  

**Prerequisite:** 620-110 Introduction to PLC’s

## 620-120 Motors and Drive Systems
This course covers principles for DC motors, AC motors, the drives and variable frequency drives (VFDs). Students will learn about motor types and drives in relationship with the appropriate application within industry. Also covered are electrical protective devices controls, single phase and three-phase power systems, and EMI. The student learns to design, install, and troubleshoot motor controls. Students learn more about electrical and electronic schematic diagrams to better understand the operation of drive control systems.  

**Prerequisites:** 605-106 Analog Circuits; Corequisite: 620-135 Power Devices

## 620-125 Servos and Process Controls
Servomechanisms are used in various automated systems. Students will study principles and theories of servomechanisms and apply them in the laboratory. Process controls and instrumentation are applied to control loops systems in the laboratory. Electrical and electronic diagrams are studied to understand control loop systems. Some experiments are conducted on: hydraulic servo controls systems, DC motors, AC motors, stepper motors, and other controls systems.  

**Prerequisites:** 605-106 Analog Circuits; Corequisite: 620-135 Power Devices or concurrent enrollment

## 620-130 Automated Cell Design and Planning
The student learns the parameters and scope under which a project must function and be constructed. Based on these parameters, the student will design, plan and learn the steps of execution in building an automated robotic cell. Students will learn planning and the use of control tools such as: work breakdown schedule (WBS) and Gantt charts. These tools assist the student in keeping their project on schedule and on budget.  

## 620-135 Power Devices
This course is an essential study of the various types of power handling solid-state devices found in automation and other electronic equipment. The devices include SCR’s, DIAC’s and TRIAC’s. Regulated and unregulated design power supplies are covered, which include analog and switching types. This course will introduce the student to the design of circuits using power handling devices and the ratings for these types of components. Students will learn to read and interpret schematics used in the electronics industry. This course teaches the study of electronic machine elements, which includes electrical, and electronics drawings and the associated symbols.  

**Prerequisite:** 605-106 Analog Circuits

## 620-140 Robotic Systems
The basics of robotics are introduced. This includes terminology, types, configurations, specifications and application characteristics of robots. Mechanical drive systems, along with control systems for automation, are studied. The student learns the basic parts of the robot and will operate these systems in laboratory exercises.  

**Prerequisites:** 620-100 Hydraulics, 620-105 Pneumatics, 620-115 Computer & Robotic Programming
**ELECTRO-MECHANICAL TECHNOLOGY**

(Automated Systems Technology)

620-145 Programmable Controllers and HIM Devices 4 Credits

The student will study system components and devices that make up a programmable or microprocessor system. Various applications and operations used for digital and process controls in industry will be studied. Further use of programming is expanded to include ladder logic, function flow control, and block instructions. Networking and interfacing to other computer systems and remote inputs and outputs modules are studied and applied. Human Interfacing Modules (HIM’s) are studied and programmed. HIM’s are setup to connect with the network or PLC’s. Diagnostic troubleshooting of PLC’s and HIM’s is applied to real world control systems. Prerequisite: 620-110 Introduction to PLC’s

620-150 Interfacing Robotic Devices 4 Credits

This course focuses on the integration of a complete automated robotic cell. Many component parts are interconnected in order for the cell to operate properly. Student will interface: PLC’s, robots, personal computers, vision systems, sensors, motor drives, conveyors, fluid power devices, and other programmable or hard automation. Topologies for networking, architectures and protocols are covered and employed in industrial control systems. In addition, wireless network technologies, and related hardware will be explored. Student will construct, wire, program, network, troubleshoot and document the complete automated robotic cell. Prerequisite: 620-130 Automated Cell Design & Planning 620-140 Robotic Systems; Corequisite: 620-155 Automated Robotic Cells

620-155 Automated Robotic Cells 4 Credits

The student will apply the concepts of robots and automation by building a small automation system. This automation cell will be accomplished within the framework of an assigned team of students. Student will apply learned concepts studied in previous classes. These concepts will assist in building, testing, and running their automated work cell. Student will develop, and apply project planning, time management and cooperative methods with their team members to build their work cell. Student will learn how to design and make parts for this project. They also will specify and purchase parts as well as, analyze system malfunctions, which may occur to the modular level. Student will practice the skills needed to interface and make repairs. By using such organizational tools as WBS and Gantt charts, the student team will learn how to finish the project on time and on budget. Prerequisites: 620-130 Automated Cell Design & Planning 620-140 Robotic Systems; Corequisite: 620-155 Automated Robotic Cells

**General Education Course Requirements:**

(see course descriptions on pages 33-37)

<table>
<thead>
<tr>
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<tr>
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<td>Written Communications</td>
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<td>801-196</td>
<td>Oral/Interpersonal Communication</td>
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<td>801-197</td>
<td>Technical Reporting</td>
<td>3</td>
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<tr>
<td>804-110</td>
<td>Elementary Algebra w/Applications</td>
<td>3</td>
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<tr>
<td>804-196</td>
<td>Trigonometry with Applications</td>
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<tr>
<td>809-172</td>
<td>Race, Ethnic, &amp; Diversity Studies OR</td>
<td>3</td>
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<tr>
<td>809-196</td>
<td>Introduction to Sociology</td>
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<td>809-198</td>
<td>Introduction to Psychology</td>
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<td>890-125</td>
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**EMERGENCY MEDICAL TECHNICIAN**

The EMT typically represents one of the first components of the emergency medical system. This course prepares individuals to care for patients at accident scenes and transport by ambulance to the hospital under medical direction. The course emphasizes emergency skills such as managing respiratory and cardiac emergencies, medical emergencies, trauma emergencies and patient assessment, and teaches these skills in a job-related context. The National Registry of EMT’s test is required at the completion of the course for licensure in the State of Wisconsin. The course is also a prerequisite for EMT-Intermediate Technician and EMT-Paramedic training. EMT-Basic is 4 credits at 8 hours per week totalling 144 hours plus 10+ hours in a hospital emergency room setting and ambulance ride-along training.

**EMT Basic Practical/Knowledge Base Outcomes**

A minimum of an 80% is required on all exams to be eligible to attend the National Registry of EMT practical and written exams needed for Wisconsin EMT licensing.

- Airway Management
- Medical Emergency recognition and management
- Trauma Emergency recognition and management
- Basic Pharmacology
- Prehospital Childbirth
- EMS Operations

**Student Outcomes & Standards–Intermediate Technician**

Minimum of 80% is required on all exams to be eligible to take the State of WI EMT-IV Technician Exam for licensing. Students will gain knowledge in the following areas:

- Cell physiology
- Venous access/IV skills
- Diabetic emergency management including using IV Dextrose and Glucagon injection
- Critical Thinking
- Shock Management
- Pharmacology
- Cardiac anatomy and emergency intervention using nitroglycerin and aspirin
- Narcotic drug overdose management using Narcan

A Caregiver Background Check WILL be required for clinical portion of the program. Students must meet the immunization requirements set by the CDC.
Program Outcomes—
Upon completion of this program, you will be able to:

- Apply the preparatory aspects of EMT-Intermediate Technician care.
- Utilize a process of clinical decision making when forming a field impression.
- Demonstrate usage of basic pharmacology principles.
- Perform intravenous therapy.
- Demonstrate care of cardiovascular patients.
- Perform interventions for diabetic cases.
- Deliver emergency care of narcotic overdose patients.
- Perform clinical skill competencies.
- Deliver emergency care to pediatric patients.

Intermediate Technician students will be graded using the following weights and values:

- Clinical-ER and Ambulance: 30%
- Classroom Skill Assessments: 20%
- Cognitive Objective Assignments: 10%
- Critical Thinking Assignments: 10%
- Exams-pass of 80% on each: 20%
- Team Project Presentation: 10%

Grade Explanations:

Clinical Time and Competencies: 45 hours of clinical time must be completed by the end of the class. Each of the competencies listed must be completed and verified successful by a preceptor. It is a State of Wisconsin requirement to complete all competencies and hours in order to be eligible for course completion. Preceptors will complete leadership and care management plan evaluation forms for each assessment performed by the student. Competency checklist forms will be given to student at the beginning of clinical eligibility. Points will be awarded according to a standard system based on the performance evaluation made by the preceptors.

A-93%-100%
B-86%-92%
C-80%-85%
D-73%-79%
F-0%-72%

Course Descriptions

531-102 Safety Emergency Procedures for the Workplace 1 Credit
This course prepares the individual for common emergencies in the workplace. It includes the American Heart Association Adult, Child and Infant CPR, First Aid and Fire Prevention and Safety. People taking this course are primarily associated with Health Care, Culinary Arts, or other BTC programs.

531-301 EMT-Basic 4 Credits
This course prepares individuals to care for patients at accident scenes and transport by ambulance to the hospital under medical direction. The course emphasizes emergency skills such as managing respiratory and cardiac emergencies, medical emergencies, trauma emergencies and patient assessment, and teaches these skills in a job-related context. The National Registry of EMT’s test is required at the completion of the course for licensure in the State of Wisconsin. The course is also a prerequisite for EMT-Intermediate Technician and EMT-Paramedic training. EMT-Basic is 4 credits at 8 hours per week totalling 144 hours plus 10+ hours in a hospital emergency room setting and ambulance ride-along training. Students must be certified in Healthcare Provider CPR prior to the start of the class. Prerequisite: 531-434 Healthcare Provider CPR

531-303 EMT-Intermediate Technician 96 Hours
The EMT-Intermediate Technician course will take you to the next level of training after EMT-Basic. Students will learn clinical decision making skills, basic pharmacology, intravenous therapy, and management of cardiovascular, diabetic, drug overdose, and shock cases. Students will complete 45 hours of skill competencies in a clinical setting. EMT-Intermediate Technician is 4 hours each week in totaling 45 hours in addition to 45 hours of hospital clinical experience. A current Wisconsin EMT license is a Prerequisite for this 3-credit course. Successful completion of a Wisconsin State exam is required to obtain a WI EMT-Intermediate Technician license.

531-412 First Responder Refresher 18 Hours
Biennial refresher course for certificate renewal. First Responder skills are emphasized along with new protocols for the two-year period.

531-415 Emergency Vehicle Operations–Ambulance 8 Hours
This course is for EMTs and drivers of ambulances consisting of classroom work, on-road and track emergency driving maneuvers.

531-420 EMT-Basic Refresher 30 Hours
Biennial State of Wisconsin mandated refresher course for licensure renewal. Basic skills are emphasized along with new protocols for the two-year period.

531-423 EMT Intermediate Technician Refresher 12 Hours
Biennial refresher course required for license renewal for E.M.T.’s with I.V. Tech Skills.

531-431 Heartsaver–CPR and AED 6 Hours
For the general public. The course consists of airway obstruction and CPR for infants, children, and adults based on the newest American Heart Association techniques (OSHA approved)
FARM BUSINESS

PRODUCTION MANAGEMENT

Farming is a technology driven business, with continually evolving management practices and an ongoing need for unbiased and focused educational resources. Farm Business and Production Management is designed to deliver on these needs. Enrollment is open to any individual actively engaged in or about to enter farming including: farm owners, operators, managers, and farm/agribusiness employees. Enrollees should plan to attend regularly scheduled group instruction, as well as allow time for individual on-site instruction.

Instruction is planned over a five to six year period and conducted on a two-fold basis:

- A minimum of 36 hours of group instruction (lecture, classroom discussion, demonstrations, field trips, and small group instruction).
- A minimum of 12 hours of individual instruction. This instruction is prescheduled on a monthly basis. Normally the site is on the farm, but may be at a location and time agreed to by both the student and instructor.

Program Outcomes—
Upon successful completion of this program, you will be able to:

- Complete financial and production records tasks necessary for business operation.
- Implement a soil management plan.
- Develop and implement appropriate cropping practices.
- Develop and apply an appropriate livestock nutrition plan.
- Implement appropriate livestock management practices.
- Operate tools and equipment needed in farm business operation.
- Develop a farm management plan.

Career Outlook:
Outlook is affected each year by the cost and availability of money, government support programs, import quotas, and local and international markets. Rising costs and changes in farm prices also affect business stability. Profits vary greatly, depending on weather, prices, operating costs, and interest rates.

The structure of the farm industry is changing as markets evolve and average farm size increases. These trends may limit traditional operations, but emerging value added and other creative production and marketing approaches will continue to provide new opportunities for those willing to meet the challenge.

Course Descriptions

090-381 Operating the Farm Business 3 Credits
Emphasizes the management skills and concepts necessary for the first year student to continue farming with today’s changing technology and farm business financing. Special emphasis is given to establishing and recording farm business and family goals. The student will organize and maintain the farm business records, as well as interpret and analyze the records to assist in making sound farm business management decisions. Each student’s farming operation is assessed and plans are developed based on needs, goals, and objectives. Students will evaluate their goals and objectives upon completion of the course.

090-382 Soils Management 3 Credits
Instruction is provided on preparation and implementation of a land-use plan, and soil testing procedures and reports. Students will receive instruction on fertilizer recommendations and budgets. Included are instruction on the application of farm manures, chemicals, soil conservation practices, and the management and safe use of farm machinery and equipment. Soil management emphasizes the analysis of the farm business and planning cropping strategies to meet the student’s needs.

090-383 Crop Management 3 Credits
Instruction is provided on all phases of crop production, management and economics. Specific topics relate to variety, selection, planning, pest control, harvesting, storage, and marketing. In addition, the cropping program is related to the total farm enterprise on a short-term and long-term basis. Crop management emphasizes the analysis of the farming business and planning of cropping practices and strategies to meet student’s needs.
FIRE PROTECTION TECHNICIAN

- Apply incident management skills to emergency incidents
- Meet professional fire and EMS credentialing standards

This series is for all who wish to be certified by the State of Wisconsin. The emphasis is on skilled hands-on training. All classes require a Wisconsin Technical College System (WTCS) test for certification at the completion of each course.

Potential Employment Opportunities
- Fire Fighter
- Fire Protection Technician
- Fire Fighting Equipment Specialist/Sales
- Fire Inspector
- Fire Fighter - Crash, Military, Government, State or Federal

Course Name | Credits | Lec-Lab
---|---|---
503-105 Fire Fighter Health & Safety | 2 | 2 - 0
503-106 Fire Service Employability | 3 | 3 - 0
503-139 Principles of Emergency Services | 3 | 3 - 0
503-142 Fire Fighting Principles | 4 | 4 - 0
503-143 Building Construction | 3 | 3 - 0
503-147 Fire Protection Systems | 4 | 4 - 0
503-151 Fire Prevention | 4 | 4 - 0
503-152 Hazardous Materials | 4 | 4 - 0
503-155 Fire Protection Hydraulics | 4 | 4 - 0
503-156 Strategies, Tactics, and Incident Management | 4 | 4 - 0
503-157 Fire Investigation | 3 | 3 - 0
531-301 EMT-Basic | 4 | 4 - 4
140-101 Spanish Language and Culture | 3 | 3 - 0

General Education Courses
801-195 Written Communication | 3 | 3 - 0
801-196 Oral/Interpersonal Communication | 3 | 3 - 0
801-197 Technical Reporting | 3 | 3 - 0
804-106 Introduction to College Math | 3 | 3 - 0
806-134 General Chemistry | 4 | 3 - 0
809-196 Introduction to Sociology | 3 | 3 - 0
809-198 Introduction to Psychology | 3 | 3 - 0

Suggested Electives (Minimum of 3 credits required)
140-102 Spanish Language and Culture II: | 3 | 3 - 0
Emergency Services Personnel
503-107 Internship | 3 | 3 - 0
531-303 EMT-Intermediate Technician | 3

TOTAL CREDITS | 69

Additional Requirements
A program Portfolio is required that will include all relevant training certificates that have been acquired, a resume and other relevant training records. A complete portfolio approved by the Fire Service Training Coordinator is required for graduation.

A standard uniform is also a program requirement. Uniforms are routinely required in the Fire Service and this requirement is intended to develop the discipline needed to operate as a team member. Some specialized personal protective equipment is required for some of the classes. Much of this equipment will be available to rent for an additional fee. (See program costs for Wisconsin residents.)

FARM BUSINESS PRODUCTION MANAGEMENT

090-384 Livestock Nutrition 3 Credits
Emphasizes the skills, techniques and concepts necessary for sound feeding management. Feed values, pricing, terminology, requirements, consumption are covered. Evaluation of feed tag labels, base feeds and feeding programs are also covered. Attention is given to the metabolic diseases of lactating animals. Livestock feeding efficiency is measured by use of the farm business analysis.

090-385 Livestock Management 3 Credits
Livestock management provides instruction on the various aspects of selection, breeding, herd health, raising of replacement stock, and marketing of livestock and livestock products. It includes the selection, operation, and maintenance of farm buildings and milking, feeding, ventilation and manure handling equipment. Efficiency of the livestock program will be measured through use of the farm business analysis.

090-386 Farm Records & Business Management 3 Credits
Instruction emphasizes the practical use of a farm record system in managing the farm through farm and financial analysis. It includes the establishment of farm business goals, selection and use of farm credit, farm business arrangements, farm estate planning, and farm income taxes. Instruction is provided on the use of computers and/or computer records and farm financial analysis of the farm business. Production and financial decisions will be based on the student’s farm business analysis.

FIRE PROTECTION TECHNICIAN

The Fire Protection Technician program offers the student an exciting career in fire protection, fire prevention and fire engineering. The field of fire science is concerned with the preservation of life and property from fire and related hazards. The fire protection technician is a highly-skilled specialist with a unique blend of technical knowledge, management abilities, and public education and communication skills. Graduates are ideally suited to careers in public and private fire protection. Another area of employment opportunity exists in the field of sales and service with companies which manufacture and distribute fire protection equipment and related supplies. Expanding industrialization and population growth have created new fire problems which must be solved. In this area, the fire protection technician can be part of the team to design and research the answers to solve these problems which are making many demands upon communities, business, and industry.

Program Outcomes
- Demonstrate professional conduct by displaying a personal code of ethics, positive work ethics, flexibility, teamwork skills, physical fitness, safe procedures, and sensitivity to diverse cultures and individuals
- Perform fire prevention activities including preplanning, public education, inspection, and investigation
- Communicate clearly and effectively both verbally and through written documentation with clients, coworkers, other agencies and supervisors
FIRE PROTECTION TECHNICIAN

Course Descriptions

503-105 Fire Fighter Health and Safety  2 Credits
This course introduces the students to the physical, emotional, intellectual and social aspects of a career in the fire service. Topics include safety, health and wellness, common diseases, life style choices and fitness. The student will receive the knowledge needed to make healthy life style choices, select appropriate risk management techniques to handle incidents safely and make decisions in the overall health and safety of the fire department members.

503-106 Fire Service Employability  3 Credits
Fire Service Employability is designed to ease the student’s transition into the work force. The course discusses the strategies and skills needed to apply for and test for careers in the fire service. Topics include job search, employment correspondence, application process, interviewing and physical testing. These topics are enhanced by resume planning, mock interviews, job search planning and preparation for physical ability testing.

503-139 Principles of Emergency Services  3 Credits
Provides an overview to 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.

503-142 Fire Fighting Principles  4 Credits
Describes basic fire behavior, techniques used to control structural and related fire emergencies, and life safety practices. Students perform all practical evolutions necessary to control and extinguish fires and otherwise meet all requirements for Firefighter I certification with the State of Wisconsin.

503-143 Building Construction  3 Credits
Provides the components of building construction that relate to fire and life safety.

503-147 Fire Protection Systems  4 Credits
Provides information relating to the features of design and operation of fire detection and suppression systems.

503-151 Fire Prevention  4 Credits
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. Meets all requirements for Fire Inspector I certification with the State of Wisconsin.

503-152 Hazardous Materials  4 Credits
Examines characteristics relating to hazardous materials including problems of recognition and mitigation. Prepares students to Hazardous Materials Technician Level.

503-155 Fire Protection Hydraulics  4 Credits
Provides a foundation of knowledge in order to understand the principles of the use of water in fire protection. Meets all of the requirements for Driver Operator-Pumper certification with the State of Wisconsin.

503-156 Strategies, Tactics, and Incident Management  4 Credits
Provides an in-depth analysis of the principles of emergency response through utilization of an incident management system. Prepares students to pursue current national ICS training requirements.

503-157 Fire Investigation  3 Credits
Provides learners with the fundamentals and technical knowledge needed for proper fire scene investigations.

531-301 EMT-Basic  4 Credits
This course prepares individuals to care for patients at accident scenes and transport by ambulance to the hospital under medical direction. The course emphasizes emergency skills such as managing respiratory and cardiac emergencies, medical emergencies, trauma emergencies and patient assessment, and teaches these skills in a job-related context. The National Registry of EMT’s test is required at the completion of the course for licensure in the State of Wisconsin. The course is also a prerequisite for EMT-Intermediate Technician and EMT-Paramedic training. EMT-Basic is 4 credits at 8 hours per week totalling 144 hours plus 10+ hours in a hospital emergency room setting and ambulance ride-along training. Prerequisite: Healthcare Provider-CPR

Fire Service Certification

- Firefighter I (96 Hours)  3 Credits
- Firefighter II (42 Hours)  1 Credit
- Fire Officer I (60 Hours)  1.5 Credits
- Fire Officer II (45 Hours)  1 Credit
- Driver/Operator Pumper (66 Hours)  1.5 Credits
- Driver/Operator Aerial (36 Hours)  1 Credit
- Fire Instructor I (40 Hours)  1 Credit

General Education Course Requirements:
(see course descriptions on pages 33-37)

- Written Communication  3 Credits
- Oral/Interpersonal Communication  3 Credits
- Introduction to College Math  3 Credits
- General Chemistry  3 Credits
- Technical Reporting  3 Credits
- Introduction to Sociology  3 Credits
- Introduction to Psychology  3 Credits

GREEN INDUSTRY TECHNICIAN

Attractively designed, healthy and well-maintained lawns, gardens, trees, and shrubbery create a positive first impression, establish a peaceful mood, create spaces for outdoor activities, and increase property values. A growing number of individuals, businesses, and organizations rely on landscape and turf professionals to establish and care for their landscapes. These professionals create designs, establish trees, hedges and flowering plants; build terraces, retaining walls, and patios; and establish and maintain turf grasses for a variety of residential, commercial and athletic uses. The Green Industry Technician program is offered in eight-week sessions, on a part-time evening and Saturday basis. Workers already employed, as well as those just beginning in the field, take advantage of the flexible programming.

For the most current schedule information, visit www.blackhawk.edu
Program Outcomes—
Upon completion of this program, you will be able to:

- Maintain turf and landscape plants
- Assess project and site parameters
- Select commonly used landscape plants for various applications (annuals, perennials, trees, shrubs, grasses, interior plants)
- Implement landscape design plans
- Apply safety principles and practices in use of tools, equipment, and products
- Maintain hand tools and power equipment

Graduates from this program have found employment as:

- Landscaper
- Greenskeeper
- Forester
- Horticulture Machine Maintenance Technician
- Arborist

Semester 1

<table>
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<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tr>
<td>001-302 Landscape Design I</td>
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<tr>
<td>001-303 Horticultural Pest Management</td>
<td>1</td>
<td>1-1</td>
</tr>
<tr>
<td>001-304 Landscape Tools &amp; Equipment</td>
<td>1</td>
<td>1-1</td>
</tr>
<tr>
<td>001-313 Golf &amp; Sports Turf Management</td>
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<td>001-330 Weeds &amp; Invasive Species</td>
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<td>001-331 Plant Health Management</td>
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<td>001-332 Woody Ornamentals – Trees</td>
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<td>001-333 Woody Ornamentals – Shrubs</td>
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Semester 2

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<td>001-305 Soils &amp; Fertilizers</td>
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<td>001-306 Arboriculture &amp; Turf Management</td>
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<td>001-307 Landscape Construction</td>
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<td>001-310 Service Business Fundamentals</td>
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<td>001-311 Service Business Fundamentals</td>
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<td>001-312 Herbaceous Plants</td>
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<td>001-322 Plant Propagation</td>
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<td>001-323 Plant Propagation</td>
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<td>001-334 Internship</td>
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**TOTAL CREDITS** 18

Course Descriptions

**001-302 Landscape Design I** 1 Credit
The learner develops basic landscape plans with an emphasis on function, design principles, and composition in this hands-on course.

**001-303 Horticultural Pest Management** 1 Credit
The study of various types of pesticides, methods of application, and safety precautions in their use. Students may take the Wisconsin Horticultural Pest Control exam at the completion of the course.

**001-304 Landscape Tools & Equipment** 1 Credit
This class provides the learner with the basic skills and knowledge to perform standard maintenance procedures on outdoor power equipment, operate the equipment safely, and make informed buying decisions.
**GREEN INDUSTRY TECHNICIAN**

001-331  Plant Health Management  1 Credit
The course covers diseases and insects common to herbaceous and woody plants found in lawns, flower and vegetable gardens, landscapes, nurseries, and unmanaged native areas. Field trips and reports aid in identification and diagnosis of plant health care issues. Very useful for those considering enrolling in Horticultural Pest Management and for those interested in any career involving plant health.

001-332  Woody Ornamentals – Trees  1 Credit
Learners select trees appropriate for various landscape schemes in Wisconsin based on physical characteristics, cultural needs, customer preference and adaptation to the environment.

001-333  Woody Ornamentals – Shrubs  1 Credit
Learners select shrubs appropriate for various landscape schemes in Wisconsin based on physical characteristics, cultural needs, customer preference and adaptation to the environment.

001-334  Internship  1 Credit
Students obtain hands-on experience through on-the-job training in the green industry field. Prior consent for the experiential learning activity by the instructor is required. The student completes a comprehensive study after successfully completing the intern requirements.

**INDIVIDUALIZED TECHNICAL STUDIES DEGREE**

The Individualized Technical Studies Degree is intended for currently employed individuals or other students who have a specific career objective that cannot be met by BTC’s existing degree programs. By combining State Board approved courses from two or more major areas of study, students may, along with an occupational mentor, modify an occupational degree program into a unique Associate degree.

Admission requires each student to participate in advising and planning sessions, which include the following:

- Provide flexibility in programming to meet the educational needs of individuals based on their particular career goals.
- Emphasize the individual’s career goals that cannot be achieved through enrollment in any single instructional program currently available at BTC.
- Develop a plan outlining the student’s career objectives.
- Identification of an occupational mentor who is familiar with the skills and abilities needed in positions similar to that sought by the student.
- Provide documentation of career goals and objectives.

Program Requirements
General Education courses will be drawn from communication, mathematics, science, and behavioral and social sciences. Each student also will complete a minimum of 36 credit hours of individualized technical studies (including at least three credit hours of computer-related courses). Students may use courses from all departments at BTC. A minimum of 20 of these credits must be focused in one discipline. The selection of these courses must be relevant to the student’s career goals and should provide sufficient hours of concentration in one or two specific technical areas to ensure technical competence in achieving his or her occupational goals.

**General Education—21-30 credit hours**

**Communication – 6 credits required:**
- 801-195  Written Communication  3 Credits
- 801-196  Oral/Interpersonal Communication  3 Credits
- 801-197  Technical Reporting  3 Credits
  (Prerequisite: Written Communication)
- 801-198  Speech  3 Credits
  (May be substituted for 801-196)

**Social Science – 3 credits required:**
- 809-166  Introduction to Ethics: Theory & App  3 Credits
- 809-172  Race, Ethnic & Diversity Studies  3 Credits
- 809-174  Social Problems  3 Credits
- 809-195  Economics  3 Credits
- 809-196  Introduction to Sociology  3 Credits

**Behavioral Science – 3 credits required:**
- 809-159  Abnormal Psychology  3 Credits
- 809-198  Introduction to Psychology  3 Credits
- 809-199  Psychology of Human Relations  3 Credits
- 809-188  Developmental Psychology  3 Credits

**Math and/or Science– 3 credits required**
(Check with your program advisor or counselor for the specific requirements)

**General Education Electives– 0-6 credits required**
(Check with your program advisor or counselor for the specific requirements)

**Individualized Technical Studies Core** 36-49 Credit hours

**Total Program Credit Hours**  60-70 Credit hours

For further information contact:

**Monroe Campus**-Christine Wellington, (608) 328-1660
**Central Campus**-Melanie Baak, (608) 757-6320
Hal Zenisek, (608) 757-7723
The Industrial Engineering Technician program is designed to train persons to serve as technicians in the fields of industrial engineering and manufacturing production. Challenging assignments in any industry are open to qualified male or female industrial engineering technicians.

This program is designed with the working student in mind, and is offered on a part-time basis in the evenings. Most students are able to attain their Associate Degree in three to five years. Several of the core courses are available in a self-paced format.

Industrial Engineering Technicians work on problems involving the efficient use of personnel, materials, and machines in the production of goods and services. They are employed in a variety of businesses and industries, including the manufacture of goods and equipment of all kinds, food processing, health care facilities, and many others.

Industrial Engineering Technicians use principles of science, engineering, and mathematics to solve problems in quality control, research and development, manufacturing, sales, construction, and customer service. Many Industrial Engineering Technicians directly assist engineers and scientists, while others work more independently in production and inspection-related jobs. Their jobs are more practically oriented than those of scientists and engineers, and typically involve dealing with both the human and technical aspects of the workplace.

Program Outcomes-
Upon completion of this program, you will be able to:

- Maintain a safe work environment
- Use CAD software
- Support product design
- Participate in process design
- Perform quality functions
- Utilize supporting software application programs
- Plan facilities
- Support shop-floor activities

Graduates from this program have found employment as:

- Industrial Engineering Technician
- Engineering Assistant
- Engineering Analyst
- Engineering Development Technician
- Engineering Liaison Person
- Mechanical Assistant - Mechanical Equipment
- Methods/Motion/Time Study Analyst

Career Outlook:
Well-qualified IE Technicians should experience good employment opportunities through the coming years. Employment is expected to increase due to the expected continued growth in the output of technical products.
623-121 Engineering Drawings & Measurements 3 Credits
This self-paced course provides the foundation skills needed to interpret industrial blueprints and perform basic metrological measurements. Orthographic projection, pictorial drawings, sections, auxiliary views, dimensions and tolerances, title blocks, revisions, basic GD&T symbols, and similar topics are covered. Students will also examine measurement concepts as they apply to the manufacturing environment, and perform hands-on activities using precision measuring tools. Note: This course, or demonstrated equivalent knowledge, is a prerequisite for 606-101 Introduction to CAD and 623-192 Process Planning. If you already have the skills covered in this course, you should apply for advanced standing. See the program advisor for details.

Also available in self-paced format

623-155 SPC (Statistical Process Control) 3 Credits
This course offers an in-depth exploration of the principles and applications of statistical process control. Specific subject areas covered include background, basic principles, variation, histograms, probability, variable and attribute control charts, and machine and process capability. Lectures will be supplemented with in-class exercises designed to make the concepts and their application more easily understandable. These individual and group activities will be drawn from the student workbooks and from additional materials to be distributed by the instructor. Also available in self-paced format

623-160 Manufacturing Materials & Processes 3 Credits
This class is a study of the characteristics and uses of various materials used in industry, including ferrous and non-ferrous metals, plastics, etc. The use of these materials is tied to various processes used to meet industries production requirements. Included will be basic concepts involved in metal machining, casting, forging, etc., as they relate to efficient production practices. Class sessions are based on directed practice and self-study in a laboratory environment with instructor assistance as required. Also available in self-paced format

623-165 Facilities Planning 3 Credits
This course covers the essential elements of plant layout and materials handling. Flow patterns, material handling requirements, equipment, and storage and retrieval methods are explored. The many factors affecting an efficient facility layout are examined, as are the decision-making tools for dealing with them. The course concludes with a group project, in which learners design an actual facility to satisfy given criteria. Each group will then present its design to the rest of the class for analysis and discussion. Also available in self-paced format

623-166 Industry & Quality Control 3 Credits
This self-paced course is an overview of quality issues in the modern industrial environment. Topics include basic quality concepts, sampling and inspection, fundamentals of measurement, statistical tools, quality policies and costs, improvement projects, and comparisons of popular quality philosophies. Note: The content is similar to course 625-101 Foundations of Quality. 623-166 may be substituted for 625-101

623-170 Industrial Organization & Structure 3 Credits
This course examines the structure of the modern manufacturing organization, and provides an overview of the interrelationship between the various functional departments and their activities. Historical background, management philosophy, planning and control requirements, labor, and human aspects of the organization are discussed.

623-192 Process Planning 3 Credits
A study is made of the principles, practices, and techniques of process planning. Using the part drawing, the student learns through systematic analysis to select the most practical and economical processes and to determine the properly sequenced series of operations to transform materials into useful products. Selection of tooling and equipment appropriate to materials, quantity, tolerances, and surface quality requirements is also discussed. Prerequisite: 623-121 Engineering Drawings and Measurements, or equivalent knowledge

623-196 Standards & Regulations 1 Credit
This self-paced course provides an overview of state and federal standards and regulations governing workplace safety and the environment. Students will learn to recognize hazards and identify applicable regulations. Emphasis is on locating standards in the code of federal regulations (CFR), applying safety and environmental standards in the workplace, and interpreting material safety data sheets (MSDS).

625-101 Foundations of Quality 3 Credits
This course prepares participants to develop a philosophy of quality, incorporate a customer focus, contribute constructively in a team environment, and use a scientific approach to solve problems. Application of basic quality concepts is emphasized. Note: The self-paced course 623-166 Industry and Quality Control may be substituted for 625-101

625-102 Human Elements of Quality 3 Credits
The focus of this course is the relationship between human habits and behaviors and continuous quality improvement. Personal, team, and organizational practices fostering cooperation and interdependence among co-workers are explored through class activities. Self-mastery, team development, and leadership for quality are among the specific themes.

General Education Course Requirements:
(see course descriptions on pages 33-37)

801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Communication 3 Credits
804-115 College Technical Mathematics I 5 Credits
806-151 Technical Science I 3 Credits
806-152 Technical Science II 3 Credits
809-172 Race, Ethnic & Diversity Studies 3 Credits
809-195 Economics 3 Credits
809-196 Introduction to Sociology 3 Credits
809-198 Introduction to Psychology 3 Credits

For the most current schedule information, visit www.blackhawk.edu
This practical program provides extensive hands-on training. Graduates of the Industrial Mechanics program will have the knowledge, skills, and work habits necessary to maintain and troubleshoot today's complex equipment. In today's manufacturing environment more knowledge is needed to understand highly integrated manufacturing systems.

Upon successful completion of 462-335 (Refrigeration Fundamentals), students will be eligible to take the EPA Section 608 Refrigerant Handling Examination.

Manufacturers continue to automate in search of greater productivity and consistent quality. A typical manufacturing environment now consists of several machines integrated and dependent on each other. Individual machines are joined by a conveyance system all of which require knowledge of mechanical, electrical, and fluid power. In order to successfully maintain and troubleshoot modern systems, more knowledge and skills are required of individual maintenance workers.

Program Outcomes
Upon completion of this program, you will be able to:

- Work safely in accordance with OSHA Standards
- Integrate mechanical, electrical and hydraulic systems
- Communicate technical information effectively
- Install and troubleshoot basic electrical circuits
- Install and troubleshoot basic hydraulic circuits
- Apply machine shop fundamentals
- Apply problem solving skills and troubleshooting methods

Graduates from this program have found employment as:

- Industrial or Maintenance Mechanic
- Machine Adjuster
- Machine Assembler
- Machine Erector
- Machine Repairer

Career Outlook:
Workers who advance to journeyman status, gain experience, and continue to upgrade their skills, typically enjoy the highest hourly wage rate at their facilities. Skilled maintenance is highly desirable because of competitive wages and a high level of job satisfaction.

Course Descriptions

421-390 Blueprint Reading - Maintenance 3 Credits
This course focuses on reading and interpreting blueprints, drawings and graphic symbols used in industry. Students will gain experience in the ability to visualize spatial relationships between single and multiple-view drawings. Significant lab time is spent interpreting actual blueprints.

462-300 Electricity for Industrial Maintenance 3 Credits
Electricity for Industrial Maintenance provides a study of theories, concepts, elements, and principles of electricity and DC Circuits. Topics covered will include atomic theory, electron flow, current, voltage and resistance. This course combines both lecture and laboratory work utilizing course material from multiple sources, delivered by various media methods. Students need no prior knowledge of electricity. Math is kept basic and minimal.

462-305 Maintenance Welding 2 Credits
This course is designed to provide students with the necessary job entry skills for performing repair and maintenance type activities in industry. The individualized instruction includes orientation and process introduction, Shielded Metal Arc Welding (SMAW) and Gas Tungsten Arc Welding (GTAW).

462-310 Maintenance Machining 3 Credits
This is an introductory course for those new to machine shop fundamentals, as well as CNC (Computer Numerical Control) machining. Students will have the opportunity to use and understand basic hand tools, and progress to the Bridgeport CNC Mill. Three machine families consisting of milling/drilling machines, lathes/turning machines and power sawing machines are studied and operated.

462-315 Industrial Maintenance Hydraulics 3 Credits
This course outlines the fundamental principles in the operation of fluid power as it is used in the transmission of power through various components, including cylinders, motors, pumps and valves. Significant time will be spent in the lab working on hydraulic trainers and tearing down and building up components. In addition, students learn and practice tasks common to the pipe trades.

462-320 Advanced Manufacturing - Drives & Linkages 3 Credits
This course will focus on identifying the different types of bearings and gears along with their applications. The student will acquire knowledge of preloading bearings and setting gears to proper backlash and shaft endplay. Belt and chain drives will also be presented. The student will gain knowledge of alignment of shafts and couplings. This will all be accomplished through lecture, visual aids and hands-on.

462-325 Machine Rigging 3 Credit
This course will focus on the safe transport of equipment and other heavy objects using ropes, cables, slings, rollers, and hoists. Topics covered include knots, wire rope, chains, slings, shackles, hooks and rigging hardware. In addition, estimating load weight, center of gravity and mechanical advantage are also covered.

462-330 Motors and Controls 3 Credits
This course concentrates on electric motors and their controls. Students will review and implement concepts of electron theory, magnetism, and ladder logic. Emphasis will focus on single and multiphase AC and DC motors. Students will be introduced to control devices such as switches, start/stop stations, magnetic motor starters, and programmable logic controllers (PLCs). This course concentrates on electric motors and their controls.
For the most current schedule information, visit www.blackhawk.edu
150-130 Network Design 3 Credits
Network Design is a lecture/hands-on lab course designed to introduce students to network design fundamentals. Topics covered include: OSI Reference Model; LAN/WAN topologies; cabling systems; access methods; protocols; introduction to various network clients; and Internet working devices (e.g. hubs, switches, bridges, routers, etc.).

150-133 Network Security 3 Credits
This course introduces learners to the fundamentals of network security. The course covers various topical areas involved in network security, including security topology, intrusion detection, device configurations, access lists, authentication, and encryption. Different methods of attacks, such as viruses, Trojan horses, and worms are also reviewed. This course also introduces wireless security concepts. This course currently covers material from MCSE exam 70-291, Implementing, Managing & Maintaining a MS Windows Server 2003 Network Infrastructure. Prerequisite: 150-130 Network Design

150-134 Router Security 3 Credits
This course covers how to secure internetworked information systems (i.e., those connected by hubs, switches, routers, etc.), including defense against methods used by hackers to enter dedicated systems. Topics covered include confidentiality, integrity and reliability; user and group authentication; authorization and accounting; encryption replication; and security enhancement features. This course currently covers material from MCSE Exam 70-298, Designing Security for a MS Window Server 2003 Network. Prerequisite: 150-133 Mathematics & Logic and 150-152 Information Security Policies & Procedures

150-135 Operating Systems Security 3 Credits
Students will cover the essentials of securing popular operating workstations and networks. Topics include authentication, group security, remote access security, security file resources, Internet Protocol security, and more. Active Directory and similar topics are also covered. This course currently covers material from MCSE exam 70-290, Managing & Maintaining a MS Window Server 2003 Environment. Prerequisites: 150-120 Micro Operating Systems I and 150-151 Information Security Principles

150-136 Perimeter Security 3 Credits
This course covers internetworked systems security management and configuration, integrated system security software, configuring network access servers for enhanced security, and an understanding of systems security support and management. Students will learn how to use Active Director, or a similar service, to create and maintain secure perimeters within a network. This course currently covers material from MCSE exam 70-294, Planning, Implementing & Maintaining a MS Window Server 2003 Active Directory Infrastructure. Prerequisite: 150-134 Router Security

150-151 Information Security Principles 3 Credits
Students will be provided with a detailed knowledge of information security concepts, by addressing the five phases of security: inspection, protection, detection, reaction, and reflection. You will learn how to analyze the most critical risks and threats, define an information security strategy and architecture, and plan for and respond to intentional and unintentional insecurities.

150-152 Information Security Policies & Procedures 3 Credits
Students will learn how to develop a security vision statement; write effective but simple security policies and procedures that protect information, people, and property; control e-Commerce information systems; and comply with legal and policy requirements. Students will also evaluate information and systems, assign ownership and responsibilities, and develop an emergency response plan. Prerequisite: 150-151 Information Security Principles

150-153 Information Security Management 3 Credits
Students will learn how to establish well-structured documentation systems for control of both sanctioned and unsanctioned activities, including those reports required by law. They will learn to write technical guidelines and technical descriptions, and develop checklists. Students will also document the application of patches and configuration changes. A resume and portfolio, which is a culmination of all information security coursework, will be compiled. Prerequisites: 150-151 Information Security Principles, 150-152 Information Security Policies & Procedures

150-154 Security Measures & Threat Mitigation 3 Credits
This is the capstone course for the IT-Information Systems Security Specialist Program and allows the student to gain a systemic view of Information Security principles and procedures. The course covers compliance auditing and monitoring, as well as a review of the body of knowledge gained in previous courses. The primary methods of learning will be “hands-on”, as students work in small groups to prepare for entry into an enterprise position involving the practice of Cyber-Security skills. This course currently covers material from MCSE exam 70-299, Implementing & Administering Security for a MS Windows Server 2003 Network. Prerequisites: 150-134 Router Security, 150-153 Information Security Management

150-155A Current Issues & Trends Seminar: Business Continuity Planning 3 Credits
This current issues and trends seminar course is designed for students enrolled in information technology, information security, e-Commerce and other business related programs. Learners will discuss a step-by-step process for addressing the fundamentals of disaster recovery planning as it pertains to getting an organization’s IT systems back online as quickly as possible. Learners will first explore assessing the risks an organization faces to attacks from hackers, viruses, and worms. The course will then review strategies to develop, document, test, implement, and maintain procedures that helps an organization quickly return to normal operations with minimal losses. The entire disaster recovery planning process will be applied to student projects or case studies. This course is intended for IT personnel as well as managers and supervisors. Prerequisite: 150-151 Information Security Principles

150-155B Current Issues & Trends Seminar: Cyber Law & Ethics 3 Credits
This current issues and trends seminar course is designed for students enrolled in information technology, information security, e-Commerce and other business related programs. Learners will be introduced to issues related to cyber crime, ethical issues surrounding internet use, personal and organizational privacy, intellectual property laws, and the regulation of information. A familiarity with computers and the Internet will be helpful to participants in the course.
150-155C Current Issues & Trends Seminar: Computer Forensics 3 Credits
The purpose of this course is to provide broad exposure to both the computer forensics field and toolkits. It is meant to provide a hands-on training environment, with classes and labs composed of learning activities for both information technology and legal/law enforcement professionals. The intent of the course is to share (and exponentially increase) understanding of the disciplines of the different constituent students.

152-191 Secure e-Commerce Concepts 3 Credits
This course is a review of Internet/Worldwide Web/e-Commerce concepts, including Internet development, internetworking principles, Internet services, Web programming, site administration, and business and security concepts, including both human and technological factors.

152-192 Designing Secure Websites 3 Credits
This course is designed to educate students about the security issues of the Worldwide Web, Web servers, and Web applications. The learner will be introduced to client and server-side security principles and programming. At course completion, the student will be able to define, design, and implement a secure Web site.

152-193 Client/Server Systems Security 3 Credits
This course provides an overview of one of the most critical issues in the Information Assurance arena: secure data exchange between internetworked systems. Topics include client/server security system design concepts; developing a database security and audit plan; system design and development; user-, group-, and application-level permissions; data integrity enhancement and maintenance; and the role of the database administrator. A methodology for anticipating, detecting, reacting to, and response to network attacks will be a significant part of the course material. Prerequisites: 150-151 Information Security Principles, 152-143 Introduction to Java Programming

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Communication 3 Credits
804-133 Mathematics & Logic 3 Credits
809-166 Introduction to Ethics: Theory & Application 3 Credits
809-195 Economics 3 Credits
809-196 Introduction to Sociology 3 Credits
809-198 Introduction to Psychology 3 Credits

The Network Specialist Associate Degree prepares students for a career in computer network support and integrated technology in order to meet business demands for information sharing. Students receive training in network design, installation, troubleshooting, administration, and management. IP Telephony technologies are introduced in the second year.

After completing this program, the student will have covered basic topic areas needed for the MCSA, Net+, A+, CCNA and CNA certifications.

Program Outcomes—
Upon completion of this program, you will be able to:
• Configure desktop hardware
• Troubleshoot microcomputer hardware and software problems
• Design a complex network to efficiently facilitate the flow of information using current LAN/WAN technologies
• Configure network equipment
• Utilize TCP/IP protocol suite for network configuration and administration
• Manage desktop operating systems and software
• Manage network operating systems
• Apply systems analysis and design as well as project management concepts
• Use the Internet as both a research and publishing tool
• Troubleshoot complex LAN/WAN issues
• Research, organize and present a seminar on a current networking technology
• Create, maintain, and update network documentation
• Manage an Information Technology project from inception to implementation
• Utilize structured programming principles in the creation, editing, compilation, and execution of computer programs
• Utilize an industry-standard relational database management system (RDBMS) to illustrate an understanding of data design and data access
• Analyze and secure network systems to prevent unauthorized access
• Design IP Telephony Systems for the enterprise

Graduates from this program have found employment as:
• Network Administrator
• Help Desk Specialist
• Network Support Specialist
• Technical Support Specialist
• Network Technician
• User Support Specialist
• Technical Consultant

Helpful High School Courses:
• Keyboarding and Software Applications
• PC Hardware Installation
• Internet Applications
• Web Page Design
• Algebra and math
• Business and information technology
• English and Speech
## Semester 1

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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</thead>
<tbody>
<tr>
<td>150-120  Micro Operating Systems I</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>150-130  Network Design</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>801-195  Written Communication</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>804-133  Mathematics &amp; Logic</td>
<td>3</td>
<td>3 - 0</td>
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<tr>
<td>809-195  Economics</td>
<td>3</td>
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## Semester 2

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<tr>
<th>Course Name</th>
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<tbody>
<tr>
<td>150-127  Windows Server 2003</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>150-131  Network Installation/Troubleshooting</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>150-140  Data and Control Structures</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>152-133  Advanced Systems Documentation</td>
<td>2</td>
<td>1 - 2</td>
</tr>
<tr>
<td>809-196  Oral/Interpersonal Communication</td>
<td>3</td>
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## Semester 3

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>150-117  LAN/WAN Integration</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>150-128  Active Directory</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>150-141  Linux</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>152-150  Systems Analysis &amp; Design</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>809-166  Introduction to Psychology: Theory &amp; Application</td>
<td>3</td>
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## Semester 4

<table>
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<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td>150-132  IT Project Management</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>150-142  Introduction to IP Telephony</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>150-143  Exchange and SQL Server</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>150-182  IT Career Preparation</td>
<td>1</td>
<td>1 - 0</td>
</tr>
<tr>
<td>809-196  Introduction to Sociology</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>809-198  Introduction to Psychology</td>
<td>3</td>
<td>3 - 0</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS 63**

1 Course has prerequisites.  2 Recommended Electives: 150-139 Current Issues & Trends in IT 3 2 - 2

### 150-117 LAN/WAN Integration

**3 Credits**

LAN/WAN Integration is a hands-on course where students build multiplatform, multiprotocol, multiserver networks from the ground up. Topics include: installation and configuration of client software, protocols, and servers; virtual LANs, switches, routers, virtual private networks, secure infrastructure design, and WAN technologies. **Prerequisites:** 150-130 Network Design and 150-128 Active Directory

### 150-120 Micro Operating Systems I

**3 Credits**

Micro Operating Systems I is a lecture/hands-on course designed to teach a popular microcomputer client operating system. The operating system covered is Microsoft Windows XP Professional. Topics include operating system installation and troubleshooting, and the use of users, groups, profiles, and policies. Best practices for securing the desktop environment are also discussed.

### 150-127 Windows Server 2003

**3 Credits**

This lecture/hands-on course concentrates on Microsoft Network Operating Systems such as Windows 2003 and Active Directory Server. Topics include: network administrator responsibilities; login security, file system security and design; Active Directory administration and design; user administration and client installation; configuration, troubleshooting, and print management. **Prerequisite:** 150-120 Micro Operating Systems I

### 150-128 Active Directory

**3 Credits**

Active Directory is a lecture/hands-on course designed to introduce advanced administration. The student can expect to be able to implement: advanced GPOs, backup strategies, Active Directory Design, WSUS, DFS, Terminal Services, CA configuration, IIS, VPNs, DHCP, DNS, software deployment, RAS, and utilities like NTDSUtil. Students will learn to use these tools and applications in an enterprise Active Directory network. **Prerequisite:** 150-127 Windows Server 2003

### 150-130 Network Design

**3 Credits**

Network Design is a lecture/hands-on lab course designed to introduce students to network design fundamentals. Topics covered include: OSI Reference Model; LAN/WAN topologies; cabling systems; access methods; protocols; introduction to various network clients; and internetworking devices (e.g. hubs, switches, bridges, routers, etc.).

### 150-131 Network Installation/Troubleshooting

**3 Credits**

Network Installation and Troubleshooting is a lecture/hands-on course that is designed to introduce the student to routing and switching infrastructures, basic Cisco router and switch configurations, troubleshooting methodologies, OSI 7 layer concepts, integration of basic network components, and integration of desktop and server-based operating systems with infrastructure in an enterprise network. **Prerequisite:** 150-130 Network Design

### 150-132 IT Project Management

**3 Credits**

This is a capstone project course that culminates the experience of the two-year program. The focus will be an integration of all of the networking skills acquired throughout the program with hands-on applications including problem-solving, troubleshooting, and technical documentation. Network troubleshooting, server design, network analysis, network design, security, recovery models, project management, network planning, and business models relating to computer networking and IT will be stressed. **Prerequisite:** 150-117 LAN/WAN Integration

### 150-140 Data and Control Structures

**3 Credits**

Data and Control Structures is a lecture/hands-on course designed to teach students to think the way the computer thinks and how data is stored and retrieved. Topics include: structured programming (i.e. sequence, selection, and iteration), database design, query building, form design, and report design. **Prerequisite:** 150-120 Micro Operating Systems I

### 150-141 Linux

**3 Credits**

Linux is a lecture/hands on course designed to teach basic Linux commands and system administration. Linux desktop operating system installation, users, groups and file security will be examined. Linux server installation, configuration, troubleshooting and security topics will also be addressed. **Prerequisite:** 150-127 Windows Server 2003

### 150-142 Introduction to IP Telephony

**3 Credits**

Introduction to IP Telephony is a lecture/hands-on course designed to teach basic VoIP and telephony concepts. This course also reinforces network design concepts for both LAN and WAN implementations that are used for IP Telephony. Topics include: Basic VoIP architectures, LAN/WAN telephony architectures, telephony concepts, telephony security, introduction to Cisco CallManager, introduction to open source telephony solutions like Asterisk, and VoIP protocols. **Prerequisite:** 150-117 LAN/WAN Integration

### 150-143 Exchange and SQL Server

**3 Credits**

Exchange and SQL Server is a lecture/hands-on course that is designed to introduce the student to Microsoft Exchange Server and Microsoft SQL Server Administration. Topics include: SQL Server installation, Exchange Server installation, Exchange and SQL configuration, managing the directory, managing distribution lists, managing information stores, writing advanced SQL queries, database design, normalization, and backing up and restoring Exchange and SQL Servers. **Prerequisite:** 150-128 Active Directory
**IT-Network Specialist**

150-182 IT Career Preparation 1 Credit
This is a course designed to prepare second year students with the skills necessary to plan and execute an active job search. Topics covered include: resumes; personal data files; letters of application; and interviewing techniques. Students will prepare a strategy for finding and obtaining a position that best fits their goals and interests. **Prerequisite:** 152-150 Systems Analysis and Design

152-133 Advanced Systems Documentation 2 Credits
This lecture/lab course will focus on technical writing and documentation skills. Hands-on work will include writing and editing business letters and memos, persuasive documents, technical reports and html documentation. The course will culminate in a short research paper and oral presentation. **Prerequisites:** 801-195 Written Communication and 150-120 Operating Systems I

152-150 Systems Analysis and Design 3 Credits
Systems Analysis & Design is a lecture/lab course intended to introduce the student to the concepts involved in a small-to-medium sized information systems project from inception to implementation. We will cover the traditional analysis and design methodologies as well as object-oriented methodologies. Throughout the life cycle of the analysis and design process, we will cover project management, utilizing Microsoft Project. We will use Microsoft Visio as a tool in diagramming various components of the system during the analysis phase, and we will use Microsoft Access as a tool in the project's design phase. Additional concepts covered will be verbal and written communication with users and team members, professional behavior, professional attire, problem identification, and problem solving. SAD I will draw on knowledge obtained from previous classes, and synthesize and apply that knowledge. **Prerequisite:** 150-140 Data and Control Structures

**General Education Course Requirements:**
(see course descriptions on pages 33-37)
801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Communication 3 Credits
804-133 Mathematics & Logic 3 Credits
809-166 Introduction to Ethics: Logic & Application 3 Credits
809-195 Economics 3 Credits
809-196 Introduction to Sociology 3 Credits
809-198 Introduction to Psychology 3 Credits

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**IT-WEB ANALYST/PROGRAMMER**

The Web Analyst/Programmer degree meets the specific skills and knowledge requirements of technical and professional jobs within the information technology field for Web development specialists including analyst/programmer, e-Commerce, or Web design/support. It is designed to meet entry-level education needs of most segments of the IT field which utilize a variety of computers. Training blends general educational development and required IT technical skills. Graduates are prepared for entry-level Web developer jobs in government, insurance, manufacturing, service, software development, wholesale and retail sales, utilities, banking and accounting.

**Short Term Certificates**
Four certificate options are also available to learners not seeking the full degree program. Short-term certificates are typically 12 to 15 credits and comprised of courses in related areas. The following certificates are available for students accepted into this program:


**Program Outcomes**
**Upon completion of this program, you will be able to:**
- Write moderately complex web applications using current Enterprise Java technology
- Write moderately complex web applications using current Microsoft technology
- Process data in a relational database using the SQL command set
- Perform entry-level systems analysis and design work to solve business problems using both traditional and object-oriented methodologies
- Build the client side of interactive web sites using (X)HTML and scripting languages
- Demonstrate work ethics and reliable behavior including, but not limited to, assuming responsibility for decisions and actions, utilizing time and stress management skills, and displaying initiative
- Work as a team member by demonstrating good communication and listening skills, cooperation, and providing a supportive environment
- Demonstrate an understanding of the IT field and its job roles

**Helpful High School Courses:**
- Algebra and Math
- General knowledge of Microsoft Windows
- Internet experience

Graduates from this program can anticipate employment as:
- Web Master
- Web Development Specialist
- e-Commerce Support Specialist
- Internet/Extranet Programmer

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td>152-142</td>
<td>Introduction to Visual Basic .NET Programming</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>152-147</td>
<td>Relational Database Development</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>152-157</td>
<td>Website Development - XHTML/CSS</td>
<td>3</td>
<td>3 - 0</td>
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<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>804-133</td>
<td>Mathematics &amp; Logic</td>
<td>3</td>
<td>3 - 0</td>
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<table>
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<th>Semester 2</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>152-143</td>
<td>Introduction to Java Programming</td>
<td>3</td>
<td>3 - 0</td>
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<tr>
<td>152-144</td>
<td>Intermediate Visual Basic .NET Programming</td>
<td>3</td>
<td>3 - 0</td>
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<tr>
<td>152-148</td>
<td>Relational Database Coding</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>152-160</td>
<td>Object-Oriented Design with UML</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>801-196</td>
<td>Oral/Interpersonal Communication</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>809-196</td>
<td>Introduction to Sociology</td>
<td>3</td>
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**For the most current schedule information, visit www.blackhawk.edu**

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IT-WEB ANALYST/PROGRAMMER

Semester 3
152-145 Advanced Java Programming 1  3  2 - 2
152-158 Advanced Website Development 1  3  3 - 0
152-161 Web Application Development Using ASP.NET 1  3  3 - 0
152-162 Object-Oriented Systems Analysis 1  3  3 - 0
809-198 Introduction to Psychology  3  3 - 0
809-199 Elective  3  3 - 0

Semester 4
152-146 Enterprise Java Programming 1  3  3 - 0
152-165 Relational Database Design  3  3 - 0
152-164 Design & Implementation Projects 1  3  3 - 0
152-182 Web Analyst/Programmer Field Study 1  1 - 0
809-166 Introduction to Ethics: Theory & Application  3  3 - 0
809-195 Economics  3  3 - 0

TOTAL CREDITS 67
1 Course has prerequisites
2 Recommended Electives

Course Descriptions

152-142 Introduction to Visual Basic .NET Programming  3 Credits
This lecture/lab course uses the Visual Basic .NET (VB.NET) programming language to teach problem-solving principles and demonstrates how to apply said principles in the development of algorithms designed to solve typical business problems. Structured programming (sequence, selection, and iteration) utilizing pseudocode is covered in detail. Introductions to database concepts, database design, and object-oriented programming (OOP) are also given.

152-143 Introduction to Java Programming  3 Credits
Introduces programming and object-oriented design concepts using the Java programming language. Students learn Java programming basics and use a simple text editor as a development environment. Design concepts and programming tools will be integrated with an emphasis on practical business solutions. Prerequisite: 152-142 Introduction to Visual Basic .NET Programming

152-144 Intermediate Visual Basic .NET Programming  3 Credits
This course provides students with a comprehensive understanding of object-oriented system development. It examines and uses the prewritten.NET Framework classes and utilizes the MSDN help facility. Topics include: collections, exception handling, interfaces and advanced development techniques such as ASP.NET and database programming using ADO.NET. Prerequisite: 152-142 Introduction to Visual Basic .NET Programming

152-145 Advanced Java Programming  3 Credits
Focuses on the server side of application programming for the Web. Topics include: Java servlets, database access with JDBC, JavaServer Pages and JavaBeans. A portion of the class deals with application design issues in a web environment. Prerequisite: 152-143 Introduction to Java Programming

152-146 Enterprise Java Programming  3 Credits
This is the 3rd course in Java programming. Topics covered include: Servlets, Java Server Pages (JSPs), the extensible markup language (XML), Web services, custom tag libraries, the Java message service (JMS), Java naming and directory interface (JNDI), and Enterprise Java applications. Prerequisite: 152-145 Advanced Java Programming

152-147 Relational Database Development  3 Credits
Relational Database Development is a lecture/lab class split into two parts: 1) A general overview of database theory, including: relational database management systems (RDBMSs) and normalization. 2) The fundamentals of the structured query language (SQL) data definition language (DDL) and data manipulation language (DML) commands, utilizing client/server based database software. Prerequisite: 152-148 Relational Database Coding

152-157 Website Development-XHTML/CSS  3 Credits
Website Development - XHTML/CSS is a beginning class in client-side Web development. Topics covered include: advanced structured query language (SQL) commands and concepts, security, and database programming. Prerequisites: 152-147 Relational Database Development

152-158 Advanced Website Development  3 Credits
Advanced Website Development is a course in developing an actual working website. A package such as PHP or Ruby on Rails is used in conjunction with a database package such as MySQL to build the site.

152-160 Object-Oriented Design with UML  3 Credits
Practical, introductory-level systems analysis experience. Emphasis is on the physical system elements: data design, object-oriented design, user interface design (screen and report) and system interface design. The use of CASE tools (e.g. Visio) is integrated throughout the course to enhance the design experience.

152-161 Web Application Development Using ASP.NET  3 Credits
Students learn to develop Microsoft ASP.NET applications that deliver dynamic content to the Web. An emphasis is placed on server-side programming and the role ASP.NET plays. As part of the class, students create Web forms with server controls, display dynamic data from a database using Microsoft ADO.NET, read XML configuration files and learn to debug ASP.NET web pages. Prerequisite: 152-144 Advanced Visual Basic .NET Programming

152-162 Object-Oriented Systems Analysis  3 Credits
Object-Oriented Systems Analysis is an intermediate course in systems analysis from an object-oriented (OO) point-of-view. The course will emphasize the analysis and documentation of systems, physical OO modeling, and OO design. Students will demonstrate knowledge of OO concepts/terminology, and the role UML plays in the systems design process. Prerequisite: 152-160 Object-Oriented Design with UML

152-163 Relational Database Design  3 Credits
Relational database design is an advanced course in database concepts and design, utilizing the database interface with a server-side programming language. Students will design, normalize, and develop a database and program the associated interface in a realistic environment. Prerequisite: 152-148 Relational Database Coding
Upon completion of this program, you will be able to:

Program Outcomes—

- Monitor and evaluate quality control in the laboratory
- Model professional behavior, ethics, and appearance appropriate to the laboratory setting
- Demonstrate quantitative reasoning skills and apply critical thinking skills to a variety of disciplines

Semester 1 (Fall Semester)

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>506-101 Beginning Laboratory Skills</td>
<td>3</td>
</tr>
<tr>
<td>506-108 Laboratory Safety/Hazardous Materials</td>
<td>1</td>
</tr>
<tr>
<td>806-199 General, Organic &amp; Biological Chem.</td>
<td>4</td>
</tr>
<tr>
<td>103-106 Introduction to MS Office Suite</td>
<td>3</td>
</tr>
<tr>
<td>1804-106 Introduction to College Math</td>
<td>3</td>
</tr>
<tr>
<td>801-195 Written Communications</td>
<td>3</td>
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</tbody>
</table>

Semester 2 (Spring Semester)

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>506-102 Intermediate Laboratory Skills</td>
<td>3</td>
</tr>
<tr>
<td>804-189 Intro to Statistics</td>
<td>3</td>
</tr>
<tr>
<td>506-109 Data Management for Lab Assistants</td>
<td>1</td>
</tr>
<tr>
<td>506-105 Quality Concepts in Laboratories</td>
<td>3</td>
</tr>
<tr>
<td>806-197 Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>801-197 Technical Reporting</td>
<td>3</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS** 34

Additional recommended coursework for students seeking employment in a Medical Lab facility:

- Medical Terminology 3 cr.
- Phlebotomy Procedures n/c
- Phlebotomy Practicum 2 cr.

Course Descriptions

**506-101 Beginning Laboratory Skills** 3 Credits

This class introduces general laboratory concepts and procedures. Emphasis will be placed on general laboratory safety, equipment utilization, and maintenance. An introduction to scientific inquiry will be addressed. Proper techniques in specimen collection, record keeping, and quality control will be introduced. Basic laboratory mathematics will be discussed and applied.

**506-102 Intermediate Laboratory Skills** 3 Credits

The learner will begin to apply laboratory procedures and the scientific method to the analysis of samples and the performance of simple experiments. The learner will develop and apply data analysis and management techniques. The learner will learn the methodology to deal with biohazardous materials.

**506-105 Quality Concepts in Laboratories** 3 Credits

The student will become familiar with quality concepts and their application within the laboratory environment. This will include understanding of the meaning and benefits of quality, quality systems and processes, and the cost/impact of quality. How to apply problem solving skills for continuous improvement will be explored.

**506-108 Laboratory Safety/Hazardous Materials** 1 Credit

The learner will become familiar with the fundamental aspects of safety and hazardous materials in the laboratory environment, as well as safety/hazardous materials regulations and their applications. The learner will develop an awareness of their responsibility for safety within the workplace.
**LABORATORY TECHNICIAN ASSISTANT**

506-109 Data Management for Laboratory Assistants 1 Credit
This class introduces the fundamental concepts and approaches for data management in a laboratory environment. Both manual and automated data collection and management will be covered with particular emphasis on “best practice” approaches for reliability, accuracy, and integrity within data management systems and their use.

804-189 Introduction to Statistics 3 Credits
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. **Prerequisite: Introduction to College Math or 2 years of high school or higher algebra OR satisfactory placement test score**

806-197 Microbiology 4 Credits
This course examines microbial structure, metabolism, genetics, growth and the relationship between humans and microorganisms. Disease production, epidemiology, host defense mechanisms and the medical impact of microbes in the environment, industry, and biotechnology are also addressed. **Prerequisite: 806-199 General, Organic and Biological Chemistry (Lab Tech students only)**

806-199 General, Organic and Biological Chemistry 4 Credits
A one semester course covering the fundamentals aspects of inorganic and organic chemistry. Topics include lab safety, measurement, elementary problem solving, atomic structure, periodicity, chemical bonding, types of chemical reactions, properties of water, acids, bases, and salts, types of solutions and calculations of concentrations, gas laws, oxidation-reduction concepts, ionization, pH and buffers, hydrocarbons, types of organic compounds and functional groups, biochemical compounds including lipids, carbohydrates, proteins, and nucleic acids.

**LANDSCAPE & TURF SERVICES**

See Green Industry for information on pages 81-83.

**LEGAL ADMINISTRATIVE PROFESSIONAL**

The Legal Administrative Professional Program prepares students for employment as skilled assistants in single-attorney law offices, law firms, government offices, insurance agencies, real estate agencies, title insurance companies, corporate offices, banks, and other organizations needing employees who have some substantive and procedural knowledge of the law. Legal Administrative Professional students have the opportunity to learn oral and written communication skills, legal office procedures and techniques, document formatting, file management, and legal research. Special emphasis is placed on legal vocabulary, document preparation, case management, ethics, and confidentiality. High-level skill development in keyboard, English, and word processing is an important part of the program.

**Program Outcomes—**
Upon completion of this program, you will be able to:
- Prepare legal documents from a variety of sources common to law offices and other agencies involved in legal transactions
- Draft correspondence to handle routine matters
- Proofread materials for proper English, accuracy, and clarity
- Develop interpersonal relationship skills, including greeting clients, answering the telephone, and applying ethical rules
- Maintain routine law office financial records
- Process incoming and outgoing correspondence
- Prepare citation using correct Blue Book format in legal memorandum and briefs
- Follow procedural steps appropriate to calendaring/docketing procedures
- Use appropriate technology to prepare legal documents and perform legal research
- Use advanced word processing techniques to design documents
- Prioritize daily activities using Outlook and other resources to manage a legal office and personal work efficiently
- Use proper legal terminology and legal procedures in class discussions and document preparation
- Manage electronic and paper-based information to maintain neat and organized files and client information

**Graduates from this program have found employment as:**
- Legal Secretary
- Legal Assistant
- Deputy Court Clerk
- Judicial Assistant
- Clerk/Typist
- Assistant Office Manager
- Receptionist
- Correspondence Clerk
- Word Processing Operator

**Helpful High School Courses:**
- Touch keyboarding skill of 40 wpm or higher for 5 minutes with 5 or fewer uncorrected errors is a prerequisite for one or more first semester courses in this program

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Credit</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td>102-160</td>
<td>Business Law</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>106-108</td>
<td>Proofreading &amp; Editing</td>
<td>1</td>
<td>0 - 2</td>
</tr>
<tr>
<td>106-129</td>
<td>Business Filing</td>
<td>1</td>
<td>0 - 2</td>
</tr>
<tr>
<td>106-145</td>
<td>Information Technology Essentials</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>106-146</td>
<td>Word Processing Applications</td>
<td>3</td>
<td>1 - 4</td>
</tr>
<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
<td>3 - 0</td>
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<tr>
<td>Elective 1 (106-131 Keyboarding Applications, if needed)</td>
<td>3</td>
<td>varies</td>
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</tbody>
</table>

**For more information, call: (608) 758-6900**
Course Descriptions

101-102 Office Accounting 3 Credits
Office Accounting is a basic course in accounting principles and bookkeeping procedures. Topics include journalizing and posting transactions, preparing worksheets, adjusting and closing entries, and preparing the financial statements. Emphasis is on the service enterprise and accounting for cash.

102-160 Business Law 3 Credits
This course is designed to provide the student with a working knowledge of law as it relates to the rights and responsibilities of businesses and individuals. Emphasis is placed on torts, contracts, case analysis, ethics, and social responsibility, particularly in the business context.

106-108 Proofreading and Editing 1 Credit
Students will develop proofreading skills for identifying and correcting punctuation, grammar, spelling, and usage errors. This course also includes editing skills for improving format, consistency, clarity, conciseness, and completeness. Activities require applying proofreading and editing skills to realistic business communications in both print and electronic formats. Touch keyboarding and basic word processing skills are helpful.

106-110 Legal Office Professionalism 3 Credits
This course is a review of business English including spelling, capitalization, number usage, punctuation, word division, possessives, editing, and proofreading skills. Composition at the computer is also a part of this class. Specific legal office communication examples will be used. The course includes work on job finding skills, also. Resume writing, cover letter writing, and interviewing skills are included. A unit on using mail, the telephone, and e-mail in a legal office will be included.

106-129 Business Filing 1 Credit
Students learn the Association of Records Managers and Administrators (ARMA) filing rules through experience with various filing methods in a practice simulation. Students will also be introduced to file maintenance procedures, supplies, and equipment.

106-131 Keyboarding Applications 3 Credits
Keyboarding Applications is designed to enhance keyboarding skills and to develop basic document formatting techniques while applying decision-making skills. Basic grammar and punctuation skills will be emphasized along with common word processing software. Students can expect to possess keyboarding skills of 40 wpm or higher at the end of this course. Touch keyboarding skill (30 wpm for 3 minutes with 3 or fewer uncorrected errors) is assumed at the beginning of this course. This course is not required for students who can demonstrate this competency on a timed test.

106-132 Legal Transcription 3 Credits
Instruction is given on the use of transcribing machines with emphasis on the production of legal transcription. The goal in this class is the production of error free documents with periodic spelling checks. There is added emphasis on the improvement of legal terminology. English, proofreading, and listening skills. Prerequisite: 106-180 Legal Terminology.

106-133 Document Formatting 3 Credits
Document Formatting further develops computer keyboarding skills and emphasizes the production of a wide range of typical business correspondence, tables, reports, and forms from unarranged and rough-draft sources. This course has a heavy emphasis on producing mailable documents. The ability to format basic letters, memos, reports, and tables using word processing software is expected at the beginning of the course along with touch keyboarding skill (a minimum of 40 wpm for 5 minutes with 3 or fewer uncorrected errors).

106-134 Legal Research & Writing 3 Credits
This course covers citing federal and state cases, statutes, legislative history materials, treatises, law reviews, as well as some additional secondary sources. Finding materials from citations is included. The basics of computerized legal research and writing, along with the preparation of legal documents, are stressed.
106-140 Keyboarding 1 Credit
Students will master the computer keyboard by touch including the letters and numeric keypad. Computer software is used to begin development of acceptable speed and accuracy levels. Students completing this course may be ready for 106-131 Keyboarding Applications, or may continue to develop their proficiency and keyboarding abilities in Skillbuilding. This course is not required for students who can demonstrate keyboarding skills of 30 words per minute with 3 or fewer uncorrected errors on a 3 minute timing. *Prerequisites: 106-141 Legal Document Processing*

106-143 Skillbuilding 1 Credit
This elective course focuses on the development of keyboarding speed and accuracy. Diagnostic computer software allows students to determine their own particular weaknesses and error patterns and then select drills specifically designed to correct those weaknesses. This course may be taken more than once to further develop skills. Students should know the alphabetic keyboard by touch or have taken 106-140 Keyboarding. Students completing this course may be ready for 106-131 Keyboarding Applications or may continue to develop their proficiency and keyboarding abilities by repeating the course.

106-145 Information Technology Essentials 3 Credits
This course provides an introduction to computers and information processing terms, hardware, software, networks, and buying a computer. Major topics also include effective use of a web browser, Microsoft Outlook's electronic mail, calendar, and contacts modules, and the basics of Windows operating system. Touch keyboarding skills are recommended.

106-146 Word Processing Applications 3 Credits
Students use word processing software to create, format, and edit business documents applying features such as headers/footers, macros, merge, templates, tables, columns, outlines, fonts, and graphics. Software functions, theory and production will be assessed. Students will be prepared to take both the core level and expert level Microsoft Office Specialist certification exams. The pace of this course is based on touch keyboarding speed of 40 words per minute and basic computer skills.

106-151 Legal Office Procedures 4 Credits
This course is designed to cover the practical aspects of law office management, including the functions of management, administrative procedures, docket control, time and billing procedures, and case management. Job-seeking skills will be covered, including the preparation of a resume. *Prerequisites: 106-110 Legal Office Professionalism, 106-132 Legal Transcription, and 106-152 Legal Document Production I*

106-152 Legal Document Production I 3 Credits
This course coordinates with other courses to provide specialized training in the understanding and actual preparation of legal documents. Areas of specialization include civil litigation, real estate, and divorce. Other topics covered include ethics, client interviews and interview forms, and court structure. *Prerequisites: 106-133 Document Formatting and 106-180 Legal Terminology*

106-154 Legal Document Production II 3 Credits
Advanced legal procedures intended to provide more in-depth training on the order of events in several fields of law are presented in this course. Attorneys with expertise in each of these areas of law assist in teaching the units. The primary course objective is to provide in-depth procedural information in each area of law. This will enable students to enter jobs and understand what they are doing as well as why the task is necessary. *Prerequisites: 106-110 Legal Office Professionalism, 106-132 Legal Transcription, and 106-152 Legal Document Production I*

106-159 Business Spreadsheets 3 Credits
Using Microsoft Excel, students will learn the elements of a spreadsheet: worksheet capabilities (create, modify, enhance, save, print, and erase worksheets), graphing capabilities (create graphs, bar charts, and pie charts), and database capabilities (create, sort, and query). Students will be prepared to take both the core level and expert level Microsoft Office Specialist certification exams. Basic computer skills are expected.

106-163 Supervised Occupational Experience - Legal Administrative Professional 1 Credit
The student will obtain practical experience in a law office or a related field of work for a minimum of 72 hours during the last semester of training in the program. As new techniques and duties are acquired, the student will gain practical experience in the areas of reception, filing, transcription, office management, and any other duties normally performed by a legal secretary of the Affiliating Office. *Prerequisites: 106-110 Legal Office Professionalism, 106-132 Legal Transcription, and 106-152 Legal Document Production I*

106-176 Legal Office Applications 3 Credits
Legal Office Applications is a course designed to provide the student with the foundational skills needed to operate a computer and an introduction of some typical software applications used in a legal office. Included in this course are Windows operating system, basic word processing, spreadsheet, and presentation software. Students will learn the fundamental concepts associated with each component. An additional unit on voice recognition in the law office will be included. Touch keyboarding skill of 30 words per minute is assumed.

106-180 Legal Terminology & Court Structure 3 Credits
This course is designed to introduce the student to basic legal vocabulary. The fields of law covered include criminal, torts, personal property, agency, wills and estates, and real property. The class also covers terminology relating to practice and procedure in the courts.

**General Education Course Requirements:**
*(see course descriptions on pages 33-37)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>801-195</td>
<td>Written Communication</td>
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<tr>
<td>801-196</td>
<td>Oral/Interpersonal Communication</td>
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<tr>
<td>804-106</td>
<td>Introduction to College Math</td>
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<tr>
<td>804-133</td>
<td>Mathematics &amp; Logic</td>
<td>3</td>
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<td>809-166</td>
<td>Introduction to Ethics:</td>
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<tr>
<td>809-195</td>
<td>Logic &amp; Application</td>
<td>3</td>
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<tr>
<td>809-196</td>
<td>Economics</td>
<td>3</td>
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<tr>
<td>809-198</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>809-199</td>
<td>Introduction to Psychology</td>
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</tbody>
</table>
The Marketing Associate Degree program enables students to understand and apply marketing, management, and entrepreneurial principles; to make rational economic decisions; and demonstrate social responsibility in a global economy. Students will learn career and technical skills in sales, marketing, market research, promotions, and leadership. Blackhawk Technical College's program provides opportunities to apply these skills in projects in business-to-business, business-to-consumer, marketing management, and advertising environments. Students can choose from a broad range of career opportunities upon graduation. Typical graduation placement includes marketing support, sales and promotion, media planning and research, account service, sales and purchasing, and more.

Program Outcomes —
Upon completion of this program, you will be able to:
- Develop strategic marketing plans to include a target market analysis, product/service mix, pricing strategy, distribution strategy, and promotion plan
- Generate and analyze marketing information for effective decision-making
- Create a professional development plan and portfolio
- Apply marketing management strategies and tactics within an enterprise
- Apply technology to marketing and marketing information systems
- Demonstrate personal selling strategies
- Design a promotional plan
- Understand principles of e-Commerce and web marketing

Graduates from this program have found employment as:
- Inside Sales
- Customer Service Reps
- Sales Professional
- Office Manager
- Special Events Coordinator
- Account Executives
- Sales Representatives
- Retail Management
- Web Marketing Associate
- Web Design Assistant

2006 Graduate Follow-up Median Wage = $14.20/hour.

Helpful High School Courses & Activities:
- DECA and FBLA events & activities
- Business Education & Marketing
- Computers and technology
- Writing and communications

For the most current schedule information, visit www.blackhawk.edu
104-113 Marketing Career Strategies   2 Credit
Traditional and alternative career search techniques are explained in this course. Emphasis is placed on both standard job application procedures and alternative techniques most often recommended by employers, recruiters, and other employment/personnel specialists. Students will complete a portfolio project that can be used to assist them with career search strategies and interviewing.

104-117 Promotion Principles   3 Credits
This course provides a broad overview of the entire spectrum of paid and non-paid activities designed to encourage the purchase of products and services, including, but not exclusive to, advertising, display, publicity/news releases, public relations, packaging, special events and sales promotion. Prerequisite: 104-102 Marketing Principles

104-118 Web & Design Concepts   3 Credits
This course examines the aesthetic, symbolic, and technical qualities of color that challenge the designer. Students will refine their use of the design principles using layout and composition techniques to solve design problems relevant to desktop publishing, web design, and/or any form of marketing communication. Applications to effective web marketing will be explored. Prerequisite: 104-144 Marketing Communications

104-125 Marketing Media   3 Credits
This course provides a broad overview of the major elements of brand management and media selection. The learning process focuses on integrating advertising into an overall marketing strategy. The purpose of this course is to introduce the real world of advertising and its diversity, its processes and principles, its people and the professional experiences and ways thinking.

104-130 Fundamentals of Customer Service   3 Credits
This course is designed for learners who desire training in the fundamentals of customer service as they relate to business. It introduces core customer service concepts and an overview of the essential skills needed to succeed in any organization. In addition to dealing with internal and external audiences, specific topics include: listening techniques, verbal and nonverbal communication, dealing with various customer types, use of technology, handling a variety of complex customer situations, as well as an overview of careers within the customer service industry.

104-140 e-Commerce Principles   3 Credits
This course provides an overview of electronic commerce. Business models underlying these electronic commerce applications are studied from both an operational and strategic perspective. A review is made of WWW technology trends including electronic payment and related issues of authentication, security, privacy, intellectual property rights, and tax implications. The role of marketing personnel in e-Commerce will be explored. Prerequisite: 103-106 Introduction to MS Office

104-144 Marketing Communications   3 Credits
In this combined lecture/lab & project-based course, students learn how to use computer and multimedia technology to plan, design, and execute marketing related communications activities within the business firm. Learners will learn to use Desktop Publishing and Desktop Design hardware and software suitable for both in-house, or electronic, pre-press production of catalogs, brochures, flyers, posters, and product information sheets. Prerequisite: 103-106 Introduction to MS Office

104-146 Marketing Management   3 Credits
This fourth-semester course instructs students in decision-making relative to the marketing mix with special emphasis on the development, organization, implementation, and control of the marketing plan. This capstone course will help the learner analyze the available research data and then, when necessary, modify the data on the basis of logic and reason. The course helps the learner make not only informed marketing decisions, but also build rationale to defend it. Case studies and/or simulations used in class are designed to improve business acumen and managerial judgment. Prerequisite: 104-160 Marketing Research

104-154 Supervised Occupational Experience – Marketing   2 Credits
Students complete an on-the-job training plan based on a three-way agreement between an approved employer/sponsor, the student/intern, and the college. Participation in the supervised occupational experience involves marketing-related, mid-management or specialist employment based on the student’s marketing career goals. Students are provided with an opportunity to apply and strengthen concepts and skills learned in the classroom and provide an opportunity to learn operational skills not taught in the classroom. Minimum of 30 credits toward a degree in Marketing is recommended.

104-160 Marketing Research   3 Credits
The emphasis of this course will be on the collection of primary data through marketing research methodologies: observation, focus groups, interviews, and surveys. The course will also introduce students to the various methods of collecting secondary data. Concepts will be reinforced through group projects. Prerequisite: 104-102 Marketing Principles

104-190 Retail Principles   3 Credits
This course includes a study of considerations and opportunities of selling goods and services to the final consumer. Topics include an overview of the end user, store design, securing and controlling inventory, pricing, promotions, and future trends. An analysis is made of the basic activities of running a retail store.

152-157 Website Development   3 Credits
Website Development - XHTML/CSS is a beginning class in client-side Web development. Topics covered include: The fundamentals of the Hypertext Markup Language (HTML) and its successor XHTML, Cascading Style Sheets (CSS), an introduction to JavaScript, and an introduction to the Extensible Markup Language (XML).

CERTIFICATE OPTIONS
Two certificate options which may enhance employability and also applies towards a Marketing Associate Degree can be awarded by completing the following courses:

Marketing Certificate
- 104-102 Marketing Principles
- 104-104 Selling Principles
- 104-117 Promotion Principles
- 104-160 Marketing Research

Promotion Certificate
- 104-102 Marketing Principles
- 104-125 Marketing Media
- 104-144 Graphic Applications in Marketing

For more information, call: (608) 758-6900
196-190 Leadership Development 3 Credits
Designed to assist individuals to apply leadership skills effectively in any organizational structure. Emphasis is placed on leadership and employee involvement strategies. Focus is on the role of the supervisor in defining direction, aligning the organization, empowering people and teams, modeling trustworthiness, balancing the needs of all stakeholders, and optimizing the allocation resources.

196-191 Supervision 3 Credits
Designed to help participants build the skills required to effectively direct the work of others within the structure of the organization. Emphasis is placed on the human behavioral aspect of supervision. Focus is on application of managerial process to the daily job of a supervisor.

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Communication 3 Credits
804-123 Math with Business Applications 3 Credits
809-172 Race, Ethnic & Diversity Studies 3 Credits
809-195 Economics 3 Credits
809-196 Introduction to Sociology 3 Credits
809-198 Introduction to Psychology 3 Credits

MECHANICAL DESIGN TECHNOLOGY

A mechanical design technician is trained to be an involved member of the engineering team engaged in the design, planning, development and testing of mechanical components and machines.

Training for this career requires technical skills of drafting, and knowledge of scientific and engineering principles as related to and applied to design.

Mechanical design technicians apply the theory and principles of mechanical engineering to design, development, and testing of machinery and mechanical equipment under direction of the engineering staff and physical scientists. Duties include review of project instructions, contracts, and specifications to determine test values, manufacturing procedures and component functions.

A designer uses engineering specifications and data, information from handbooks, equipment manuals, suppliers, catalogs, etc., which help determine whether an existing design is practical or economical to produce. The engineer may also be called upon to apply knowledge of basic engineering principles to solve design problems, such as those involving tolerances, strength, speeds, motion, or the selection of the proper standard components for a mechanical device.

Graduates may find positions dealing with product development, equipment design, technical advisors, tool design, machinery design, and other technical level positions as associates with the field of mechanical engineering. Potential for advancement beyond entry-level employment is limited only by the ability and efforts of the individual.

Program Outcomes—
Upon completion of this program, you will be able to:

- Solve mechanical and spatial related problems
- Design mechanical components using CAD software
- Analyze and improve existing mechanical component drives
- Recommend mechanical power transfer system upgrades in the realm of machine design
- Utilize supporting software applications program aimed at supporting design changes
- Design cost effective mechanical components
- Work as a constructive and effective design team member
- Balance design considerations with existing and future technology

Graduates from this program have found employment as:
- Mechanical Design Technician
- Mechanical Drafts Person
- Industrial Engineering Assistant
- Mechanical Design Technician/Supervisor
- Tool & Die Designer
- Tool Designer/Engineer
- Technical Illustrator
- Engineering/Manufacturing Liaison

Career Outlook:
Well-qualified mechanical design technicians should experience good employment opportunities through the year 2010. Employment is expected to increase due to the expected continued growth in the output of technical products. Industrial expansion and complex technological changes such as robotics and automation will create a demand for more technicians. Technicians with computer-assisted design experience are more likely to obtain employment.

<table>
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<tr>
<th>Semester 1</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tr>
<td>Semester 2</td>
<td>Drafting Representations</td>
<td>2</td>
<td>1 - 2</td>
</tr>
<tr>
<td></td>
<td>Fasteners and Processes</td>
<td>3</td>
<td>2 - 2</td>
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<tr>
<td></td>
<td>Manufacturing Materials &amp; Processes</td>
<td>3</td>
<td>3 - 0</td>
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<tr>
<td></td>
<td>College Technical Mathematics</td>
<td>4</td>
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<td></td>
<td>Technical Science I</td>
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<tr>
<td>Semester 3</td>
<td>Strength of Materials</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td></td>
<td>3-Dimensional CAD</td>
<td>3</td>
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<td>Kinematics</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>Written Communication</td>
<td>3</td>
<td>3 - 0</td>
</tr>
</tbody>
</table>

For the most current schedule information, visit www.blackhawk.edu
**Course Descriptions**

**606-120 Strength of Materials** 3 Credits  
A study is made of the behavior of machine parts and structural members that are in service. Various types of loads and the effects of those loads are examined. Failure modes are examined and calculated to assure proper machine design and function.

**606-123 Fundamentals of Drafting** 2 Credits  
This is a course designed to introduce the student to the concepts, equipment and tools associated with Mechanical Drafting. The course is a precursor to more advanced subject matter discussed in later program classes.

**606-124 Orthographic Projection** 3 Credits  
ANSI Standards, as related to drafting, are introduced. The principles for orthographic projection and techniques for layout of multi-view drawings are introduced. Subject areas include ANSI regulations/standards, primary planes of projection and applied orthographic projection. Dimensioning basics are covered.

**606-125 Drafting Representations** 2 Credits  
Internal features expressed through sections and drafting conventions are examined. Auxiliary, successive auxiliary, revolution and applied descriptive geometry are used extensively in the course. A brief introduction to pictorials is covered.

**606-126 Fasteners & Processes** 3 Credits  
An in-depth look at threaded fasteners and screw thread systems is taken. Working strength of various threads to assess mode of failure as well as specific stress and strain calculations are discussed. Welding terminology and symbology are introduced.

**606-127 2-Dimensional CAD** 3 Credits  
All aspects of two-dimensional computer aided drafting are explored. This is a foundation for more advanced editing and dimensioning as well as three-dimensional computer aided renderings.

**606-128 3-Dimensional CAD** 3 Credits  
This is a hands-on drawing course in the latest Mechanical Design nuance known as 3-D drafting. The student will learn time saving techniques for constructing solid models for use in the industrial design field.

**606-129 Kinematics** 3 Credits  
The student takes an in-depth look at the study of motion as related to machines and the design and selection of belts, gears, cams and eccentrics. Linear and rotational motion is discussed as well as specific displacement. Also discussed are bearings and clutches/brakes.

**606-130 Actuators** 3 Credits  
In this course, the basics of creating movement through the use of electricity, electric motors, hydraulics and pneumatics are discussed. This course is intended to give the student a basic understanding of the various machine design applications he/she may encounter in industry.

**606-131 Geometric Dimensioning & Tolerancing** 2 Credits  
GD&T introduces the student to the differences between conventional tolerancing and geometrical tolerancing. An emphasis is put on interpretation and application of the proper GD&T symbology given the function of the part and according to ANSI Standards.

**606-132 Design Applications** 2 Credits  
A culmination of the total program is reached in this course. Multiple projects are assigned to strengthen the student’s ability to perform in the design field. This course allows the student to be creative in their design selection, and to defend/explain the selection based on necessary criteria.

**623-160 Manufacturing Materials & Processes** 3 Credits  
A study is made of the various materials used in industry today and how those materials can be altered or worked to create a specific product. Various areas such as forming, casting, forging and machining are discussed.

**General Education Course Requirements:**  
(see course descriptions on pages 33-37)

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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tr>
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<td>801-196</td>
<td>Oral/Interpersonal Communication</td>
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<td>801-197</td>
<td>Technical Reporting</td>
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<tr>
<td>804-115</td>
<td>College Technical Mathematics 1</td>
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<td>804-116</td>
<td>College Technical Mathematics 2</td>
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<td>806-151</td>
<td>Technical Science I</td>
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<td>806-152</td>
<td>Technical Science II</td>
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<td>809-172</td>
<td>Race, Ethnic &amp; Diversity Studies</td>
<td>3</td>
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<tr>
<td>809-196</td>
<td>Introduction to Sociology</td>
<td>3</td>
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<tr>
<td>809-198</td>
<td>Introduction to Psychology</td>
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**For more information, call: (608) 758-6900**
The Medical Administrative Specialist Associate Degree program provides educational opportunities for those interested in working wherever knowledge of medical terminology and professional procedures and ethics are required. Examples include physician practices; large health care and allied health organizations such as clinics, hospitals, and foundations; insurance companies; medical publishers; research organizations; and medical product manufacturers. Medical Administrative Specialist students receive specialized training in medical ethics, records management, medical terminology, human anatomy, health insurance, medical billing, medical transcription, coding, and MS Office Suite software.

Program Outcomes—
Upon completion of this program, you will be able to:

• Use computers as tools for solving problems, collecting data, managing and communicating information, presenting ideas, and making decisions
• Apply analytical skills in solving problems, collecting data, managing and communicating information, presenting ideas, and making decisions
• Use appropriate English skills in written and oral communications and in listening
• Demonstrate the medical legal aspects of health care office practices including confidentiality of health records, release of information, patient’s rights, health records as legal evidence, informed consent, malpractice, agency, physician and employee liability
• Use reference materials to research information
• Apply medical language and AAMT formatting guidelines in all written communication
• Produce quality medical documents
• Demonstrate the following professional traits while working in a health care office environment: dependability, punctuality, responsibility, acceptable appearance, sound judgment, ethical behavior, flexibility, and adaptability
• Use all forms of telecommunications effectively
• Demonstrate effective communication skills integral to maintaining rapport with coworkers and clients

Graduates from this program have found employment as:
• Medical Administrative Specialist, Administrative Secretary
• Medical Transcriptionist
• Entry-Level Coder
• Medical Records Technician, Medical Records Clerk
• Medical Voucher Clerk, Underwriting Clerk
• Receptionist
• Insurance Billing
• Medical Clerk/Typist
• Clinic Clerk, Hospital Clerk, Admissions Clerk

Helpful High School Courses:
• Business English (grammar)
• Keyboarding, Computer skills (word processing, etc.)
• Biology, Science related
• Health related, Medical terminology (would be helpful)
• Accounting, Math

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>106-113</td>
<td>Health Care Insurance</td>
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<tr>
<td>106-114</td>
<td>Health Care Records Management</td>
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<td>2 - 2</td>
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<tr>
<td>106-131</td>
<td>Keyboarding Applications</td>
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<td>801-195</td>
<td>Written Communication</td>
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<td>804-106</td>
<td>Introduction to College Math</td>
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<th>Course Name</th>
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<td>106-107</td>
<td>Patient Billing</td>
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<tr>
<td>106-120</td>
<td>Terminology for Transcription-Coding</td>
<td>3</td>
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<td>106-127</td>
<td>Health Care Documentation</td>
<td>3</td>
<td>1 - 4</td>
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<td>106-128</td>
<td>Health Care Office Technologies</td>
<td>3</td>
<td>1 - 4</td>
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<td>801-196</td>
<td>Oral/Interpersonal Communication</td>
<td>3</td>
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<td>809-166</td>
<td>Introduction to Ethics: Theory &amp; Application</td>
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<th>Course Name</th>
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<td>Medical Transcription I</td>
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<tr>
<td>106-135</td>
<td>Introduction to Basic Coding</td>
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<tr>
<td>106-136</td>
<td>Advanced Patient Billing</td>
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<tr>
<td>106-118</td>
<td>Pharmacology for Transcription-Coding</td>
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<tr>
<td>106-119</td>
<td>Medical Minutes, Proofreading &amp; Editing</td>
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<tr>
<td>806-194</td>
<td>Survey of Anatomy &amp; Physiology</td>
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<td>809-199</td>
<td>Psychology of Human Relations</td>
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<tr>
<td>106-104</td>
<td>Medical Transcription II</td>
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<td>530-102</td>
<td>Medical Office Coding I</td>
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<td>2 - 2</td>
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<tr>
<td>106-105</td>
<td>Medical Transcription III</td>
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<td>530-103</td>
<td>Medical Office Coding II</td>
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<tr>
<td>106-109</td>
<td>Medical Office Administration</td>
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<tr>
<td>809-195</td>
<td>Economics</td>
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<td>809-172</td>
<td>Race, Ethnic &amp; Diversity Studies</td>
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<td>Elective(s)</td>
<td></td>
<td>3 varies</td>
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**TOTAL CREDITS** 68

1 Course has prerequisite that has to have been successfully completed.
2 Recommended Electives:
101-102 Office Accounting 3 Credits
106-124 Supervised Occupational Experience Medical Office 1 Credit
Medical Office Specialist Certificate (33 cr.)

Students may elect to receive a certificate as a Medical Office Specialist upon satisfactory completion of the first two semesters of the Medical Administrative Specialist Degree Program. Earning this certificate will help prepare you for entry-level office positions in health care, including clerks and medical records assistants.

Course Descriptions

101-102 Office Accounting 3 Credits
Office Accounting is a basic course in accounting principles and bookkeeping procedures. Topics include journalizing and posting transactions, preparing worksheets, adjusting and closing entries, and preparing the financial statements. Emphasis is on the service enterprise and accounting for cash.

106-103 Medical Transcription I 4 Credits
This course provides the student with instruction using audio equipment and medically oriented materials. Emphasis is placed on developing the ability to use references to produce accurate, correctly formatted medical reports in an efficient manner, using correct spelling, punctuation, proofreading, and grammar. Medical report style and format are reviewed. The student will produce various medical and surgical reports representative of those typed in hospitals and clinics using a word processing program. This course includes a module on the use of speech recognition software. Touch keyboarding with an accurate speed level of 40 wpm or more, basic computer, and advanced word processing skills are recommended. Students should also have a strong background in grammar, punctuation, medical terminology, and medical document formatting. Prerequisite: 106-120 Terminology for Transcription/Coding, and 106-127 Health Care Documentation.

106-104 Medical Transcription II 3 Credits
In this course, the student transcribes medically oriented reports, correspondence, and patient progress notes from various medical specialties using audio equipment and a word processing program. Format, grammar, spelling, punctuation, and proofreading are emphasized. Work is also done with English sound alike words. Prerequisites: 106-103 Medical Transcription I (or demonstrated equivalent), 106-118 Pharmacology for Transcription/Coding, 806-194 Survey of Anatomy & Physiology.

106-105 Medical Transcription III 3 Credits
In this course, the student transcribes medically oriented reports, correspondence, and patient progress notes from various medical specialties and foreign-accent dictated reports using audio equipment and a word processing program. Format, grammar, spelling, punctuation, and proofreading are emphasized. Work is also done with medical sound alike words. Prerequisite: 106-104 Medical Transcription II (or demonstrated equivalent).

106-107 Patient Billing 3 Credits
This course emphasizes computerized patient billing procedures in the medical office environment. The students will input patient information, charges, payments, and appointments. In addition, reports and insurance forms are generated using a microcomputer-billing program. Confidentiality, HIPAA, and compliance issues will be discussed. Prerequisite: 106-113 Health Care Insurance.

101-109 Medical Office Administration 3 Credits
In this capstone class students demonstrate their knowledge of all skills learned in the Medical Administrative Specialist program through simulation, discussion, research, and team-work. Units of instruction will also include career development and professionalism in the health care setting. Student should be in last semester of program to enroll in this course.

106-113 Health Care Insurance 3 Credits
Students are introduced to the various private and government insurance programs. Students will gain knowledge in understanding the ever-changing role of the health care industry and the need for confidentiality and compliance. A basic introduction of payment systems and coding will be covered.

106-114 Health Care Records Management 3 Credits
This course covers the systematic control of information in each phase of the record life cycle: creation, distribution, use, maintenance, and disposition. Topics will include systems of filing and storage (general and medical specific); organizing, managing, and controlling the system; potential careers; and trends in technology. Ethical/legal issues in the health care field will be addressed. Students will learn to organize files through Windows Explore. Students will also gain knowledge of Microsoft Outlook for sharing files and as a communication tool. A simulation will provide hands-on experience with major filing classification systems in both paper and computer database format. Touch keyboarding and basic computer skills are necessary.

106-118 Pharmacology for Transcription/Coding 2 Credits
This course will provide an introduction to the use of pharmacology terminology and context. The pathophysiology of the human body will be covered in conjunction with treatments used to combat disease. Included is information on medication actions, dosage forms, routes of administration, and drug uses. Emphasis is on the terminology necessary for medical reports used in transcription and coding. Prerequisite: 106-120 Terminology for Transcription/Coding.

106-119 Medical Minutes, Proofreading & Editing 2 Credits
Students may learn to take meeting minutes in a variety of settings that may culminate in taking minutes during a meeting at a medical facility. Students will also develop proofreading skills for identifying and correcting punctuation, grammar, spelling, and usage errors. This course includes editing skills for improving format, consistency, clarity, conciseness, and completeness. Touch keyboarding and basic word processing skills are necessary. Students should also have a strong background in grammar and punctuation. Prerequisite: 106-127 Health Care Documentation.

106-120 Terminology for Transcription/Coding 3 Credits
This course provides a combination of the study of medical vocabulary and the application of that vocabulary in an office setting. Students will learn the pronunciation, spelling, definition, and correct usage of medical terms used in a variety of health care office applications, with an emphasis on terminology necessary for medical reports used in transcription and coding. Students will also learn how to divide medical words into their component parts: the root word, the suffix, the prefix, and the combining form.
MEDICAL ADMINISTRATIVE SPECIALIST

106-124 Supervised Occupational Experience—Medical Office 1 Credit
In this course, students apply and interview for medical office internship placements. Once selected, the student will apply the knowledge and skills obtained in the classroom to a work environment. Completion of 48 credits in the Medical Administrative Specialist Program is recommended.

106-127 Health Care Documentation 3 Credits
Health Care Documentation will include transcription. A heavy emphasis will be placed on medical report types, formats, AAMT rules of style, grammar, and punctuation. Students will also become familiar with a variety of medical reference materials available to them—books and computer sites. Touch keyboarding and basic word processing skills are necessary. Students should also have a strong background in grammar and punctuation. Prerequisite: 106-131 Keyboarding Applications

106-128 Health Care Office Technologies 3 Credits
Health Care Office Technologies is an introductory course in the use of an office suite in a health care facility setting. It incorporates the use of word processing, spreadsheet, desktop publishing, and presentation software as an integrated application. Students will learn basic concepts associated with each component of the package and how to incorporate them in an office setting. Touch keyboarding and basic word processing skills are necessary. Prerequisite: 106-131 Keyboarding Applications

106-131 Keyboarding Applications 3 Credits
Keyboarding Applications is designed to enhance keyboarding skills and to develop basic document formatting techniques while applying decision-making skills. Basic grammar and punctuation skills will be emphasized along with common word processing software. Students can expect to possess keyboarding skills of 40 wpm or higher at the end of this course. Touch keyboarding skill (30 wpm for 3 minutes with 3 or fewer uncorrected errors) is assumed at the beginning of this course. This course is not required for students who can demonstrate this competency on a timed test.

106-135 Introduction to Basic Coding 1 Credit
This course will build upon skills learned in Health Care Insurance with emphasis on understanding the organization of the CPT and ICD coding books. Students will apply proper procedures in locating codes and use of coding symbols and conventions. Prerequisites: 106-107 Patient Billing, 106-113 Health Care Insurance, 106-120 Terminology for Transcription/Coding

106-136 Advanced Patient Billing 3 Credits
This course will build upon skills learned in Health Care Insurance and Patient billing. Subjects will include pre-certification, release of information, extracting information from the medical record for billing purposes, completing health care insurance forms for both government and private insurance companies using both paper and computer software formats. Prerequisites: 106-107 Patient Billing, 106-113 Health Care Insurance, 106-120 Terminology for Transcription/Coding

530-102 Medical Office Coding I 3 Credits
Students will learn to assign ICD-9 CM and CPT codes, supported by medical documentation, with entry level proficiency. Learners will apply instructional notations, conventions, rules, and official coding guidelines for both the ICD-9 CM and CPT books. Learners apply skill through coding application to medical documentation and exercises. Resources, including the Internet and coding software will be introduced and reinforced. Prerequisites: 106-135 Introduction to Basic Coding, 106-136 Advanced Patient Billing, 806-194 Survey of Anatomy and Physiology

530-103 Medical Office Coding II 3 Credits
Students will build upon knowledge from Medical Office Coding I to assign ICD-9 CM and CPT codes, supported by medical documentation, with entry level proficiency. Learners will apply rules and guidelines used in coding for physician and hospital services. Application of coding will be demonstrated through medical documentation and reports. Knowledge of government and private payer guidelines will be applied throughout. Resources, including the Internet and coding software will be introduced and reinforced. Prerequisites: 530-102 Medical Office Coding I

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Communication 3 Credits
804-106 Introduction to College Math 3 Credits
809-166 Introductions to Ethics: Theory and Application 3 Credits
809-172 Race, Ethnic and Diversity Studies 3 Credits
809-195 Economics 3 Credits
809-199 Psychology of Human Relations 3 Credits
The Medical Assistant is a link between health care providers and their patients, their professional associates, and the suppliers of equipment and medications. The Medical Assistant is the team member who assists the qualified provider in the office or other medical setting, performing administrative and/or clinical duties.

Demand for the Medical Assistant may also occur in business or industrial health centers, health insurance companies and emergency care centers. The Medical Assistant has a wide range of duties supportive to the provider’s practice. Business/administrative duties include scheduling and receiving patients, obtaining patient information, maintaining medical records, maintaining supplies and equipment, and assuming responsibility for office care, insurance matters, office accounts, fees and collections. Medically related duties include assisting with examinations and treatments, taking health histories, performing certain diagnostic tests, carrying out laboratory procedures and sterilizing instruments and equipment.

The Medical Assistant Supervised Externship experience takes place during the last weeks of the final semester of the program. The student must have satisfactorily completed all of his/her program courses prior to this experience and agree to participate without remuneration. During externship, each student will spend two rotations in health care facilities. One rotation will focus on administrative or business skills. The other rotation will focus on clinical and laboratory skills. The externship experience allows students to become familiar with a variety of experiences they might encounter in the work place.

Program Outcomes–

Upon completion of this program, you will be able to:

- Perform clerical functions
- Perform bookkeeping procedures
- Prepare special accounting entries
- Apply principles of medical asepsis
- Perform specimen collection
- Perform diagnostic testing
- Process insurance claims
- Provide patient care
- Communicate effectively
- Apply legal and ethical concepts
- Instruct patients
- Perform medical office operational functions
- Demonstrate professionalism in a health care setting

Potential Employment Opportunities

Medical Assistant, Medical Laboratory Assistant, Medical Administrative Specialist, Medical Records/Transcriptionist, Office Clinic Receptionist, Medical Clerk.

The American Association of Medical Assistants awards the title of Certified Medical Assistant (CMA) to those who pass a national written examination.

Beginning with the January 2001 Certification Examination, felons are not eligible to sit for the examination without a waiver from the certifying board.

The Blackhawk Technical College Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon the recommendation of the Curriculum Review Board of the American Association of Medical Assistants’ Endowment (AAMAE). Commission on Accreditation of Allied Health Education Programs, 35 E. Wacker Dr., Suite 1970, Chicago, Illinois 60601-2208, (312) 553-9355.

**Potential Employment Opportunities**

Medical Assistant, Medical Laboratory Assistant, Medical Administrative Specialist, Medical Records/Transcriptionist, Office Clinic Receptionist, Medical Clerk, Phlebotomist, and Dialysis Tech.

<table>
<thead>
<tr>
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<th>Course Name</th>
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<tr>
<td>501-101 Medical Terminology*</td>
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<tr>
<td>501-104 Healthcare Customer Service</td>
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<tr>
<td>501-107 Intro. to Healthcare Computing</td>
<td>2</td>
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<td>509-301 Medical Assistant</td>
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<td>509-302 Human Body in Health and Disease</td>
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<td>509-303 Medical Assistant Lab Procedures I</td>
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<td>509-304 Medical Assistant Lab Procedures II</td>
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Semester 2 courses are conducted during the first 14 weeks of the semester. The last 4 weeks of the semester focus on 160 hours of externship participation.

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<td>509-307 Medical Office Insurance and Finance</td>
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<td>509-308 Pharmacology for Allied Health</td>
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<td>509-309 Medical Law, Ethics &amp; Professionalism</td>
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<td>809-198 Introduction to Psychology</td>
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<td>509-310 Medical Assistant Externship</td>
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(160 total hours)

**TOTAL CREDITS**

33

Program Requirements:

Complete the COMPASS test with scores of 40 in math, 80 in reading, and 70 in writing. OR receive an ACT score of 16 or higher in the three areas. Students who do not meet the scores above must remediate and retest. Program Prerequisite: Keyboarding

Program Corequisite: CPR and First Aid for Health Professionals (must be completed prior to Medical Assistant Externship)

The standard for promotion in the Medical Assistant program requires a “C-” in all courses. Satisfactory completion of all on-campus courses and a physical examination are required before externship.

Note: A Caregiver Background Check is required.
Due to the rigor of the Medical Assistant Program, students may wish to adjust their schedules for a lighter course load over 3 or 4 semesters. However, all students will complete Clinical Procedures I in the fall, followed by Clinical Procedures II and Externship in the spring of their final year of the program. Students may also elect to talk to their counselors regarding taking associate degree courses that may substitute for the Technical Diploma courses.

Course Descriptions

501-101 Medical Terminology 3 Credits
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and recombination of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systemic and surgical terminology.

501-104 Healthcare Customer Service 2 Credits
This course is designed as an introduction to customer service for learners interested in various healthcare settings. The learner investigates healthcare systems, safety standards, and the workplace. The learner examines professionalism, interpersonal and written communication skills, and confidentiality as they relate to customer service in healthcare.

501-107 Introduction to Healthcare Computing 2 Credits
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. Emphasizes the use of the common software packages, operating systems, file management, word processing, spreadsheet, database, Internet, and electronic mail.

509-301 Medical Assistant Administrative Procedures 1 Credit
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 office staff, and keep an inventory of supplies. Students apply introductory medical coding skills and managed care terminology. Prerequisite/Corequisite: Computer course, declared Medical Assistant Program, 501-107 Introduction to Computing for Healthcare or 103-106 Introduction to MS Office.

509-302 Human Body in Health and Disease 3 Credits
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. Prerequisite/Corequisite: 501-101 Medical Terminology.

509-303 Medical Assistant Laboratory Procedures 1 2 Credits
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. Prerequisite: Admission to Medical Assistant Program.

509-304 Medical Assistant Clinical Procedures 1 4 Credits
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. Prerequisite/Corequisite: 501-101 Medical Terminology, 509-302 Human Body in Health and Disease; Prerequisite: Admission to Medical Assistant Program or 806-177 General Anatomy and Physiology.

509-305 Medical Assistant Laboratory Procedures 2 2 Credits
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. Prerequisite: 509-303 Medical Assistant Laboratory Procedures 1.

509-306 Medical Assistant Clinical Procedures 2 3 Credits
Prepares Medical Assistant students to perform patient care skills in the 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: 509-304 Medical Assistant Clinical Procedures 1, 509-303 Medical Assistant Laboratory Procedures 1, 501-101 Medical Terminology, 509-302 Human Body in Health and Disease or 806-177 General Anatomy and Physiology.

509-307 Medical Office Insurance and Finance 2 Credits
Introduces Medical Assistant 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: 501-101 Medical Terminology, 509-302 Human Body in Health and Disease or equivalent; 501-107 Introduction to Computing for Healthcare or 806-177 General Anatomy and Physiology.

509-308 Pharmacology for Allied Health 2 Credits
Introduces students to classifying medications 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: 501-101 Medical Terminology, 509-302 Human Body in Health and Disease.

509-309 Medical Law, Ethics and Professionalism 1 Credit
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.
For more information, call: (608) 758-6900

medical assistant

509-310 Medical Assistant Externship 3 Credits
Requires Medical Assistant 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. Prerequisite: 1st and 2nd semester courses

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-390 Communications for Health Professions 2 Credits
809-198 Introduction to Psychology 3 Credits

medical coding specialist

The Medical Coding Specialist Program prepares individuals for employment as entry-level coding specialists in health care facilities such as hospitals, clinics, physician practice groups, surgery centers, long-term care facilities and home health care agencies. Coding specialists are also employed in consulting firms, coding and billing services, insurance companies, governmental agencies and computer software companies.

The Medical Coding Specialist reviews medical documentation provided by physicians and other health care providers and translates this into numeric codes. The coding specialist assigns sequences diagnostic and procedural codes using universally recognized coding systems. Several uses of coded data are for payment of health care claims, statistics and medical research.

Program Outcomes –

Upon completion of this program, you will be able to:

• Assign diagnostic and procedure codes using ICD coding systems
• Assign diagnostic and procedure codes using CPT coding systems
• Adhere to Security/Privacy/Confidentiality policies
• Use computers to process information
• Support data collection and reimbursement system
• Communicate in a professional manner
• Model professional behaviors, ethics and appearance

Admission Requirements

• Typing skills
• Completion of Compass test with acceptable scores
• Basic computer knowledge – word processing skills preferred
• Related work experience in health care or medical records preferred
• Ability to use internet for research

Potential Employment Opportunities

• Medical Coding Specialist
• Coding Specialist
• Coding Analyst
• Claims Analyst
• Inpatient Coder
• Outpatient Coder

Course Descriptions

501-101 Medical Terminology 3 Credits
Focuses on the component parts of medical terms: prefixes, suffixes and word roots. Students practice formation, analysis and reconstruction of terms. Emphasis on spelling, definition and pronunciation. Introduction to operative, diagnostic, therapeutic and symptomatic terminology of all body systems, as well as systematic and surgical terminology.

530-181 Intro to the Health Record 1 Credit
This course prepares learners to illustrate the flow of health information in various health care delivery systems and within the health information department. Prepares learners to retrieve data from health records. Professional ethics, confidentiality and security of information are emphasized.

530-182 Human Diseases for the Health Professions 3 Credits
Designed to give learners an insight into common pathophysiology (disease process) as related to the body/organ systems. Emphasis is placed on understanding the etiology (cause), signs and symptoms, diagnostic tests, and treatment of each disease. Prerequisite: completion of or concurrent enrollment in 806-194 Survey of Anatomy & Physiology and 501-101 Medical Terminology or 806-177 General Anatomy & Physiology

530-183 ICD-9-CM Coding 3 Credits
Prepares students to assign ICD-9-CM codes supported by medical documentation with entry-level proficiency. Students apply ICD-9-CM instructional notations, conventions, rules, and official coding guidelines when assigning ICD-9-CM codes to case studies and actual medical record documentation. Prerequisite: Typing speed of 30 wpm, completion of or concurrent enrollment in 530-181 Intro to Health Records, 806-194 Survey of Anatomy & Physiology, 530-182 Human Diseases for the Health Professions and 501-101 Medical Terminology or 806-177 General Anatomy & Physiology

530-184 CPT Coding 3 Credits
Prepares learners to assign CPT codes, supported by medical instructional notations, conventions, rules and official coding guidelines when assigning CPT codes to case studies and actual medical record documentation. Prerequisite: Typing speed of 30 wpm, completion of or concurrent enrollment in 530-181 Intro to Health Records, 806-194 Survey of Anatomy & Physiology, 530-182 Human Diseases for the Health Professions, 501-101 Medical Terminology or 806-177 General Anatomy & Physiology

Suggested Support Courses

106-140 Keyboarding
106-143 Skillbuilding
801-195 Written Communications
103-106 Intro to MS Office
801-196 Oral Communications
197-107 Professional Profiles

Total Credits 18 or 19
The Associate Degree Nursing program prepares nurses to function with the knowledge, skill and judgment of beginning staff nurses in a variety of health care settings. The program is accredited by the National League for Nursing Accrediting Commission (NLNAC). For more information, contact NLNAC at 61 Broadway-33rd Floor, New York, NY, 10006, or (800) 669-1656, or on the website at www.nlnac.org.

The Associate Degree Nursing program consists of a minimum of four semesters. Completion of the program may take longer depending upon the number of students petitioning to enter clinical nursing classes. Nursing courses include classroom, laboratory, and clinical experiences in a variety of settings. A grade of “C” or higher must be received in all program required courses.

Graduates are eligible to apply to the Wisconsin Board of Nursing to take the examination for licensure as a Registered Nurse. State Administrative Code rules state that a graduate may have difficulty obtaining a license with an arrest or conviction record that is substantially related to nursing practice. The Coordinator of the program is available to discuss concerns in this area.

Students may apply for testing for licensure as a L.P.N. (Licensed Practical Nurse) after successfully completing all courses through the second semester. L.P.N.’s entering into the ADN program may receive credit for past clinical education based on their current knowledge, skills and judgment. In order to help L.P.N.’s be program ready, they will need to take the Nursing Bridge course before entering third semester. Re-entry, transfer, and LPN students must contact the counseling office for information about entry to the nursing program. Acceptance to the program will be based upon space availability and approval of the nursing faculty.
NURSING Semester 4

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td>543-113</td>
<td>Nursing: Complex Health Alterations</td>
<td>3</td>
</tr>
<tr>
<td>543-114</td>
<td>Nursing: Mgt &amp; Profess Concepts</td>
<td>2</td>
</tr>
<tr>
<td>543-115</td>
<td>Nursing: Advanced Practice</td>
<td>3</td>
</tr>
<tr>
<td>543-116</td>
<td>Nursing: Clinical Transition</td>
<td>2</td>
</tr>
<tr>
<td>809-196</td>
<td>Sociology*</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>2</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 70

- Completion of a 3 credit Nursing Assistant course is required before entering the program.
- General education courses must be completed in semester listed or prior.

ADN Application Process (Pre-Clinical ADN Nursing)

A. Apply to enroll at BTC. Requirements:
1. High school diploma or equivalent.
2. Successful completion of one year of high school chemistry with a grade of "C" or higher OR successful completion of one semester of college chemistry with a grade of "C" or higher OR pass standardized science assessment exam (not currently available at Blackhawk Technical College).
3. Completion of COMPASS Testing with 60 in math, 85 in reading, 78 in writing OR ASSET scores of 44 or above in all 3 areas OR ACT scores of 18 in math, 19 in reading, 18 in writing, or SAT composite score of 890. Students who do not meet the scores above must remediate & retest.
4. Complete BTC application and pay $30 application fee.

B. Apply to enter clinical nursing classes:
1. Complete the petition process.
2. Acquire CPR Certification—Healthcare Provider Course (every 2 years).
3. Obtain physical exam with immunization record within 6 months prior to start of clinical. TB skin test must be done within 3 months prior to start of clinical.
4. Complete orientation session.
5. Clear Caregiver Background Check.
6. Obtain medical insurance coverage.
8. Submit copy of Nursing Assistant course completion certificate or certification card. Course must be one approved by the WI Dept. of Health & Family Services.
9. When applicable, student must submit a copy of their LPN license.

Course Descriptions

543-101 Nursing Fundamentals 2 Credits
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: Admission to nursing program

543-102 Nursing: Skills 3 Credits
This course focuses on development of clinical skills and physical assessment across the lifespan. Content includes mathematical 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: Admission to nursing program

543-103 Nursing Pharmacology 2 Credits
This course introduces the principles of pharmacology, including drug classifications and their effects on the body. Emphasis is on the use of the components of the nursing process when administering medications. Prerequisites: Admission to nursing program

543-104 Nursing: Introduction to Clinical Practice 2 Credits
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 formation of nurse-client relationships, communication, data collection, documentation, and medication administration. Prerequisites: Admission to nursing program

543-105 Nursing Health Alterations 3 Credits
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.

543-106 Nursing Health Promotion 3 Credits
This course will cover topics related to health promotion in the context of the family. It 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 it 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.

543-107 Nursing: Clinical Care Across the Lifespan 2 Credits
This clinical experience applies nursing concepts and therapeutic interventions to clients across the lifespan. It also provides an introduction to applying the concepts of teaching and learning. Extending care to include the family is emphasized.
543-108 Nursing: Introduction to Clinical Care Management 2 Credits
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.

543-109 Nursing Complex Health Alterations I 3 Credits
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 imbalance, and alterations in comfort.

543-109 Nursing Complex Health Alterations II 2 Credits
Complex Health Alterations II 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 imbalance, and alterations in comfort.

543-110 Nursing: Mental Health and Community Concepts 2 Credits
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.

543-111 Nursing Intermediate Clinical Practice 3 Credits
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.

543-112 Nursing Advanced Skills 1 Credit
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.

543-113 Nursing Complex Health Alterations II 3 Credits
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 the reproductive systems. The learner 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.

543-114 Nursing Mgmt. & Professional Concepts 2 Credits
This course covers nursing management and professional issues related to the role of the RN. Emphasis is placed on preparing for the RN practice.

543-115 Nursing Advanced Clinical Practice 3 Credits
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

543-116 Nursing Clinical Transition 2 Credits
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.

Nursing Assistants are vital members of the health care team. They help care for patients under the supervision of a professional registered nurse in a variety of settings. Blackhawk Technical College has two Nursing Assistant Courses.

NURSING ASSISTANT (N.A.)
120-Hour Course (3 Credits)—543-300

Basic tasks and procedures performed by nursing assistants include bed-making techniques, personal bedside care of the patient, measuring intake and output, caring for patients in isolation, measuring vital signs (temperature, pulse, respirations and blood pressure), and serving and feeding patients.

The course contains a mix of classroom instruction, lab practice and clinical experience working with patients in a long-term care setting under the direct supervision of a registered nurse instructor.

Instructional materials will include a textbook, workbook, and NA handbook as well as videos. Written exams and return demonstrations will be used for student evaluation.

Criminal Background Checks are required for anyone entering Health Occupations courses. A complete physical examination is also required.

Applicants must obtain a score of 21 in Math and 60 in Reading on the COMPASS, OR obtain a score of 8.0 in Math and Reading on the TABE. Those who do not obtain these scores must remediate and retest.

Program Outcomes—
Upon completion of this course, the student will be able to:

• Communicate and interact effectively with clients, family and co-workers
• Maintain and protect client’s rights
• Demonstrate the ethical and legal responsibilities of the NA/HHA
• Carry out the basic nursing skills required of the NA/HHA
• Provide for resident personal care and hygiene in a long-term care setting
• Assist with client rehabilitation and restorative care, promoting independence
• Assist clients with long-term, disabling conditions including dementia

Students who successfully complete the N.A. course will be eligible to take the competency evaluation for inclusion on the Wisconsin Nurse Aide Registry as a Nursing Assistant/Home Health Aide. (NA/HHA)
NURSING ASSISTANT

NURSING ASSISTANT-ADVANCED
60-Hour Course (2 Credits)—543-302

The purpose of the Nursing Assistant - Advanced course is to build upon the information and skills that were learned in the 120-hour course as well as preparing the student to function in an Acute Care setting.

The Advanced/Acute Care skills will include monitoring blood glucose values; pre and post-op patient care, assisting with sterile procedures, advanced dementia-care certification, CPR certification, as well as basic telemetry and automated vital sign monitoring. **Prerequisite: 543-300 Nursing Assistant**

The course contains a mix of classroom instruction, lab practice, a research paper and oral presentation, independent study and clinical experience working with patients in an Acute Care setting under the direct supervision of a registered nurse instructor.

Instructional materials will include a textbook and NA handbook as well as videos. Written examinations, return demonstrations and completion of assigned certifications will be used for student evaluation.

Criminal Background Checks are required for anyone entering Health Occupations courses. A complete physical examination is required.

Applicants must have completed the 120 hour NA course and/or be currently on the Wisconsin Nurse Aide Registry.

**Program Outcomes— Upon completion of this program, you will be able to:**

- Communicate and interact effectively with clients, family and co-workers
- Maintain and protect client’s rights
- Demonstrate the ethical and legal responsibilities of the NA/HHA
- Perform the advanced as well as basic nursing assistant skills per the course requirements
- Provide for patient care and hygiene in an Acute Care setting
- Assist with client rehabilitation and restorative care, promoting independence
- Relate the material learned in the certification portion to the acute care setting

PHYSICAL THERAPIST ASSISTANT

The Physical Therapist Assistant (PTA) is a technically educated health provider who assists the Physical Therapist (PT) in the provision of physical therapy and may perform physical therapy interventions selected by the supervising PT. The PTA works under the direction and supervision of the PT, helping manage conditions such as back and neck injuries, sprains/strains and fractures, arthritis, burns, amputations, stroke, multiple sclerosis, birth defects, injuries related to work and sports, and others.

PTAs work in a broad range of settings. Employment opportunities for PTAs are located in hospitals, outpatient clinics, rehabilitation facilities, skilled nursing, sub acute, and long-term care facilities, home health agencies, schools, hospice, industrial health clinics, community health centers, fitness centers and sports training facilities, and colleges and universities.

According to American Physical Therapy Association member surveys, the median income for entry-level and experienced PTAs is above $33,000. PTAs who were employed in the southern and western regions of the nation earned the highest median salary. Blackhawk Technical College (BTC) graduate surveys indicate that the starting average wage for entry-level PTA graduates is $36,000+ per year and rising. Wages for experienced PTAs, according to the latest ADVANCE Physical Therapy publication, indicates that wages for experienced PTAs range from $20,000 to $70,000 per year.

The need for PTAs continues to grow. The US Department of Labor, Bureau of Labor Statistics states “Employment of Physical Therapist Assistants is expected to grow much faster that the average through the year 2012.” Over the long run the demand for PTAs will continue to raise due to the number of individuals with disabilities, the rapid growing elderly population, and the large baby boom generation entering prime age for needing increased health care. America’s CAREERInfoNET lists PTA as one of the 25 fastest growing occupations.

**Program Description**

The two-year, afternoon, early evening program begins in June each year and continues for six semesters (4 regular and 2 summers). The regular fall and spring semesters are 16 weeks, and the summer’s are 6 weeks. Graduates receive an Associate of Applied Science Degree, which are conferred in May. The program employs six faculty members who are all practicing clinicians; three PT’s and three PTA’s. The total cost of tuition and fees for five semesters is approximately $5500. Average semester textbook and supply cost is $200. State licensure is required for the PTA in Wisconsin. Blackhawk graduates traditionally score higher on the national examination when compared to students testing from all other accredited schools. A Caregiver Background Check is required for the clinical portion of the program. Persons with previous felony convictions are not eligible for licensure or credentialing. The PTA program is currently accredited by the Commission on Accreditation in Physical Therapy Education.

**Program Goal**

The mission of the BTC Associate Degree PTA program is to prepare qualified PTAs, as defined in the Wisconsin Physical Therapy Practice Act and in accordance with the standards of the American Physical Therapy Association, for employment in the healthcare community.

**Program Mission**

The mission of the BTC Associate Degree PTA program is to fulfill the program mission through the achievement of the program outcomes.
## Admissions & Enrollment

Applications are submitted to the Office of Admissions. Students will be program ready after submitting the following: completion of application and processing fee; evidence of high school graduation, G.E.D or H.S.E.D.; transcripts reflecting high school or college biology, chemistry and algebra with grade “C” or above; and COMPASS with scores of 60 in math, 85 in reading, and 78 in writing or ACT scores of 18 in math, 19 in reading, and 18 in writing or SAT of 900 in math and reading.

Each year program ready students are asked to confirm program admission through the petition process. Final admission into the PTA program requires a certified physical examination, updated immunizations, current CPR certification, and a clean Caregiver Background Check. The PTA program generally admits 24 first year students each summer. Admissions include 4 students from Madison Area Technical College, 4 from Waukesha Technical College, and 2 from Rock Valley College and the remainder from Blackhawk Technical College.

### Course Descriptions

**Level I Courses**

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
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<tbody>
<tr>
<td>General Anatomy and Physiology</td>
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<tr>
<td>Survey of Physics</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>PTA Kinesiology 1 (First nine weeks)</td>
<td>3</td>
<td>3-0</td>
</tr>
<tr>
<td>PTA Kinesiology 2 (Second nine weeks)</td>
<td>4</td>
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<td>PTA Patient Interventions</td>
<td>4</td>
<td>4-0</td>
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<tr>
<td>Written Communications</td>
<td>3</td>
<td>3-0</td>
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<tr>
<td>PTA Clinical Practice 1</td>
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<tr>
<td>PTA Therapeutic</td>
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<tr>
<td>Exercise (First nine weeks)</td>
<td>3</td>
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<tr>
<td>PTA Therapeutic Modalities</td>
<td>4</td>
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<tr>
<td>PTA Principles of Musculoskeletal Rehabilitation</td>
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<td>Race Ethnic &amp; Diversity</td>
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<td>Introduction to Ethics</td>
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<td>Oral Communications</td>
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<tr>
<td>PTA Principles of Neuromuscular Rehabilitation</td>
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<tr>
<td>PTA Clinical Practice 2</td>
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<tr>
<td>PTA Rehabilitation Across the Lifespan</td>
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<td>(First nine weeks)</td>
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<tr>
<td>PTA Professional Issues 2</td>
<td>2</td>
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<tr>
<td>PTA Mgmt. of Cardiopulmonary &amp; Integumentary Conditions</td>
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**Level II Courses**

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<td>PTA Kinesiology 1</td>
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<tr>
<td>PTA Clinical Practice 2</td>
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<td>3-0</td>
</tr>
<tr>
<td>PTA Rehabilitation Across the Lifespan</td>
<td>5</td>
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</tbody>
</table>

**Program Outcomes**

Upon completion of this program, you will be able to:

- Demonstrate effective communication with patients, families and the health care team.
- Exhibit behaviors and conduct that reflect respect and sensitivity according to physical therapy practice standards.
- Function under the supervision of a physical therapist in a safe, legal, ethical manner.
- Produce documentation to support the delivery of physical therapy services.
- Demonstrate critical thinking skills to implement and adjust a plan of care under the direction and supervision of a physical therapist.
- Perform technically competent data collection under the direction and supervision of the physical therapist.
- Perform technically competent physical therapy interventions under the direction and supervision of the physical therapist.
- Educate patients, families, and other health care providers.
- Integrate components of administrative, operational, and fiscal practices of physical therapy service in a variety of settings.
- Implement a self-directed plan for career development, credentialing, and lifelong learning.

For the most current schedule information, visit [www.blackhawk.edu](http://www.blackhawk.edu)
PHYSICAL THERAPIST ASSISTANT

524-143 PTA Therapeutic Modalities 4 Credits
Develops the knowledge and technical skills necessary to perform numerous therapeutic modalities likely to be utilized as a PTA. Prerequisites: 524-139 PTA Patient Interventions

524-144 PTA Principles of Neuromuscular Rehabilitation 4 Credits
Integrates concepts of neuromuscular pathologies, physical therapy interventions, and data collection in patient treatment. Prerequisites: 524-142 PTA Therapeutic Exercise, 524-141 PTA Kinesiology 2, and 524-139 PTA Patient Interventions

524-145 PTA Princ of Musculoskeletal Rehabilitation (2nd 9 Wks.) 4 Credits
Integrates concepts of musculoskeletal pathologies, physical therapy interventions, and data collection in patient treatment. Prerequisites: 524-142 PTA Therapeutic Exercise, 524-141 PTA Kinesiology 2, and 524-139 PTA Patient Interventions

524-146 PTA Management Of Cardiopulmonary and Integumentary Conditions (1st 9 Wks.) 3 Credits
Integrates concepts of cardiopulmonary and integumentary pathologies, physical therapy interventions, and data collection in patient treatment. Prerequisites: 524-142 PTA Therapeutic Exercise, 524-141 PTA Kinesiology 2, and 524-139 PTA Patient Interventions

524-147 PTA Clinical Practice 1 2 Credits
Provides a part-time clinical experience to apply foundational elements, knowledge, and technical skills pertinent to physical therapy practice. Prerequisites: 524-141 PTA Kinesiology 2, and 524-143 PTA Therapeutic Modalities

524-148 PTA Clinical Practice 2 3 Credits
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. Prerequisites: Pre/Co: 524-147 PTA Clinical Practice 1

524-149 PTA Rehabilitation Across the Lifespan (1st 9 Wks.) 2 Credits
A capstone course that 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. Prerequisites: 524-144 PTA Principles of Neuromuscular Rehabilitation, 524-145 PTA Principles of Musculoskeletal Rehabilitation, 524-146 PTA Management of Cardiopulmonary and Integumentary Conditions, and 524-148 PTA Clinical Practice 2

524-150 PTA Professional Issues 2 (1st 9 Wks.) 2 Credits
Incorporates professional development, advanced legal and ethical issues, healthcare management and administration, and further development of professional communication strategies. Prerequisites: 524-140 PTA Professional Issues 1 and 524-148 PTA Clinical Practice 2

524-151 PTA Clinical Practice 3 (2nd 9 Wks.) 5 Credits
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: 524-147 PTA Clinical Practice 2, 524-144 PTA Principles of Neuromuscular Rehabilitation, 524-145 PTA Principles of Musculoskeletal Rehabilitation and 524-146 PTA Management of Cardiopulmonary and Integumentary Conditions

PHYSICAL THERAPIST ASSISTANT

General Education Course Requirements:
(see course descriptions on pages 33-37)
806-177 Gen Anatomy & Physiology 4 Credits
806-139 Survey of Physics 3 Credits
801-195 Written Communication 3 Credits
801-196 Oral/Interpersonal Communication 3 Credits
809-166 Intro to Ethics 3 Credits
809-196 Introduction to Sociology 3 Credits
809-172 Race Ethnic Diversity 3 Credits
809-198 Introduction to Psychology 3 Credits

RADIOGRAPHY

Radiography describes the process of producing diagnostic (x-ray) radiographic images of the human body.

Part art, part science, the trained radiographer must be knowledgeable and proficient in human anatomy, radiation safety and physics, and radiographic positioning.

Because of the nature of the work, the radiographer must be an individual capable of working with the acutely and chronically ill and injured, as well as patients of every age and background. Patience, compassion, and empathy are essential requirements of any person working in radiography.

The Blackhawk Technical College Associate Degree Radiography Program is a two-year Associate Degree program requiring considerable commitment on the part of the student. Learning is performed in the classroom, laboratory, and in the clinical environment at any number of healthcare facilities affiliated with the radiography program.

A wide range of placement opportunities allows the graduate radiographer many options with respect to full or part-time employment, as well as opportunities in hospitals, clinics, private physician offices, or mobile imaging centers.

The Mission of the Blackhawk Technical College Associate Degree Radiography Program is to prepare the Student to Practice Entry-Level Diagnostic Medical Radiography.

The Goals and Associated Outcomes of the Blackhawk Technical College Associate Degree Radiography Program are as follows:

Goal 1: Students Will Perform Competent Radiography

• Outcome 1: Students Position Correctly for Radiographic Procedures
• Outcome 2: Students Select Proper Exposure Factors
• Outcome 3: Students Practice Proper Radiation Protection
• Outcome 4: Students Assess Patient Condition
• Outcome 5: Students Practice Patient Safety
• Outcome 6: Students Evaluate Radiographic Images

For more information, call: (608) 758-6900
Goal 2: Students Will Communicate Effectively
• Outcome 1: Students use Effective and Professional Oral Communication Skills in all Educational Settings
• Outcome 2: Students use Effective and Professional Written Communication Skills in all Educational Settings

Goal 3: Students Will Use Critical Thinking and Problem Solving Skills
• Outcome 1: Students Manipulate Technical Factors for Non-Routine Situations
• Outcome 2: Students Manipulate Radiographic Positioning for Non-Routine Situations

Goal 4: Students Will Demonstrate Professionalism
• Outcome 1: Students will Conduct Themselves Professionally in the Clinical Environment
• Outcome 2: Students will Qualify the Importance of Continued Professional Development

Goal 5: The Program Will Graduate Entry-Level Technologists
• Outcome 1: The Program will Maintain a Minimal 75% Completion Rate for the Current 5-Year Period
• Outcome 2: The Program will Maintain a Minimal 75% Pass Rate on the ARRT Credentialing Examination for the Current 5-Year Period
• Outcome 3: The Program will Maintain a Minimal 75% Graduate Placement Rate within 6 Months of Graduation for the Current 5-Year Period
• Outcome 4: Program Graduates will be Satisfied with the Educational Experience with Respect to both Academic and Clinical Abilities
• Outcome 5: Employers will be Satisfied with the Knowledge, Professionalism, and Technical Skills of Program Graduates

Program Accreditation
The Blackhawk Technical College Associate Degree Radiography Program is accredited by the Joint Review Committee on Education in Radiologic technology (JRCERT), 20 N. Wacker Dr., Suite 20, Chicago, IL 60606-3182, (312)704-5300

Graduates of the BTC radiography are eligible to sit for the certification examination in radiography prepared by the American Registry of Radiologic Technologists (ARRT).

The methodology used to evaluate and assess the radiography outcomes is provided in detail to students during the New Student Orientation Session, and is available to applicants of the program upon request.

Prerequisites for program admission
• High school biology or college equivalent (“C-” or above)
• High school algebra or college equivalent (“C-” or above)
• High school chemistry or physics or college equivalent (“C-” or above)
• ACT=composite score of 18 (taken within the past 3 years) or SAT = 900 or above for math and reading scores or COMPASS test scores of: Writing: 75, Reading: 82, Numerical: 49. The COMPASS test is administered at BTC.

Student Pregnancy: Should the student become pregnant during the course of the educational program, Blackhawk Technical College and the Associate Degree Radiography Program cannot guarantee normal graduation time.

Specific details related of the radiography program student pregnancy policy are found in the program student handbook, and are available to program applicants upon request.

Criminal History: In accordance with Wisconsin Caregiver Background law, applicants with criminal history may be denied placements at clinical affiliates. Additionally, criminal history may impact eligibility of the student to sit for the certification examination in radiography prepared by the American Registry of Radiologic Technologists (AART). Applicants with criminal history are advised to meet with the radiography program director prior to program entry.

Program Prerequisite Requirements
• Participate in clinical observation tour set by Radiography Coordinator
• Attend program orientation session
• Complete physical examination & program health requirements

A Caregiver Background Check is required for the clinical portion of this program. All Radiography Program Core Courses (prefix 526) require program entry for enrollment. Please contact the Student Services department to ensure “program ready” status.

1. Students must earn a passing grade (“C”; GPA 2.0) in all courses in the curriculum.
2. Students will have a minimum cumulative grade point average (GPA) of 2.0.
3. Students will have completed all mandatory, elective, and continued clinical competency examinations as outlined in the clinical education and evaluation portion of this document.
4. All outstanding bills related to the student’s education must be paid in full before graduation.

Eligibility of students to take the ARRT examination is subject to successful completion and review by Program Faculty.
Course Name | Credits | Lec-Lab
---|---|---
526-101 Introduction to Radiography | 3 | 3-0
526-102 Radiographic Procedures I | 4 | 3-2
526-103 Prin. of Radiographic Exposure | 3 | 3-0
526-104 Radiation Protection & Biology | 3 | 3-0
526-105 Applied Clinical Radiography I | 2 | 0-16
526-106 Radiographic Procedures II | 4 | 3-2
526-108 Applied Clinical Radiography II | 2 | 0-16
526-109 Applied Clinical Radiography III | 1 | 0-24
526-110 Applied Clinical Radiography IV | 2 | 0-24
526-114 Introduction to Cross-Sectional Anatomy: Radiography | 3 | 3-0
526-113 Registry Review | 3 | 3-0
526-112 Applied Clinical Radiography V | 2 | 0-24
526-115 Methods of Patient Care | 2 | 2-0
526-116 Special Imaging | 2 | 2-0
526-117 Principles of Radiographic Pathology | 3 | 3-0
526-118 Radiation Physics | 3 | 3-0
526-120 Radiographic Film Evaluation | 2 | 2-3
526-121 Computerized Radiology Systems | 3 | 3-0

TOTAL CREDITS | 70

Course Descriptions

526-101 Introduction to Radiography | 3 Credits
An overview of the educational concepts associated with the profession of medical radiography and its role in healthcare delivery. Topics include general radiography and specialized medical imaging techniques, basic radiation protection, medical terminology, and the legal and ethical considerations of working in the profession of medical radiography. **Prerequisite:** Admission to the Radiography Program

526-102 Radiographic Procedures I | 4 Credits
This course encompasses the radiographic anatomy, positioning and its terminology, image evaluation, and radiographic pathology pertinent to the performance of radiographic examinations of the chest, abdomen, upper and lower extremity/ies, spinal column, and bony thorax. The laboratory portion of this course allows the student to simulate all radiographic examinations to the satisfaction of the instructor before performing procedures on patients. **Prerequisites:** 526-101 Introduction to Radiography, 526-115 Methods of Patient Care

526-103 Principles of Radiographic Exposure | 3 Credits
This course is designed to provide the student with information and theory necessary to produce quality radiographs. Areas discussed include geometric and photographic characteristics of imaging material, x-ray exposure factors, influencing accessories and measurement devices and their application. Topics related to radiographic processing, such as latent image formation, processing chemistry, and film characteristics will also be discussed. **Prerequisites:** 526-102 Radiographic Procedures I, 526-104 Radiation Protection and Biology, 526-105 Applied Clinical Radiography I

526-104 Radiation Protection and Biology | 3 Credits
This course will provide the student with an overview of the principles of radiation protection and the interactions of radiation with living systems. Topics covered will include radiation safety practices for the patient, radiographer, and other personnel; regulatory agencies involved in radiation safety; and the concept of ALARA. Radiation biology topics will include radiation effects in biological molecules and organisms; factors affecting biological response; and acute effects of radiation. **Prerequisites:** 526-101 Introduction to Radiography, 526-115 Methods of Patient Care

526-105 Applied Clinical Radiography I | 2 Credits
In this course students apply information learned in the classroom to the actual practice of Clinical Radiography. Under the guidance of designated clinical instructors and staff technologists, students perform radiographic procedures on actual patients and are evaluated on the various aspects of clinical performance. The first clinical course is designed to introduce the radiography student to the clinical environment and allows for the performance of radiographic procedures of the chest, abdomen, and upper and lower extremity. **Prerequisites:** 526-101 Introduction to Radiography, 526-115 Methods of Patient Care

526-106 Radiographic Procedures II | 4 Credits
This course encompasses the radiographic anatomy, positioning, image evaluation, positioning terminology, and radiographic pathology pertinent to the performance of radiographic examinations of the alimentary canal, biliary system, urinary system and skull. The laboratory portion of this course allows students to simulate all radiographic examinations to the satisfaction of the instructor before performing procedures on patients. **Prerequisites:** 526-102 Radiographic Procedures I, 526-104 Radiation Protection and Biology, 526-105 Applied Clinical Radiography I

526-108 Applied Clinical Radiography II | 2 Credits
In this course students apply information learned in the classroom and from the first clinical course to the actual practice of Clinical Radiography. Under the guidance of designated clinical instructors and staff technologists, students perform radiographic procedures on actual patients and are evaluated on the various aspects of clinical performance. The second clinical course allows for the performance of radiographic procedures of the spine and surrounding structures, bony thorax, gastrointestinal tract, biliary and urinary systems and skull. **Prerequisites:** 526-102 Radiographic Procedures I, 526-104 Radiation Protection and Biology, 526-105 Applied Clinical Radiography I

526-109 Applied Clinical Radiography III | 1 Credit
In this course students continue to apply information learned in the classroom and previous clinical courses to the actual practice of Clinical Radiography. Under the guidance of designated clinical instructors and staff technologists, students perform radiographic procedures on actual patients and are evaluated on the various aspects of clinical performance. The third clinical course allows for performance of portable and surgical radiography, trauma and emergency radiography, and continued experience in general radiographic procedures. **Prerequisites:** 526-103 Principles of Radiographic Exposure, 526-106 Radiographic Procedures II, 526-108 Applied Clinical Radiography II
526-110 Applied Clinical Radiography IV  2 Credits
In this course students continue to apply information learned in the classroom and previous clinical courses to the actual practice of Clinical Radiography. Under the guidance of designated clinical instructors and staff technologists, students perform radiographic procedures on actual patients and are evaluated on the various aspects of clinical performance. The fourth clinical course allows for continued experience in general radiographic procedures as well as an introduction to specialty areas of medical imaging. Prerequisites: 526-109 Applied Clinical Radiography III, 526-120 Radiographic Film Evaluation

526-112 Applied Clinical Radiography V  2 Credits
In the terminal clinical education course, students complete the process of becoming competent in all entry-level radiographic procedures. After completion of all clinical education requirements for graduation, radiography students are permitted to request additional clinical experiences in specialty areas of medical imaging. Prerequisites: 526-110 Applied Clinical Radiography IV, 526-118 Radiation Physics

526-113 Registry Review  3 Credits
This course is a review of all material covered during the course of the two years training for the purpose of preparing for the national certifying examination prepared by the American Registry of Radiologic Technologists. Emphasis is placed on the weak areas of the individual students. Simulated registry examinations are also utilized. (Suggested elective). Prerequisites: 526-110 Applied Clinical Radiography IV, 526-116 Special Imaging, 526-118 Radiation Physics, (or permission of the Radiography Coordinator)

526-114 Introduction to Cross-Sectional Anatomy  3 Credits
An overview of the visualization of anatomical structures of the body as seen utilizing cross sectional medical imaging modalities such as computed tomography (CT scan), and magnetic resonance imaging (MRI). Anatomical structures will be studied in the axial, sagittal, and coronal body planes. Prerequisites: 526-120 Radiographic Film Evaluation, 526-109 Applied Clinical Radiography III, OR Permission of the Radiography Coordinator

526-115 Methods of Patient Care  2 Credits
An overview of the principles and practices of patient care used in radiography. Topics will include proper history taking, measuring vital signs, aseptic and sterile technique, considerations of using contrast media, and emergency care pertinent to the handling and care of patients within the radiology department. Prerequisite: Admission to the Radiography Program

526-116 Special Imaging  2 Credits
This course encompasses the special radiographic procedures performed as part of general radiography including myelography, arthrography, hysterosalpinography, sialography, venography, mammography, and lymphangiography. Topics related to special imaging equipment such as digital image processing, computed tomography, magnetic resonance imaging and quality assurance testing will be explored. Prerequisites: 526-109 Applied Clinical Radiography III, 526-120 Radiographic Film Evaluation

526-117 Principles of Radiographic Pathology  2 Credits
This course is designed to provide the student with the basic aspects of disease and its effect on the various body systems. This course also emphasizes the effect disease has on the performance of radiographic and radiologic procedures and how pathological conditions can be identified radiographically. Prerequisites: 526-110 Applied Clinical Radiography IV, 526-116 Special Imaging, 526-118 Radiation Physics

526-118 Radiation Physics  3 Credits
This course provides the student with an overview of general and radiation physics and introduces the radiographic student to the different radiography equipment found within the Department of Radiography. Topics include the structure of matter, the production and properties of x-rays, and interactions of x-rays with matter, magnetism, and electro-magnetism, x-ray tubes, x-ray machine circuitry, and specialized medical imaging equipment. Prerequisites: 526-109 Applied Clinical Radiography III, 526-120 Radiographic Film Evaluation

526-120 Radiographic Film Evaluation  2 Credits
In this course, the student learns to critically evaluate radiographic images. A Systematic approach to radiographic evaluation that includes minimum standards for acceptable image quality, as well as thorough critique of photographic and geometric properties, or other factors that affect the quality of the finished radiograph. Students will critique finished radiographs against established evaluation criteria, and suggest measures for improvement. Prerequisites: 526-103 Principles of Radiographic Exposure, 526-106 Radiographic Procedures I, 526-108 Applied Clinical Radiography II

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-195 Written Communication  3 Credits
801-196 Oral/Interpersonal Communication  3 Credits
806-177 General Anatomy & Physiology  4 Credits
806-179 Advanced Anatomy and Physiology  4 Credits
809-195 Economics  3 Credits
809-196 Introduction to Sociology  3 Credits
809-198 Introduction to Psychology  3 Credits

For the most current schedule information, visit www.blackhawk.edu
The Management Development Program is designed for people interested in acquiring or improving managerial or supervisory skills. Whether your goal is to be more efficient and effective in your present job or to move in a new career direction, the Management Development Program will give you competitive skills for the future, using the state-of-the-art management tools: Project Management; Leadership; Quality; Managing Diversity and Change; Safety Issues; Problem-Solving; Supervision; and Legal Issues.

The Management Development Accelerated Program is intended for working adults whose knowledge and expertise become important parts of the learning process. This accelerated learning format relies exclusively on “teams” to support each other throughout the cycle. These teams of learners share a common purpose and collaborate together to acquire competencies which are immediately applicable to employment environments. As a result, the degree completion times are faster and more directly transferred to careers. Anyone interested in this learning format is encouraged to join the next cycle which will start soon.

**Program Outcomes—**
**Upon completion of this program, you will be able to:**
- Perform the role and responsibility of an effective supervisor
- Apply the principles of problem solving and working effectively in teams
- Demonstrate effective communications techniques relating to interviewing, training, selecting, and evaluating employee performance
- Demonstrate effective leadership skills
- Assess organizational structures and behaviors, and focus on the changes and challenges of the organization
- Analyze and apply the fundamentals of Total Quality Management
- Demonstrate and evaluate the importance of safety issues in the workplace
- Apply the concepts of labor relations and legal issues to management and labor
- Perform basic budgeting and financial tasks proficiently
- Perform an effective business presentation in the work environment
- Demonstrate ability to plan, organize and control a project

**Graduates from this program have found employment as:**
- Associate Manager
- Materials Manager
- Team Leader
- Project Coordinator
- Quality Assurance Supervisor
- Club Manager
- Labor Relations Manager
- Human Resources Representative

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**Helpful High School Courses:**
- Computer Skills
- Written/Oral Communications
- Business Education
- DECA or FBLA Membership

**Course Name** | **Credits** | **Lec-Lab**
--- | --- | ---
Technical Studies Courses
102-160 Business Law | 3 | 0-0
196-191 Supervision | 3 | 0-0
196-113 Organizational Development | 3 | 0-0
196-135 Team Building - Problem Solving | 3 | 0-0
196-192 Managing for Quality | 3 | 0-0
196-193 Human Resource Management | 3 | 0-0
196-190 Leadership Development | 3 | 0-0
196-105 Safety in the Workplace | 3 | 0-0
196-104 Legal Issues | 3 | 0-0
196-111 Project Management | 3 | 2-2
196-112 Applications of Technology | 3 | 0-0
196-114 Fundamentals of Budget Analysis | 3 | 0-0
804-117 Business Math | 3 | 0-0

General Education Courses
801-195 Written Communication | 3 | 0-0
801-196 Oral/Interpersonal Communication | 3 | 0-0
804-189 Introductory Statistics | 3 | 0-0
809-166 Introduction to Ethics: Theory & Application | 3 | 0-0
809-172 Race, Ethnic & Diversity Studies | 3 | 0-0
809-195 Economics | 3 | 0-0
809-198 Introduction to Psychology | 3 | 0-0

Recommended Electives
103-106 Introduction to MS Office | 3 | 0-0
104-130 Fundamentals of Customer Service | 3 | 0-0

**TOTAL CREDITS** | **66**

You can receive an Associate Degree in the following two formats to fit your schedule:

**Traditional Management Development**
- Classes typically meet once a week during the day or evening and follows the traditional college calendar (Aug.-May).
- Completion of degree usually within 3-4 years.

**Accelerated Management Development**
- Classes meet for four hours a week in the evening, for 6 wks.
- Classes are not bound by the traditional college calendar.
- Teams support each other through the entire management development cycle.
- Students spend less time in class and more time in independent and group study.
- Students may complete degree in less time (2-3 years), but this format requires more commitment.
If you feel stuck in your current position, perhaps you can open some doors by completing a certificate in Management Development. The 33 credit certification can be earned simply by completing up to half of the required courses in the Management Development Associate Degree Program. The 18 credit certificate can be earned by completing five courses from the technical studies category and one General Education course listed in the AAS curriculum. Every enterprise is a people business and with this certificate, you will better understand and be able to perform the necessary skills in supervision, quality, or leadership.

Course Descriptions

102-160 Business Law 3 Credits
This course is designed to provide the student with a working knowledge of law as it relates to the rights and responsibilities of businesses and individuals. Emphasis is placed on torts, contracts, case analysis, ethics, and social responsibility, particularly in the business context.

103-106 Introduction to MS Office 3 Credit
Intended for students with little or no prior computer experience. This course will introduce students to the Microsoft Office Suite and overview many of the core competencies of Outlook, Word, Excel, Access, PowerPoint, and Explorer. Students will develop the use of technology for both problem solving and decision-making and will be expected to learn to use the resources available to search for answer to problems.

104-130 Fundamentals of Customer Service 3 Credits
This course is designed for learners who desire training in the fundamentals of customer service as they relate to business. It introduces core customer service concepts and an overview of the essential skills needed to succeed in any organization. In addition to dealing with internal and external audiences, specific topics include: listening techniques, verbal and nonverbal communication, dealing with various customer types, use of technology, handling a variety of complex customer situations, as well as an overview of careers within the customer service industry.

196-104 Legal Issues 3 Credits
Students will thoroughly explore the issues surrounding the employee/employer relationship (interviewing, hiring, promotion, discipline, termination) including: discrimination, privacy, wrongful discharge, and organized labor. Student will understand the context of the laws by examining the history of American labor. Student will identify employment issues currently being defined by the court system. Student will apply such knowledge to their workplace as a manager to minimize employer liability.

196-105 Safety in the Workplace 3 Credits
Identifies the supervisor’s responsibility for maintaining a safe, productive workplace. Includes skills used to communicate and enforce rules and procedures, train workers, and represent the interest of both the organization and employees.

196-111 Project Management 3 Credits
Learners will recognize the role of projects and the importance of project management in the current business environment.

Learners will develop successful proposals, plan, schedule, and budget a project. Learner will use computer software to assist them in controlling the progress of the project. Learner will acknowledge firsthand the importance of people skills in managing a project.

196-112 Applications of Technology 3 Credits
This course focuses on the utilization of multimedia to design, develop, and deliver, effective presentations to the work environment.

196-113 Organizational Development 3 Credits
Applies the personal leadership qualities identified in the Leadership Development course to the supervisor’s role. Focus is placed on: using leadership theories, delegating tasks, leading the group to a vision, managing conflict, influence organizational culture, and related topics that affect the leader’s role in the organization.

196-114 Fundamentals of Budget Analysis 3 Credits
The learner analyzes the fiscal components of a business by evaluating financial statements and annual reports that are relevant to the supervisor and decision-making. Each learner will evaluate and review ratios, trends, and develop a budget, and monitor the results. This course is a practical hands-on approach to interpreting accounting and financial reports as a non-accountant.

196-135 Team Building/Problem Solving 3 Credits
Learner will understand the significance of teams in today’s business organizations. Learner will practice facilitation tools and conflict resolution techniques. Problem solving strategies and team building activities will be introduced during an in-class team simulation.

196-190 Leadership Development 3 Credits
Designed to assist individuals to apply leadership skills effectively in any organizational structure. Emphasis is placed on leadership and employee involvement strategies. Focus is on the role of the supervisor in identifying direction, aligning the organization, empowering people and teams, modeling trustworthiness, balancing the needs of all stakeholders, and optimizing the allocation resources.

196-191 Supervision 3 Credits
Designed to help participants build the skills required to effectively direct the work of others within the structure of organization. Emphasis is placed on the human behavioral aspect of supervision. Focus is on application of managerial process to the daily job of a supervisor.

196-192 Managing for Quality 3 Credits
Examines 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 systems, how to interact with customers, and data collection tools for continuous improvement will be explored.

196-193 Human Resources Management 3 Credits
Establishes a foundation for development of employee effectiveness by focusing on the supervisor’s role in understanding, communicating, and implementing organizational policies. Focus is placed on: employee hiring; orientation and training; performance management; motivating employees and related topics that affect the supervisor’s work group.
For more information, call: (608) 758-6900

SUPERVISORY MANAGEMENT
(Management Development)  

General Education Course Requirements:
(see course descriptions on pages 33-37)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
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<tr>
<td>801-196</td>
<td>Oral/Interpersonal Communication</td>
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<td>3</td>
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<tr>
<td>809-195</td>
<td>Economics</td>
<td>3</td>
</tr>
<tr>
<td>809-198</td>
<td>Introduction to Psychology</td>
<td>3</td>
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</tbody>
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NEW PROGRAM!

Completing the Technical Communication program can help you find a career as a professional writer. Technical communicators are traditionally known for making technical information easy to understand, but they also write for a variety of audiences and purposes. With a degree in Technical Communication, graduates may find employment writing marketing materials, web site text, sales promotion copy, newsletters, project proposals, grants, operating and maintenance manuals, and more. In short, students in the Technical Communication program will learn to become writers—writers trained to produce a broad range of documents targeted to a variety of business needs. In addition to impeccable writing and editing skills, students will develop valuable layout and design skills, making documents visually attractive and user-friendly. Students will learn to apply these skills to paper-based documents, as well as documents designed for the electronic medium. Strong writers are needed in all kinds of businesses. Their ability to clearly communicate key information helps companies grow and succeed. If you love to write, there’s a place for you in business and industry.

This is a shared program with Western Technical College (WTC) in La Crosse, WI. Students apply to WTC and enroll in program courses taken online through WTC and in traditional classroom or alternative delivery formats through BTC. The degree is issued through WTC.

Program Outcomes

- Demonstrate effective reading, writing, speaking and listening skills
- Demonstrate mathematical skills
- Apply scientific concepts
- Identify and solve problems, applying knowledge in a critical, creative and ethical manner
- Recognize the value of self and others in order to be a productive member of a diverse global society (for example, function effectively in a team environment)
- Evaluate and use information technology effectively
- Effectively edit technical documents
- Prepare journalistic documents appropriate to a business setting (e.g., newsletters and press releases) in electronic and paper-based media

TECHNICAL COMMUNICATIONS

Graduates from this program may seek employment as:

- Technical Writer
- Author/Writer
- Desktop Publisher
- Editor

Course Name Credits Lec-Lab

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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</thead>
<tbody>
<tr>
<td>103-106</td>
<td>Introduction to MS Office</td>
<td>3</td>
<td>BTC</td>
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<tr>
<td>104-102</td>
<td>Marketing Principles</td>
<td>3</td>
<td>BTC</td>
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<tr>
<td>104-118</td>
<td>Web &amp; Design Concepts</td>
<td>2</td>
<td>BTC</td>
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<tr>
<td>201-112</td>
<td>Design Fundamentals</td>
<td>3</td>
<td>BTC</td>
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<tr>
<td>699-101</td>
<td>Editing for Style &amp; Mechanics</td>
<td>3</td>
<td>Online</td>
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<td>801-195</td>
<td>Written Communication</td>
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<td>BTC</td>
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<td>801-198</td>
<td>Speech</td>
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<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
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<td>699-110</td>
<td>Journalism in the Workplace(^1)</td>
<td>3</td>
<td>Online</td>
</tr>
<tr>
<td>699-112</td>
<td>Professional Business Writing(^1)</td>
<td>3</td>
<td>Online</td>
</tr>
<tr>
<td>699-113</td>
<td>HTML/Web Programming for Writers</td>
<td>3</td>
<td>Online</td>
</tr>
<tr>
<td>801-197</td>
<td>Technical Reporting</td>
<td>3</td>
<td>BTC</td>
</tr>
<tr>
<td>809-196</td>
<td>Intro to Sociology</td>
<td>3</td>
<td>BTC</td>
</tr>
<tr>
<td>809-198</td>
<td>Intro to Psychology</td>
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<td>Estimated Semester Total</td>
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<thead>
<tr>
<th>Semester 3</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>203-125</td>
<td>Digital Photography</td>
<td>3</td>
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<tr>
<td>699-114</td>
<td>Writing - The Electronic Medium(^1)</td>
<td>3</td>
<td>Online</td>
</tr>
<tr>
<td>699-116</td>
<td>Procedure Manuals(^1)</td>
<td>3</td>
<td>Online</td>
</tr>
<tr>
<td>104-144</td>
<td>Marketing Communications</td>
<td>3</td>
<td>BTC</td>
</tr>
<tr>
<td>804-189</td>
<td>Introductory Statistics</td>
<td>3</td>
<td>BTC</td>
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<table>
<thead>
<tr>
<th>Semester 4</th>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>699-118</td>
<td>Learning and Teaching Online(^1)</td>
<td>3</td>
<td>Online</td>
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<tr>
<td>809-166</td>
<td>Intro to Ethics</td>
<td>3</td>
<td>BTC</td>
</tr>
<tr>
<td>699-122</td>
<td>Practicum in Technical Comm(^1)</td>
<td>3</td>
<td>BTC</td>
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<tr>
<td>809-195</td>
<td>Economics</td>
<td>3</td>
<td>BTC</td>
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<tr>
<td>999-999</td>
<td>Elective Course</td>
<td>3</td>
<td>BTC</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 66

\(^1\)Course has prerequisites
**Course Descriptions**

**699-101 Editing for Style & Mechanics**  3 Credits
This course is designed to prepare learners to edit technical documents for style and mechanics by improving their knowledge of basic standard American English usage, punctuation, grammar, sentence structure, and proofreading to technical documents as a foundation for success in the Technical Communication Associate Degree program. (Students need a B or better to continue in the Technical Communication Program.)

**699-110 Journalism in the Workplace**  3 Credits
This course focuses on journalistic writing as it is typically applied in a business setting. Students will gather information, apply Associated Press Stylebook guidelines for newswriting, write articles for publication, design layouts for newsletters, conduct interviews and publish newsletters (paper copy and online). **Prerequisite: 801-195 Written Communication**

**699-112 Professional Business Writing**  3 Credits
Building on the writing skills developed in Written Communication, this course prepares students for the communication skills required in the workplace. In addition to studying intercultural communication, students write documents typical of the corporate environment, including job search materials, good-news, bad-news, and persuasive messages, formal reports, and learn about simple grant proposals. **Prerequisite: 801-195 Written Communication**

**699-113 HTML/Web Programming for Writers**  3 Credits
Technical Communicators need an awareness of the potential and constraints of web programs and how they affect writing in a web environment. Topics covered are web history, website organization, HTML, graphics use, page and site design, with a brief look at XML, CSS, and JavaScript. Students use Notepad and a web editor to create code, and an FTP program to publish. Students produce a website to showcase future web work. **Prerequisite: 801-195 Written Communication**

**699-114 Writing for the Electronic Medium**  3 Credits
Students will use digital cameras to create digital images. Basic image manipulation and output will be taught using Photoshop software. Topics and projects include depth of field, production planning, studio flash photography and producing a number of powerpoint presentations. Before beginning this class, you should have a working knowledge of your computer and its operating systems. **STUDENTS MUST PROVIDE THEIR OWN CAMERA.**

**699-116 Procedure Manuals**  3 Credits
This course focuses on the preparation of procedure manuals. Students will work through the following process for creating a manual: analyze needs, prepare a project schedule, create a design, prepare a draft, conduct user tests and reviews, make revisions, obtain edits, make revisions, prepare the document for production, and close out the project. Students will work as part of a team that may include outside clients and/or vendors. **Prerequisite: 801-197 Technical Reporting**

**699-118 Learning and Teaching Online**  3 Credits
Production of training materials is a growing facet of the technical communicator’s work. Learning and Teaching Online provides instruction in the tools used for online training, production of webbed instructional writing, conversion of printed materials, and communication strategies used in an online learning environment. It identifies models for efficient and effective training and provides practice with online instructional skills. **Prerequisite: 699-114 Writing for the Electronic Medium or Instructor Consent**

**699-122 Practicum in Technical Comm**  3 Credits
This course provides practical experience working as a technical writer. Students will be assigned to work with, and learn from, an area employer. Specific tasks and focuses will be tailored to the interests of the student and the needs of area employers. Evaluation of the student’s performance will be a cooperative effort between the employer and the instructor. **Prerequisites: 699-101 Editing for Style & Mechanics, 699-110 Journalism for Technical Writers, 699-112 Professional Business Writing, 699-114 Writing for the Electronic Medium and 699-116 Procedure Manuals**

**201-112 Design Fundamentals**  3 Credits
Creative ability of each student will be directed toward the layout, design and production of graphic design related projects. Through lectures, demonstrations and lab assignments, students will create and design projects utilizing a variety of materials and techniques.

**General Education Course Requirements:**
(see course descriptions on pages 33-37)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>801-195</td>
<td>Written Communication</td>
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<tr>
<td>801-198</td>
<td>Speech</td>
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<tr>
<td>801-197</td>
<td>Technical Reporting</td>
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<tr>
<td>809-196</td>
<td>Intro to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>809-198</td>
<td>Intro to Psychology</td>
<td>3</td>
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<tr>
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<td>Introductory Statistics</td>
<td>3</td>
</tr>
<tr>
<td>809-166</td>
<td>Intro to Ethics</td>
<td>3</td>
</tr>
<tr>
<td>809-195</td>
<td>Economics</td>
<td>3</td>
</tr>
</tbody>
</table>

For the most current schedule information, visit www.blackhawk.edu
Welding is the most common way of permanently joining metal parts. Heat is applied to the pieces to be joined, melting and fusing them to form a permanent bond. Because of its strength, welding is used to construct and repair parts of ships, automobiles, spacecraft, and thousands of other manufactured products. Welding is used to join beams and steel reinforcing rods when constructing buildings, bridges, and other structures, and also in utilities such as nuclear power plants.

Welding program students advance through each semester in a cohort group, or may choose single process classes. Learning modules progressively build on what has been accomplished in exercises, practical assignments and exams. Students in the morning cohort group must take 442-307 and 442-308 together during the fall semester, and 442-310 and 442-312 together during the spring semester as part of their learning group. Students in the afternoon, evening or Saturday sessions may elect to take one or more process classes.

Learning modules progressively build on what has been accomplished in exercises, practical assignments and exams. For this reason students must take 442-307 and 442-308 together during the fall semester, and 442-310 and 442-312 together during the spring semester as part of their learning group.

Welders may perform manual welding, in which the work is entirely controlled by the welder, or semi-automatic welding, in which the welder uses machinery, such as a wire feeder, to perform welding tasks.

Welders develop those manipulative skills, which are necessary to the welding of joints common to all metal industries. They understand and apply the proper theories of welding, cleaning and fabrication to appropriate shop applications. Welders know how to read blueprints, utilize the necessary tools, and perform the mathematical functions essential to the completion of a project. Welders follow and apply safety practices and procedures as they relate to industrial situations. They are able to understand and communicate technical information related to the profession.

Graduates of the program can expect to be proficient in welding structural steel, aluminum, stainless steel and other metals. They will develop the ability of blueprint reading, sketching, and layout for welding. Major job skills learned will include: Oxygen-Fuel Cutting (OFC), Plasma Arc Cutting (PAC), Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Flux Core Arc Welding (FCAW), Metal Core Arc Welding (MCAW), and Gas Tungsten Arc Welding (GTAW).

Program Outcomes—
Upon completion of this program, you will be able to:

• Integrate established safety protocol
• Set-up, repair, and maintain tools and equipment using established procedures
• Operate power tools and equipment using established processes and procedures
• Perform welding, cutting, and allied processes using established procedures

Career Outlook:
In construction, wholesale trade, and repair services, employment of welders and cutters will grow more rapidly than most other occupations. The level of construction is expected to expand, as is the number of metal products needing repair, increasing the need for welding and cutting.

Graduates from this program have found employment as:

• Production Line Welder
• Welder Helper
• Welder Tacker
• Fabrication Helper
• Fabricator
• Machine Maintenance Helper
• Union or Nonunion Apprentice in Boilermaker, Steamfitter or Iron worker trades

Note: Short-term certificate options are also available.

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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</thead>
<tbody>
<tr>
<td>420-310</td>
<td>Machine Shop Fundamentals</td>
<td>1</td>
<td>0 - 2</td>
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<tr>
<td>421-380</td>
<td>Blueprint Reading (Welding)</td>
<td>2</td>
<td>3 - 0</td>
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<tr>
<td>442-307</td>
<td>Gas Metal Arc Welding (GMAW)</td>
<td>5</td>
<td>2 - 8</td>
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<tr>
<td>442-308</td>
<td>Flux Cored Arc Welding (FCAW)</td>
<td>5</td>
<td>2 - 8</td>
</tr>
<tr>
<td>631-120</td>
<td>Industrial Computer Applications</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>804-306</td>
<td>Shop Math I</td>
<td>2</td>
<td>3 - 0</td>
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<table>
<thead>
<tr>
<th>Semester 2</th>
<th>Course Name</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>442-305</td>
<td>Metal Fabrication</td>
<td>2</td>
<td>1 - 3</td>
</tr>
<tr>
<td>442-310</td>
<td>Shielded Metal Arc Welding (SMAW)</td>
<td>5</td>
<td>2 - 8</td>
</tr>
<tr>
<td>442-312</td>
<td>Gas Tungsten Arc Welding (GTAW)</td>
<td>5</td>
<td>2 - 8</td>
</tr>
<tr>
<td>801-311</td>
<td>Communication</td>
<td>2</td>
<td>3 - 0</td>
</tr>
<tr>
<td>804-308</td>
<td>Shop Math II</td>
<td>2</td>
<td>3 - 0</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 34

Morning courses must be taken concurrently as part of the learning cohort group. Afternoon, evening and Saturday classes may be taken individually or together.

Course Descriptions

420-310 Machine Shop Fundamentals 1 Credit
This course is designed to acquaint the student with machine shop bench work, drill presses, pedestal grinders, and information on basic power machines. The student will have an opportunity to use and understand tools such as files, hacksaws, measuring devices, band saws, drill press, and grinders.

421-380 Blueprint Reading (Welding) 2 Credits
This course is designed to help the student acquire the ability to visualize spatial relationships between two and three view drawings. Introduction to machine and welding terminology and concepts is acquired by reading a series of prints. A study of welding symbols is covered. The course emphasizes training in visualization and factual information as a means of gaining a working knowledge of the interpretation of prints related to the welding or fabrication industry.
442-305 Metal Fabrication 2 Credits
This course is designed to provide students with the knowledge and skills required to fabricate simple projects or parts of a project found on engineering drawings. Metal fabrication will focus on the planning and execution of projects using the knowledge and skills already acquired during the first semester of the Welding Program. Written and illustrated descriptions by the student of how the fabricated project was accomplished will also be included in the units of instruction. The use and care of fabricating hand tools, along with safety, is stressed.

442-307 Gas Metal Arc Welding (GMAW) 5 Credits
This is an introductory course designed for students who desire to learn the theories and skills of welding. Students will learn to make sound welds in all positions with the Gas Metal Arc Welding process (GMAW) on mild steel in all positions using short circuiting transfer mode. Students will also make sound welds in the Spray Transfer Mode on mild steel in the flat and horizontal positions. Industry standards and codes will be explored as visual and destructive testing of welded samples are carried out by students as an introduction to aspects of weld quality assurance and weld quality control. Health hazards and safety rules are discussed along with grinding, shearing, joint design and welding certification procedures. Students will have an opportunity to have their work samples evaluated and qualified to AWS D1.1 Structural welding code and AWS SENSE standards.

442-308 Flux Cored Arc Welding (FCAW) 5 Credits
This is an introductory course designed for students who desire to learn the theories and skills of welding. Students will learn to make sound welds in all positions with the Flux Cored Arc Welding process (FCAW) and Metal Cored Arc Welding Process (MCAW) on mild steel in all positions using short circuiting, spray and semi-spray transfer modes. Industry standards and codes will be explored as visual and destructive testing of welded samples are carried out by students as an introduction to aspects of weld quality assurance and weld quality control. Health hazards and safety rules are discussed along with grinding, shearing, joint design and welding certification procedures. Library research, written assignments and tests, basic metallurgy and certification preparation are all units of instruction involved in the above area. Students will have an opportunity to have their work samples evaluated and qualified to AWS D1.9 Sheet metal welding code and AWS SENSE standards.

442-312 Gas Tungsten Arc Welding (GTAW) 5 Credits
This is an introductory course designed for students who desire to learn the theories and skills of welding. Students will learn to make sound welds with the Gas Tungsten Arc Welding Process (GTAW) on mild steel, stainless steel and aluminum alloys. Industry standards and codes will be explored as visual and destructive testing of welded samples are carried out by students as an introduction to aspects of weld quality assurance and weld quality control. Health hazards and safety rules are discussed along with weldability, tungsten electrode selection, shielded gases, grinding, shearing, joint design and welding certification procedures. Library research, written assignments and tests, basic metallurgy and certification preparation are all units of instruction involved in the above areas. Students will have an opportunity to have their work samples evaluated and qualified to AWS D1.9 Sheet metal welding code and AWS SENSE standards.

631-120 Industrial Computer Applications 3 Credits
The Industrial Computer Applications course is designed to meet the need for foundational computer training in industrial occupations. Using a self-paced, modular format, the ICA course is flexible to meet the needs of students with varying backgrounds in computer usage. Topics covered include: PC parts identification (including communications ports), operating system usage, file management, word processing, spreadsheet usage, and Internet usage.

General Education Course Requirements:
(see course descriptions on pages 33-37)
801-311 Communication 2 Credits
804-306 Shop Math I 2 Credits
804-308 Shop Math II 2 Credits

Library research, written assignments and tests, and basic metallurgy and certification preparation are all units of instruction involved in the above area.

ACCOUNTING ASSISTANT CERTIFICATE (32 cr.)
Students may choose to receive a certificate as an Accounting Assistant upon satisfactory completion of the first two semesters of the Accounting Associate Degree Program. With this certificate, you will be better prepared for entry level positions related to accounts receivable, accounts payable, payroll, bookkeeping, and other related office functions.

Basic Engine Performance & Air Conditioning Certificate (12 cr.)
This certificate prepares the student to perform preventive maintenance, diagnostics, and repairs on automotive vehicles and light trucks. Areas of study include the diagnosis and repair of battery, starter, and charging systems; mechanical and electrical systems; engine ignition systems; and heating and air conditioning systems. Students will learn the necessary technical skills and essential worker traits to secure and retain employment in the automotive service and related fields. The automotive technician program is a NATEF-certified program and is recognized nationally for its excellence.

For the most current schedule information, visit www.blackhawk.edu
CERTIFICATES/SPECIAL PROGRAMS

Brake, Alignment, & Lube Certificate (13 cr)
This certificate prepares the student to perform preventive maintenance, diagnostics, and repairs on automotive vehicles and light trucks. Areas of study include the diagnosis and repair of: braking systems (except anti-lock brakes), steering and suspension systems, all-wheel alignment, and transmission systems. Students will learn both basic and advanced technical skills and essential worker traits to secure and retain employment in the automotive and related fields.

Business Technology Certificate (34 cr)
The Business Technology one-year certificate is designed to prepare tomorrow’s assistants who want to position themselves to become valued members of the workplace team. Students will become respected assistants who are equipped with technology, communication, and professional office skills. This certificate consists of the first-year courses from the Administrative Assistant Associate Degree program. Credits earned in this program may be applied to the 2-year associate degree if desired.

Refer to the Blackhawk Technical College Catalog for the Administrative Assistant Associate Degree program description & courses.

Semester 1

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
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<tbody>
<tr>
<td>106-108 Proofreading and Editing</td>
<td>1</td>
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<tr>
<td>106-145 Information Technology Essentials</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>106-146 Word Processing Applications</td>
<td>3</td>
<td>1 - 4</td>
</tr>
<tr>
<td>106-157 Administrative Assistant Fundamentals</td>
<td>1</td>
<td>1 - 0</td>
</tr>
<tr>
<td>196-107 Professional Profiles</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>801-195 Written Communication</td>
<td>3</td>
<td>3 - 0</td>
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<tr>
<td>Elective 1 (106-131 Keyboarding Applications, if needed)</td>
<td>3</td>
<td>1 - 4</td>
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Semester 2

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<tr>
<th>Course Name</th>
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<tbody>
<tr>
<td>106-129 Business Filing</td>
<td>1</td>
<td>0 - 2</td>
</tr>
<tr>
<td>106-133 Document Formatting</td>
<td>3</td>
<td>1 - 4</td>
</tr>
<tr>
<td>106-153 Administrative Office Procedures</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>106-159 Business Spreadsheets</td>
<td>3</td>
<td>2 - 2</td>
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<tr>
<td>106-165 Business Presentations</td>
<td>1</td>
<td>0 - 2</td>
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<td>801-196 Oral/Interpersonal Communication</td>
<td>3</td>
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<tr>
<td>804-106 Introduction to College Mathematics</td>
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<tr>
<td>804-110 OR Elementary Algebra with Applications</td>
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TOTAL CREDITS (minimum) 34

1Course has prerequisites.
2Recommended Electives:
102-160 Business Law 3 3 - 0
106-131 Keyboarding Applications 3 1 - 4
106-140 Keyboarding 1 0 - 2
106-143 Skillbuilding 1 0 - 2

All courses in this certificate qualify for the Administrative Assistant A.A.S. Degree. This certificate is offered at both Central Campus and the Monroe Campus.

*Interested students should contact a counselor/program advisor to take a keyboarding proficiency assessment prior to registration. Students scoring over 40 wpm (with 5 minutes with 5 or fewer uncorrected errors) should enroll in Document Formatting or Keyboarding Applications. Students scoring 30 – 40 wpm should enroll in Keyboarding Applications. Students scoring below 30 wpm (3 minutes with 3 or fewer uncorrected errors) should begin with Keyboard and/or Skillbuilding courses.

Brake, Alignment, and Lube Certificate (13 cr)

Community Based Residential Facility (CBRF) Caregiver

The Community Based Residential Facility (CBRF) caregiver course is a 46 hour video-based course designed to provide instruction in individual CBRF facilities. The course presents resident rights, client groups’ needs, responding to challenging behaviors, standard precautions, meeting dietary needs and administering medications. This course meets the requirements of Administrative Code HFS83 and has been approved by the Wisconsin Department of Health and Family Services. It is targeted toward elderly and dementia populations.

Individual student fees include:

- Block I- Client Related Training Advanced Age
- Block II- Dementia and Developmental Disabilities
- Block III- Standard Precautions
- Block III- Medications
- Block III- Dietary

Annual video rental fee and one workbook to be kept on site:

- Student testing (written and skill performance)
- Certificates of completion
- Training documents
- Instructor support
- Program updates

*For more information on dates and fees please call 743-4426.
**This course does not include Fire Safety, First Aid, and Choking instruction. These instructional aspects are in a separate course. For information call Loren Lippincott at 757-7709.

Computer Hardware Support Certificate (15 cr)*

This certificate program provides the extensive hands-on training with hardware, software, and operating systems needed to keep PC-based systems operational and functioning at peak efficiency. These courses provide the basic knowledge, attitudes, skills, and habits needed to guide and implement the systematic enhancement of PC based systems as the technology continues to evolve. Students will learn to: assemble/disassemble a complete PC; diagnose and repair hardware/software problems; install and configure PC hardware; resolve memory conflicts; install, configure, optimize and troubleshoot hardware, software, and operating systems.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td>631-100 Microcomputer Fundamentals</td>
<td>3</td>
<td>varies</td>
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<tr>
<td>631-101 Troubleshooting Operating Systems</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>450-315 Customer Service Fundamentals</td>
<td>2</td>
<td>varies</td>
</tr>
<tr>
<td>631-102 Microcomputer Hardware Service</td>
<td>3</td>
<td>varies</td>
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<tr>
<td>450-316 Microcomputer Software Service</td>
<td>2</td>
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</tr>
<tr>
<td>450-317 Troubleshooting Microcomputers</td>
<td>2</td>
<td>varies</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 15

* Participants must complete BTC’s program admission process for certain certificates. Prerequisite: Must be registered in the Computer Service Technician Program.

For more information, call: (608) 758-6900
**Basic Corrections Academy**

**Spring Semester—Certificate/Special Program**

The Basic Corrections Academy is a program that provides the curriculum required for correctional officer certification with the Wisconsin Department of Justice, Law Enforcement Standards Board. The program is a 160 hour course that focuses on the philosophical and tactical principles of working as a correctional officer in Wisconsin. The course includes a skills-assessment examination prior to completion to verify student competence. Upon the completion of the program, a student will be eligible for certification with the Wisconsin Department of Justice, Law Enforcement Training and Standards Board.

**Criminal Justice—Full-Time Law Enforcement Academy (16 cr.)**

**Spring/Fall Semester**

The Law Enforcement Basic Recruit Academy is a program for those that are interested in a career in law enforcement. The program is thirteen consecutive weeks totaling 520 instructional hours. Upon completion of the program, a student will be eligible for certification with the Wisconsin Department of Justice, Law Enforcement Training and Standards Board. The program focuses on both the theories of law enforcement and is coupled with the tactical skills necessary to be a police officer, deputy sheriff, or sworn member of law enforcement in Wisconsin.

**Part-Time Law Enforcement Academy (16 cr.)**

**Fall Semester**

The part-time Law Enforcement Basic Recruit Academy is a program for those that are interested in a career in law enforcement yet may have other life commitments which prevent them from attending a traditional full-time program. The program is a full year program consisting of 520 instructional hours. Upon completion of the program, a student will be eligible for certification with the Wisconsin Department of Justice, Law Enforcement Training and Standards Board. The program focuses on both the theories of law enforcement and is coupled with the tactical skills necessary to be a police officer, deputy sheriff, or sworn member of law enforcement in Wisconsin. The program meets Tuesday and Thursday nights from 6:00 p.m. until 10:00 p.m. The program also meets every-other Saturday as scheduled.

**Certification Track**

**Basic Law Enforcement Academy (12 cr.)**

**Summer Semester**

The certification track, Basic Law Enforcement Recruit Academy is a program for those that are interested in a career in law enforcement and have previously completed the certification track courses and have obtained an Associate Degree in Criminal Justice at Blackhawk Technical College. The program is seven consecutive weeks totaling 256 instructional hours. Upon completion of the program, a student will be eligible for certification by the Wisconsin Department of Justice, Law Enforcement Training and Standards Board. Students that have not completed all of the required prerequisites will not be eligible for the training academy. The program focuses on the tactical skills necessary to be a police officer, deputy sheriff, or sworn member of law enforcement in Wisconsin.

**Civil Engineering Technician**

Offered as a shared program with Gateway Technical College, this program is designed with three different emphases to choose from: Architectural/Structural, Public Works and Survey.

The first year of the program is the same for all three emphases. In the second year, you specialize. The first year allows you to become exposed to and develop a basic understanding regarding the many aspects of the profession.

First year classes are offered both days and evenings. Second year classes are offered mostly evenings and Saturdays (allowing those who have secured jobs to hone their skills and showcase their talents). However, classes are also offered in a NODAL* format--distance education at its best. Classes are taught at Gateway Tech, but students can take the lab in room 1106 on BTC’s Central Campus. Also the use of CDs allow each student to study at their own pace and review at their leisure. Only two classes would need to be taken on-site, which could be done at Gateway’s Elkhorn Campus. Those classes are Land Survey and Conflict Resolution.

**Customer Service Certificate (16 cr.)**

This certificate program includes occupational skills needed to be successful in the world of customer service. Business skills, people skills, technology, personal effectiveness and much more will be explored to help the learner establish a solid customer service foundation for any career. Topical areas included in this short-term certificate are:

- Service Professions
- Business Skills
- Business Software
- Field Study
- Communication
- Interpersonal Assessments

**Course Descriptions**

**104-130 Fundamentals of Customer Service 3 Credits**

This course is designed for learners who desire training in the fundamentals of customer service as they relate to business. It introduces core customer service concepts and an overview of the essential skills needed to succeed in any organization. In addition to dealing with internal and external audiences, specific topics include: listening techniques, verbal and nonverbal communication, dealing with various customer types, use of technology, handling a variety of complex customer situations, as well as an overview of careers within the customer service industry.

**104-131 Relationship Management in Customer Serv. 3 Credits**

Effectively managing relations with customers is critical to any successful customer service operation. Learners will explore strategies to identify customer needs, communicate effectively, and demonstrate professional work attitudes and ethics. Hands-on activities will help develop interpersonal and intrapersonal skills and an appreciation for various cultures and customers.

**104-132 Time Management & Problem Solving in Customer Service 3 Credits**

Learn techniques for prioritizing work, handling multiple tasks, and managing change in this course designed for anyone interested in improving their customer service skills. Participants will also learn how to resolve conflict and improve working relationships with customers and peers.
CERTIFICATES/SPECIAL PROGRAMS

Customer Service Certificate (16 cr.)

104-133 Sales Skills for Customer Service 3 Credits
This course is designed for learners who seek sales related training as it applies to the role of a customer service agent. Concepts such as up selling and cross selling will be discussed as well as basic sales information such as profits and losses, referrals, finding alternative solutions, and use of resources available to customer service personnel.

103-106 Introduction to MS Office 3 Credits
Intended for students with little or no prior computer experience. This course will introduce students to the Microsoft Office Suite and overview many of the core competencies of Outlook, Work, Excel, Access, PowerPoint, and Explorer. Students will develop the use of technology for both problem solving and decision-making and will be expected to learn to use the resources available to search for answer to problems.

106-140 Basic Keyboarding 1 Credit
Students will master the computer keyboard by touch, including the letters and numeric keypad. Computer software is used to begin development of acceptable speed and accuracy levels. Students completing this course may be ready for 106-131 Keyboarding Applications, or may continue to develop their proficiency and keyboarding abilities in Skillbuilding. This course is not required for students who can demonstrate keyboarding skills of 30 words per minute with 3 or fewer uncorrected errors on a 3-minute timing.

Database Management Certificate (15 cr.)

This certificate is designed to prepare information technology professionals through credit-based lifelong learning and continuing education. Students completing the series of courses offered in this certificate will learn skills related to relational database coding, design, and development.

Prior knowledge of programming logic, web development, database concepts, and programming are recommended. Recommended pre-admission skills/requirements include an associate degree in information technology or a minimum of 3 years of related work experience. Learners in this certificate will be expected to have experience with relational database design, at least one procedure programming language and a Visual programming language.

Course Name Credits
152-147 Relational Database Development 3 Credits
152-148 Relational Database Coding 3 Credits
152-162 Object Oriented Systems Analysis 3 Credits
152-163 Relational Database Design 3 Credits
152-160 Object Oriented Design with UML 3 Credits

Healthcare Associate Certificate Program (10 cr.)
The Healthcare Associate Certificate Program is designed meet the changing needs of the healthcare environment. The Healthcare Associate is an emerging team member, cross-trained in both patient care and managing client information, and can function in the roles of Patient Care Associate, Patient Care Technician, Medical Receptionist, Health Unit Coordinator and various other entry level clinical and clerical positions. The Healthcare Associate can practice in various healthcare settings including acute care, long term care and clinics. Topics identified in this program include: the language of medicine and healthcare, customer service in healthcare, the new professional, communication technology, and working with the healthcare team.

To be eligible for the Healthcare Associate Certificate, the graduate will have successfully completed the Skilled Nursing Assistant (SNA) course, as well as the two Healthcare Associate Certificate program courses with a grade of C- or better.

Program Outcomes–
Upon completion of this program, you will be able to:
• Communicate professionally in the Healthcare Environment
• Manage client information
• Transcribe medical orders
• Perform Clerical Procedures of Health Professionals
• Integrate the role of the Healthcare Associate into the Healthcare System

Potential Employment Opportunities
• Patient Care Associate
• Patient Care Technician
• Medical Receptionist
• Health Unit Coordinator
• Unit Clerk

Course Name Credits
510-310 Healthcare Associate Procedures 4 Credits
510-311 Healthcare Associate Externship 1 Credit
543-300 Nursing Assistant 5 Credits

TOTAL CREDITS 10

Physical Examination:
A physical examination must be completed prior to entering the externship portion of the Healthcare Associate Certificate Program.

Criminal History:
In accordance with Wisconsin Caregiver Background law, applicants with criminal history may be denied placement by clinical affiliates. Applicants with criminal history are advised to meet with program faculty or coordinator prior to program entry.

CPR:
All students must provide documentation of current CPR certification for the Health Provider prior to being placed for the externship portion of the HCA certificate program.

Course Descriptions
510-310 Healthcare Associate Procedures 4 Credits
The student will be introduced to the emerging and expanded role of the new healthcare professional including topics related to: the medical environment, communication skills, customer service skills, order processing, and techniques required to perform various clinical functions. Medical terminology, issues of ethical and legal concerns, safety performance of clinical functions and the use of various technologies in delivering clinical care and clerical functions will be the focus.
510-311 Healthcare Associate Externship  1 Credit
Introduces the student to clinical and clerical procedures performed in a various medical settings. The students will integrate the knowledge and skills learned in the classroom in hospitals, long term care facilities and clinics. Clinical and clerical responsibilities will include managing client information and the integration of various clinical procedures in this expanded healthcare delivery role.

543-300 Nursing Assistant (120-Hour Course)  5 Credits
Basic tasks and procedures performed by nursing assistants include bed-making techniques, personal bedside care of the patient, measuring intake and output, caring for patients in isolation, measuring vital signs (temperature, pulse, respirations and blood pressure), and serving and feeding patients.

543-302 Nursing Assistant - Advanced (60-Hour Course)  2 Credits
The purpose of the Nursing Assistant - Advanced course is to build upon the information and skills that were learned in the 120-hour course as well as preparing the student to fulfill in an Acute Care setting.

The Advanced/Acute Care skills will include monitoring blood glucose values; pre and post-op patient care, assisting with sterile procedures, advanced dementia-care certification, CPR certification, as well as basic telemetry and automated vital sign monitoring. Prerequisite: 543-300 Nursing Assistant

Industrial Engineering Certificate (13 cr.)
The Industrial Engineering certificate is a 13-credit certificate designed to train persons in the field of industrial engineering and manufacturing production.

Industrial Engineering Technicians work on problems involving the efficient use of personnel, materials, and machines in the production of goods and services. They are employed in a variety of businesses and industries, including the manufacture of goods and equipment of all kinds, food processing, health care facilities, and many others.

This program is designed with the working student in mind and is offered as independent study. Access to many books and resource materials is provided by BTC. Use of these materials will require frequent visits to the campus. Some on-campus time for study, testing, and use of videotapes, etc., will also be required.

These courses are offered in a self-paced format. Several of the courses are also available in a classroom setting.

<table>
<thead>
<tr>
<th>Semester 1</th>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Engineering Drawings and Measurements</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td></td>
<td>Manufacturing Materials &amp; Processes</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td></td>
<td>Facilities Planning</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td></td>
<td>Industry &amp; Quality Control</td>
<td>3</td>
<td>SP</td>
</tr>
<tr>
<td></td>
<td>Standards and Regulations</td>
<td>1</td>
<td>SP</td>
</tr>
<tr>
<td>TOTAL CREDITS</td>
<td></td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>
CERTIFICATES/SPECIAL PROGRAMS

Lodging & Hospitality Management (33 cr)

Explore the exciting world of hospitality & lodging management in a one-year certificate at Blackhawk Technical College, Janesville, Wisconsin. The employment opportunities are diverse and varied and may fit your interests, skills and personality traits. Contact Blackhawk Technical College to learn more about local hospitality related educational opportunities.

Hospitality related careers include managing food & beverage services, marketing & sales, human resources, housekeeping, uniformed services, security, front office, accounting & financial management, property management, and facilities maintenance & environmental engineering. Blackhawk Technical College is a member of the American Hotel & Lodging Educational Institute.

Lodging managers are responsible for keeping their establishments running efficiently and profitably. They help ensure guests have a pleasant stay and also support business travelers with needed services such as meeting rooms and electronic equipment. Larger hotels hire hundreds of workers and the role of supervision and training are core competencies for management positions in larger properties. Accounting, computer and broad business skills along with a high level of customer service and interpersonal abilities are all critical to success in this occupation. Written and oral communication skills and a desire to work with people are needed to enter this field. Industry certifications are available to students employed in this field and this Blackhawk Technical College certificate provides entry-level skills that can lead to future related certifications.

Occupational Analysis:
Lodging management related positions are expected to grow at a rate of 17% through 2014. These projected job openings include net replacement and new job openings due to growth.

Hotels increasingly emphasize specialized training for their employees. Postsecondary training in hotel, restaurant, or hospitality management is preferred for most hotel management positions; however, a college liberal arts degree may be sufficient when coupled with related hotel experience or business education. Internships, part-time or summer work experience in a hotel are an asset to students seeking a career in hotel management. The experience gained and the contacts made with employers can greatly benefit students after graduation. Most degree programs include work-study opportunities.

Other colleges, and many universities, offer certificate or degree programs in hotel, restaurant, or hospitality management leading to an associate, bachelor, or graduate degree. Technical institutes, vocational and trade schools, and other academic institutions also offer courses leading to formal recognition in hospitality management. In total, more than 800 educational facilities provide academic training related to employment as lodging managers. Hotel management programs include instruction in hotel administration, accounting, economics, marketing, housekeeping, food service management and catering, and hotel maintenance engineering. Computer training also is an integral part of hotel management training, due to the widespread use of computers in reservations, billing, and housekeeping management.

Wage & Earnings Estimates (2006):
United States: $25,100 to $82,500 with a median of $42,300 ($20.35 per hour)
Wisconsin: $27,100 to $62,500 with a median of $39,800 ($19.14 per hour)

- Core Career Success Competency Areas:
- Customer & Personal Service
- Administration and Management
- English language proficiency
- Sales & Marketing
- Personnel and Human Resources
- Speaking, active listening,
- Critical thinking & problem solving
- Reading comprehension
- Social perceptiveness

Blackhawk Technical College Curriculum Plan:

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Credits</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>106-140</td>
<td>Keyboarding</td>
<td>1</td>
<td>36</td>
</tr>
<tr>
<td>103-106</td>
<td>Introduction to MS Office</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>104-130</td>
<td>Customer Service Fundamentals</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>101-102</td>
<td>Office Accounting</td>
<td>3</td>
<td>72</td>
</tr>
<tr>
<td>102-148</td>
<td>Intro to Business</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>102-110</td>
<td>Business Career Planning</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>804-123</td>
<td>Math with Business Applications</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>104-102</td>
<td>Marketing Principles</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>104-104</td>
<td>Selling Principles</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>102-137</td>
<td>Business Communications 1 credit</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>801-196</td>
<td>Oral/Interpersonal Communications</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>102-135</td>
<td>Lodging &amp; Hospitality Management</td>
<td>3</td>
<td>54</td>
</tr>
<tr>
<td>102-136</td>
<td>Hotel Operations</td>
<td>3</td>
<td>54</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 33

Network Support Certificate (20 cr)*

<table>
<thead>
<tr>
<th>Course</th>
<th>Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>631-100</td>
<td>Microcomputer Fundamentals</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>631-101</td>
<td>Troubleshooting Operating Systems</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>631-115</td>
<td>LAN/WAN Fundamentals</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>631-116</td>
<td>Troubleshooting Network Oper. Syst.</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>450-316</td>
<td>Microcomputer Software Service</td>
<td>2</td>
<td>varies</td>
</tr>
<tr>
<td>450-319</td>
<td>Microcomputer Peripherals</td>
<td>2</td>
<td>varies</td>
</tr>
<tr>
<td>450-320</td>
<td>Troubleshooting Comm. Systems</td>
<td>2</td>
<td>varies</td>
</tr>
<tr>
<td>450-321</td>
<td>Troubleshooting Network Hardware</td>
<td>2</td>
<td>varies</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 20

Participants must complete BTC’s program admission process for certain certificates.

*Prerequisite: Must be registered in the Computer Service Technician Program.

Personal Care Worker

The Personal Care Worker—Home Care course is a 40-hour course that prepares students to assist clients with personal and restorative health care. Basic knowledge and skills include current job duties, client rights, human development, nutrition, safety, communication, supportive and restorative care, and death and dying. Demonstration of selected skills such as body mechanics, standard precautions, hygiene cares, transfers, and vital signs is necessary to receive a certificate of completion.
Phlebotomy

The Phlebotomy certificate program trains students in all aspects of medical specimen collection and processing. This program is open to anyone who has courses or career training in body structure or function and medical terminology.

The health care profession continues to change and grow with limitless opportunities for employment. One of the key elements of success in the health profession, as with any career, is the ability to add specific technical skills to your work experience.

The Phlebotomy certificate offers you a flexible short-term training opportunity to build on the skills you already have and increase your value in the job market. More than 90% of program graduates have found employment in their chosen field within six months of completing a program.

Program Outcomes—
Upon completion of this program, you will be able to:

- Demonstrate knowledge of the health care delivery system and medical terminology
- Demonstrate knowledge of infection control and safety
- Outline the basic anatomy and physiology of body systems and related pathologic conditions
- Demonstrate an understanding of the principles and practice of specimen collection in the patient care system
- Demonstrate knowledge of collection equipment, various types of additives used, special precautions necessary, and substances that can interfere in clinical analysis of blood constituents
- Demonstrate proper techniques to perform venipuncture and capillary puncture
- Demonstrate proper requisitioning, specimen transport and specimen processing
- Apply the basic concepts of communication, sociology, and psychology to patient interaction

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>513-410 Phlebotomy Procedures</td>
<td>2-2</td>
<td></td>
</tr>
<tr>
<td>513-312 Phlebotomy Practicum</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Upon successful completion of 513-410, students enroll in the 120-hour practicum, which offers an in-depth clinical experience arranged individually to fit your schedule. Following the successful completion of both portions of the program, students will be awarded a certificate and be eligible to register for a national certification exam. "A Caregiver Background Check is required for the clinical portion of this program.

Promotion Certificate (12 cr)

Create your own career opportunities by earning this focused certificate in Promotion. The key to sales is proper promotion of your product or service. So regardless of your occupation, satisfactory completion of the following courses within the Marketing Associate Degree Program will help you advance your career. Courses include: 104-102 Marketing Principles, 104-117 Promotion Principles, 104-125 Marketing Media, 104-144 Marketing Communications. See Marketing Associate Degree pages for course descriptions.

Quality Sciences Certificate (29 cr)

NEW CERTIFICATE!

The Quality Sciences Certificate prepares individuals to work under the direction of quality engineers or supervisors to perform a variety of tasks in a modern and fast-paced manufacturing and engineering environment. Quality practitioners analyze and solve problems, prepare inspection plans and instructions, select sampling plan applications, prepare procedures, perform audits and apply fundamental statistical methods for process control. They work with internal and external customers and suppliers to identify expectations and determine satisfaction levels; quality principles for products and processes such as monitoring, measuring and continuous improvement; quality standards, requirements and specifications; meeting management; and team development.

This program is designed with the working adult in mind. Many courses are offered in either self-paced or web-enhanced formats as well as a traditional classroom setting.

While not a requirement it is recommended for students pursuing the Quality Sciences Certificate to have a good working knowledge of basic computer concepts including word processing and spreadsheet applications, directory and file management and Web and email familiarity.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>421-385 Blueprint Reading</td>
<td>2</td>
</tr>
<tr>
<td>444-301 Metrology</td>
<td>2</td>
</tr>
<tr>
<td>444-304 GD&amp;T Interpretations</td>
<td>1</td>
</tr>
<tr>
<td>623-155 Statistical Process Control</td>
<td>3</td>
</tr>
<tr>
<td>625-101 Foundations of Quality</td>
<td>3</td>
</tr>
<tr>
<td>625-102 Human Elements of Quality</td>
<td>3</td>
</tr>
<tr>
<td>801-195 Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>801-196 Oral/Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>801-197 Technical Reporting</td>
<td>3</td>
</tr>
<tr>
<td>804-105 General Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>804-189 Introductory Statistics</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 29

Small Business Management Certificate (18 cr)

This certificate provides career and technical skills common to owning and operating a small business. Individuals pursuing an entrepreneurial career may also find value in this short-term program. Six courses from the Business-Management AAS degree are recommended in order to help you prepare for your future. The certificate will focus primarily on the planning aspects of small business careers. The certificate is intended for adults and other non-traditional students interested in a short-term credential and who have prior life/work experience in business. These courses can be used for credit in the Business-Management Associate Degree program if you wish to pursue this degree in the future.

Consult the Blackhawk Technical College Guides for specific course availability and schedules. Complete course descriptions can be located in the college catalog under the Business-Management Associate Degree or on the website at www.blackhawk.edu.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>102-148 Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>104-102 Marketing Principles</td>
<td>3</td>
</tr>
<tr>
<td>103-106 Introduction to MS Office</td>
<td>3</td>
</tr>
<tr>
<td>101-117 Accounting Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>102-120 Small Business Management</td>
<td>3</td>
</tr>
<tr>
<td>104-130 Customer Service Fundamentals</td>
<td>3</td>
</tr>
</tbody>
</table>
Supply Chain Management (29 cr)

Logistics and transportation management prepares students in all activities involved in the flow of goods from the point of origin to the point of consumption. Specific focus areas include transportation, inventory control materials management, purchasing, global trade, customer service, and logistics management. This certificate is designed for a person seeking introductory positions with a carrier or shipper, or other supply chain related positions. Courses are offered in the accelerated learning format. Prior experience with Word, Excel, and Internet searches is helpful.

Certificate completers will be able to:

- Utilize terminology in the area of transportation
- Apply methodologies and techniques to process the flow of goods
- Integrate the area of supply chain management for low total cost and improved services
- Optimize utilization of modes of transportation
- Utilize computerized applications of logistics

Contact the Business & Information Technology Division office, (608) 757-7623, for scheduling and registration information.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>182-110</td>
<td>Business Career Planning</td>
<td>1</td>
<td>16 hrs.</td>
</tr>
<tr>
<td>102-137</td>
<td>Business Communications</td>
<td>1</td>
<td>16 hrs.</td>
</tr>
<tr>
<td>103-106</td>
<td>Introduction to MS Office</td>
<td>3</td>
<td>48 hrs.</td>
</tr>
<tr>
<td>182-102</td>
<td>Computer Applications in Logistics</td>
<td>3</td>
<td>64 hrs.</td>
</tr>
<tr>
<td>182-109</td>
<td>Transportation-Introduction</td>
<td>3</td>
<td>48 hrs.</td>
</tr>
<tr>
<td>182-116</td>
<td>Transportation Administration</td>
<td>3</td>
<td>48 hrs.</td>
</tr>
<tr>
<td>182-152</td>
<td>Warehouse &amp; Inventory Management</td>
<td>3</td>
<td>48 hrs.</td>
</tr>
<tr>
<td>182-157</td>
<td>Logistics Management</td>
<td>3</td>
<td>48 hrs.</td>
</tr>
<tr>
<td>182-166</td>
<td>Motor Carrier/Commercial</td>
<td>3</td>
<td>48 hrs.</td>
</tr>
<tr>
<td>138-160</td>
<td>Global Supply Chain Logistics</td>
<td>3</td>
<td>48 hrs.</td>
</tr>
<tr>
<td>804-117</td>
<td>Business Mathematics</td>
<td>3</td>
<td>48 hrs.</td>
</tr>
</tbody>
</table>

TOTAL CREDITS: 29

Course Descriptions:

103-106 Introduction to MS Office 3 Credits

Intended for students with little or no prior computer experience. This course will introduce students to the Microsoft Office Suite and help them learn many of the core competencies of Outlook, Word, Excel, Access, PowerPoint, and Explorer. Students will develop their use of technology for both problem solving and decision-making, and will be expected to learn to use the resources available to search for answers to problems.

182-102 Computer Applications in Logistics 3 Credits

This course develops fundamental skills in the use and integration of word processing, spreadsheets and database software for transportation data analysis and related logistics applications. Current industry applications of technology will be explored.

Prerequisites: 103-106 Introduction to MS Office and 182-157 Logistics Management

182-109 Introduction to Transportation 3 Credits

Examine the framework, role, and historical development of transportation; characteristics of railroad, truck, and air transportation, and the pipeline industry.

182-116 Transportation Administration 3 Credits

Discuss fundamentals of the administrative aspects of transportation operations; hands-on exercises in freight classification, tariffs, carrier pricing schedules, rates, bills of lading, contracts, and freight claims.

182-152 Warehouse & Inventory Management 3 Credits

Course explores warehousing and other distribution operations, including key concepts such as productivity, quality, inventory management, and material flow. Practical hands-on topics covered in this course include merchandise handling, palletizing and packaging, hazardous material handling, powered industrial trucks, and warehouse safety.

182-157 Logistics Management 3 Credits

Learn basic concepts, management levels, elements of inventory control, transportation, warehousing, packaging, material handling and purchasing, and the role that order processing plays in the distribution cycle.

182-166 Motor Carrier/Commercial 3 Credits

Explore fundamental understanding of motor carrier transportation: equipment DOT requirements for diver and hours of service, cargo documentation, dispatching, legal limits, fuel tax, licensing, contracting, and hazardous materials.

138-160 Global Supply Chain Logistics 3 Credits

Review the basics of international trade including entering the overseas market, distribution, payment letters of credit, shipping documents, importing, customs house brokers, government requirements, and sources of assistance and information.

809-352 Skills for Successful Employees 2 Credits

This course seeks to ready the student for employment by discussing specific “human” skills that lead to success on the job. The topics presented may include: the importance of having a good attitude; the need to recognize that customers “buy” much more than a clearly defined product or service; and knowing how to treat customers, how to influence them, how to handle complaints, and how to sell. Students will also become aware of the need for self-organization, for innovation, for teamwork, and for effective management.

Under Vehicle Specialist

Introduces students to fluids servicing and diagnosis, maintenance, and repair of brakes, suspension and steering, and exhaust systems on light, medium and heavy-duty vehicles. Prepares students for jobs in the under vehicle servicing industry.

Visual Basic.NET (VB.NET) Developer (12 cr)

This certificate is designed to prepare information technology professionals through credit-based lifelong learning and continuing education. Students completing the series of courses offered in this certificate will learn skills related to Visual Basic.NET programming, including server-side (utilizing ASP.NET) and client-side applications. Anyone without a background in object-oriented analysis and design and/or databases is encouraged to take the listed optional courses.

The current demand for IT professionals with Visual Basic.NET experience is growing. Typical occupational placement is likely to include positions related to software development and Web-based development. Current programmers who want to increase their skills will benefit. Database managers, Web, Intranet and Extranet support positions will benefit from competencies presented in this certificate. This certificate will also help prepare the attendee for Microsoft’s Visual Basic.NET Certification.
Prior knowledge of programming logic, web development, database concepts, and programming are recommended. Recommended pre-admission skills/requirements include an Associate's Degree in Information Technology or a minimum of three years related work experience. Learners in this certificate will be expected to have experience with relational database design, at least one procedure programming language, and a Visual programming language.

### Course Name Credits Lec-Lab
152-142 Intro. to VB.NET Programming 3 varies
152-144 Intermediate VB.NET Programming 3 varies
152-161 Web Application Development 3 varies
152-148 Relational Database Coding 3 varies

Optional Courses:
- 152-147 Relational Database Development 3 varies
- 152-163 Relational Database Design 3 varies
- 152-160 Object Oriented Design with UML 3 varies
- 152-162 Object Oriented Systems Analysis 3 varies

### Web Programming Certificate (12 credits)
This certificate is designed to prepare information technology professionals through credit-based lifelong learning and continuing education. Students completing the series of courses offered in this certificate will learn skills related to Internet Web programming, including server-side and client-side website development. Anyone without a background in object-oriented analysis and design are encouraged to take these optional courses.

This certificate also introduces important competencies related to e-Commerce and protocols for building and maintaining secure websites. Prior knowledge of programming logic, web development, database concepts, and programming are recommended. Recommended pre-admission skills/requirements include an associate degree in Information Technology or a minimum of 3 years of related work experience. Learners in this certificate will be expected to have experience with relational database design, at least one procedure programming language and a Visual programming language.

### Web Programming Curriculum
- 152-157 Website Development – XHTML/CSS 3 credits
- 152-158 Advanced Website Development 3 credits
- 152-191 Secure e-Commerce Concepts 3 credits
- 152-192 Designing Secure Websites 3 credits

Optional courses:
- 152-160 Object Oriented Design with UML 3 credits
- 152-162 Object Oriented Systems Analysis 3 credits

Many of these courses may be available online and accessed via the Web. Please consult the current semester course schedule for more information.

### Welding Fabrication Processes & Application (SMAW/GTAW)*
Welding is the most common way of strike joining metal strike. Heat is applied to the pieces that need to be joined. A filler material is added as the metal fuses together to form a permanent bond. Welders learn a variety of skills and processes through study and practice. Students learn oxygen-fuel cutting (OFC), gas metal arc welding (GMAW), and flux core arc welding (FCAW). Employment opportunities for welders are abundant in construction, industry, and repair-oriented service industries. The need for welders is forecasted to expand over the next several years.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>420-310 Machine Shop Fundamentals</td>
<td>1</td>
<td>varies</td>
</tr>
<tr>
<td>421-380 Blueprint Reading (Welding)</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>442-306 Welding Processes &amp; Safety</td>
<td>4</td>
<td>varies</td>
</tr>
<tr>
<td>442-307 Gas Metal Arc Welding (GMAW)</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>442-308 Flux Core Arc Welding (FCAW)</td>
<td>3</td>
<td>varies</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS 14**

Participants must complete BTC’s program admission process for certain certificates. *Prerequisite: Must be registered in the Welding Program.

### Welding Fabrication Processes & Application (SMAW/GTAW)*
This certificate program prepares students for Shielded Metal Arc Welding (SMAW) using the E-6011, E-7014, and E-7018 structural steel electrodes. They will also gain hands-on skills in the welding of steel, and aluminum using the Gas Tungsten Arc Welding (GTAW) process. Students will fabricate simple projects or part of a project found on engineering drawings. Welder positions are available in construction, industrial and service/repair sectors.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>442-305 Metal Fabrication</td>
<td>2</td>
<td>varies</td>
</tr>
<tr>
<td>442-309 Industrial Welding Procedures, Codes &amp; Specifications</td>
<td>2</td>
<td>varies</td>
</tr>
<tr>
<td>442-310 Shielded Metal Arc Welding (Non Low Hydrogen)</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>442-311 Shielded Metal Arc Welding (Low Hydrogen)</td>
<td>3</td>
<td>varies</td>
</tr>
<tr>
<td>442-312 Gas Tungsten Arc Welding (GTAW)</td>
<td>3</td>
<td>varies</td>
</tr>
</tbody>
</table>

**TOTAL CREDITS 13**

Participants must complete BTC’s program admission process for certain certificates. *Prerequisite: Must be registered in the Welding Program.

### Clinical Laboratory Technician
The Clinical Laboratory Technician program is offered through a contractual agreement with Madison Area Technical College. General education courses may be taken at Blackhawk Technical College. All occupational specific/core courses must be taken through Madison Area Technical College. *Students are encouraged to contact MATC for specific program information.*

### ABOUT THE PROGRAM
The Clinical Laboratory Technician (CLT) program is approved by the National Accrediting Agency for Clinical Laboratory Science (8410 West Bryn Mawr Avenue, Suite 670, Chicago, IL 60631; (773) 714-8880). A combination of fundamental laboratory techniques and clinical experience prepares graduates for work in laboratories serving the health care sector. The final semester of the program is a clinical experience in laboratories in Madison and surrounding communities. Students should anticipate the possibility of traveling or relocating to complete the clinical experience. A list of laboratories used for the clinical experience is available from the program director. Students are admitted in the fall semester only.

For the most current schedule information, visit www.blackhawk.edu
CERTIFICATES/SHARED PROGRAMS

Clinical Laboratory Technician

Graduates of the program qualify for both the American Society of Clinical Pathologists Board of Registry and the National Certification Agency for Laboratory Personnel certification exams for medical laboratory technicians and clinical laboratory technicians, respectively, under the direction of the American Society of Clinical Pathologists and the American Society of Clinical Laboratory Science.

Requirements For Admission:

1. High school graduation, HSED, or GED with a “C” or better ave.
2. The following high school courses with “C” or better grades:
   a. Three years of English
   b. One year of chemistry
   c. One year of general biology
   d. Two years of algebra or one year of algebra and one year of geometry (or one semester of each course at the college level with a grade of “C” or better)
3. Satisfactory score on the COMPASS or equivalent.

Program Requirements:

Once admitted to the program, the following requirements must be met in order to continue in the program.

1. Caregiver Background Check (CBC); refer to the Health, Human and Protective Services policy.
2. Physical exam and completed Personal History form on file prior to the beginning the first semester clinical rotation.

PLANNING TO PURSUE A FOUR-YEAR MEDICAL TECHNOLOGY (Clinical Laboratory Science) DEGREE?

Consider the following course substitutions:

1. Anatomy & Physiology 1 & 2 for General A & P
2. College Chemistry 1 & 2 for Bioorganic Chemistry

(Both Anatomy and Physiology 2 and College Chemistry 2 can be used to meet elective requirements.)

Course Descriptions:

10-513-110 Basic Lab Skills 1 Credit

Explores health career options and fundamental principles and procedures of the clinical laboratory. Incorporates medical terminology, basic laboratory equipment, safety and infection control procedures, and simple laboratory tests. Prerequisites: Successful completion of the following high school courses with a grade of “C” or better: three years of English, one year of chemistry, one year of general biology, two years of algebra or one year algebra and one year of geometry, a satisfactory score on ACT or compatible substitute.

10-513-111 Phlebotomy 2 Credits

Provides opportunities to perform routine venipuncture, capillary puncture, and special collection procedures. Prerequisites: 10-513-110 Basic Lab Skills.

10-513-113 Laboratory Quality Assurance & Math 1 Credit

Focuses on mathematical calculations used in the laboratory. Explores concepts of quality control and quality assurance, regulatory compliance requirements, and certification and continuing education programs. Prerequisites: Successful completion of the following high school courses with a grade of “C” or better: three years of English, one year of chemistry, one year of general biology, two years of algebra or one year algebra and one year of geometry, a satisfactory score on ACT or compatible substitute.

10-513-115 Basic Immunology Concepts 2 Credits

Provides an overview of the immune system including testing methods for diagnosis of immune system disorders and viral and bacterial infections. Prerequisites: Successful completion of the following high school courses with a grade of “C” or better: three years of English, one year of chemistry, one year of general biology, two years of algebra or one year algebra and one year of geometry, a satisfactory score on ACT or compatible substitute.

10-513-115 Basic Immunology Concepts 2 Credits

Provides an overview of the immune system including testing methods for diagnosis of immune system disorders and viral and bacterial infections. Prerequisites: Successful completion of the following high school courses with a grade of “C” or better: three years of English, one year of chemistry, one year of general biology, two years of algebra or one year algebra and one year of geometry, a satisfactory score on ACT or compatible substitute.

10-513-114 Urinalysis 2 Credits

Perform physical, chemical and microscopic analysis of urine. Explore renal physiology and correlate urinalysis results with clinical conditions. Prerequisites: Satisfactory completion of all first semester, first year Clinical Laboratory Technician courses.
10-513-120 Basic Hematology  3 Credits
Covers theory and principles of blood cell production and function. Introduces basic practices and procedures in the hematology laboratory. **Prerequisites: Satisfactory completion of all first semester, first year Clinical Laboratory Technician courses**

10-513-121 Coagulation  1 Credit
Introduces theory and principles of coagulation and explores mechanisms involved in coagulation disorders. Emphasis is placed on laboratory techniques used to diagnose disease and monitor treatment. **Prerequisites: 10-513-120 Basic Hematology**

10-513-122 Introduction to Blood Bank  2 Credits
Focuses on basic blood banking concepts and procedures including blood typing and compatibility testing. **Prerequisites: Satisfactory completion of all first semester, first year Clinical Laboratory Technician courses**

10-513-123 Advanced Blood Bank  2 Credits
Covers advanced blood banking concepts and procedures including workups for adverse reaction to transfusions and disease states. **Prerequisites: 10-513-122 Introduction to Blood Bank**

10-513-130 Advanced Hematology  2 Credits
Explores mechanisms involved in the development of hematologic disorders. Emphasis is placed on laboratory techniques used to diagnose disorders and monitor treatment. **Prerequisites: 10-513-120 Basic Hematology**

10-513-131 Introduction to Clinical Chemistry Diagnostics  3 Credits
Introduces techniques and procedures for routine analysis using photometric, potentiometric and separation techniques. Covers pathophysiology and methodologies for carbohydrate, lipids, proteins, renal function, and blood gas analysis. **Prerequisites: Satisfactory completion of all second semester, first year Clinical Laboratory Technician courses**, 20-806-201

10-513-132 Advanced Clinical Chemistry Diagnostics  2 Credits
Covers pathophysiology and methodologies for hepatic, bone, cardiac markers, tumor markers, endocrine function, fetal function, miscellaneous body fluids, and toxicology. Includes techniques and procedures for analysis using sophisticated laboratory instrumentation. **Prerequisites: 10-513-131 Intro. to Clinical Chemistry Diag.**

10-513-133 Clinical Microbiology  4 Credits
Presents the clinical importance of infectious diseases with emphasis on the appropriate collection, handling, and identification of clinically relevant bacteria. Disease states, modes of transmission and methods of prevention and control, including antibiotic susceptibility testing, will be discussed. **Prerequisites: Satisfactory completion of all second semester, first year Clinical Laboratory Technician courses**, 20-806-273 Microbiology

10-513-140 Advanced Topics in Microbiology Fundamentals  2 Credits
Introduces laboratory methods used in the isolation and initial identification of pathologic microorganisms. **Prerequisites: 10-513-133 Clinical Microbiology**

10-513-141 Pre-clinical Experience  2 Credits
Provides opportunities to practice the principles and procedures of laboratory medicine in a clinical laboratory setting. Learn to operate state of the art instruments and report results on Laboratory Information Systems. **Prerequisites: Satisfactory completion of all Clinical Laboratory Technician program courses and concurrent enrollment in 10-513-141**

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Dental Hygiene
This associate degree program prepares individuals for a career as a Dental Hygienist. The dental hygienist is a member of the dental team and helps individuals maintain oral health and prevent oral diseases. Under the supervision of a dentist, the hygienist inspects the mouth, removes stains and deposits from teeth, applies preventative agents, prepares clinical and diagnostic tests, completes dental x-rays, and performs many other services related to oral care. Dental hygienists counsel patients about preventive measures such as nutrition, oral hygiene and dental care.

Blackhawk Technical College maintains shared program agreements with both Madison Area Technical College (MATC) and Waukesha County Technical College (WCTC) for the Dental Hygiene Program. While Blackhawk students attend Dental Hygiene program courses at one of these facilities, General Education and Elective requirements (as applicable) may be taken at BTC.

The admission and program completion requirements vary somewhat between MATC and WCTC. Blackhawk Technical College recommends meeting the “Program-Ready” requirements for both institutions to assure the earliest program acceptance. Please contact the BTC Student Services Counseling department for details related to Program-Ready and Program Completion requirements.

**General Education Requirements: WCTC**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>806-177</td>
<td>General Anatomy and Physiology</td>
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</tr>
<tr>
<td>806-186</td>
<td>Intro to Biochemistry</td>
<td>3</td>
</tr>
<tr>
<td>806-197</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>801-196</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>809-198</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>809-195</td>
<td>Economics</td>
<td>3</td>
</tr>
<tr>
<td>809-196</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>801-196</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td>806-201</td>
<td>General, Organic and Biological Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>806-197</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>809-198</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>809-196</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>809-159</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>801-196</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

**General Education Requirements: MATC**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>806-201</td>
<td>General, Organic and Biological Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>806-197</td>
<td>Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>809-198</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>801-195</td>
<td>Written Communication</td>
<td>3</td>
</tr>
<tr>
<td>809-196</td>
<td>Introduction to Sociology</td>
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<tr>
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<td>Abnormal Psychology</td>
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<tr>
<td>801-196</td>
<td>Oral Communication</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>6</td>
</tr>
</tbody>
</table>

**Program Learning Outcomes—Graduates of the Interpreter Technician Associate Degree Program should be able to:**

1. Demonstrate proper expressive ASL structures.
2. Demonstrate competency in receptive ASL skills.
3. Demonstrate a culturally sensitive attitude when involved with Deaf, Hard of Hearing, or hearing groups of people.
4. Differentiate the languages used by deaf/hard of hearing consumers.
5. Use adaptive equipment, e.g., TTYs, closed captioning, the relay service.
6. Follow the Code of Ethics for the sign language interpreter.
7. Identify the laws impacting the Deaf/interpreting communities.
8. Identify the differences between the interpreting/transliterating roles.
Civil Engineering

Offered as a shared program with Gateway Technical College, this program is designed with three different emphases to choose from: Architectural/Structural, Public Works and Survey.

The first year of the program is the same for all three emphases. In the second year, you specialize. The first year allows you to become exposed to and develop a basic understanding regarding the many aspects of the profession.

First year classes are offered both days and evenings. Second year classes are offered mostly evenings and Saturdays (allowing those who have secured jobs to hone their skills and showcase their talents). However, classes are also offered in a NODAL* format—distance education at its best. Classes are taught at Gateway Tech, but students can take the lab in room 1106 on BTC’s Central Campus. Also the use of CDs allow each student to study at their own pace and review at their leisure. Only two classes would need to be taken on-site, which could be done at Gateway’s Elkhorn Campus. Those classes are Land Survey and Conflict Resolution.

Interpreter Technician

Occupations for Associate Degree Graduates:
1. Interpreter for the Deaf-Staff
2. Interpreter for the Deaf-Freelance
3. Deaf Services Coordinator
4. Communication Assistant

Aptitude and Interests: Concentration, organization, patience, attention to detail, understand and interpret information rapidly, communication skills, flexible, able to adapt to changing environments, make decisions as to needs of both Deaf and hearing clients, work will independently, deal with pressure from conflict between cultures in professional manner, friendly, and open-minded.

Physical Requirements: Employers may place physical requirements on various jobs in this career field. Gateway Technical College strongly encourages you to investigate these requirements with employers to determine your employability before you enter into this program.

Helpful High School Courses: English, Psychology, Sociology, Algebra, Accounting, Sciences, Computers, Speech, Marketing.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>533-101* Deafness/Introduction to</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>533-102* ASL 1</td>
<td>4</td>
<td>3 - 4</td>
</tr>
<tr>
<td>533-103* Practicum 1 (Coreq. 533-102)</td>
<td>3</td>
<td>2 - 4</td>
</tr>
<tr>
<td>533-104* ASL 2 (Prereq. 533-102, 533-103)</td>
<td>4</td>
<td>3 - 4</td>
</tr>
<tr>
<td>533-105* Cultural Sensitivity in Interpreting</td>
<td>2</td>
<td>2 - 0</td>
</tr>
<tr>
<td>(Prereq. 533-103)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>533-109* Deaf Culture in America</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>533-106* ASL Structure and Function</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>(Prereq. 533-104)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>533-107* ASL 3/Introduction to Interpreting</td>
<td>4</td>
<td>3 - 4</td>
</tr>
<tr>
<td>(Prereq. 533-104)</td>
<td></td>
<td></td>
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<tr>
<td>533-110* ASL 4/Interpreting (Prereq. 533-107)</td>
<td>4</td>
<td>3 - 4</td>
</tr>
<tr>
<td>533-111* Interpreter Practicum II</td>
<td>3</td>
<td>1 - 8</td>
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<tr>
<td>(Prereq. 533-105)</td>
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<tr>
<td>533-112* Professional Development for the</td>
<td>2</td>
<td>2 - 0</td>
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<tr>
<td>Interpreter (Coreq. 533-110)</td>
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Total Required 35

Occupational Support

<table>
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<th>Course Name</th>
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<tbody>
<tr>
<td>804-160 # College Mathematics</td>
<td>3</td>
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<tr>
<td>(Prereq. Satisfactory placement test score)</td>
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<td></td>
</tr>
<tr>
<td>533-108* Alternative Communication Techniques</td>
<td>2</td>
<td>1 - 2</td>
</tr>
<tr>
<td>&amp; Adaptive Equipment for the Deaf</td>
<td></td>
<td></td>
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<tr>
<td>105-131 # Microcomputers, Introduction to</td>
<td>3</td>
<td>2 - 2</td>
</tr>
<tr>
<td>533-120* Interpreting: Sign to Voice</td>
<td>3</td>
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<tr>
<td>(Coreq. 533-110)</td>
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Total Required 11

General Education Courses

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<th>Course Name</th>
<th>Credits</th>
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<tr>
<td>801-195# Written Communication</td>
<td>3</td>
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<tr>
<td>(Prereq. Satisfactory placement test score)</td>
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<tr>
<td>809-198# Introduction to Psychology</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>801-196# Oral Interpersonal Communication</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>801-198# Speech</td>
<td>3</td>
<td>3 - 0</td>
</tr>
<tr>
<td>809-197# Contemp. American Society/Multicultural</td>
<td>3</td>
<td>3 - 0</td>
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</table>

Total Required 15

Suggested Electives

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<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
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<tbody>
<tr>
<td>533-113 ASL Skillbuilding 1</td>
<td>1</td>
<td>0 - 2</td>
</tr>
<tr>
<td>533-114 ASL Skillbuilding 2</td>
<td>1</td>
<td>0 - 2</td>
</tr>
<tr>
<td>533-115 ASL Skillbuilding 3</td>
<td>1</td>
<td>0 - 2</td>
</tr>
<tr>
<td>533-116 ASL Skillbuilding 4</td>
<td>1</td>
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</tr>
<tr>
<td>533-117 ASL Skillbuilding 5</td>
<td>1</td>
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</tr>
<tr>
<td>533-118 ASL Skillbuilding 6</td>
<td>1</td>
<td>0 - 2</td>
</tr>
<tr>
<td>533-119 Interpreting: Oral</td>
<td>3</td>
<td>2 - 2</td>
</tr>
</tbody>
</table>

Total Required 6

Program Total Required 67

Note: Prerequisites can be waived with department approval
Any associate degree program course may be used as an elective.
* Courses which may be taken prior to entry into program.

Requirements for Graduation:

- 67 credits with an average of 2.0 or above
- An average of 2.0 (“C”) or above for all 533-prefix courses
- Must obtain Level I in Computer Literacy, meaning the following competencies: hands-on experience with machine operation, data input, screen display control, information updating, and use of disk memory.

Course Descriptions

ASL 1
This course will focus on intensive vocabulary development and basic ASL sentence structure. The students will begin to develop both expressive and receptive ASL skills.

ASL 2
This is a continuation in the development from phrases and simple sentences to complex structures. It will focus on the development of conversational ASL skills.

ASL 3/Introduction to Interpreting
This course will move from conversational ASL to beginning interpretation. Students will advance from complex structures to the appropriate use of ASL and English idioms.
Interpreter Technician

ASL Structure and Function
This course is designed to expose the student to a comparison of the linguistic structure and function of American Sign Language. It will cover the study and use of phonemes and morphemes in ASL.

Cultural Sensitivity in Interpreting
This course will focus on the importance of understanding the cultural norms and values involved in any interpreting assignments. Students will learn how culture impacts the communication process and the importance of producing a culturally accurate interpreted message.

Deaf Culture in America
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.

Interpreter Practicum I
This course will give the student an opportunity to observe a variety of ASL users in educational and/or social settings.

Occupational Therapist Assistant
The Occupational Therapy Assistant program is offered through a contractual agreement with Madison Area Technical College. General education courses may be taken at Blackhawk Technical College. All occupational specific/core courses must be taken through Madison Area Technical College.

Occupational therapy is a health profession serving persons whose everyday functioning is complicated by developmental disability, physical illness or injury, emotional problems, or aging changes. Occupational therapists use activities designed to:

1. Improve the physical, sensory, cognitive, social and emotional skills needed for daily activities.

2. Offer alternative approaches and adaptive devices when such capacities are impaired or lost.

3. Ultimately promote a healthy balance and maximum independence in each client's self-care, work and leisure performance.

This program prepares occupational therapy assistants who collaborate with occupational therapists. OT assistants are employed in community settings providing mental health, residential care and home health services as well as in hospitals and schools. Graduates also serve as activity directors conducting health maintenance activity programs for the elderly in senior centers, day-care centers and nursing homes. Students interested in enrolling in the Occupational Therapy Assistant program should contact the Blackhawk Technical College counseling office for admissions information.

Accreditation/Credentialing
This program is accredited by the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), 4720 Montgomery Lane, PO Box 31220, Bethesda, MD 20824-1220, (301) 652-AOTA. Credentialing as a Certified Occupational Therapy Assistant (COTA) is separate from MATC graduation. Certification with the National Board for Certification in

Occupational Therapy (NBCOT) requires passing a nationally administered OTA competency examination.

Licensure by the State of Wisconsin or other states requires passing this certification exam and complying with any other state credentialing requirements. A felony conviction may affect a graduate's ability to sit for the NBCOT certification examination or attain state licensure.

Admission Requirements
1) High school graduate or equivalent;
2) two semesters of high school level or one semester of college level with grades of C or better in the following: biology, chemistry, algebra; three to four years of English and
3) acceptable ACT, SAT, COMPASS or equivalent assessment test. Call 246-6065 to confirm status of fall admissions.

Program Requirements
1) Caregiver Background Check (CBC); refer to catalog for Health, Human and Protective Services Policy;
2) physical exam and a completed Medical Physical History Form (pdf) on file prior to beginning fieldwork experiences involving direct client care; and
3) essential functions for the Occupational Therapist Assistant program

NOTE: A copy of the essential functions necessary to successfully complete the program will be available upon request from the division office.

<table>
<thead>
<tr>
<th>Course Name</th>
<th>Credits</th>
<th>Lec-Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>514-101 Introduction To Occupational Therapy</td>
<td>3</td>
<td>3 - 0</td>
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<td>514-102 Medical Conditions</td>
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<td>514-170 Seminar/Practice &amp; Management</td>
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</table>

TOTAL CREDITS 72

*Courses which can be taken prior to entering the program.

**Courses must be completed within 18 months after completion of all other occupational therapy courses.

***Recommended electives.
Course Descriptions

514-101 Introduction to Occupational Therapy  3 Credits
This course introduces occupational therapy and the OT assistant’s role. It includes medical terminology and abbreviations. Prerequisite: Occupational Therapy Course. Prerequisite: Occupational Therapy Course prerequisites plus completion of 806-207 or concurrent enrollment in 514-111 and 514-148

514-105 Field Observation  2 Credits
This course orientates students to Level I and II Fieldwork. A 40-hour placement in an OT practice setting provides opportunities to observe and participate. It emphasizes developing basic competency in professional skills, planning, and documentation. Prerequisites: First and second semester occupational therapy courses; concurrent enrollment in 514-130 and 514-135

514-111 Therapeutic Skills I  2 Credits
This class increases self-awareness and develops the skills and attitudes needed for client and co-worker relationships. It emphasizes behavior change processes, interpersonal techniques, interviewing and use of self within dyadic contexts. Prerequisites: Occupational Therapy Course prerequisites, plus completion of or concurrent enrollment in 806-207

514-112 Therapeutic Skills II  2 Credits
This class explores therapeutic use of self and group processes. It emphasizes skills needed to plan, implement, and evaluate group activities. Group activities and leadership skills are used to meet therapeutic goals. Prerequisites: 514-111

514-115 Developmental Principles  4 Credits
This class applies normal human development and related principles to analyze human performance, activities, and environments. It emphasizes specific client conditions and OT interventions related to practice with infants, children, and adolescents. Prerequisites: Occupational Therapy Course prerequisites plus completion of 806-207 or concurrent enrollment in 514-111 and 514-148

514-117 Biological Foundations of Human Performance  2 Credits
This course studies anatomical and physiological foundations of sensorimotor and cognitive human performance, effects of dysfunction, and therapeutic interventions to enhance affected human performance. Prerequisite: 806-207

514-120 Occupational Therapy Process  4 Credits
This course covers the OT assistant role at each stage of the OT process. It emphasizes screening and evaluation skills and introduces occupational therapy and activities services in geriatric settings as a part of a Level I Fieldwork placement. Prerequisite: 806-207

514-125 Community Practice  3 Credits
This class emphasizes program planning, using community resources and developing educational experiences for clients, families, and peers. It includes interventions and resources for serving individuals with developmental disabilities in community, home, work, and institutional settings. Prerequisite: 514-115

514-130 Physical Rehabilitation Practice  4 Credits
This class emphasizes OT evaluation and treatment of common medical conditions in physical rehabilitation. It covers prevention, maintenance, and rehabilitation. Prerequisites: 514-105 and 514-135

514-135 Mental Health Practice  4 Credits
This course emphasizes occupational therapy evaluation and therapeutic interventions to meet psychosocial needs and work with individuals affected by mental health conditions. It includes performance skills assessment, treatment planning, and intervention simulations. Prerequisites: 809-231 or 809-199, 809-237, 514-111, 514-112, & concurrent enrollment in 514-105 and 514-130

514-140 Health Care Systems  2 Credits
This class examines medical, educational, and social models of service delivery from the perspective of the consumer, client advocate, and OT provider, and how these systems impact OT practice. Prerequisites: First semester Occupational Therapy courses and concurrent enrollment in 514-105 is recommended

514-145 Recreation Practice  3 Credits
This class introduces leisure analysis and planning. Students practice organizing and conducting individual and group leisure activities for special populations. Prerequisites: 514-111, 514-112, & 514-115; completion of the first and second semester occupational therapy courses is recommended

514-148 Minor Media I  1 Credit
This class develops needle art media skills used as therapeutic activities or leisure pursuits; introduces activity analysis and gradation; and explores various teaching/learning methods. Prerequisites: Occupational Therapy Course prerequisites plus completion or concurrent enrollment in 806-207

514-149 Minor Media II  1 Credit
This class develops skills using a variety of craft media as therapeutic activities or leisure pursuits. It emphasizes teaching methods, activity analysis, and facility maintenance. Prerequisite: Completion of 514-148. 514-150

Occupational Assistant

514-150 Media and Skills  4 Credits
This class refines skills used when analyzing, selecting, and performing activities with an emphasis on pediatric and mental health populations. It includes woodworking, leather work, ceramics, music, splinting, electric switch construction, and computer and assistive technology. Prerequisites: Completion of first and second semester occupational therapy courses. Students are encouraged to contact MATC for specific program information

MATC-BTC Program Equivalents
MATC OTA Requirements/Credits  BTC Course
801-151 Communicate. Skills I  3 Cr
806-207 Anatomy & Physiology  4 Cr
809-199 Psych of Human Relations  3 Cr
801-152 Communication Skills II  3 Cr
809-237 Abnormal Psychology  4 Cr
809-197 Contemporary American Society  3 Cr

Equivalents/Credits
801-195 Written Communicate  3 Cr
806-195 Anatomy & Phys. I  4 Cr
809-198 Intro to Psychology  3 Cr OR
809-199 Psych of Human Relate  3 Cr
801-196 Oral/Interpersonal Communication  3 Cr OR
801-198 Speech  3 Cr
809-195 Abnormal Psychology  3 Cr
809-197 Contemporary American Society  3 Cr
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<td>Financial Analysis</td>
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<td>Accounting Fundamentals</td>
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</tr>
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<td>101-123</td>
<td>Income Tax Accounting</td>
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<td>101-124</td>
<td>Applied Income Tax</td>
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<td>Cost Accounting</td>
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<td>101-128</td>
<td>Supervised Occupational Experience</td>
<td>40</td>
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<td>101-130</td>
<td>Accounting Information Systems</td>
<td>41</td>
</tr>
<tr>
<td>101-131</td>
<td>Accounting Databases</td>
<td>41</td>
</tr>
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<td>101-135</td>
<td>Payroll Accounting</td>
<td>41</td>
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<tr>
<td>101-136</td>
<td>Computerized Accounting</td>
<td>41</td>
</tr>
<tr>
<td>101-137</td>
<td>Career Development in Accounting</td>
<td>41</td>
</tr>
<tr>
<td>101-150</td>
<td>AIPB Certified Bookkeeper Review</td>
<td>41</td>
</tr>
<tr>
<td>102-110</td>
<td>Business Law</td>
<td>41-42, 53, 95</td>
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<td>102-115</td>
<td>Management Principles</td>
<td>53</td>
</tr>
<tr>
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<td>Small Business Management</td>
<td>53</td>
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<td>102-125</td>
<td>Supervised Occupational Experience - Business</td>
<td>53</td>
</tr>
<tr>
<td>102-130</td>
<td>Business Finance and Budget Management</td>
<td>53</td>
</tr>
<tr>
<td>102-139</td>
<td>Business Administration in Food Service</td>
<td>62</td>
</tr>
<tr>
<td>102-148</td>
<td>Introduction to Business</td>
<td>53</td>
</tr>
<tr>
<td>102-160</td>
<td>Business Law</td>
<td>62</td>
</tr>
<tr>
<td>103-106</td>
<td>Introduction to Microsoft Office</td>
<td>62</td>
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<td>Introduction to MS Office</td>
<td>41, 53, 97, 117, 124, 128</td>
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<td>Introduction to Quickbooks</td>
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</tr>
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<td>41</td>
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<td>Marketing Principles</td>
<td>53</td>
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<td>Marketing Principles</td>
<td>97</td>
</tr>
<tr>
<td>104-104</td>
<td>Selling Principles</td>
<td>54, 97</td>
</tr>
<tr>
<td>104-111</td>
<td>Marketing Career Strategies</td>
<td>98</td>
</tr>
<tr>
<td>104-117</td>
<td>Promotion Principles</td>
<td>98</td>
</tr>
<tr>
<td>104-118</td>
<td>Web &amp; Design Concepts</td>
<td>98</td>
</tr>
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<td>104-125</td>
<td>Marketing Media</td>
<td>98</td>
</tr>
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<td>104-130</td>
<td>Customer Service Fundamentals</td>
<td>54</td>
</tr>
<tr>
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<td>Fundamentals of Customer Service</td>
<td>98, 117, 123</td>
</tr>
<tr>
<td>104-131</td>
<td>Relationship Management in Customer Service</td>
<td>123</td>
</tr>
<tr>
<td>104-132</td>
<td>Time Management &amp; Problem Solving</td>
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<td>Sales Skills for Customer Service</td>
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</tr>
<tr>
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<td>e-Commerce Principles</td>
<td>98</td>
</tr>
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<td>Supervised Occupational Experience–Marketing</td>
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<td>Marketing Research</td>
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<td>Retail Principles</td>
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<td>106-103</td>
<td>Medical Transcription I</td>
<td>102</td>
</tr>
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<td>106-104</td>
<td>Medical Transcription II</td>
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</tr>
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<td>Medical Transcription III</td>
<td>102</td>
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<td>106-107</td>
<td>Patient Billing</td>
<td>102</td>
</tr>
<tr>
<td>106-108</td>
<td>Proofreading and Editing</td>
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<td>Legal Office Professionalism</td>
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<td>Health Care Records Management</td>
<td>102</td>
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<td>Supervised Occupational Experience - Medical Office</td>
<td>103</td>
</tr>
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<td>Health Care Documentation</td>
<td>103</td>
</tr>
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<td>106-128</td>
<td>Health Care Office Technologies</td>
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</tr>
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<td>152-160 Object-Oriented Design with UML</td>
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<td>106-143 Skillbuilding</td>
<td>152-161 Web Application Development</td>
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<td>Using ASP.NET</td>
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<td>106-146 Word Processing Applications</td>
<td>152-162 Object-Oriented Systems Analysis</td>
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<tr>
<td>106-151 Legal Office Procedures</td>
<td>152-163 Relational Database Design</td>
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<td>152-164 Design and Implementation Projects</td>
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<tr>
<td>106-153 Administrative Office Procedures</td>
<td>152-182 Web Analyst/Programmer Field Study</td>
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<tr>
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<td>152-191 Secure e-Commerce Concepts</td>
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<td>152-192 Designing Secure Websites</td>
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<td>106-156 Business Database</td>
<td>152-193 Client/Server Systems Security</td>
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<td>106-157 Administrative Assistant Fundamentals</td>
<td>152-194 Computer Applications in Logistics</td>
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<td>106-158 Supervised Occupational Experience - Administrative Assistant</td>
<td>152-195 Introduction to Transportation</td>
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<td>106-159 Business Spreadsheets</td>
<td>152-196 Transportation Administration</td>
<td></td>
</tr>
<tr>
<td>106-160 Administrative Office Projects</td>
<td>152-197 Logistics Management</td>
<td></td>
</tr>
<tr>
<td>106-163 Supervised Occupational Experience - Legal Administrative</td>
<td>152-198 Motor Carrier/Commercial</td>
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</tr>
<tr>
<td>106-164 Specialized Software Applications</td>
<td>196-101 Principles of Supervision</td>
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<td>106-165 Business Presentations</td>
<td>196-104 Legal Issues</td>
<td></td>
</tr>
<tr>
<td>106-167 Legal Office Applications</td>
<td>196-105 Safety in the Workplace</td>
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<tr>
<td>106-180 Legal Terminology &amp; Court Structure</td>
<td>196-106 Professional Profiles</td>
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<tr>
<td>138-160 Global Supply Chain Logistics</td>
<td>196-107 Project Management</td>
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<td>140-101 Spanish Language &amp; Culture</td>
<td>196-122 Applications of Technology</td>
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<td>140-102 Spanish Language &amp; Culture II: Emergency Services Personnel</td>
<td>196-112 Organizational Development</td>
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</tr>
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<td>150-117 LAN/WAN Integration</td>
<td>196-113 Fundamentals of Budget Analysis</td>
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<tr>
<td>150-120 Micro Operating Systems I</td>
<td>196-114 Team Building/Problem Solving</td>
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</tr>
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<td>150-127 Network Operating Systems I</td>
<td>196-115 Leadership Development</td>
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<td>150-128 Network Operating Systems II</td>
<td>152-190 Fundamentals of Basic Coding</td>
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<tr>
<td>150-130 Network Design</td>
<td>152-191 Food Service Industry &amp; Menu Design</td>
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<tr>
<td>150-131 Network Installation/Troubleshooting</td>
<td>152-192 Food Production II</td>
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<td>152-193 Food Production II</td>
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<td>152-194 Food Service Industry &amp; Menu Design</td>
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<td>150-134 Router Security</td>
<td>152-195 Orientation to Quantity Food Prep.</td>
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<tr>
<td>150-135 Operating Systems Security</td>
<td>152-196 Food Science I</td>
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<tr>
<td>150-136 Perimeter Security</td>
<td>152-197 Quantity Production of Soups, Sauces, Salads/Dressings</td>
<td></td>
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<tr>
<td>150-139 Current Issues &amp; Trends in IT</td>
<td>152-198 Quantity Production of Entrees, Vegetables</td>
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</tr>
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<td>150-141 Linux</td>
<td>152-199 Nutrition</td>
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<td>152-200 Baking for Chefs</td>
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<td>150-143 Exchange and SQL Server</td>
<td>152-201 Beverage Management</td>
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<td>152-202 Management of Short Order Service</td>
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<td>150-153 Information Security Management</td>
<td>152-203 Catering/Special Events/Contract Food Service</td>
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<td>150-154 Security Measures &amp; Threat Mitigation</td>
<td>152-204 Ice Sculpturing/Decorative Food Display</td>
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<tr>
<td>150-155A Current Issues &amp; Trends Seminar: Business Continuity Planning</td>
<td>316-142</td>
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<td>150-155B Current Issues &amp; Trends Seminar: Cyber Law &amp; Ethics</td>
<td>316-147 Food Service Sanitation</td>
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<td>150-155C Current Issues &amp; Trends Seminar: Computer Forensics</td>
<td>316-159 Food Purchasing, Inventory &amp; Cost Control</td>
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<tr>
<td>150-182 IT Career Preparation</td>
<td>316-160 Gourmet Stocks Sauces</td>
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<tr>
<td>152-133 Advanced Systems Documentation</td>
<td>316-165 Gourmet Foods</td>
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<td>152-142 Introduction to Visual Basic.NET Programming</td>
<td>316-166 Specialized Foods</td>
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<td>Industrial Organization &amp; Structure</td>
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<td>Process Planning</td>
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<td>Standards &amp; Regulations</td>
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<td>625-101</td>
<td>Foundations of Quality</td>
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<td>Human Elements of Quality</td>
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<td>Microcomputer Fundamentals</td>
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<td>Troubleshooting Operating Systems</td>
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<td>631-102</td>
<td>Microcomputer Hardware Service</td>
<td>58</td>
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<td>631-115</td>
<td>LAN/WAN Fundamentals</td>
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<td>631-116</td>
<td>Troubleshooting Network Operating Systems</td>
<td>58</td>
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<td>631-117</td>
<td>PC and Networking Technology Update</td>
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<td>699-101</td>
<td>Editing for Style &amp; Mechanics</td>
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<td>699-110</td>
<td>Journalism in the Workplace</td>
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<td>Professional Business Writing</td>
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<td>HTML/Web Programming for Writers</td>
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<td>Writing-The Electronic Medium</td>
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<td>699-116</td>
<td>Procedure Manuals</td>
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<td>Learning and Teaching Online</td>
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<td>Practicum in Technical Comm</td>
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<td>Speech</td>
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<td>Communication for Health Professions</td>
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<td>Introduction to Biochemistry</td>
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<td>Abnormal Psychology</td>
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<td>Introduction to Ethics: Theory and Application</td>
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<td>Race, Ethnic and Diversity Studies</td>
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<td>Social Problems</td>
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