



# 2002 *Catalog* 2003



**Blackhawk Technical College**

# **Blackhawk Technical College**

# **2002 Catalog 2003**

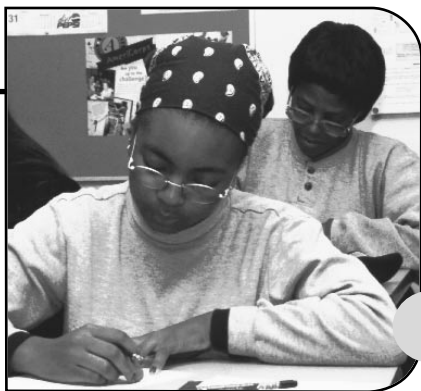
The Blackhawk Technical College Board actively complies with all state and federal equal opportunity and affirmative action laws, rules, executive orders and policies, including Titles VI and VII of the Civil Rights Act, Title IX of the Educational Amendments Act of 1972, section 50A of the Rehabilitation Act of 1973, the Age Discrimination Acts of 1967 and 1975, the Equal Pay Act of 1973, the Civil Rights Restoration Act of 1987, the Americans With Disabilities Act of 1990 and the Civil Rights Act of 1991. It is the policy of the Blackhawk District not to discriminate on the basis of age, race, creed, color, religion, handicap, disability, marital status, sex, national origin, ancestry, arrest or conviction record, sexual orientation, political affiliation, genetic testing, or membership in the national guard, state defense force or any reserve component of the military forces of the United States or this state. The District prohibits discrimination against students in admission and/or participation in services, programs, courses, and facilities usage based upon race, color, creed, religion, sex, national origin, disability, ancestry, age, sexual orientation, pregnancy, marital status, or parental status. Inquiries regarding equal opportunity may be directed to: Affirmative Action Office, 6004 Prairie Road, P.O. Box 5009, Janesville, Wisconsin 53547-5009, or phone (608) 758-6900.

*Blackhawk Technical College reserves the right to make changes in courses and regulations published in this catalog without obligation or prior notice.*

**Information Hotline at:  
(608) 757-7710 or TTY (608) 743-4499**

**Phone: (608) 758-6900  
Website: [www.blackhawk.edu](http://www.blackhawk.edu)**

**6004 Prairie Road • County Trunk G • P.O. Box 5009  
Janesville, Wisconsin 53547**



# Blackhawk Technical College

proven success

credit transferability



over 45 degree programs to choose from



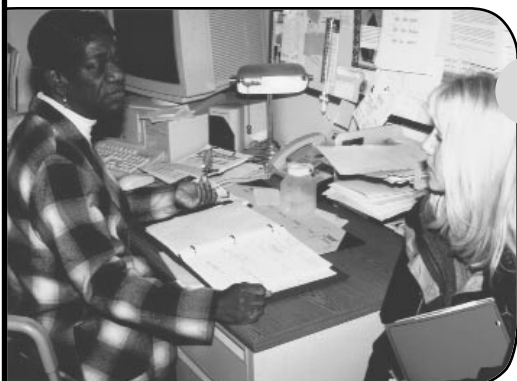
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modern equipment, facilities, programs and more!



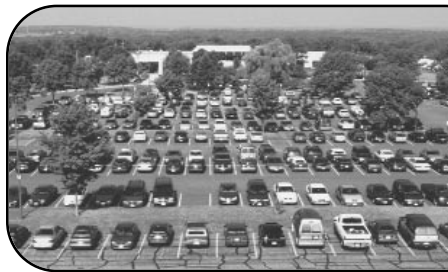
friendly environment



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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 Rock County Airport, the North Rock County Center 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 18,000 students annually—about 5,000 credit and 13,000 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. Schedules are available at the switchboard at BTC's main entrance.

## 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 Community Relations Office. Course descriptions in this catalog are only 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.

## Hours Of Operation

The general operating hours of Blackhawk Technical College are **7 a.m. to 10 p.m. Monday through Thursday; 7 a.m. to 5 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.

## Funding

The postsecondary and adult vocational education programs at BTC anticipate receiving federal funding in 2001-2002. These federal funds represent approximately six percent of the total projected operational costs for postsecondary and adult vocational education programs at BTC.

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 certificate, as well as apprenticeship programs.

Programs offered by the college are approved by the State of Wisconsin Educational Approval Board for the training of veterans.

## The District Board

**Blackhawk Technical College** is led by a nine-member Board of Directors. The volunteer Board, which is appointed by the County Board Chairs of Rock and Green Counties, must consist of a cross-section of representatives from geographic, occupational, and ethnic/racial backgrounds. Board members are appointed based on their interest in helping to keep BTC strong and meeting individual students' and employers' needs while balancing the needs and desires of area taxpayers. Members serve for a three-year term with re-appointment possible.

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& ServicesAcademic  
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**Carolyn N. Lawrence**  
Board Secretary, Secretary  
to Director of Education,  
Wisconsin School for  
Visually Handicapped  
*Beloit*



**Richard C. Stockwell**  
Board Treasurer,  
President, Rock County  
Buick Honda GMC  
*Janesville*



**Carrie J. Kroll**  
Department of Workforce  
Development,  
Rock County Job Center  
*Beloit*



**Eric A. Larson Ed. D.**  
President  
*Blackhawk  
Technical College*



**Thomas A. Westrick**  
Board Vice Chair  
Site Administrator; Rick  
Holte Education Center-GM  
No. Amer. Truck Platforms  
*Janesville*



**William N. Yoss**  
Board Chair,  
President, W.N. Yoss  
Construction, Inc.  
*Janesville*



**Bette Lang**  
Superintendent of Beloit  
Public Schools  
*Janesville*



**James Munro**  
Retired, Superintendent of  
Monroe School District  
*Monroe*



**Audrey C. Hein**  
Retired  
*Monroe*

## 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.

## Our Vision:

**Flexible, Accessible, Relevant Learning**

## Our Values:

**Trust, Diversity, Teamwork**

## 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, phone (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 Prairie Road, P.O. Box 5009, Janesville, Wisconsin 53547-5009, phone (608) 757-7773.

## Accreditation

Blackhawk Technical College is accredited by the **Higher Learning Commission, 30 N. LaSalle St., Suite 2400, Chicago, Illinois 60602, phone (800) 621-7440**. Accreditation is a non-governmental, voluntary means for an educational institution to assure those within the institution, the students, the general public, and state and federal agencies that the institution has clearly-defined objectives, an appropriate structure, and staff and resources to accomplish those objectives.

## APPROVAL/ACCREDITATION

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 of Nursing
- \* Council on Dental Education/American Dental Association
- \* Wisconsin Approval Board (for Education of Veterans & War Orphans)
- \* Federal Aviation Administration
- \* American Dietetic Association
- \* Division of Community Services
- American Physical Therapy Association
- Committee on Accreditation of Allied Health Education Programs
- American Culinary Federation Accrediting Commission
- \* National Automotive Technicians Education Foundation (NATEF)–National Institute for Automotive Service Excellence (ASE)
- Commission on Dental Accreditation
- \* Wisconsin Department of Justice–Division of Law Enforcement Services
- \* Wisconsin Department of Health and Family Services: Caregiver Registry and Investigation Unit
- Joint Review Committee on Education in Radiologic Technology

## 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.

## 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, auto mechanics, 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 assistant and hygiene, and health unit coordinator. 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. This is described in further detail in the General Information section.



**Earn Your Bachelor's Degree with**

**Blackhawk Technical College**

**Franklin University**

For more information call:  
**608-341-6237**

## Aviation Center

The Blackhawk Technical College Aviation Center is located at the Rock County Airport on U.S. Highway 51 between the city limits of Beloit and Janesville [at 4618 S. Columbia Drive, Janesville, WI. 53546-9120, phone (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 at 444 East Grand Ave., Beloit, WI 53511, (phone number: (608) 757-7669), in the building's lower level. The Center provides basic academic instruction, remedial education, and English as a Second Language (ESL) classes



## Challenge Training (Ropes) Course

Located on the northeastern edge of BTC's Central Campus, a newly-constructed Challenge Training Course (sometimes referred to as the "Ropes" course) is available to area businesses, organizations, and BTC staff and students. The course helps individuals and groups to build and develop skills in the areas of leadership, teamwork, awareness, trust, problem-solving, strategic planning, confidence, and communication. With the training being coordinated through BTC's Business and Community Development (BCD) Division, the seminars and workshops can be customized to meet individuals' and organizations' needs. Pricing will vary depending on the users needs.

The course consists of three high structures: a Climbing Wall, High Y, Pamper Pole and various low structures. Also to be constructed in the area is a basic shelter to help protect participants in the event of inclement weather. The course was made possible through donations by Simmons Company and Alliant Energy as well as BTC. To access the course, and discuss pricing, **contact the BCD Division at BTC at (608) 757-7728.**

## Monroe Campus

The Monroe Campus of Blackhawk Technical College is located just off Highway 11 at 210 Fourth Avenue, Monroe, WI 53566, phone (608) 328-1660. This friendly, full-service, handicapped-accessible campus has three computer labs



equipped with state-of-the-art computer equipment, a distance learning lab designed for global classroom connections, a nursing assistant and phlebotomy lab, and five general classrooms.

Last year, over 4,000

students engaged in learning activities at the Monroe Campus. 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 lab offers GED/HSED and vocational 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 up-to-date training for Green County employees. Small class size and a personalized learning environment ensure the success of Monroe Campus students.

## North Rock County Center



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, Janesville, WI 53545, phone (608)

743-4470.], this 26,000 square-foot facility is undergoing remodeling and a small addition, which will be ready by the start of classes in August, 2002. The remodeled center will be known as the Center for Transportation Studies.

Being added to the center at that time will be BTC's Automotive Technician program. The center will house two large shops for the Diesel and Heavy Equipment Technician and Automotive Technician programs; a cold storage area; three classrooms; a library; a microcomputer lab; an area for Landscape and Turf Services classes; an area for Apprenticeship programs; faculty offices; and a student lounge. All agricultural and several apprenticeship programs are housed at this center, as well as many non-credit offerings in computer applications and several other areas. Ample parking is available with access off of U.S. Highway 14.

## 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.

## 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 \$10.00 fee will be collected at the assessment site. 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 with a composite score of 15 or higher. (Anyone entering the Dental Hygiene, Physical Therapist Assistant, Nursing or Radiography program is required to successfully complete the COMPASS assessment or complete the ACT with a composite score of 18 or higher.)

## How to Apply

There is an **admissions process** for those who elect to enter a program of training. The applicant is required to communicate with the admissions office to facilitate the process. The process is designed to move the student into the college in a positive, helpful manner through the following steps:

1. To obtain an application form, **call (608) 757-7710**. Forms are also available from high school counselors.
2. Pay a \$30 non-refundable application fee. (The check should be made payable to Blackhawk Technical College.)
3. Submit educational transcripts. These include high school, GED/HSED, technical college, four-year college or university.
4. Entrance testing may also be required.

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. A late fee may be charged. Timely completion of all admission and registration requirements is also beneficial for those applying for financial aid.

## 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, a 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 School-to-Work Coordinator.

A number of courses in general education, business, and technology/industry may qualify for advanced standing. Basic requirements for the transcribed 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.

## 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.

## 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.

## International Students

Blackhawk Technical College is approved for the attendance of non-immigrant students under the Immigration and Nationality Laws by the Immigration and Naturalization Service. Non-immigrant international students who wish to apply must demonstrate a level of proficiency in their use of English to enable them to pursue the program of their choice (Test of English as a Foreign Language or TOEFL is required).

International students should investigate federal certification requirements as they relate to their program of studies prior to enrollment.

## Tuition and Fees

The tuition fee per credit at Blackhawk Technical College is established by action of the Wisconsin Technical College Board and is subject to possible revision at any time. In addition, many course offerings carry a separate consumable materials fee, services fee, and/or special fees. Please consult the Student Services Office at BTC to determine correct fees.

All tuition and fees are due at the time of registration unless you have been approved for deferred payment. The fees payable at registration include:

**Tuition**—Tuition rates are established by the Wisconsin Technical College System (WTCS). Local students and Wisconsin students pay the same rate, while out-of-state students are required to pay an additional tuition charge. If you drop a course or withdraw early, tuition may be refundable according to the WTCS refund policy.

**Material and Laboratory Fees**—An extra fee will be assessed on each credit to defray the cost of materials used in the course. The amount of the fee will be determined by the Wisconsin Technical College System (WTCS) and will vary by the type of course. The fee may also be refundable in accordance with BTC policies should you drop or withdraw from a course early.

**Student Activity Fee**—All students will pay a per credit activity fee. This fee is used to support activities and entertainment for students.

## Deferred Payment

You may pay tuition and fees in installments if you are unable to pay all costs at the time of registration.

If you want to pay tuition and fees in installments, you should request a Tuition/Fee Deferment Form from the Registration Office at the time of registration. You will pay a portion of your fees at that time as well as a non-refundable processing charge of \$20.00. No deferment of tuition or fees will be authorized without completion of the Tuition/Fee Deferment form.

You will be responsible for paying all fees in accordance with the payment schedule. If you fail to complete your tuition and fee obligation on time, you will be withdrawn from your program of study and you will be assigned a “W” (withdrawn) grade for all courses. This withdrawal will occur after the 29th day of the semester.



## Financial Aid

Students are encouraged to make contact with this office as soon as possible. The Financial Aid Office can help a student who may need additional money to attend BTC. Financial assistance available to you may include grants, part-time employment, scholarships, and 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.

Although Blackhawk Technical College assumes that a student and his/her family will make every effort to finance his/her education, situations exist where a student needs assistance in order to attend the school.

To be considered for any type of available financial assistance, a Free Application for Federal Student Aid (FAFSA) is required. These forms are available at the Financial Aid Office. Students may also apply online at: [www.fafsa.ed.gov](http://www.fafsa.ed.gov) Students are encouraged to apply for financial aid when they and/or their parents file tax returns. For further information, contact the Financial Aid Office at (608) 757-7664. Financial aid assistance is also available at the Monroe Campus.

Applying for financial aid should be completed months before the start of the academic year. BTC has no deadline for applying, although some types of aid are awarded quickly and may not be available if you submit your application late.

## TYPES OF FINANCIAL ASSISTANCE

### Pell Grant

The Pell Grant, unlike a loan, 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 and may range from \$400 to \$4,000 per year. Pell Grants may be paid to students attending less than half time.

### 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. Grants can range from \$250 to \$1,050 for students. 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.

### Supplemental Education Opportunity Grant (SEOG)

The SEOG program is available if the person is enrolled on a half-time or more basis and has financial need. The most needy students are funded first. Individuals must qualify for a Pell Grant to be eligible. Assistance ranges from \$200 to \$400 per year.

## Federal Work Study Program

In the Federal College Work Study program, a student is provided part-time employment. Work study is based upon financial need. A student may work a maximum of 25 hours per week. “On-the-job” performance is a criterion for continuation. Summer work study is also available on a full-time basis for those who qualify.

## Minority Retention Grant

The Minority Retention Grant is available to those 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. The grant ranges from \$300 to \$1,000 per academic year. 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 and ranges from \$600 to \$1,175 per year.

## 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.

## 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 information.*

## 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 Tech Association (BTA). Individuals are encouraged to check with those offices located on the Central Campus (BTA and Foundation offices in the Administration Building) for further information.

## Veterans/Military Programs

A variety of 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. 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. Please contact your local County Veterans Service Officer or the BTC Veterans Office (Financial Aid Office) on campus. Following are some of the more common veterans' assistance programs.

## Student Loans

The Federal Family Educational Loan (FFEL) provides low-interest loans (5.93 % capped at 8.25%) through participating lenders. Students must first complete the Free Application for Federal Financial Aid. If the student is eligible for a Stafford Loan, he/she will be notified with a financial aid award notice. Students may also be eligible for the unsubsidized Stafford Loan. The Stafford Loan is based on need, whereas the unsubsidized Stafford and PLUS Loans are non need-based loans. 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. First time borrowers are required by law to wait thirty days for the disbursement of their loans and must complete entrance loan counseling and sign the necessary forms and promissory note.

## Students' Rights and Responsibilities

As a financial aid recipient, you have the right to ask questions and understand how your aid package was determined and prepared. You also have the right to expect that your financial information will remain confidential and will not be released without your written permission. See the Financial Aid Office for additional information about your rights.

**Financial aid students at BTC also have certain responsibilities. These include:**

- filing all forms in a timely manner and completing your file before any aid is disbursed
- Using aid received solely for educational purposes
- Notifying the Financial Aid Office of any changes in enrollment status, financial status, or any private scholarships obtained outside of the financial aid office
- Maintaining academic progress
- Repaying all aid you received after withdrawing or dropping out of classes
- Providing complete and accurate information to the Financial Aid Office
- Registering with the Selective Service if you are a male between the ages of 18 years and 26 years.

***You are responsible for reporting all information to the Financial Aid Office at BTC.***

## Disbursement of Financial Aid

All financial aid is disbursed through the Registration Office on a rolling basis.

Tuition and fees are deducted from PELL and SEOG grant checks before disbursement. All fees are expected to be paid before any remaining financial aid is paid.

## Return of Title IV Financial Aid

Federal Law now states that if you receive Federal Financial Aid and withdraw or drop-out of **all** your classes before completing 60% of the semester, you will have to return some Federal Aid that you received. If you receive all "F's" for the semester, you will be required to repay a portion of your Federal Financial Aid also. 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.*

## 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 **Community Information Office**, located in the Administration Building on the Central Campus or call (608) 757-7769.

## REGISTRATION & RECORDS

### 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, you will need 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."

Mandatory 100 percent attendance with required make-up hours can be justified when outside regulatory agency requirements must be met. Instructors who require 100 percent mandatory attendance must show a correlation between attendance and the final grade. They must also have their attendance policy approved by the appropriate Dean before providing a statement to the class.

## 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.

You are not completely registered until all fees have been paid or you have signed a deferred payment agreement. 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.

*Late registration is allowed during the first week of each semester if space is available.*

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 sent to you providing specific procedures to be followed including the date and time of registration, estimated cost, and other applicable information.

## 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.

## 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 accepted only after all credit students have been accepted.

When you audit a class you are expected to participate in the class work, complete assignments, and meet the instructor's attendance requirements. Students with disabilities are expected to have a special adaptation plan in place which may waive some of the course requirements. If you elect to audit, you will pay all of the regular 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. Special options are available for senior citizens. 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 Advanced Status Committee.

1. Advanced Standing Credits--supported by official transcripts, students may request the transfer of credits from other post-secondary institutions;
2. Advanced Placement or Credit--supported by adequate documentation, students may request awarding of credits based upon work or other experiences;
3. Proficiency Testing--when students have had life experiences, advanced high school courses, or other undocumented or unaccredited experiences, BTC offers them the opportunity to receive credit by challenging certain existing courses as approved and arranged by the appropriate division dean.

**In all of the above circumstances, the student begins the process of Advanced Standing with a counseling appointment.** In the cases of Advanced Standing Credits, and Advanced Placement or Credit, the request along with transcripts/documentation is submitted to the Advanced Status Committee for final determination. Proficiency testing requires approval and arrangement by the appropriate division dean. If testing is administered, those official results are then submitted to the Advanced Status Committee for final determination.

## Transfer of Credit From BTC

One of the primary purposes of BTC is to provide the knowledge and skills related to occupational preparation. BTC programs are not intended to be the first years of a baccalaureate program. However, credits earned in various BTC programs may be transferable to a number of colleges and universities offering baccalaureate degrees.

BTC has written transfer agreements with a number of private and public four-year colleges and universities. BTC counselors have information regarding institutions which accept BTC credits. In all cases, the granting of such credits is at the discretion of the accepting college or university. Therefore, it is essential that you consult with your counselor regarding credit transfer.



*Selected Blackhawk Technical College courses will transfer to the following schools:*

- Alverno College
- Cardinal Stritch College
- Franklin University
- Marquette University
- Mount Senario College
- National-Louis University
- Rock Valley College
- Bellin College of Nursing
- Edgewood College
- Marian College
- Milwaukee Institute of Art & Design
- Rockford College
- St. Norbert College
- University of Wisconsin-Green Bay
- University of Wisconsin-LaCrosse
- University of Wisconsin-Madison
- University of Wisconsin-Milwaukee
- University of Wisconsin-Oshkosh
- University of Wisconsin-Parkside
- University of Wisconsin-Platteville
- University of Wisconsin-River Falls
- University of Wisconsin-Stevens Point
- University of Wisconsin-Stout
- University of Wisconsin-Whitewater
- Upper Iowa University

## 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 credits toward a bachelor's degree in the following ways:

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.*

## Course Drops/Adds/Withdrawals

You can change your program schedule by dropping, adding, or withdrawing from classes. However, such changes are not encouraged because of the impact the change can have on your financial aid eligibility and your graduation status. Changes in your program schedule should only be made after careful consideration and consultation with your counselor.

Schedule changes can occur during the school year, but certain guidelines should be followed. For instance, it is not advisable to add a new class after the third week of the semester. Also, you may not withdraw from a class when less than 20 percent of a class remains. In the case of extenuating circumstances, you may obtain written permission from the appropriate Dean to withdraw.

If an agency or program (e.g., Workplace Development, Wingspan, Southwest Wisconsin Workforce Development Board) is helping support your educational expenses, you may be required to have your schedule change approved by the agency or program staff.

If you add a class, you will be required to pay all additional tuition and fees at this time. If you are dropping or withdrawing from a class, you may receive a refund consistent with the WTCS refund policy. Any refund will be mailed out to you within two weeks.

It is particularly important for you to follow the procedures if you are dropping a class because if you are not officially withdrawn, you will receive an "F" for that class.

## 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 guideline:

**100 % Refund**—A 100% refund will be issued when you drop or withdraw from a course before the first day of class, or if BTC cancels a course during the first 14 calendar days or before 11% of the class has been completed.

**80% Refund**—An 80% refund will be issued when you drop or withdraw from a course during the first 14 calendar days or if less than 11% of the course's total potential hours of instruction have been completed.

**60% Refund**—A 60% refund will be allowed when you drop or withdraw from a course during the 15th through 28th calendar day of the instructional term or if 11% to 20% of the course's total potential hours have been completed.

**0% Refund**—A 0% refund will be granted after the 28th calendar day or when more than 20% of total course hours 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.

## Grades/Academic Standards

Students are expected to maintain a high level of scholarship. A minimum of one hour of outside preparation is usually required for each class period at the technical level. In associate degree courses, an average of two hours per credit may be expected. Grades are recorded at the end of each semester on the following basis:

Grades	Description	Points
A	Excellent	4.00
A-	Excellent	3.67
B+	Above Average	3.33
B	Above Average	3.00
B-	Above Average	2.67
C+	Average	2.33
C	Average	2.00
C-	Average	1.67
D+	Below Average	1.33
D	Below Average	1.00
D-	Below Average	.67
F	Failure	0
I	Incomplete	0
W	Withdrawal	0
AU	Audit	0
TR	Credit Granted	0
PR	Test Out	0

Grades and Grade Point Averages (GPA) serve as a measurement of your success while enrolled in classes at BTC. Grades are assigned and progress reports are issued at the end of each semester. 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. An overall 2.0 minimum 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 above. It is the student's responsibility to consult with his/her instructors as to his/her progress.

## Incomplete Course Work

A grade of "Incomplete" (I) may be assigned by your instructor when your course work is of passing quality and represents a significant portion of the requirements for a final grade, but is incomplete for a good cause as determined by the instructor. Good cause may include illness, serious personal problems, an accident, a death in the immediate family, a large and necessary increase in working hours, or other situation of equal gravity. If these situations occur when 20 percent or more time remains in the class, you should consider withdrawing from the class. If you are failing a course, you cannot ask for an "Incomplete" to avoid receiving an "F."

It is your responsibility to maintain contact with the instructor and to turn in all required work within the designated time (not to exceed one year). Any extensions beyond the maximum year of allowed time must be initiated by you and will be considered by the instructor on an individual basis. The instructor will complete and file a Grade Change form.

## Mid-Term Grades

Mid-term grades are issued in an effort to provide students with early feedback about academic progress. Mid-term grades are available on [www.blackhawk.edu](http://www.blackhawk.edu) after the eighth week of the semester. Letter grades of “S” and “U” are issued. An “S” indicates that you are currently performing at a “C” or higher in the course. A “U” indicates that you are currently performing at a “C-” or lower in the course.

## Program Graduation and Persistence Rates

Blackhawk Technical College, along with all colleges and universities, is required by federal regulation to disclose information regarding program graduation and persistence rates. This information, as well as other informative materials about job opportunities and program placement rates, is available to you from the Student Services Office. Stop in and ask for your copy of this report. A copy of the information is also available in the BTC Library.

## GRADUATION

Three types of recognition ceremonies are held at Blackhawk Technical College:

### Formal Graduation Ceremony

A moment of pride for any student is graduation day. Graduation is recognition that you have accomplished something of importance that will have meaning for years to come. Graduation exercises are held annually in the spring. Students who meet all program requirements may be invited to participate.

Included are individuals who have completed 12 credits of formalized training (certificate, diploma, degree). Individuals or groups who have not met the 12-credit formalized training component may petition the review committee on an annual basis for inclusion in the formal graduation ceremony.

In order to participate in the graduation ceremony, you must apply for graduation and pay a nominal graduation fee in order to have your name listed on the graduation program. An overall minimum 2.0 GPA is required for graduation.

Students are required to wear caps and gowns for the graduation ceremony. Information on the purchase of caps and gowns will be sent to you in early spring.

BTC can provide reasonable accommodations for students and guests participating in graduation activities. If you or your guests require a special accommodation, you should contact the Student Services Manager at least two (2) weeks before the graduation ceremony.

## High School Equivalency Completion Ceremony

Included are all individuals who have completed their high school diploma or equivalent.

## Recognition Ceremony

This is available to any group that has completed a formalized training component.

## Review Committee

A three-person committee will be responsible for reviewing requests for inclusion in the formal graduation ceremony. The committee will consist of the Student Services Manager (committee chair), an instructional manager, and a faculty member to be appointed by the Vice President of Learning. Any questions regarding this procedure should be directed to the Student Services Manager in the Student Services Office.

## Honor Cord



The Honor Cord program, sponsored by the Student Government Association, recognizes graduating students who have a cumulative program grade point average (GPA) of 3.75

or above at the end of the semester prior to completing their program requirements. Qualifying students will receive complimentary gold cords that can be worn on the graduation gown recognizing this achievement of academic excellence. For further information on the Honor Cord, see the Student Activities Manual. Copies are available in the Student Services Office at BTC's Central Campus.

## President's Honor List

The President's Honor List contains the names of students maintaining a 3.5 grade point average (GPA) and above with a class load of nine credits or more. Honor students with a cumulative GPA of 3.5 or better for the duration of their enrollment in a one- or two-year program have such noted on their placement records. Persons achieving a 4.0 GPA are also recognized by a special “High Honors” notation.

## Transcripts

A transcript of your entire academic record at BTC may be obtained by making a written request to the Registration Office. This request may be made by letter or using a transcript request form, which is available from the Registration Office. When requesting a transcript, it is important that you include your student I.D. number and dates of attendance. After graduation you will be mailed a complimentary transcript along with your diploma. Additional transcripts may be obtained as needed, but you will be assessed a charge per transcript to be paid before the transcript is sent to you.

## Access to Student Records

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

1. The right to inspect and review the student's education records within 45 days of the day the BTC receives a request for access.

Students should submit to the Student Services Manager written requests that identify the record (s) they wish to inspect. The Student Services Manager will make arrangements for access and notify the student of the time and place where the records may be inspected.

2. The right to request the amendment of the student's education records that the student believes are inaccurate or misleading.

Students may ask BTC to amend a record that they believe is inaccurate or misleading. They should write to the Student Services Manager, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

If BTC decides not to amend the record as requested by the student, BTC will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

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 administrative, supervisory, academic or support staff position (including law enforcement unit personnel); 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, the University 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**

BTC, under most circumstances, will not release information in your file without your written consent or the consent of your parents if you are under the age 18. However, the Blackhawk Technical College Board has designated the following information as directory information: **your name, address, e-mail address, telephone number, date and place of birth, major field of study, dates enrolled, credit load, 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.

## Name, Address, & Phone Number Change

If you change your name, address, or phone number, it is important that you notify the Registration Office immediately. BTC needs to have up-to-date information on file in the event of an illness, an emergency, the mailing of grade reports, etc. The service is for your benefit and safety, and we would strongly encourage you to notify us of any changes in personal information.

## Program Changes/Verifying Program of Record

If your goals and needs change and your program no longer meets your objective, you can change your program, in most instances, at any time during your admission process or even after you have begun your program. We encourage you to discuss any program changes with your Counselor, and you must notify the Admissions Office of any program change in person, in writing, or by telephone at **(608) 757-7665**. If you do not notify the Admissions Office of your program change, no change will be made to your records.

Ensuring the accuracy of your program of record is an important issue. Not only can this possibly affect financial aid eligibility, but it could also affect graduation from your program and your permanent records at Blackhawk Technical College. If, at any time, you would like to verify your program of record, simply contact the Admissions Office.



## **SUPPORT SERVICES**

### **Activity Periods**

Student Activity Periods are held every Thursday between noon and 12:50 p.m. No classes are scheduled during this hour so that you may participate in club and organizational activities, entertainment, and special informational presentations. The activity period also gives you time to develop plans and programs in conjunction with your technical program.

### **Career Center**

The Career Center at BTC can help you with your career planning needs. Anyone living in the BTC district is eligible to use the Career Center. 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.

Career planning and job search strategies workshops are held on a regular basis. A small fee may be charged for the workshops.

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.

### **Counseling Services**

Because much of our lifetime is spent at work, career satisfaction is important to all of us. Feeling challenged, satisfied, and rewarded in a job can mean that our work needs are being met, adding to our overall sense of well-being. Sound career decisions are based on information and personal choice. Through guided self-assessment and fact finding, we can help you with one of life's most important choices.

You are encouraged to consult with a counselor about any academic or personal problem. A counselor can help you explore your aspirations, attitudes, interests, or any other special problems you may have. Counseling services include vocational guidance, career information, assistance with academic and study problems, and personal counseling.

The professional counseling staff is located in the Counseling Center, directly opposite the registration area. You may seek out counseling assistance on a walk-in basis from 7:30 a.m. to 4:30 p.m. Monday through Friday, but it is highly recommended that you schedule an appointment. (A full-time counselor is also available at the Monroe Campus.) Counseling services are available at the outreach centers and in the evenings on a limited schedule. For more information about counseling services, or to schedule an appointment, call **(608) 757-7668** or **(608) 328-1660** at the Monroe Campus.

### **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. Contact **(608) 757-7719** for more information.

### **Services for Students With Disabilities**

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 **757-7796**. Reasonable accommodations, including academic and technical program adaptations, can be made to assist you in achieving your career goals.

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.

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 (**757-7713**) or information desk at the Monroe Campus (**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.

### **Student Identification Numbers**

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.

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## 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 needed to be successful in vocational/technical programs. 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**.

## Alcohol and Drug Abuse Prevention

*(Project C.A.R.E.—Chemical Abuse Resistance Education)*

Through a contracted service, an ATODA Specialist (Alcohol, Tobacco and Other Drug Abuse Services) is available at BTC to assist students and staff with any concerns they may have regarding the use and abuse of alcohol, tobacco, and other drugs. The ATODA Specialist coordinates education, screening, referral, and follow-up support activities. In addition, the ATODA Specialist is available to give classroom presentations on a variety of topics promoting alternatives to alcohol and other drugs. Assessments and referrals to community resources are also part of the many services available. A variety of opportunities for students to participate in non-alcohol recreational activities while on campus are available through Project C.A.R.E. The ATODA Specialist maintains a library of related resource materials which are available to staff and students.

If you are experiencing problems with alcohol, tobacco or other drugs, or have concerns that someone you know may be abusing alcohol or other drugs, you are encouraged to contact the ATODA Specialist. You don't have to have a problem to talk to the ATODA Specialist. The ATODA Specialist can be reached at **(608) 757-7715** or in the Student Services Office.

## 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.

## Guaranteed Retraining 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**.

## RESOURCES

### Distance Learning Services

The Distance Learning Services area provides and maintains facilities and equipment for compressed video, the Wisconsin Technical College Network (WTCN), WTCN meeting channel, and other distance learning initiatives at the college. In addition, this area houses a large selection of media equipment, films, videotapes, etc. that enhance instructional delivery.

### 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.-5 p.m.** on Friday. It is also open Saturdays from 9 a.m. to 1 p.m. The Aviation Center Library is aviation-oriented while the North Campus Library is agriculture and diesel-oriented. Both of these libraries are open during class hours. During the summer, hours are different.

A wide range of books, periodicals, technical publications, TV course videotapes, and many other materials are available to you as a student. Cooperative service agreements also provide you with access to materials available from area public libraries, as well as college and university libraries. Certain material is considered "Reserved" and may only be used within the libraries. Most other materials can be checked out for a two-week period. Microfiche readers, printers, photocopiers, video players, and computers are available for student use at the Central Campus Library.

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.

## **Textbooks/Bookstore**

Students are required to purchase their own textbooks and supplies. While it is not mandatory, students will usually find it convenient to purchase materials from the campus bookstore, which is a contracted service. The policy for a refund on book purchases is posted at the bookstore. Because faculty members may determine their textbooks for each course, it is recommended students obtain their required textbooks and workbooks after attending the first class.

The bookstore has available a wide range of textbooks, educational materials, and school supplies available to you. 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!

## **Student Commons/Food Service**

The Student Commons is the focal point for students on the Central Campus. This attractive, multi-purpose area is large enough to accommodate 600 students in a relaxed atmosphere during class breaks. The adjacent food service area serves reasonably-priced breakfasts, lunches, and snacks through a contracted service. Breakfasts include eggs, hashbrowns, and breakfast meats, plus doughnuts and sweet rolls, coffee, hot chocolate, and a variety of juices. The lunch menu features several hot entrees, a salad bar, cold sandwiches, desserts, and short-order items such as hamburgers and french fries. A variety of soft drinks is also available. Breakfasts are served from 7:30-10:00 a.m. and lunches from 10 a.m.-1 p.m. daily.

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.

## **Child Care 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 certified 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 **757-7751** for more information about the hours and services provided.

## **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 Accident and Health Insurance**

Two 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.

## **Parking**

The Central Campus has parking available in both the east (front) and north (side) lots. Usually there is adequate parking for everyone. Please observe parking restrictions as posted. Otherwise, you may park in either of the lots 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 are two short-term parking areas—one for visitors and one 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 or valid BTC pass may receive a parking citation issued by the Rock County Sheriff's Dept.

On-site parking is available at the Aviation Center, North Rock County Center, 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.

## **Bus Transportation**

Public transportation is offered between Janesville and Beloit. There are twelve stops each weekday at the Central Campus between 6 a.m. and 6:15 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.

## STUDENT ACTIVITIES AND AWARDS

BTC encourages student participation in extra-curricular and co-curricular activities. These activities are recognized as having educational, recreational, and social value, enabling students to gain valuable experience in leadership and working with others. To a large extent, the responsibility for conducting and administering student activities lies with the students themselves.

You are encouraged to participate in the activities that best suit your personal interests and needs. For further information about these activities, contact the Student Activities Office located in Student Services or call 757-6330. Students have the opportunity to participate in activities at all of our campus centers.

### 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.

### BTC Ambassadors

BTC Ambassadors are a select group of students who participate in special events, conduct tours, give presentations and assist with the orientation and recruitment of new students. Students interested in becoming an Ambassador apply in early fall and are chosen through an interview process.

### Student Government Association

The purpose of the Student Government Association (SGA) is to promote citizenship and leadership among the student body, foster a spirit of democracy and unity in student activities, and encourage mutual understanding among students, administration, and staff. SGA is composed of representatives from each program and club who meet during activity period to discuss and act on issues of importance to the student body. Leadership in SGA is coordinated by an Executive Committee which consists of the President, a Vice President from each center, Treasurer, Recording Secretary, Corresponding Secretary, Governor, Lieutenant Governor, and Parliamentarian.

### Student Activities Committee

The Student Activities Committee (SAC), as a sub-group of SGA, helps plan campus-wide social, recreational, and educational activities. They are also responsible for coordinating the activities calendar for all student groups. Members are involved in choosing entertainers for on-campus performances, arranging holiday programs, promoting health awareness programs, educational speakers, and organizing recreational sports events. Some of the activities sponsored by SAC include live entertainment in the Commons, annual all school socials, off campus trips to sports events, shopping trips, etc.

## Student Activities Board

The Student Activities Board was established to assist the District in developing an activities program which complements the curricular offerings of the college and provides a fair and efficient means for the distribution of funds. This board, comprised of students and staff, reviews applications for student clubs and organizations, prepares an annual budget which includes financial support for all activity groups, and evaluates the overall activity program to best meet the needs of the students.

## 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 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.
- **Child Care Club**—The Child Care Club provides students in the Child Care 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.

## Student Organizations (cont.)

- **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.
- **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.
- **SADHA**—Student American Dental Hygienists' Association— This club was formed in January, 1998. This association is a student affiliate of the national American Dental Hygienists' Association. The purpose of the BTC association is to cultivate, promote, and sustain the art and science of dental hygiene and to contribute toward the improvement of the health of the public. Students will also learn communication and leadership skills and have the opportunity to travel and learn more about their profession.
- **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.

## 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.

## Volleyball Court

A sand-pit volleyball court is located west of the Commons on the Central Campus. Constructed with funds designated from the Student Government Association, the volleyball court provides recreational activities for students as time permits. Those interested may check out volleyballs from the Information Desk with a driver's license serving as the deposit to check out the ball.

## Awards Program

The honors recognition program culminates in late April at the annual Awards Program sponsored by the Student Government Association. At the program, individuals are recognized for their academic achievements, participation in club and student organization activities, and contribution to the community and BTC.

## Wisconsin Technical College Ambassador Program

The Technical College Ambassador Program recognizes and rewards outstanding student achievement in technical education. Students are nominated by staff and must progress through district-level screening and selection activities. The BTC winner represents our Technical College District at the State Technical College Ambassador Award Ceremony in the spring in Madison.

## Who's Who Among Students In American Junior Colleges

BTC students are eligible for recognition in the Who's Who Among Students in American Junior Colleges publication. Selection is based on campus leadership, scholastic and community achievements, and the student's promise for future contributions to vocational endeavors. Deserving students are nominated by BTC staff.

## Outstanding Student Achievement

This award is for students in the top 10 percent of their program who are graduating with a 3.0 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.

**IMPORTANT INFORMATION FOR STUDENTS**
**Campus Safety/  
Crime Reporting Statistics**

Federal and state laws require BTC to provide students information on criminal activities on campus, and to outline institutional policies for reporting criminal and arrest activities. The following information is provided in compliance with these laws:

**Reporting of Criminal  
Actions On BTC Facilities**

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 or 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.

BTC cooperates with law enforcement authorities in the exercise of their responsibilities. BTC encourages accurate and prompt reporting of all crimes to the appropriate local police agencies.

BTC will obtain reports of criminal activity and other emergency actions occurring on BTC facilities from local law enforcement agencies supporting the facilities. BTC shall prepare and report annually security and criminal statistics to students, faculty, and staff as required by applicable guidelines and procedures.

**Security Of And Access To BTC Facilities**

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.

**Monitoring And Recording  
Criminal Activity Off Campus**

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. By law, BTC will cooperate with local law enforcement authorities who may request BTC staff to verify information (e.g., student status, ages, residence, etc.) about students.

**Criminal Offense  
Statistics at BTC Facilities**

BTC must annually collect and report statistics regarding certain types of crimes in accordance with applicable laws. Following is a summary of crimes that occurred on BTC facilities during 1998, 1999, and 2000:

	1998	1999	2000
<b>Murder</b>			
Murder and Non-Negligent			
Manslaughter	0	0	0
Negligent Manslaughter	0	0	0
<b>Rape</b>			
Forcible	0	0	0
Non-Forcible	0	0	0
<b>Robbery</b>	0	0	0
<b>Aggravated Assault</b>	0	0	0
<b>Burglary</b>	0	0	0
<b>Motor Vehicle Theft</b>	0	0	0
<b>Arson</b>	0	0	0

**Statistics About  
Arrests On BTC Facilities**

Local police agencies report the following information regarding arrests on BTC facilities during 1998, 1999, and 2000:

	1998	1999	2000
<b>Liquor Law Violations</b>	0	0	0
<b>Drug Abuse Violations</b>	0	0	0
<b>Weapons Possessions</b>	0	0	0

## Possession, Use, And Sale Of Alcohol And Enforcement Of Underage Drinking Laws

The possession and 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.

The possession, use, and sale of illegal drugs is regulated at BTC in accordance with the Drug Free Schools Act, the Drug Free Workplace Act, applicable provisions of state and federal law, Wisconsin Administrative codes and District Board policies. BTC cooperates with local police agencies to enforce violations related to the possession, use, and sale of illegal drugs. If you fail to comply with applicable laws or district rules you face possible criminal prosecution, and/or suspension or expulsion.

BTC recognizes drug and alcohol dependency or abuse as a major health problem, as well as a safety and security problem. The college takes a proactive approach to alcohol and drug dependency abuse through education, prevention, and assistance. BTC is engaged in a continual effort to raise the awareness of the students, faculty/staff and the community to the problems of alcohol and drug dependency or abuse.

If you experience problems with alcohol, tobacco, or other drugs, or have concerns that someone you know may be abusing drugs or alcohol, you are encouraged to contact the ATODA Specialist.

## Tobacco/Smoking

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 please use only the designated areas set aside for tobacco use and the receptacles located at those areas.*

## Phones

Pay telephones are available for student use in each building and outside by the bus stop. You are encouraged to use these phones to conduct your business. Students are not allowed to use the school office phones. Text (TTY) telephones are also available for the hearing impaired. Red-colored emergency phones are located throughout the Central Campus which connect directly with the main switchboard. No dialing is necessary. **The TTY# is: (608) 743-4499**

## Accident or Illness Emergency Procedures

Due to the technical nature of your education at BTC, there are many pieces of equipment which may cause serious injury. You are urged to use caution when operating all equipment and to follow proper safety procedures to prevent an accident.

Occasionally accidents or other serious illnesses will occur. In those situations, BTC uses the professional medical treatment system available in the community to respond. BTC will provide basic medical first aid but will not treat any illness or injury. Rather, you will be referred to an appropriate medical treatment facility. If you refuse to seek follow-up medical treatment after it has been recommended by a staff member, you will be asked to sign a waiver corroborating this decision.

You will be responsible for your own transportation to a medical facility. However, should the injury or illness be considered an emergency or life threatening in the opinion of the staff member on the scene, an ambulance may be requested at the discretion of that staff member. You will be responsible for the cost of the ambulance. Under no circumstances will BTC staff transport you for treatment. All accidents, regardless of the seriousness, should be reported to a staff member, so that first aid and follow-up treatment can be provided and an accident report prepared.

Clean-up after an accident or illness should be left to the BTC maintenance and custodial staff. You should not attempt to clean up blood, vomit, or other body fluids without proper safety equipment. If clean-up is necessary, you should go to the information desk at the main entrance and request maintenance/custodial staff to clean up the area.

*In case of emergency, call 911. (Depending on your campus location, you may need to dial "9" first or use the red-colored emergency phones located in the hallways at the Central Campus to reach the switchboard. They will contact 911 for you).*

## Student Messages

Only messages of an emergency nature will be taken at the Information Desk and every reasonable attempt will be made to locate the student. Non-emergency messages will not be accepted. In some cases (e.g., car lights left on, etc.) a message will be placed on the closed-circuit TV monitors in the hallways. Students should inform families, child care providers, etc. of the above limitations and develop alternate arrangements in the event they cannot be located

## School Closings

Weather-related school closings will be given to area radio and TV stations by 6 a.m. for daytime classes and by 3 p.m. for evening classes. Please tune to the following radio/TV stations:

### RADIO

<b>WTJK</b>	— 1380 AM —	<i>Beloit</i>
<b>WEKZ</b>	— 93.7 FM —	<i>Monroe</i>
<b>WKPO</b>	— 105.9 FM —	<i>Janesville</i>
<b>WCLO</b>	— 1230 AM —	<i>Janesville</i>
<b>WTSO</b>	— 104 FM —	<i>Madison</i>
<b>WSJY</b>	— 107 FM —	<i>Janesville/ Fort Atkinson</i>
<b>WJVL</b>	— 99.9 FM —	<i>Janesville</i>
<b>WEKZ</b>	— 1260 AM —	<i>Monroe</i>
<b>WZOK</b>	— 97.5 FM —	<i>Rockford</i>
<b>WGEZ</b>	— 1490 AM —	<i>Beloit</i>
<b>WFAW</b>	— 940 AM —	<i>Janesville/ Fort Atkinson</i>

### TELEVISION

<b>WISC</b>	— Channel 3 —	<i>Madison</i>
<b>WKOW</b>	— Channel 27 —	<i>Madison</i>
<b>WMTV</b>	— Channel 15 —	<i>Madison</i>
<b>WTVO</b>	— Channel 17 —	<i>Rockford</i>
<b>WREX</b>	— Channel 13 —	<i>Rockford</i>
<b>WIFR</b>	— Channel 23 —	<i>Rockford</i>

## Lockers

A limited number of lockers are available for student use. Lockers may be rented during the first two days of the fall semester in an area set up in the Commons. After the first two days, lockers may be rented from the Student Services Office. Lockers may be rented the first day of the spring semester in the Commons. After the first day of the spring semester, lockers will be available for the spring semester and summer school session from the Student Services Office.

If you want to rent a locker, the cost is \$3.00 per semester, \$5.00 per year, and \$2.00 per summer term. Students may rent lockers on a semester or yearly basis. Policies related to locker rental and use may be obtained from Student Services.

## Lost and Found

The Lost and Found is located at the Information Desk directly inside the main entrance. It is generally open from **7:00 a.m. to 10:00 p.m. Monday through Thursday and 7:00 a.m. to 5:00 p.m. on Friday.** Anyone finding an item should turn it in to the Information Desk.

## Bulletin Boards and Notices

Notices, announcements, and posters are permitted only on bulletin boards. All must carry a dated approval stamp obtained in Student Services. It is strongly recommended that this approval be obtained prior to printing a supply of any posters or announcements, as some restrictions may apply. Only posters, flyers, etc. pertaining to campus activities, classes, or services of a direct nature to student interests will be approved.

Items “for sale” or “wanted” may only be posted on specially designated bulletin boards near the Commons. An expiration date for all notices will be indicated and it is the student’s and/or organization’s responsibility to remove the dated postings. Any announcements not carrying the approval stamp or not on the appropriate form will be taken down.

## Student Referral

When you experience problems completing program or course requirements, it is important that you seek help immediately. Sometimes an instructor may refer you to a counselor for assistance. A student referral form is used for this purpose. Once a referral form is received, the counselor will meet with you to discuss steps necessary to improve your academic performance. You are also urged to communicate directly and promptly with your counselor when you are notified that a referral has been filed. Referrals will typically be made for poor attendance patterns, evidence of academic difficulties, and similar occurrences.

## Religious Belief Accommodations

BTC will attempt to minimize conflict between your academic obligations and sincerely held religious beliefs. Reasonable accommodations will be made so that examinations and other academic requirements do not unnecessarily interfere with your observation of religious holidays.

Observation of a religious holiday does not exempt you from any course requirement, but allows you an opportunity to complete the assignment through an alternate means as arranged with your course instructor(s).

The following procedures will be used to set up reasonable accommodations for a religious holiday:

You will submit a written request to your course instructor(s) within the first ten (10) days of the class. The request will advise the instructor(s) of the specific date of the observation. The instructor(s) will have ten (10) school days to respond to your request, in writing, outlining the accommodations that will be made.

You should remind the instructor(s), in writing, of the religious observation five (5) school days in advance of the anticipated absence.

The instructor(s) may provide you with a make-up assignment for the day absent. The instructor(s) are not obligated to schedule a make-up assignment before the regularly scheduled requirements are due.

Conflicts between your observation of a religious holiday and completion of academic requirements should be resolved informally between you and your instructor whenever possible. If the issue cannot be resolved informally, a formal complaint may be filed. See your counselor for information on how to proceed with a formal complaint.

## Code of Conduct

Blackhawk Technical College is charged with the responsibility of providing technical and adult education to the people of Rock and Green Counties. In support of its mission, BTC has adopted a code of conduct which applies to all students enrolled in courses, as well as any guest or group involved in activities on BTC's premises. The code sets forth reasonable rules, and is intended to protect the welfare and safety of everyone. Under the code, the following behaviors and acts are not allowed:

- Acts of dishonesty and cheating.
- Intentional actions which obstruct, disrupt, or physically interfere with the use of BTC.
- Physical abuse, verbal abuse, threats, intimidation, harassment, coercion, and/or other conduct which threatens or endangers any person.
- Unauthorized possession, duplication, or use of keys or unauthorized entry to BTC premises.
- Attempted or actual theft of or damage to BTC property or to other personal or public property.
- Theft or other abuse of computer time and equipment.
- Conduct which is disorderly, lewd, or indecent, or which is a breach of peace on BTC premises or at BTC-sponsored activities.
- Possession or display of firearms, dangerous articles, or substances, incendiary devices, explosives, or other potential weapons.
- Illegal use, possession, or distribution of narcotic or other controlled substances.
- Use, possession, or distribution of alcoholic beverages on BTC's premises.
- Violation of federal, state, or local law on BTC premises or at BTC-sponsored activities.
- Violation of BTC policies, rules, or regulations.
- Failure to comply with reasonable directions of BTC officials acting in the performances of their duties.
- Any other activity deemed to endanger the student, the college community, or the academic process.

All students, guests, and groups are requested to comply with the established standards. Conduct that violates the code is not acceptable and will not be tolerated. Persons who fail to comply may be suspended, expelled, or liable for legal prosecution as appropriate to the offense.

The *BTC Code of Conduct* is intended for your benefit and the protection of everyone involved in education and other activities at BTC. Students are expected to know and willingly follow the code in their everyday activities.

BTC is concerned about academic misconduct (cheating) and its effects upon students and the academic integrity of BTC. If a student has concerns about cheating, or if they witness cheating in any of their classes, they should report the situation to the instructor in charge of the course.

## Student Disciplinary Procedure

A complaint against a student for an alleged violation of the Student Code of Conduct should be forwarded to the Student Services Manager. In the event BTC has reason to believe that any student has violated one or more of the standards of conduct, disciplinary action may be initiated.

If possible, alleged misconduct will be resolved informally through a conference with the student(s) and appropriate staff member(s). However, if the allegations of misconduct cannot be resolved informally, or if the allegations threaten the safety and welfare of any person, the Student Services Manager will arrange for a Student Conduct Hearing.

***In the event that the student's course of conduct is so serious as to warrant immediate action, the President or designee may remove the student from campus and prohibit the student from returning to the campus prior to the hearing. In any case, the student will have a right to a hearing.***

### STUDENT CONDUCT HEARING

A Student Conduct Hearing will be held to determine whether the student action warrants discipline. A Student Conduct Committee will hear the complaint against the student. The committee will consist of the Student Services Manager (Chair), Dean or appropriate instructional coordinator, a student services counselor, an instructor, and a Student Government Association representative. The staff member or person issuing the complaint will be allowed to present his/her case. The alleged offender will also be permitted to present information to explain his/her side of the issue/conflict. Other appropriate persons may be called to testify at the discretion of the committee.

All parties have a right to be represented by a counselor or advocate. Intention of either party to have an advocate present must be communicated to the Student Services Manager in writing at least seventy-two (72) hours prior to the start of the hearing. Neither the counselor nor advocate, will be allowed to speak on behalf of any person involved in the grievance hearing.

After hearing the testimony, the committee will meet privately to recommend what, if any, disciplinary action should be taken. The Student Conduct Committee will make the recommendation within five (5) school days of the committee hearing. The recommendation will be communicated in writing to all parties involved.

Failure of the alleged offender to appear for the hearing will not affect the right of the Student Conduct Committee to take whatever disciplinary action is deemed appropriate.

### APPEALS PROCEDURE

The student has a right to appeal a disciplinary decision to the President. Disciplinary decisions may only be appealed under the following conditions:

Significant error in the process which impaired either party, including failure to follow appropriate procedures either prior to or during the initial hearing.

Significant new evidence of a substantial nature.

Appeals must be submitted in writing, within five (5) school days following issuance of the decision. In the event of an appeal, the initial decision shall be stayed until a decision is made about granting an appeal.

## **Student Complaint/ Grievance Procedure**

When students believe that they have a valid complaint regarding BTC policies, personnel, or facilities, you may initiate a grievance. All grievances must be initiated within the semester in which the alleged incident occurred or policy was encountered. Contact the Student Services Office to initiate the process.

The student, as well as the involved staff member(s), may be accompanied by an advocate at any step in the process. The advocate is a person of the grievant's choice who is present at all proceedings to ensure that the rights of the parties involved are protected and proper procedures are followed.

Intention of either party to have an advocate present at the Grievance Hearing must be communicated to the Student Services Manager in writing at least seventy-two (72) hours prior to the start of the meeting or hearing. The advocate will not be allowed to speak on behalf of any person involved in the Grievance Hearing.

A grievance may be initiated according to the following procedures:

### **Step 1–Informal Meeting**

Students are encouraged to make an appointment with the appropriate staff member to explain the nature of the complaint. It is hoped that in most cases, complaints will be resolved at this level. You can contact the Student Services Office and they can assist you.

### **Step 2–Supervisory Meeting**

If students and the staff member are unable to reach a satisfactory agreement, student may request a meeting with the appropriate staff member and his/her supervisor. This request must be made within five (5) school days after the informal meeting (Step 1). You shall place in writing the nature of the complaint and submit copies to the appropriate staff member and program counselor. Ordinarily, that meeting shall take place no more than five (5) school days after the date of the complaint.

### **Step 3–Grievance Hearing**

Should the issue remain unresolved after the supervisory meeting (Step 2), the student may request a grievance hearing. A request for a grievance hearing must be made in writing to the Student Services Manager no later than five (5) school days following the supervisory hearing (Step 2). The Student Services Manager will arrange to have a Grievance Hearing Committee appointed. The committee members shall include two (2) students, two (2) instructors, two (2) administrators, and the Student Services Manager, who shall serve as the chairperson of the Grievance Committee.

Both sides of the issue will be heard by the Grievance Committee. The grievant will be permitted to give information to explain his/her side of the issue/conflict. The staff member(s) involved will also be allowed to present his/her case. Other appropriate persons may be called to testify at the discretion of the committee.

After hearing the testimony, the Grievance Committee will meet privately to consider its recommendation. The Grievance Committee shall make a recommendation within five (5) school days of the committee hearing. The recommendation shall be communicated in writing to all parties involved by the Student Services Manager.

The recommendation of the Grievance Committee is final unless the staff member, against whom the complaint was made, does not concur or fails to carry out the recommendation of the Grievance Committee. The decision of the staff member to either comply or reject the recommendation shall be made and communicated to the Student Services Manager within five (5) working days. The Student Services Manager will inform the student(s) of the staff member's decision.

Failure of the student to appear at the grievance hearing will constitute withdrawal of the complaint. Once the complaint is withdrawn, it cannot be reissued.

### **Appeals Procedure**

*You may appeal the Grievance Committee's recommendation to the President, in writing, under the following conditions:*

- When the staff member decides not to comply with the Grievance Committee's recommendation
- When either party was impaired by significant errors in the process, including inadequate notice and/or failure to follow appropriate procedures during the hearing.
- When significant new evidence of a substantial nature is discovered.

Under any of the stated circumstances the Grievance Committee's recommendation will be referred to the President. The President shall have the option of hearing the appeal or allowing the recommendation of the grievance committee to stand.

Appeals must be submitted in writing, within five (5) school days following issuance of the decision. When the President agrees to hear the appeal, all parties will be notified within ten (10) days of receipt of the request and the actual hearing will occur within five (5) school days of the written notice to hear the appeal. Ordinarily, after hearing the appeal, the President will issue a written decision within five (5) school days. The decision of the President is final and not subject to further appeals.

*Please note that Blackhawk Technical College is required to have all formal grievances available for review by accrediting agencies at their request.*

## Discrimination & Harassment Policies

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**, *Director, Human Resources, Affirmative Action Officer*, Administration Center  
**Phone (608) 757-7773**

**Rita Brock**, *Title IX Officer, BCD Division Office*, Central Campus  
**Phone (608) 757-7726**

**Dr. Robert Borremans**, *ADA Officer*, Administration Center  
**Phone (608) 757-7735**

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

*Your written concerns can be sent to any of these individuals at:*

**Blackhawk Technical College**  
**6004 Prairie Rd. • P.O. Box 5009 • Janesville, WI 53547**

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.

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 such conduct is made either explicitly or implicitly a term or condition of an individual's employment, student status, or academic participation.
2. Submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions affecting an individual.
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.

## Consensual Relations

Positive relationships between students and staff at BTC enrich the college environment and are encouraged. It is natural that interaction between individuals in an academic setting may lead to personal friendships. Personal friendships do not pose problems as long as they do not interfere with academic decisions. However, a consensual romantic or sexual relationship between a student and a staff member may be exploitative and create the appearance of a conflict of interest.

Therefore, students and staff are discouraged from entering into a consensual romantic or sexual relationship while the student is currently enrolled in the staff person's class or when the student is receiving guidance from the person.

As a student you are urged, for your own protection, to refrain from developing a relationship of a sexual or romantic nature with BTC staff. If you become involved in such a relationship, you are encouraged to contact the BTC Title IX Officer located in the Business and Community Development Office on the Central Campus, phone **(608) 757-7726**.

## Recycling

Blackhawk Technical College is participating in a voluntary recycling program. Your assistance is needed to make BTC's recycling program a success. Located throughout the facilities you will find paper, trash, and aluminum containers. Please use them. In addition, please remember that classroom trash receptacles are for paper only. Do not place other types of items in those receptacles—use the containers in the hallway. Your help and cooperation is needed and appreciated as we all work together to protect our environment.

## Student Handbook/Calendar

The Student Handbook/Calendar contains important dates and occurrences throughout the year at BTC. Student Handbook/Calendars are available at the Information Desk.

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**PROGRAMS & SERVICES**

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 Service Occupations instructional divisions within the college.

**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 757-7627 or 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.

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's Governor's Work-based Learning Board and works as a consortium in coordination with School-to-Work, Work-based Learning and Youth Apprenticeship initiatives designed to focus students on a career path for the future. The Blackhawk Technical College 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 prepares young people for careers. The consortium meets monthly to determine implementation of activities and to disseminate information.

The Tech Prep initiative works closely with all secondary students and 9-14 educators to create a seamless transition between consortium high schools and Blackhawk Technical College. This seamless transition is established through 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 by giving students a head start on their college degree.

Professional development of area educators is also coordinated and provided through Tech Prep by offering training in the development of applied and integrated academics with an emphasis toward hands-on relevant learning, connected to the Wisconsin Model Academic Standards. In addition to workshops, seminars, and curriculum development activities, funding is available for educators to work as externs at a business of their choice to learn current trends and technologies in the workplace. This experience is then captured, reported, and applied in their work with students as they serve in their role as an instructor, counselor or administrator.



## Academic and Career Development Division

The Academic and Career Development Division faculty and staff provide basic skills education, career development instruction and support services which assist students to 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, laser disks, television, 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 provided at no cost to adults in the district. Contact the *BTC Learning Centers*:

Central Campus—6004 Prairie Rd, Janesville 53545  
(608) 757-7676

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

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

Rock County Job Center – 1900 Center Ave., Janesville 53546  
(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 unless otherwise indicated.

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. There is **NO FEE** charged for these courses.

## Course Listings

Course No.	Course Name
73-851-713	BSE Communications 1
73-854-713	BSE Math 1
73-856-713	BSE Science 1
73-858-713	BSE Reading 1
73-859-713	BSE Social Science 1
73-862-713	BSE Employability Skills/Career Decisions 1
74-851-762	BSE Communications 2, Communications Review-Storefront
74-851-764	BSE Communications 2
74-854-762	BSE Math 2, Math Review-Storefront
74-854-764	BSE Math 2
74-856-762	BSE Science 2, Science Review-Storefront
74-856-764	BSE Science 2
74-858-762	BSE Reading 2, Reading Review-Storefront
74-858-764	BSE Reading 2
74-859-762	Social Science 2, Social Science Review-Storefront
74-859-764	BSE Social Science 2
74-862-764	BSE Employability Skills/Career Decisions 2
75-861-711	English as a 2nd Language, Beginning Literacy, Communications
75-861-714	English as a 2nd Language, Beginning Literacy, Math
75-861-715	English as a 2nd Language, Beginning Literacy
75-861-718	English as a 2nd Language, Beginning Literacy, Reading
75-861-731	English as a 2nd Language, Beginning Communications
75-861-734	English as a 2nd Language, Beginning Math
75-861-735	English as a 2nd Language, Beginning
75-861-738	English as a 2nd Language, Beginning Reading
75-861-751	English as a 2nd Language, Low Intermediate, Communications
75-861-754	English as a 2nd Language, Low Intermediate, Math
75-861-755	English as a 2nd Language, Low Intermediate
75-861-758	English as a 2nd Language, Low Intermediate, Reading

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Course No.	Course Name
75-861-771	English as a 2nd Language, High Intermediate, Communications
75-861-774	English as a 2nd Language, High Intermediate, Math
75-861-775	English as a 2nd Language, High Intermediate Reading
75-861-778	English as a 2nd Language, High Intermediate, Reading
75-861-791	English as a 2nd Language, Low Advanced, Communications
75-861-794	English as a 2nd Language, Low Advanced, Math
75-861-795	English as a 2nd Language, Low Advanced
75-861-798	English as a 2nd Language, Low Advanced, Reading
76-851-791	ASE High School English
76-851-793	ASE Literature and Composition
76-853-791	ASE American History A
76-853-792	ASE American History B
76-854-790	ASE General Math
76-854-791	ASE Introduction to Algebra & Geometry
76-854-792	ASE Pre-Algebra A
76-854-793	ASE Pre-Algebra B
76-854-794	ASE Algebra 1A
76-854-795	ASE Algebra 1B
76-854-796	ASE Geometry A
76-854-797	ASE Geometry B
76-854-798	ASE Algebra 2A
76-854-799	ASE Algebra 2B
76-856-791	ASE General Science
76-856-793	ASE Physical Science
76-856-795	ASE Biology Prep
76-856-797	ASE Anatomy & Physiology Prep
76-856-799	ASE Chemistry Prep
76-858-790	ASE College Prep Reading
76-859-790	ASE Government
76-859-791	ASE Social Studies
76-859-792	ASE Current Social Issues
76-859-793	ASE Sociology
76-859-794	ASE Economics
76-851-771	BSE Communications 3, GED
76-851-772	BSE Communications 3, GED Review
76-854-771	BSE Math 3, GED
76-854-772	BSE Math 3, GED Review
76-856-771	BSE Science 3, GED
76-857-771	BSE Health, HSED
76-858-771	BSE Reading 3, GED
76-859-771	BSE Social Science 3, GED
76-859-773	BSE Social Science 3, Civics, HSED
76-862-771	BSE Employability Skills/Career Decisions 3
77-851-755	BSE Communication Skills for Workplace Learning Center

Course No.	Course Name
77-851-781	BSE Communications 3, Communications Review
77-851-783	BSE Communications 3, Communications Prep
77-854-755	BSE Math for Workplace Learning Center
77-854-781	BSE Math 3, General Math, Review
77-854-783	BSE Math 3, Intro. to Algebra & Geometry
77-854-785	BSE Math 3, Algebra for Health Professions
77-854-787	BSE Math 3, Algebra & Geometry for Business and Industry
77-856-781	BSE Science 3, Science Review
77-856-783	BSE Science 3, Non-Human Biology
77-856-785	BSE Science 3, Anatomy & Physiology Prep
77-856-787	BSE Science 3, Chemistry Prep
77-856-789	BSE Science 3, Physics Prep
77-856-792	BSE Science 3, Electronics Prep
77-858-781	BSE Reading 3, Efficient College Reading
77-858-783	BSE Reading 3, for the Health Professions
77-858-785	BSE Reading 3, Medical Terminology Prep
77-859-781	BSE Social Science 3, Social Science Review
77-862-781	BSE Employability Skills/Career Decisions 3
77-890-781	BSE Study Skills for College & Vocational Students
78-851-780	BSE Communications 3, Review
78-851-782	BSE Communications 3, Comp. Prep
78-854-780	BSE Math 3, General Math, Review
78-854-782	BSE Math 3, Introduction to Algebra & Geometry
78-854-784	BSE Math 3, Algebra for Health Professions
78-854-786	BSE Math 3, Algebra & Geometry for Business and Industry
78-856-780	BSE Science 3, Science, Review
78-856-782	BSE Science 3, Non-Human Biology
78-856-784	BSE Science 3, Anatomy & Physiology Prep
78-856-786	BSE Science 3, Chemistry Prep
78-856-788	BSE Science 3, Physics Prep
78-856-790	BSE Science 3, Electronics Prep
78-858-780	BSE Reading 3, Efficient College Reading
78-858-782	BSE Reading 3, Reading for Health Professions
78-858-784	BSE Reading 3, Medical Terminology Prep
78-859-780	BSE Social Science 3, Social Science Review
78-890-780	BSE Study Skills for College & Vocational Students

**851-713 BSE Communications 1**

Introductory course includes basics of punctuation, spelling, and 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 Science 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,  
Communications 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.

**854-764 BSE Math 2**

Reviews Level 1 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**

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.

**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.

**858-762 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 later 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.

**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  
(ESL Communications 1)**

Instruction to familiarize learners with basic speaking, listening, and pronunciation strategies. Students will learn to generate the sounds of English, use basic survival language, and respond to personal information questions.

**861-714 ESL Beginning Literacy Math (ESL Math 1)**

Instruction and practice with survival language related to numbers. Students learn to use cardinal and ordinal numbers to count, express dates, provide telephone numbers and addresses, count money, and tell time.

**861-715 ESL Beginning Literacy Functional (Functional ESL 1)**

Learners will participate in cultural exchange activities and learn about standard American social norms of time, etiquette, body language, and personal grooming. Learners will become aware of the American work ethic and employer expectations for entry level employees.

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### **861-718 ESL Beginning Literacy (ESL Reading 1)**

Instruction and practice with pre-reading and writing skills. Students learn to recognize the English alphabet and make use of sound/symbol relationships. Learners will reproduce letters, words, numbers, and symbols related to basic survival vocabulary.

### **861-731 ESL Beginning Communications (ESL Communications 2)**

Learners will apply basic pronunciation strategies, discriminate speech, and identify the sounds of English. Instruction and practice in the use of formal and informal conversational language. Learners will generate and respond to simple informational questions and increase survival vocabulary related to health, family relationships, transportation, household features, and technology.

### **861-734 ESL Beginning Math (ESL Math 2)**

Instruction to develop language and skills needed for beginning math. Topics include place value concepts, and basic addition, subtraction, multiplication, and division of whole numbers.

### **861-735 ESL Beginning Functional (Functional ESL 2)**

Learners will identify common occupations and work sites. Workplace vocabulary will be stressed and students will learn to identify basic safety signs, workplace titles, areas, items, and tools. Learners will access technology, use school information and resources, and apply learning skills and strategies needed for academic and workplace success.

### **861-738 ESL Beginning Reading (ESL Reading 2)**

Instruction to develop comprehension of a range of printed material and develop an awareness of language patterns. Learners will identify common signs, use calendars and maps, and recognize personal information print. Learners will employ a variety of comprehension strategies and write simple grammatically correct statements and questions in the present tense.

### **861-751 ESL Low Intermediate Communications (ESL Communications 3)**

Learners will identify the sounds of English from dictation, discriminate present from past statements and questions, and use formal and informal conversational language to respond to questions about familiar topics. Survival vocabulary will be expanded to include names of school based resources, emergency language, and increased health and shopping vocabulary.

### **861-754 ESL Low Intermediate Math (ESL Math 3)**

Learners will review basic math skills of addition, subtraction, multiplication, and division and apply knowledge to solve basic word problems. Familiarity with key words will be stressed. Learners will be introduced to fractions and learn to use a ruler, yard stick, and tape measure for standard measurement.

### **861-755 ESL Low Intermediate Functional (Functional ESL 3)**

Learners will identify skills for specific occupations and be introduced to pre-employment resources such as classified ads, job services, and employment agencies. Very basic interview skills will be introduced and practiced. Learners will discuss elements of workplace culture and identify basic employee benefits and rights.

### **861-758 ESL Low Intermediate Reading (ESL Reading 3)**

Learners will demonstrate comprehension of a range of printed materials by completing simple forms, following one-step written directions, using state and local maps, and reading experiential stories. Common idioms and phrasal verbs will be introduced. Learners will form statements and questions using pronouns, contractions, and adjectives.

### **861-771 ESL High Intermediate Communications (ESL Communications 4)**

Learners will identify sounds of English, use basic pronunciation strategies, and discriminate speech. Formal and informal conversational language skills will be developed through participation in a variety of activities. Learners will use sustained speech to give short explanations, descriptions, and process directions.

### **861-774 ESL High Intermediate Math (ESL Math 4)**

Learners will use critical thinking skills to solve problems using fractions, decimals, percents, and proportions. Basic algebra and geometry concepts will be introduced.

### **861-775 ESL High Intermediate Functional (Functional ESL 4)**

Learners will use pre-employment resources such as classified ads, employment agencies, web sites, and the Rock County Job Center to complete a variety of assignments and tasks. Employer expectations such as punctuality, attitude, team work, and appreciation for diversity will be discussed. Learners will participate in activities to prepare for interviews.

### **861-778 ESL High Intermediate Reading (ESL Reading 4)**

Learners will demonstrate comprehension of a range of printed materials including road signs, safety signs, newspaper articles, rhythm chants, short narratives, and fairy tales. Comprehension strategies studied will include recognition of compound words, homonyms, prefixes, and suffixes. Learners will demonstrate an awareness of a variety of language patterns and utilize rules of grammar to form statements and questions in simple and continuous tenses.

### **861-791 ESL Low Advanced Communications (ESL Communications 5)**

Learners will discriminate speech, display active listening skills, and increase survival language. Formal and informal conversational language will be practiced. Learners will be expected to use sustained speech to generate two-person dialogues about familiar topics and share experiential stories. There will be instruction and practice using a variety of grammatical structures including the perfect tenses and tag questions.

### **861-794 ESL Low Advances Math (ESL Math 5)**

Learners will be introduced to basic concepts and language skills needed in algebra and geometry such as signed numbers, equations, rectangular coordinates, polynomials, angles, triangles, and plane and solid figures.

### **861-795 ESL Low Advanced Functional (Functional ESL 5)**

Learners will identify the raise/promotion process, discuss the purpose of personnel files, discuss employer expectations, and identify discriminatory practices. Interview etiquette will be discussed and practiced. Activities will lead to greater understanding of American cultural practices such as volunteerism, competitiveness, parenting, and neighborhood interaction.

### 861-798 ESL Low Advanced Reading (ESL Reading 5)

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.

### 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.

### 856-771 BSE Science 3, GED

A continuation of Science 2. Concentrates on higher level comprehension, application, analysis, and evaluation skills needed for the GED test. Includes topics in biology, chemistry, earth science, and physics.

### 857-771 BSE Health, HSED

Overview of general health practices needed for healthy adult and family living. Allows students seeking a Wisconsin state HSED to meet the requirements of that diploma.

### 858-771 BSE Reading 3, GED

Develops reading in the content areas, including literature interpretation, science, social studies, and math. Test taking skills and study skills are stressed. This course is geared toward the GED tests utilizing simulated GED test taking, multi-media presentations, computer software, and test practice workbooks.

### 859-771 BSE Social Science 3, GED

Concentrates heavily on content in the areas of history, economics, geography, political science, and the behavioral sciences. Also provides instruction preparing individuals to understand themselves and society. Includes a study of basic terms, inquiry, and observation methods that provide background for life application. Course will be appropriate for GED completion.

### 859-773 BSE Social Science 3, Civics, HSED

This 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 responsibility. Students who finish 30 hours of instruction in this course meet the citizenship requirement for the HSED certification.

### 862-771 BSE Employability Skills/Career Decisions 3

Classroom activities provide students with awareness of their own interests, values, and abilities. Students will be assisted in making appropriate career choices, and in making application for training, employment, or financial aid.

### 890-780 BSE Study Skills for College and Vocational Students

This course uses the textbook *Becoming a Master Student* to develop the skills necessary to be a successful college student. Students will learn how to study a textbook, how to take notes, how to write papers, and how to interact assertively and cooperatively with fellow students, teachers, and significant others. They will also learn about campus and community resources, health, time and money management, and memory techniques. Speakers with expertise in the topics to be covered will be invited to class throughout the semester as their schedules permit. In class discussions, students share with each other the techniques that have worked for them.

### 851-755 BSE Communications Skills for Workplace Learning Centers

Participants in this course will learn how to increase their reading comprehension; use punctuation, spelling, and capitalization rules as needed for written expression in everyday situations; write complete sentences and paragraphs; and demonstrate the ability to use listening and speaking skills. Participants will also learn problem solving, critical thinking, and conflict resolution skills using work related materials when appropriate. Emphasis will be placed on skill enhancement that is immediately transferable to professional or personal use by the participants. Course work may also be used in preparation for the GED test.

### 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, Introduction 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, Algebra for the Health Professions**

Designed for students entering a program in the health occupations that would benefit from an introduction to algebra. Provides problem-solving skills needed for drug calculations and courses in physics and chemistry.

**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.

**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, and 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.

**858-780/858-781 BSE Reading 3, Efficient College Reading**

This course concentrates on developing efficient college reading stressing vocabulary, comprehension strategies, 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.

**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.

**890-780/890-781 BSE Study Skills**

This class is designed to assist new and continuing students in the development of affective 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.

**854-795 ASE Algebra 1B**

This course continues the concepts of Algebra 1A and expands to the elements of analytical geometry, systems of equation, radicals and exponents, quadratics, and 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, radicals and exponents, complex numbers, and polynomial equations.

**854-789 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, and 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.

**856-795 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, and 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**

This 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, economic, religious and educational.

**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.

**CALS--**

**Computer Assisted Learning System**

CALS 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 CALS 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.

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## **ESL--English As A Second Language**

ESL provides Basic Skills Education instruction in math, 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.

## **External Diploma Program**

A program for mature adults who have enough knowledge to demonstrate competency of the requirements for a high school diploma. Through a series of assessment activities, participants will demonstrate that they have gained skills through life experiences. There are no instructions and no tests. The program is individualized and confidential. A high school diploma is issued upon completion. There are fees involved.

## **Family Literacy Programs**

Blackhawk Technical College works in cooperation with the Beloit and Janesville Public Schools to provide parenting, English as a Second Language (ESL), and basic skills instruction. The Even Start 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.*

## **P.I. 5.09**

This program is an alternative form of HSED, available only by referral from instructors.

## **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.

## **Special/Supplementary Services for Students With Disabilities**

Special support assistance is provided to students with disabilities who attend BTC in either a credit or non-credit program. An instructor will assist in arranging for physical modifications, accommodation of visual or hearing impairments, or other individualized services that will assist the student in being successful. The support instructor will also travel to outreach centers to assist in necessary adaptations. **Please call 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 Certificate**

## **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. **Classes are offered at all centers during the day and evenings.***

## 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.

## GENERAL EDUCATION DIVISION

#### 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 communications, 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. These skills, which are regularly identified by employers, employees, and educators, are broadly defined by seven outcomes.

## Assessment Outcome Statements

- Use the writing process to prepare and present written documents.
- Use various communication strategies to share meaning orally.
- Apply listening skills to various communication situations.
- Apply mathematical symbols and concepts to area of study.
- Utilize mathematical processes to solve problems.
- Apply scientific concepts and terminology.
- Apply social science concepts and principles to area of study, world of work, and personal life.

## General Education Alternative Methods Of Delivery

The General Education Division prides itself on its flexibility. Classes are offered in a variety of formats including traditional, video-based (TV), compressed video, Accelerated Learning (ACCEL), 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.

#### Video-based-Independent Study:

These courses require students watch selected programs over public television and complete activities based on the programs and selected readings. These courses are becoming more web-enhanced so access to a computer is recommended.

#### Compressed Video (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.

#### 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 you to come to campus to complete the tests.

**Required For Associate Degree (18 Credits)**

The General Education core for associate degree programs consists of 15 credits drawn from Communications and Behavioral/Social Sciences. In addition, all Associate Degree programs require 3 credits of math and/or science. Students should check with their program advisor or counselor for the specific program requirements.

**Communications-- 6 credits required**

Course #	Course Title	Credits
801-195	Written Communications	3
801-196	Oral/Interpersonal Communications	3
801-197	Technical Reporting (Prerequisite: Written Communications)	3
801-198	Speech (May be substituted for 801-196)	3

**Social Science-- 3 credits required**

Course #	Course Title	Credits
809-195	Economics	3
809-196	Introduction to Sociology	3
809-197	Contemporary American Society	3

**Behavioral Science -- 3 credits required**

Course #	Course Title	Credits
809-198	Introduction to Psychology	3

**Math and/or Science -- 3 credits required**

(Check with your program advisor or counselor for the specific program requirements.)

**General Education Electives -- 3 credits required. See list below.**

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**
**801-119 Mass Communication 3 Credits**

This is a course designed for students who are interested in learning about music, radio, television, and film. However, the nature and scope of the course goes beyond mere media appreciation. The overall objective is to provide students with an understanding of the forms of Mass Communication and insure that the students learn how to communicate interpersonally about the films, television shows, and radio music that they see and hear. Main learning activities: movies, recorded music and television shows will be seen and heard regularly in class and discussed and critiqued formally outside of class.

**801-132 Secretarial Communications 3 Credits**

Secretarial Communications includes the following writing skills: grammar and usage, punctuation, capitalization, correct use of numbers, homonyms, possessives, and using these skills in applied writing. It also includes editing and proofreading skills, job finding skills such as resume writing, cover letters, interview follow-up letters, and interviewing skills, as well as composing and writing various types of business letters, memos, and meeting minutes correctly.

**801-195 Written Communications 3 Credits**

Written Communications teaches the writing process which includes pre-writing, drafting, revising, and editing. Through a variety of writing assignments, the student will analyze audience and purpose, research and organize ideas, and format and design documents based on subject matter and content.

**801-196 Oral/Interpersonal Communications 3 Credits**

This survey course explores effective interpersonal, small group, and public communication skills. Students gain practical experience by exploring a variety of topics which may include: understanding communication, interpersonal relationships, listening, nonverbal communication, obstacles to communication, interviewing, small group problem-solving and leadership, and informative and persuasive public speaking.

**801-197 Technical Reporting 3 Credits**

This course teaches the preparation and presentation of written and oral technical information. The types of documents discussed include: technical memos and letters, brief reports, proposals, manuals, mechanism descriptions, instructions, and research reports. Students will work on improving clarity of expression, economy of language, and accuracy of information. A graphics section is included. Students will also deliver an oral technical presentation for a specific audience.

**Prerequisite: Written Communications**

**801-198 Speech 3 Credits**

Speech is designed to provide both the "how" and the "why" to public speaking in order to help students become better speakers and better consumers of public communications. The course covers the basic principles of speech communication as well as how to apply these principles in the classroom, in the community, and in careers. Audience-centered communication is emphasized throughout the course: how to analyze the listeners, how to be sensitive to their needs and interests, and how to talk to and with others. Students are urged to communicate ideas to real people rather than merely go through the motions of "giving a speech". This course may be taken to satisfy the Oral/Interpersonal Communications requirement for Associate Degree Programs.

**801-311 Communications I 2 Credits**

This course reviews the grammar and writing skills that an adult learner needs to write clearly and concisely on the job. Students will also examine the composition skills that are needed to produce a variety of job-related documents including: business memos, letters, and short reports. Additional topics may include: interpersonal skills, employment-related communications, group decision-making, telephone techniques, and oral presentations.

**801-312 Communications II 2 Credits**

This course presents the skills and techniques essential to effective intrapersonal and interpersonal communication and shows how to apply these skills and techniques to situations encountered in daily living. Units of study may include: verbal and nonverbal communication, listening skills, perception and self-concept, effective use of language, group processes, conflict, persuasion, speech organization, interviewing techniques and telephone techniques. Students will participate in oral communication projects individually and in small groups.

**804-101 Algebra 3 Credits**

This is a math course covering tools of algebra, equation solving, signed numbers, inequalities, word problems, systems of equations and inequalities, graphing polynomials, exponents, and radicals. If time permits, factoring, algebraic fractions and solving quadratic equations may be included. This course is designed to prepare the student for the algebra used in many program areas. Program area applications are included.

**804-105 General Mathematics 3 Credits**

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, 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:** 1 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 rations, 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.

**804-111 Math Data Processing 3 Credits**

This one semester course includes mathematical topics suitable to the current computer industry. General topics include: problem solving and critical thinking techniques, number theory, essential algebra, set theory, logic, computer number systems (conversions between decimal, binary, octal, and hexadecimal), internal data representation, and essential statistics.

**804-112 Data Collection, Presentation and Analysis 3 Credits**

*Offered in spring semester only.*

This course is intended to introduce the individual to basic data collection, analysis and presentation techniques. The use of descriptive statistics as well as sampling, probability, and decision-making models will be covered. Data reliability will also be addressed. This course is intended as an introduction to basic statistics with an emphasis on current, real world applications.

**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.

**804-151 Technical Mathematics I 5 Credits**

This course includes a review of arithmetic and geometric principles, algebraic operations and solutions of linear equations, trigonometry, including solutions of right and oblique triangles, a study of vectors, periodic functions and complex numbers. Special emphasis is given to problems pertaining to the particular area of technology.

**Recommended:** High school algebra or equivalent

**804-152 Technical Mathematics II 4 Credits**

This course is a continuation of Technical Mathematics I and includes a further study in algebra with topics such as quadratic equations, logarithms, series and sequences, statistics, and an introduction to analytic geometry and differential and integral calculus with applications. **Prerequisite:** 804-151

**804-304 Math Fundamentals 2 Credits**

*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. (This course is similar to General Mathematics minus three units of study. General Mathematics may be used to satisfy the Math Fundamentals requirement.)

**804-306 Shop Mathematics I 2 Credits**

This course includes the basic principles of arithmetic beginning with whole numbers and common fractions, and continuing through decimals, percentages, ratios, proportions and averages, measurements, use of constants and coordinate systems. These principles are applied to typical shop problems throughout the course. **Recommended:** 1 year of high school math

**804-308 Shop Mathematics II 2 Credits**

This course is a continuation of Shop Mathematics I and includes the study of the properties of circles, volumes and surface areas of various solids, an introduction to practical algebra and trigonometric principles used in solving right triangles as well as applications of the sine and cosine law in solving oblique triangles. **Prerequisite:** 804-306

**804-309 Shop Mathematics III 2 Credits**

*Offered in fall semester only.*

This is a one-semester course designed to provide the student an understanding of statistical methods used to determine whether or not manufacturing processes are in control. The course will cover the history of statistical process control (SPC), an introduction to statistics including probability, measures of central tendency and variation, histograms, normal distributions, variable and attribute charts and cause-and-effect charts. Emphasis will be placed on the application of these principles to help identify and resolve practical problems and procedures found in the machine shop and industry.

**Prerequisites:** 804-306 and 804-308

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**806-108 Applied Anatomy & Physiology 5 Credits**

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.

**Prerequisites:** 806-131 & 806-140

**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.

**806-111 Introduction to Biochemistry 3 Credits**

This introductory course covers the characteristics and classification of chemicals essential for life and health, emphasizing how the body uses these substances, and exploring the relationship of biochemistry and health. Specific topics covered include electrolytes in biochemistry, organic and biochemical compounds, biochemical energy, metabolic pathways, chemical communications, and body fluids.

**806-118 Metal Science 3 Credits**

*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.

**806-121 Basic Chemistry 3 Credits**

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.

**806-131 Anatomy & Physiology 4 Credits**

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.

**806-140 General Physics 3 Credits**

This course is designed to acquaint the students with basic concepts of physics and their applications. Topics covered include algebra (a review), measurement, motion, forces, work, energy, power, simple machines, heat, and electricity. Laboratory exercises are designed to expand upon and reinforce lecture material.

**806-151 Technical Science I 3 Credits**

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.

**Prerequisite:** 804-151

**806-152 Technical Science II 3 Credits**

This course is a continuation of Technical Science I with a study of heat, wave motion and sound, light and optics, and an introduction to electricity and magnetism. Sufficient mathematical treatment is given to the materials so the student 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. **Prerequisite:** 806-151

**806-194 Survey of Anatomy and Physiology 3 Credits**

This course is designed to assist the Medical Secretary with the transcription of medical notes, information, and documented application of medical, surgical, and human anatomy terminology, and provide a basic understanding of human physiology.

**Prerequisite:** 510-117 Medical Terminology

**806-195 Anatomy & Physiology I 4 Credits**

The first semester in a two-semester series that studies human anatomy and physiology according to the body's systems approach, but with consideration of the functional interrelationships of the various systems. Fundamental concepts and principles of cell biology, histology, the integumentary system, the skeletal system, the muscular system, and the nervous system (including the special senses) and the endocrine system are studied.

**Prerequisites:** High school chemistry and high school biology

**806-196 Anatomy & Physiology II 4 Credits**

The study of human anatomy and physiology according to the body's systems approach, but with consideration of the functional interrelationship of the various systems. Emphasis is on the normal structure and function of the cardiovascular system, respiratory system, digestive system, metabolism, the urinary system, fluid and electrolyte balance, acid-base balance, and the reproductive system.

**Prerequisite:** 806-195

**806-197 Microbiology** **4 Credits**  
The fundamentals of Microbiology will be emphasized through lecture and laboratory exercises. Topics in history, morphology and physiology, nutritional growth and metabolism, and methods available for identification of microorganisms will be taught. Current concepts relating to the spread of disease and control mechanisms will be discussed. Common causes and sources of infection will be demonstrated and examined along with recent advances in chemotherapy.

**Prerequisites:** *High school chemistry and high school biology*

**806-315 Applied Science** **2 Credits**  
*Offered in spring semester only.*

This one semester course in basic physics principles reviews accuracy and precision of measurements and introduces calculations with units and conversions within and between systems of measurements. Formula rearranging and applications to problem solving are reviewed. Basic physics topics such as properties of matter, mechanical principles of force, motion (linear and circular), energy, power and machines, heat, electricity, and magnetism are also studied. Emphasis is placed on the applications of the laws and principles of physics to practical problems. The use of vectors is demonstrated in forces, velocities, and electrical transformers.

**Prerequisites:** *804-105.*

**806-333 Aviation Physics** **2 Credits**

This is a one-semester course in basic physics principles for aviation maintenance technicians. It includes a review of the units of measurement and conversions along with the properties of fluids. Mechanics (linear motion, equilibrium, energy, power, circular motion and machines), heat (temperature scales, specific heats and transfer), along with sound (wavelength, frequency, speed and intensity) are included. Special emphasis is given to problems applying these principles to the particular area of technology.

**Recommended:** *High school algebra*

**809-120 Developmental Psychology** **3 Credits**

This course reviews physiological, psychological, and sociological aspects of development through the life span. It covers major maturational developments and task-oriented achievements from birth through old age.

**809-155 Abnormal Psychology** **3 Credits**

Workers in helping professions learn to respond appropriately to deviant and disturbed behavior in their encounters with the public. Course content enables them to function optimally as an ally of the medical and paramedical therapeutic professional.

**Prerequisite:** *809-198*

**809-171 Social Problems** **3 Credits**

An examination of the effects of social problems on the individual and traditional institutions of his/her society. Students develop the ability to defend a position on social issues, gather information, do problem analysis, make decisions, explore the ways in which the individual's and society's expectations are shaping our life style, and to describe how community services and organizations operate first hand. The course is also meant to increase proficiency in both oral and written communication, to foster personal involvement in society, and to develop a sense of citizen responsibility and the skills with which to fulfill it.

**809-195 Economics** **3 Credits**

Students receive a basic understanding of the economic system, its many elements and the individual's relationship to the system as a whole. The course demonstrates the role of money and its effects on our economy, presents measurement of production, employment and income, explains why we have business fluctuations, and shows the current method of economic analysis and the development of economic policies used to stabilize the level of economic activity.

**809-196 Introduction to Sociology** **3 Credits**

Study of individuals in groups (minorities and the majority), looking at culture, deviance, social stratification, basic institutions - family, educational, religious, political and economic, collective behavior, and social movements.

**809-197 Contemporary American Society** **3 Credits**

Students explore their position as members of society through a look at the various social institutions such as the family, religion, economics, education, and politics. Students learn basic social terms to give them a frame of reference for future use.

**809-198 Introduction to Psychology** **3 Credits**

Study of the basic theories of perception, learning and memory, intelligence and cognition, motivation, personality, values and attitudes, stress and related issues. Abnormal behavior and various therapeutic approaches are explained. Students will consider the historical development of the science of psychology as well as the methodology employed in research. Some biological functions will be explored to the extent that they relate to psychological processes. Nursing students will also work with the DSM IV to acquire a degree of familiarity with this diagnostic tool in preparation for their psychiatric nursing rotation. There will be ample opportunities for drawing relationships between course work and everyday living. A considerable effort will be made to introduce the student to related recent research findings through ancillary materials.

**809-351 Human Relations** **2 Credits**

This course is designed to acquaint the student with the basic concepts of human relations, basically on the job. The purpose is to promote understanding of oneself and empathy for others as a basis for establishing satisfactory relationships on the job and in everyday living.

**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.

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## Business And Community Development Division

Each year more than 14,000 Green and Rock County adults meet their needs for continuing education and more than 150 businesses meet their needs for customized training and technical assistance at Blackhawk Technical College. Through the development of two Centers, services are now organized to better meet the needs of incumbent workers, job seekers and enrichment learners alike. The Center for Continuing Education monitors community needs and provides classes starting at many times during the year. The Center for Business and Professional Development works directly with businesses, education, and community to custom design services including classes, workshops and seminars, and technical assistance such as strategic planning which are often delivered at the requesting business's site.

### Jane Svennevig, Vice President—(608)757-7704 Business and Community Development

New Business Development  
Training Funds Identification  
Grant Development  
Business Expansion/Retention  
Community Development  
Agency Interface

## Center for Business and Professional Development

The Center for Business and Professional Development custom builds courses and services to businesses' specifications or modifies existing courses to meet special interests and requirements. If you represent a business, industry, agency, or organization located in Rock or Green County, BTC's professionals can design and conduct the training desired, using your business facilities or Blackhawk Technical College's. Courses can be set up to meet your specific needs.

Instructors, consultants, and technical resource specialists can be brought in from throughout Wisconsin and surrounding regions to work on special training problems. Worker training funding may be available to offset training costs.

Customized training is currently being delivered in-plant in many of the following areas listed.

- Basic Skills Education
- GED/HSED (High School Equivalency)
- English as a Second Language (ESL)
- Business Communications
- Interpersonal Skills
- Leadership Development
- PC Software Applications
- Math Skills
- Meeting Facilitation
- Myers-Briggs Type Indicator
- Sales and Marketing
- 7-Step Improvement Process
- Strategic Planning
- Supervision

- Team Development
- Total Quality Improvement
- Automated Manufacturing Technologies
- Basic Shop Skills
- Confined Space
- Forklift Safety
- Individualized Technical Studies Degree
- Industrial Maintenance or Safety
- Manufacturing Productivity
- Quality Assurance
- MOUS Testing Center
- OSHA Compliance

### Rita Brock—Coordinator, Center for Business and Professional Development—(608)757-7726

Call Rita for service if your organization or company is non-manufacturing, service, education, or government related. Rita can customize all types of training or technical assistance to meet your needs. Additional courses are developed as requested.

### Patricia Kempinski—Coordinator, Center for Business and Professional Development—(608)757-7728

Call Pat for service if your organization or company is transportation or construction related or a general manufacturer. Pat can customize all types of training or technical assistance to meet your company's needs.

### Peggy Corning—Coordinator, Center for Business and Professional Development—(608)757-7725

Call Peggy for service if your organization or company is a manufacturer targeted to the automotive, plastics, or food processing industries. Peggy can customize all types of training or technical assistance to meet your company's needs.

## Center for Continuing Education

The Business and Community Development Center for Continuing Education offers non-credit courses in Business Occupations, General Education, Industrial/Agriculture Occupations, Personal Development, Occupational Preparation, Career Change, and Skills Upgrading.

### Val Wittman—Coordinator, Center for Continuing Education—(608)757-7701

### Anita Huffman—Continuing Education Specialist, Monroe Campus—(608)329-8203

## **Business Continuing Education Courses**

In addition to established subjects ranging from keyboarding and speedwriting to computer languages, real estate and supervisory training, courses are continually being developed and implemented in areas such as banking, insurance, clerical skills, business finance, and marketing.

*(Sample Listing)*

- Microcomputer Applications\*
- Office Occupations Lab\*
- Real Estate & Appraisal\*
- Introduction to Microcomputers\*
- Small Business Management\*
- Speedwriting (Intro. & Refresher)\*
- Leadership Skills\*
- Supervisory Training\*
- Microsoft Windows
- Basic Programming\*
- Customer Relations
- Financial Planning\*
- Quality Concepts\*
- Sales Training\*
- Introductory Accounting\*
- Keyboarding (Intro. & Refresher)\*
- Word Processing

*\*-indicates a variety of specific courses within subject area.*

## **Personal Development Continuing Education Courses**

In **PERSONAL DEVELOPMENT** a variety of classes provides adults with opportunities to expand their knowledge or skills for both personal and vocational development.

Diverse interests require a variety of opportunities, times, and settings to meet the needs of employed workers, homemakers, and retired individuals who desire personal growth.

Individuals and groups with ideas for classes are encouraged to contact the Center for Continuing Education.

*(Sample Listing)*

- Cake Decorating
- Creative Writing
- Flower Arranging
- Genealogy
- Pre-Retirement Planning
- Sewing
- Spanish
- Quilting
- Commercial Drivers License
- Drawing & Painting
- Furniture Renovation
- German
- Reupholstery
- Sign Language
- Food/Nutrition Classes

A wide variety of Industrial related courses are offered. Classes range from Basic Electricity to Programmable Logic Controllers.

Interested students take these courses for skills upgrade and self-improvement in their current vocation or to help open the door for new opportunities in the working world.

The following courses are offered for individuals to attend on a part-time basis in the area of industrial occupations.

## **Industrial Continuing Education Courses**

*(Sample Listing)*

- Basic Electricity for Construction & Industry
- CAD-Computer Assisted Drafting
- Fundamentals of Welding
- National Electric Code
- Programmable Logic Controllers
- Safety
- Blueprint Reading
- Forklift Operator Training
- House Wiring
- Pre-Apprenticeship Training
- Quality Control
- Woodworking

## **Outreach Continuing 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, ATODA counseling and support, and GED/HSED preparation and testing services are offered. Up-to-date training for Green County employers and employees supports regional workforce development. Over 3,000 students are annually 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
- Evansville
- Monroe
- Rock County Job Center
- Edgerton
- Milton
- North Rock County Center

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 and Business and Community Development Division.

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An apprenticeship is a training program that involves an agreement with an employer or an employer/employee agency. It is an ideal learning situation combining work experience with related classroom training. BTC provides classroom instruction to apprentices in the following skilled trades:

- Carpentry
- Electrical
- Plumbing
- Maintenance Mechanic/Millwright

An apprentice training program is a legally-constituted program of education set up under Wisconsin state law in such a way that the employer and the apprentice are fairly treated under a contractual agreement. Apprentice programs vary in length from one to six or more years. During this time, the apprentice is assured of receiving well-rounded training in his or her selected field, and the employer is assured of having a skilled employee.

This training is accomplished through the cooperative efforts of the Bureau of Apprenticeship Standards, Department of Workforce Development, which supervises the work of the apprentice on the job to see that it meets standards set for that particular trade; the employer, who provides work experience for the apprentice; and BTC, which provides instruction in trade technology and related sciences.

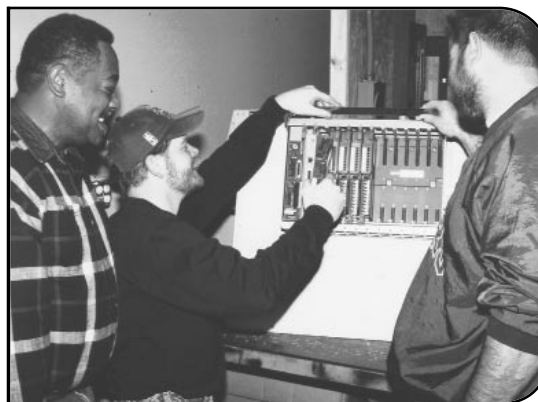
To be eligible for apprenticeship training, a person must be employed in the field and meet the application and testing procedures of the trade in which he or she wishes to participate. The rules and policies for apprenticeship may vary because of policies set forth by outside agencies and advisory committees.

## Apprenticeship Information

Prospective applicants for apprenticeship may receive information by contacting the apprenticeship coordinator at (608) 757-7627 or (608) 743-4472.

## Carpenter

Carpenters lay out buildings on the job site. They also build forms for such items as floors, beams, joists, wall columns, and stairs. They do rough framing, roof framing, stair framing, and scaffold building in both home and heavy construction settings. They may complete outside finishing by installing such items as cornices, outside wall trim, and roof coverings. They may also install inside finishing products such as doors, windows and trim, baseboards, cabinets, wardrobes, flooring, and ceilings. They may apply exterior and interior hardware to doors, windows, and cabinets. Carpenters may perform miscellaneous repair work, set up for machinery and other equipment, and some welding.



## Electrician (Construction)

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. Journeylevel 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.

## Maintenance Mechanic/Millwright

Millwright apprentices learn to repair and maintain machines and mechanical equipment using hand tools, power tools, and precision measuring and testing equipment. They troubleshoot mechanical devices and complete needed repairs; dismantle devices to gain access to and remove defective parts using hoists, cranes, hand tools, and power tools; maintain operations and service schedules in accordance with diagrams, sketches, operation manuals, and manufacturers' specifications; perform preventive maintenance procedures; adjust functional parts of devices and control instruments using hand tools, levels, plumb bobs, and straight edges; inspect used parts to determine changes in dimensions using rulers, calipers, micrometers, and other measuring instruments; lubricate and service hydraulic and pneumatic devices; complete performance tests on equipment; make replacement parts for machinery; work with and maintain electrical equipment; and repair and maintain hand and power tools used in daily operations.

## Plumber

Plumbers install pipes for water, gas, sewage, and drainage systems. They also install sanitary facilities such as lavatories, toilets, tubs, bathroom fixtures, showers, kitchen fixtures, drinking fountains, and laundry equipment. Plumbers install pipe systems, using both hand and power tools to cut, bend and thread pipes, and to make welded and soldered joints. Plumbers must also run tests on their installations to assure that the system is functioning properly and meets the Plumbing Code. They are often called upon to clear pipelines and drains and to make repairs on faucets, valves, and leaky pipes.

## Steamfitter

Steamfitters (also called pipefitters) assemble, install, and maintain pipes to carry water, steam, compressed air, gases, and fluids needed for processing, manufacturing, heating, or cooling. The journeylevel pipefitter must be able to adapt and repair pipe systems; install appliances and heating and refrigeration units; and do all types of pipe welding. Pipefitters work with both high- and low-pressure pipes, mostly in industrial and commercial buildings. They also install and repair residential heating and cooling equipment. They install pipelines in refrigeration plants, oil refineries and chemical and food processing plants. They also install automatic sprinkler systems. They have technical knowledge in preventing corrosion, clogging and breaking of pipelines; and in testing for proper operation.



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## ASSOCIATE DEGREE IN TECHNICAL STUDIES–Journeyworker

The Associate Degree in Technical Studies–Journeyworker is designed for individuals who possess a Journeylevel Certificate with a minimum of 400 hours of apprenticeship-related instruction from the Wisconsin Technical College System or equivalent. This degree builds upon previous technical training through the addition of 18 credits of general education and technical support and 6-14 credits of occupational support courses. It is designed to enhance technical apprenticeship training by providing courses in social science, math, behavioral science, communications, and student-selected Associate Degree-level courses.

### Program Requirements

- **Journey level Certificate**  
(400 hour minimum)
- **Associate Degree-Level Courses**  
Student-selected occupational support
- **General Education**
  - Communications (6 credit minimum)*
    - Written Communications 3
    - Oral/Interpersonal Communications 3
    - Technical Reporting 3
    - Speech 3
  - Social Science (3 credit minimum)*
    - Economics 3
    - Introduction to Sociology 3
    - Contemporary American Society 3
  - Behavioral Science (3 credit minimum)*
    - Introduction to Psychology 3
  - Mathematics/Science (3 credit minimum)*
    - Basic Chemistry 3
    - Technical Science 3
    - General Mathematics 3
    - Introduction to College Mathematics 3
    - Algebra 3
    - Business Mathematics 3

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With the demands created by the increased growth and complexity of modern society, accounting has become one of the fastest growing professions in America. Opportunities exist in the areas of public, private, and governmental employment.

The Department of Accounting offers an Associate Degree that 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 and ability to learn throughout their lives.

## Accounting Department Mission Statement

To provide the foundation upon which graduates can build, specialize, and advance in the accounting field.

## Program Standards

Graduates from the Associate Degree in Accounting program must meet the following minimum requirements:

- minimum grade of "C-" (grade point 2.0) in all Accounting courses and algebra
- cumulative GPA of 2.5 or better in Accounting courses
- cumulative GPA of 2.0 or better overall

## Potential Employment Opportunities

Accounts Payable/Receivable, Payroll, Staff Accountant, Tax Preparer, Cost Accountant, General Accountant.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
101-103	Accounting Orientation	1	1 - 0
101-105	Accounting Spreadsheets <sup>1</sup>	3	1 - 4
101-111	Accounting I <sup>1</sup>	4	3 - 2
101-135	Payroll Accounting <sup>1</sup>	2	1 - 2
103-174	Introduction to MS Word	1	0 - 2
801-195	Written Communications	3	3 - 0
804-101	Algebra	3	3 - 0
<b>Semester 2</b>			
101-112	Accounting II <sup>2</sup>	4	2 - 4
101-130	Accounting Information Systems	3	3 - 0
101-136	Computerized Accounting <sup>2</sup>	1	0 - 2
102-160	Business Law	3	3 - 0
801-196	Oral/Interpersonal Communications	3	3 - 0
	Elective <sup>3</sup>	3	varies
<b>Semester 3</b>			
101-113	Accounting III <sup>2</sup>	4	2 - 4
101-123	Income Tax Accounting	3	2 - 2
101-125	Cost Accounting <sup>2</sup>	4	2 - 4
103-175	Microsoft Access	2	0 - 4
809-198	Introduction to Psychology	3	3 - 0
<b>Semester 4</b>			
101-109	Financial Analysis <sup>2</sup>	3	2 - 2
101-124	Applied Income Tax <sup>2</sup> or	2	0 - 4
101-128	Accounting Internship <sup>2</sup>		varies
101-131	Applied Accounting Information Systems <sup>2</sup>	3	1 - 4
101-137	Career Development in Accounting <sup>2</sup>	1	1 - 0
809-195	Economics	3	3 - 0
809-196	Introduction To Sociology	3	3 - 0
	Elective <sup>3</sup>	3	varies
<b>TOTAL CREDITS</b>		<b>68</b>	

<sup>1</sup>Course has Co-requisites.

<sup>2</sup>Course has prerequisites

<sup>3</sup>It is recommended that the electives be taken from

(101) AIPB Certified Bookkeeper, (196) Management Development or (154) Computer Information Systems areas.

## Accounting Internship

Students have the option of participating in the Accounting Internship experience in the second year of the Accounting program. In this course, students interview for Accounting internship placements within business and industry. Once selected, the student will apply their knowledge and skills in an accounting work environment.

## One Year Certificate Option

Students may elect to receive a certificate as an Accounting Assistant upon satisfactory completion of the first two semesters of the accounting program. 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

### 101-103 Accounting Orientation

**1 Credit**

This course is required for first semester students to provide the student a program overview, including expectations and graduation requirements. In addition, the student will be provided information regarding student resources, advisors, job placement, and study skills.

### 101-105 Accounting Spreadsheets

**3 Credits**

This course provides "hands-on" experience in reporting financial data utilizing Microsoft Excel. Microsoft Excel is a spreadsheet program which allows the user to enter, analyze, report and graph data. The user is able to establish the look of the completed worksheet through Excel's formatting capabilities that allow a range of fonts, styles, colors, as well as borders and shading. This course will provide the user with an intermediate level of proficiency in Excel, through hands on business applications. A working knowledge of Microsoft Windows is highly recommended.

**Corequisites:** 101-111 Accounting I and 804-101 Algebra

### 101-109 Financial Analysis

**3 Credits**

A capstone course for fourth semester accounting students that offers a simulated work experience for a career in the accounting profession. Topics include budgeting, forecasting, and financial analysis. Emphasis is placed on spreadsheeting and financial statement preparation.

**Pre-requisites:** 101-125 Cost Accounting and 101-113 Accounting III.

### 101-111 Accounting I

**4 Credits**

An introductory course to the basic structure of accounting. Fundamental accounting concepts and principles are presented with their application to the analysis and recording of business transactions through the use of problems and practice sets. The course focus is on journalizing, posting, financial statements, sales accounting, purchases, and banking transactions.

**Corequisite:** 101-103 Accounting Orientation, 101-105 Accounting Spreadsheets and 804-101 Algebra.

### 101-112 Accounting II

**4 Credits**

A continuation of Accounting I. Account groups are studied for their composition, valuation, recognition, and appropriate accounting treatment. Asset management, inventory control, managerial accounting concepts and principles, and cost accounting are introduced.

**Prerequisite:** Minimum grade of "C-" in 101-103 Accounting Orientation, 101-105 Accounting Spreadsheets, 101-111 Accounting I and 804-101 Algebra.

**101-113 Accounting III 4 Credits**

A continuation of Accounting II. The course focus is on accounting for partnerships and corporations, and the statement of cash flows. A comprehensive practice set allows students a practical application of accounting theories.

**Prerequisite:** Minimum grade of "C-" in 101-112 Accounting II.

**101-123 Income Tax Accounting 3 Credits**

A study of the federal and state income tax laws 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.

**101-124 Applied Income Tax 2 Credits**

This course provides "hands-on" experience in preparing federal and state income tax returns for people in the community through the VITA program. Customer relations is an important component of this course. **Prerequisite:** Minimum grade of "C-" in 101-123 Income Tax Accounting.

**101-125 Cost Accounting 4 Credits**

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.

**Prerequisite:** Minimum grade of "C-" in 101-112 Accounting II and 101-135 Payroll Accounting.

**101-128 Accounting Internship 3 Credits**

In this course, students interview for accounting internship placements within business and industry. Once selected, the student will apply their knowledge and skills in an accounting work environment.

**Prerequisites:** Completion of 1<sup>st</sup> year courses of the Accounting Program.

**101-130 Accounting Information Systems 3 Credits**

Upon successful completion of this course the student will be able to document the accounting system in an organization using flowcharting techniques, identify internal control weaknesses and make suggestions as to how internal controls can be strengthened. The student will become familiar with the principles of system development and decision making. The student will understand how each transaction cycle functions and what is needed to keep them in control.

**101-131 Applied Accounting Information Systems 3 Credits**

In this course the student applies knowledge gained in Accounting Information Systems to develop an accounting system using a database package. Each of the main transaction cycles will be studied in detail with emphasis on the internal control structure, information tracking and reporting.

**Prerequisites:** Minimum grade of "C-" in 101-130 Accounting Information Systems, 101-113 Accounting III, and 103-175 Microsoft Access.

**101-135 Payroll Accounting 2 Credits**

This course emphasizes methods of computing wages and salaries, methods of keeping 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.

**Corequisites:** 101-111 Accounting I and 804-101 Algebra.

**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.

QuickBooks Pro is used as a comprehensive software program 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 of QuickBooks Pro.

**Prerequisite:** Minimum grade of "C-" in 101-111 Accounting I.

**101-137 Career Development In Accounting 1 Credit**

Prepares learners to use strategies for seeking, obtaining, and retaining employment in accounting and finance related positions. Learners develop a job search plan, prepare a resume and cover letter, complete application forms, and prepare for job interviews. Learners build a professional profile and finalize a personal portfolio. Learners critically review ethical issues in the accounting profession and research accounting topics using the Internet, library, and community resources.

**Prerequisite:** 101-103 Accounting Orientation.

**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.

**103-174 Microsoft Word 1 Credit**

Microsoft Word is a popular word processing program that enables the user to create a full range of business and personal correspondence. Word extends the boundaries of word processing with its ability to add graphics, colors, and tables. This course will introduce the user to the basic concepts of Word through hands-on applications within a realistic business context.

**Prerequisites:** Keyboarding or proven ability to touch key at 20 wpm. A working knowledge of Microsoft Windows is highly recommended.

**103-175 Microsoft Access 2 Credits**

Microsoft Access is a powerful, but understandable, database application which will allow the user to organize a collection of related information. Access enables the user to maintain a great amount of information, retrieve that information quickly, and share it with other Microsoft Office applications. This course will provide the user with an intermediate level of proficiency of Access through realistic hands-on business applications.

**General Education Course Descriptions on Pages 38-41.**

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-101 Algebra 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits

The administrative professional of today is not doing the same things as were done five years ago. BTC's Administrative Assistant two-year associate degree is designed for today'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.

The required software courses are based on the core level competencies specified for the MOUS (Microsoft Office User Specialist) certification program. Students will be prepared to take 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, these industry-recognized exams may be conveniently scheduled.

## Potential Employment Outlook

Administrative Assistant, Administrative Coordinator, Administrative Professional, Administrative Secretary, Administrative Specialist, Executive Secretary, Executive Assistant, Office Manager, Information Processing Specialist, Project Coordinator, Receptionist, Secretary, Staff Assistant, Transcriptionist.

**One-year Certificate Option**  
Students may elect to earn an Office Technology Certificate upon satisfactory completion of the first two semesters of the associate degree program. Students who choose this option may return to BTC within three (3) years to complete the Administrative Assistant Associate Degree.

## Course Descriptions

### 101-102 Office Accounting 3 Credits

A basic course in accounting principles and bookkeeping procedures. Topics include journalizing and posting transactions, preparing the worksheet, adjusting and closing entries, and preparing the financial statements. Emphasis is on the service enterprise and accounting for cash. Labs will introduce the use of the microcomputer in accounting.

### 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.

### 105-135 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.

### 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 skill to realistic business communications in both print and electronic formats.

*Touch keyboarding and basic word processing skills are assumed.*

### 106-129 Business Filing 1 Credit

Students learn the Association of Records Managers and Administrators (ARMA) filing rules through experience with various filing methods. Students will be introduced to file maintenance procedures, supplies and equipment, active and inactive filing systems, and records control procedures.

### 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, and 801-195 Written Communications.

## Course Name Credits Lec-Lab

### Semester 1

105-135	Professional Profiles	3	3 - 0
106-129	Business Filing	1	0 - 2
106-133	Document Formatting*	3	1 - 4
106-145	Information Technology Essentials*	3	2 - 2
106-157	Administrative Assistant Fundamentals	1	1 - 0
801-195	Written Communications	3	3 - 0
804-106	Introduction to College Mathematics		
	OR 804-101 Algebra	3	3 - 0

### Semester 2

101-102	Office Accounting	3	2 - 2
106-108	Proofreading and Editing	1	0 - 2
106-146	Word Processing Applications*	3	1 - 4
106-153	Administrative Office Procedures*	3	2 - 2
106-159	Business Spreadsheets	3	2 - 2
106-165	Business Presentations	1	0 - 2
801-196	Oral/Interpersonal Communications	3	3 - 0

### Semester 3

106-137	Integrated Office Applications*	3	1 - 4
106-156	Business Database	2	1 - 2
106-164	Specialized Software Applications*	3	1 - 4
809-195	Economics	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
	Elective	3	3 - 0

### Semester 4

102-160	Business Law	3	3 - 0
106-130	Transcription Technology*	2	0 - 4
106-155	Introduction to Desktop Publishing*	2	1 - 2
106-158	Administrative Assistant Externship*	2	1 - 4
106-160	Administrative Office Management*	3	2 - 2
809-196	Introduction to Sociology	3	3 - 0
	Elective	3	3 - 0

**TOTAL CREDITS 69**

\* Course has prerequisites.

**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 also be a focus. A current word processing software will be emphasized.

**Prerequisite:** touch keyboarding skill of 30 wpm for 3 minutes with 3 or fewer uncorrected errors.

**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 proofreading techniques to produce mailable copy. Team projects involve the students in simulated office projects utilizing document production techniques, decision-making abilities, and interpersonal skills.

**Prerequisites:** 106-131 Keyboarding Applications with a grade of "C-" or better (or equivalent skills); format basic letters, memos, reports, and tables; and touch keyboarding skill 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 activities are integrated within some projects. Students will also develop employment portfolios and prepare employment-related documents.

**Prerequisites:** 106-146 Word Processing Applications, 106-159 Business Spreadsheets, 106-156 Business Database, and 106-165 Business Presentations.

**106-140 Keyboarding 1 Credit**

Students 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.

**106-143 Skillbuilding 1 Credit**

This 36-hour 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.

**Prerequisite:** Students must already know the alphabetic keyboard by touch.

**106-145 Information Technology Essentials 3 Credits**

This course provides an introduction to computers and information processing, terminology, hardware, software, networks, and buying a computer. Major topics also include the basics of effective use of a web browser, Microsoft Outlook's electronic mail module, and Windows 2000 operating system.

**Prerequisite:** Touch keyboarding skill of 30 words per minute.

**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. Theory and application will be assessed. Legal Secretary students should enroll in the fall semester for WordPerfect. Administrative Assistant students should enroll in the spring semester for Microsoft Word (these Word students will be prepared to take both the core level and expert level Microsoft Office User Specialist (MOUS) certification exams).

**Prerequisites:** 106-145 Information Technology Essentials and keyboarding skill of 40 words per minute for 5 minutes with 5 or fewer uncorrected errors.

**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.

**Prerequisites:** 106-146 Word Processing Applications, 106-108 Proofreading and Editing Skills, and keyboarding skill of 40 words per minute for 5 minutes with 5 or fewer uncorrected errors.

**106-156 Business Database 2 Credits**

This course is designed to teach the basic elements of Microsoft Access. Applications will include the creation of a database; finding, displaying, and deleting records; providing listings and reports; making tables; and managing mailing lists. Students will be prepared to take the Microsoft Office User Specialist (MOUS) certification exam.

**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 Administrative Assistant Externship 2 Credits

This course consists of two components—a minimum of 72 hours of practical experience in an office environment and 18 hours of in-class instruction. Students will be expected to 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.

**Prerequisites:** *Grades of "C-" or better in all core courses in semesters 1, 2, and 3 of the Administrative Assistant Associate Degree program.*

## 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 User Specialist (MOUS) certification exams.

## 106-160 Administrative Office Management 3 Credits

This course enhances skills necessary to provide organizational and technical support in a contemporary office setting. The office professional's administrative and supervisory roles are explored. Topics covered include project management, research, travel and meeting planning, financial information, emerging technologies, international issues, and career development.

**Prerequisites:** *Grades of "C-" or better in all core courses in semesters 1, 2, and 3 of the Administrative Assistant Associate Degree program.*

## 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 class intranet.

**Prerequisites:** *106-146 Word Processing Applications, 106-108 Proofreading and Editing, and 106-165 Business Presentations.*

## 106-165 Business Presentations 1 Credit

The course provides an introduction to Microsoft PowerPoint presentation software including create, enhance, modify, show, and print slides; use clip art, slide designs, transitions, WordArt, Wizards, and Pack and Go; insert animation, video, and sound; use a scanner and digital camera; and integrate other software. Students will be prepared to take the core level Microsoft Office User Specialist (MOUS) certification exams.

**Touch keyboarding and basic word processing skills are assumed.**

## General Education Course Descriptions on Pages 38-41.

- 801-195 Written Communication 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-106 Introduction to College Math  
or 804-101 Algebra 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits

## OFFICE SPECIALIST CERTIFICATE

The Office Specialist Certificate prepares students for entry level employment as a receptionist, office assistant, office clerk or typist. The students will learn and practice keyboarding skills as well as basic computer applications with an emphasis in word processing. All classes are offered at the BTC-Monroe Center. This certificate may be a first step into employment or may prepare the student to enter the Administrative Assistant Associate Degree program. Prospective students interested in earning this certificate should have a typing speed of 30 wpm for 3 minutes with 3 or fewer uncorrected errors. This may be accomplished by taking a preparatory course in typing/keyboarding.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
101-102	Office Accounting	3	2 - 2
	<b>OR</b>		
101-111	Accounting I	4	3 - 2
106-131	Keyboarding Applications*	3	1 - 4
106-145	Information Technology Essentials *	3	2 - 2
106-157	Administrative Assistant Fundamentals	1	1 - 0
801-195	Written Communications	3	3 - 0
<b>Semester 2</b>			
101-105	Accounting Spreadsheets	3	3 - 0
105-135	Professional Profiles	3	3 - 0
106-126	Records Management *	3	3 - 0
106-146	Word Processing Applications *	3	1 - 4
801-196	Oral/Interpersonal Communications	3	3 - 0
* 30 wpm with 3 or fewer errors			
<b>Preparatory Courses</b>			
106-140	Typing/Keyboarding	1	2 - 0
106-143	Skillbuilding	1	2 - 0

**TOTAL CREDITS 30**



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.

### 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 air conditioning technicians, refrigeration technicians, sales representatives, sales engineers, system supervisors, system designers, and system design technicians. Entry-level employment in the state of Wisconsin ranges from \$20,000 to \$30,000 per year.

### Potential Employment Opportunities

HVAC/R Service technician, HVAC/R Service Manager, HVAC/R Sales Representatives, Construction Manager, and HVAC/R Systems Designer.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
601-110	Air Conditioning Fundamentals	3	2 - 2
601-115	Electrical Fundamentals	3	2 - 2
631-120	Industrial Computer Applications	3	2 - 2
601-125	Mechanical Systems - Drawing & Interpretation	3	2 - 2
801-196	Oral/Interpersonal Communications	3	3 - 0
804-101	Algebra	3	3 - 0
<b>Semester 2</b>			
601-120	Refrigeration Fundamentals*	3	2 - 2
601-130	Heating Systems	3	2 - 2
601-135	Electrical Controls & Systems*	3	2 - 2
801-195	Written Communications	3	3 - 0
809-196	Introduction to Sociology	3	3 - 0
<b>Semester 3</b>			
601-140	Control Circuit Applications*	3	2 - 2
601-150	Air Conditioning Applications*	3	2 - 2
601-155	Refrigeration Applications*	3	2 - 2
809-195	Economics	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
	<b>Elective</b>	3	3 - 0

### Semester 4

601-145	Heating System Applications*	3	2 - 2
601-160	HVAC/R Systems*	3	2 - 2
601-165	Electronic Energy Management Systems*	3	2 - 2
601-170	Service Internship	3	3 - 3
	<b>OR</b>		
601-175	Servicing & Troubleshooting Elective	3	2 - 2 3 - 0

### TOTAL CREDITS

**66**

\*Course has prerequisites.

### Course Descriptions

#### 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.

**Prerequisite:** 601-110.

#### 601-125 Mechanical Systems-Drawing and Interp. 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

Heating Systems will study the principles of operation of commercial and residential heating systems as encountered in the HVAC/R servicing and installation business. Forced air systems utilizing gas and oil combustion systems will be covered along with electric heating systems. This course is a balance of theory and application.

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## 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.

## 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:** 601-115 and 601-135.

## 601-145 Heating System Applications 3 Credits

Heating Systems Applications includes instruction and laboratory work on forced air hydronic hot water systems and steam applications. Students will be able to design systems, estimate load conditions, size pumps and expansion tanks. This course is a combination of classroom presentation and lab.

**Prerequisite:** 601-130.

## 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 techniques, load calculating and estimating and air and fluid measurements. This course is a combination of classroom presentation and lab.

**Prerequisite:** 601-110.

## 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.

## 601-160 HVAC/R Systems 3 Credits

This course includes refrigeration applications to split and self-contained air conditioning systems, evaluation of AC installations, AC equipment start-up, high efficiency equipment, and system troubleshooting. Applications and principles of heating and ventilating will also be included in this course. This course is almost entirely application, with some theory.

**Prerequisite:** 601-110, 601-130, 601-150.

## 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.

## 601-170 Service Internship 3 Credits

Students will have the opportunity to apply their classroom experience on the job. Local HVAC/R contractor have shown great interest in the program and are willing to accept students for internship. Internship time can be accrued throughout the two-year program to achieve a total of 108 hours.

## 601-175 Servicing and Troubleshooting HVAC/R Equipment 3 Credits

Various methods of troubleshooting and servicing of HVAC/R systems are studied. Utilizing manufacturers 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, 601-150, 601-155 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 Descriptions on Pages 38-41.

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-101 Algebra 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits



Airframe 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 computerized controls. In small, independent shops, technicians usually inspect and repair many different types of aircraft.

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. 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.

## Potential Employment Opportunities

There is a high demand for qualified Aviation Maintenance Technicians. Opportunities exist in both general and commercial aviation. Entry-level starting salary range is projected at between \$25,000 and \$35,000 a year in the state of Wisconsin. Likely job titles for graduates of this program include: Aircraft Mechanic, Aviation Maintenance Technician, Aircraft & Engine Mechanic, Apprentice or helper repairman.

## Semester 3

402-344	Aircraft Assembly and Rigging	3	3 - 2
402-345	Aircraft Propellers	3	3 - 2
402-346	Aircraft Electrical Charging Systems	2	2 - 2
402-347	Aircraft Nonmetal Structures	2	2 - 2
402-348	Basic Reciprocating Engines	4	4 - 3
402-349	Advanced Turbine Engines	3	3 - 2

## Semester 4

402-390	Aircraft Landing Gear	2	2 - 2
402-391	Aircraft Systems II	3	3 - 2
402-392	Aircraft Electronics	2	2 - 2
402-393	Reciprocating Engine Systems	4	4 - 3
402-394	Advanced Reciprocating Engines	3	3 - 3
402-395	Aircraft Inspection	2	2 - 2

## TOTAL CREDITS

66

Note: The number of class hours per week may vary due to block scheduling.

*Prerequisites may be waived after review of subject knowledge and previous experience.*

## Course Descriptions

### 402-305 Aviation Basic Science I

2 Credits

This course will introduce the beginning student to ground handling, ground movement, and servicing of a variety of aircraft to include the proper selection of appropriate fuels, oils, and hydraulic fluids. The student will start, ground operate and secure aircraft. The student will also be introduced to aircraft fuel management systems, including fueling, dumping, transferring and defueling. The student will be introduced to aircraft technical data and be required to read and interpret this data accurately through the study of various FAA and manufacturer publications. The student will write descriptions or work performed, and accurately complete various forms, records, and reports.

### 402-306 Aviation Basic Electricity

2 Credits

This course will introduce beginning students to the basics of direct current and alternating current electricity. The student will be able to calculate and measure voltage, current, and resistance in both direct current and alternating current electricity. The student will use a multimeter and be introduced to basic circuit schematics.

**Corequisite:** 806-333, *Aviation Physics*

### 402-307 Materials and Processes I

3 Credits

This course will introduce the student to the materials and processes used on airframes and powerplants. The student will fabricate fluid lines, study heat treating and aircraft hardware, 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 student will layout, bend, form, and repair sheet metal structures and components.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
806-333	Aviation Physics	2	3 - 1
402-305	Aviation Basic Science I	2	3 - 1
402-306	Aviation Basic Electricity	2	3 - 1
402-307	Materials & Processes I	3	3 - 2
402-308	Aircraft Metal Structures	3	3 - 2
402-309	Basic Turbine Engines	3	3 - 2
801-311	Communications I	2	3 - 0

## Semester 2

402-334	Aviation Basic Science II	2	2 - 2
402-335	Aircraft Systems I	3	3 - 2
402-336	Aircraft Electrical Distribution Systems	3	3 - 2
402-337	Materials & Processes II	3	3 - 2
402-338	Nondestructive Inspection Techniques	2	2 - 2
402-339	Turbine Engine Systems	3	3 - 3

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## 402-309 Basic Turbine Engines 3 Credits

This course will introduce the beginning student to the basic operation of aircraft turbine powerplants. The student will be introduced to turbine engine 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.

**Prerequisites:** 806-333 *Aviation Physics*, 402-305 *Aviation Basic Science I*.

## 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 wire, 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.

**Prerequisites:** 402-306 *Aviation Basic Electricity*, 806-333 *Aviation Physics*.

## 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.

**Prerequisite:** 402-307 *Materials and Processes I*.

## 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 also perform dye penetrant, eddy current, ultrasonic, and magnetic particle inspections on test samples and on aircraft and aircraft parts.

## 402-339 Turbine Engine Systems 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.

**Prerequisite:** 402-309 *Basic Turbine Engines*.

## 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 also balance, assemble, and rig aircraft structures as well as primary and secondary control surfaces. Students will also be taught to check alignment of structures and how to rig both fixed wing and rotary wing aircraft.

**Prerequisite:** 402-307 *Materials and Processes I*.

## 402-345 Aircraft Propellers 3 Credits

In this course the student will study propellers as driven by both reciprocating and turbine aircraft engines. The student will study, inspect, and service propellers and propeller control systems, and will learn to 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 and will study, disassemble, assemble, and check generators and alternators. The student will also study and inspect integrated constant speed drive generators and inspect, adjust, and troubleshoot alternating and direct current electrical systems and study how charging systems are regulated, and adjust regulators.

**Prerequisite:** 402-306 *Aviation Basic Electricity* and 402-336 *Aircraft Electrical Distribution Systems*.

## 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. Also students will study and use special fasteners for non-metal structures and will study, inspect, and repair bonded structures, fiberglass structures, honeycomb, and composite structures. In addition, 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 powerplants. The student will be introduced to reciprocating engine theory and study each section of the reciprocating engine, and also 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.

**Prerequisites:** 402-309 Basic Turbine Engines and 402-339 Turbine Engine Systems.

**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.

**Prerequisites:** 402-307 Materials and Processes I and 402-335 Aircraft Systems I.

**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 also 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.

**Prerequisites:** 402-305 Aviation Basic Science I, 402-335 Aircraft Systems I and 402-336 Aircraft Electrical Distribution 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, as well as study, inspect, and repair antenna installations.

**Prerequisites:** 402-306 Aviation Basic Electricity, 402-336 Aircraft Electrical Distribution Systems, and 402-346 Aircraft Electrical Charging Systems.

**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, and study, install, and inspect ignition systems. Throughout the progress of this course, the student will reassemble a reciprocating engine.

**Prerequisites:** 402-348 Basic Reciprocating Engines and **Corequisite:** 402-394 Advanced Reciprocating Engines.

**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 and be able to run, inspect, and check a reciprocating engine installation. The student will also study and accomplish troubleshooting of operating reciprocating engine installations.

**Prerequisites:** 402-348 Basic Reciprocating Engines and **Corequisite:** 402-393 Reciprocating Engine Systems.

**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 and 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.

**Prerequisite:** Completion of all other courses.

**General Education Course Descriptions on Pages 38-41.**

- 801-311 Communications I 2 Credits
- 806-333 Aviation Physics 2 Credits



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Continuing developments in automotive technology are placing new demands on the technicians who keep automobiles running. Automotive Service Technicians must diagnose and repair performance problems in cars and perform recommended maintenance procedures on new cars and trucks to factory specifications. Computer technology has become a major part of automotive service as it is practiced today.

The Blackhawk Technical College Automotive Technician Program is an Automotive Service Excellence (ASE) certified two-year technical diploma program teaching students automotive repair and maintenance. Classroom discussion is supplemented with extensive practical skill development in the shop. Students will be provided with the most current training available for the rapidly changing automotive service industry.

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 will prepare students for the challenging field of performance diagnostics. Special emphasis is placed on the development of problem-solving skills to work thru complex automotive problems using component analysis and functional testing. Students will gain experience in advanced electronics through the use of service manuals, diagnostic computers, lab oscilloscopes and digital volt ohmmeters.

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.

## Potential Employment Opportunities

Job opportunities for Automotive Service Technicians are expected to be plentiful for persons who complete automotive training programs in high school or technical schools. BTC's program includes the electronics training that increases your opportunity in a competitive job market. The typical entry level salary for Automotive Service Technicians range from \$17,000 to \$24,000 a year.

Likely job titles for graduates of this program include: Automotive Line Technician, Automotive Specialty Technician, Diagnostic Technician - Specialty Fields: Electronic Engine Controls, Computerized Fuel Systems, Emission Control Service and Certification, Engine Performance Testing, Computerized Electrical Diagnostics Service Manager, Parts Manager, Automotive Equipment and Part Sales, Automotive Business Owner/Manager

## Course Name

## Credits Lec-Lab

### Semester 1

404-338	Service Fundamentals	2	1 - 2
404-343	Automotive Machine Shop	1	1 - 1
404-345	Brake Service	3	2 - 3
404-346	Steering and Suspension Service	3	2 - 4
404-347	Drive Train Service I	2	1 - 2
404-348	Service Simulation	2	0 - 6
804-304	Math Fundamentals	2	3 - 0

### Semester 2

404-339	Engine Service	2	1 - 2
404-340	Fuel Systems Service	2	1 - 2
404-341	Engine Performance Testing I	2	1 - 2
404-342	Heating and Air Conditioning Service	3	2 - 4
404-344	Electrical Service I	2	1 - 3
404-349	Service Management	1	0 - 2
801-311	Communications I	2	3 - 0
806-315	Applied Science	2	3 - 0

### Semester 3

404-350	ASE Certification Review	1	2 - 0
404-351	Electronic Engine Control Fund.	4	2 - 5
404-352	Computerized Fuel Systems Service	2	1 - 3
404-353	Emission Control Service and Cert.	1	1 - 1
404-356	Electrical Service II	4	2 - 5

### Semester 4

450-315	Customer Service Fundamentals	2	3 - 0
404-354	Engine Performance Testing II	4	2 - 5
404-355	Drive Train/Transaxle Service II	2	1 - 3
404-357	Electronic Engine Control Diag.	2	1 - 3
404-358	Service Internship	2	0 - 8

## TOTAL CREDITS

55

## 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.

### 404-339 Engine Service 2 Credits

This course is designed to introduce the student to the theory of gasoline engine operation construction and design. The course also includes methods of diagnosis, disassembly, measurement, and reassembly. Students will become familiar with tools, machines and equipment used for engine repair. Emphasis is placed upon diagnostic ability and skill development.

### 404-340 Fuel Systems Service 2 Credits

This course will introduce the students to fuel delivery and emission systems. Emphasis will be placed on servicing and diagnosing of these systems.

**404-341 Engine Performance Testing I 2 Credits**

The student will be introduced to techniques of diagnosis and analysis of the electrical and fuel systems. Testing and related repair using the most modern equipment will be high priority.

**404-342 Heating & Air Conditioning Service 3 Credits**

This course provides a basic understanding of the automobile cooling and air conditioning system. Theory of air conditioning will be defined. Emphasis will be 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 will give the student an opportunity to use and understand tools such as, outside micrometer, cylinder bore gage, telescoping gage, drill press, brake rotor and drum lathe, and other measuring instruments. Emphasis in both English and metric are covered in this course.

**404-344 Electrical Service I 2 Credits**

This course is designed to introduce the student to the fundamentals of electricity. Emphasis is placed on diagnosis and repair of starting and charging systems.

**404-345 Brake Service 3 Credits**

The student is introduced to the fundamentals of the automotive brake system including drum, disc, hydraulic, power, and anti-skid systems. Brake measurements is a high priority.

**404-346 Steering and Suspension Service 3 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 2 Credits**

This course is designed to introduce the student to the fundamentals of the power train. Emphasis will be 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. Emphasis will be placed on shop liability, 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 Fundamentals 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 will be introduced to various computerized fuel systems. Topics covered will be electronic fuel injection, throttle body injection systems, port fuel injection, multi-port injection systems as well as sequential injection systems. Emphasis will be placed on diagnostics and development of skills in using sophisticated diagnostic equipment.

**404-353 Emission Control Service and Certification 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 II 4 Credits**

This course is designed to maintain OBDII computerized vehicles and develop systematic repair procedures through the use of shop manuals and sophisticated diagnostic equipment. Emphasis will be 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 II 4 Credits**

This course is designed to help the students learn how to diagnose and repair electrical problems related to automobile accessories. Emphasis will be placed on skillfully understanding and testing procedures necessary for repair.

**404-357 Electronic Engine Control Diagnosis 2 Credits**

This course will be a composite of all computerized systems. Emphasis will be 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 will be high priority.

**404-358 Service Internship 2 Credits**

Students wishing for hands-on shop experience will obtain four credits for on-the-job training related directly and in cooperation with a services facility. Prior consent of automotive instructor will be required. A comprehensive study will be completed by the student 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 field service technician. Practical interviews and role-playing are included in this course.

**General Education Course Descriptions on Pages 38-41.**

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

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The Micro Programmer Specialist program prepares students for a career in business information technology. Students receive training in computer programming languages, client/server computing, database theory, systems analysis and design, internet applications, microcomputer operating systems, and software applications.



As a graduate of this program you will have the following qualifications:

- Write programs for computer-based applications
- Analyze and solve problems related to computer-based applications
- Design computer-based applications
- Apply critical thinking skills to computer-based application problems
- Communicate orally and in writing with computer users

## Potential Employment Opportunities

Computer Programmer, Programmer Analyst, Microcomputer Programmer, and Microcomputer Systems Analyst

Course Name	Credits	Lec-Lab
<b>Semester 1</b>		
154-112 Micro Software Applications	2	1 - 2
154-115 Micro Databases	3	2 - 2
107-119 Micro Programming Logic	3	2 - 2
150-120 Micro Operating Systems I	3	2 - 2
150-130 Network Design	3	2 - 2
801-195 Written Communications	3	3 - 0
<b>Semester 2</b>		
102-148 Business Organization <b>OR</b>	3	3 - 0
104-140 eCommerce	3	3 - 0
154-122 Internet Applications <sup>1</sup>	2	2 - 0
107-142 Micro Programming I <sup>1</sup>	3	2 - 2
107-143 Micro Programming II <sup>1</sup>	3	2 - 2
107-150 Systems Analysis & Design I <sup>1</sup>	2	1 - 2
804-111 Math Data Processing <sup>1</sup>	3	3 - 0
<b>Semester 3</b>		
107-144 Micro Programming III <sup>1</sup>	3	2 - 2
107-145 Micro Programming IV <sup>1</sup>	3	2 - 2
107-147 Client/Server I <sup>1</sup>	3	2 - 2
107-151 Systems Analysis & Design II <sup>1</sup>	2	1 - 2
107-182 Micro Programmer Field Study <sup>1&amp;3</sup>	1	1 - 0
801-196 Oral/Interpersonal Communications	3	3 - 0
Elective <sup>2</sup>	3	3 - 0
<b>Semester 4</b>		
107-148 Client/Server II <sup>1&amp;4</sup>	3	2 - 2
107-181 Micro Programmer Internship <sup>1&amp;3</sup>	1	8 - 0
809-198 Introduction to Psychology	3	3 - 0
809-195 Economics	3	3 - 0
809-197 Introduction to Sociology	3	3 - 0
Elective <sup>2</sup>	3	3 - 0

**TOTAL CREDITS**

**66 or 68 (with internship)**

<sup>1</sup> Course has prerequisites.

<sup>2</sup> Recommended Elective

107-157 Web Programming I and 107-158 Web Programming II **OR**

107-139 Current Issues & Trends in Computer Science.

<sup>3</sup> Students may take 107-181 and/or 107-182 to satisfy program req.

<sup>4</sup> 107-155 Current Issues & Trends in Computer Science

(PL/SQL Programming) may be taken in lieu of or concurrently with 107-148.

## Course Descriptions

### 104-140 eCommerce

**3 Credits**

This course provides an overview of electronic commerce. Business models underlying these electronic commerce applications are studied from both an operational 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 eCommerce will be explored.

### 107-119 Micro Programming Logic

**3 Credits**

Micro Programming Logic is a lecture/lab course that includes a discussion of problem-solving principles and how to apply those principles to develop algorithms to solve typical business problems. Structured programming (sequence, selection, and iteration) utilizing pseudocode is covered in detail. An introduction to object-oriented programming terminology is also given.

### 107-142 Micro Programming I

**3 Credits**

Micro Programming I is a lecture/lab course introducing the student to the Visual Basic (VB) computer programming language. Emphasis will be on the methods, procedures and thought processes necessary for effectively programming a computer using VB. Topics covered include: Program logic design; program coding; the utilization of modules, procedures, functions, and variables; sequence; selection; iteration; arrays; and file handling.

**Prerequisites:** Minimum grade of C- in 107-119 Micro Programming Logic.

### 107-143 Micro Programming II

**3 Credits**

Micro Programming II is a lecture/lab course in the Java programming language. Topics covered include: Program logic design; program coding; input/output (I/O); math operators; relational operators; logical operators; sequence; selection; iteration; and methods, all utilizing Java applications.

**Prerequisites:** Minimum grade of C- in 107-119 Micro Programming Logic.

### 107-144 Micro Programming III

**3 Credits**

Micro Programming III is a lecture/lab course covering advanced concepts of the Visual Basic (VB) programming language. Topics covered include: File input/output (I/O); error handling; debugging and testing; multiuser applications; add-ins, ActiveX, APIs, database programming; and an introduction to client/server computing.

**Prerequisites:** Minimum grade of C- in 107-142 Micro Programming I.

**107-145 Micro Programming IV 3 Credits**

Micro Programming IV is a lecture/lab course covering advanced concepts of the Java programming language. Topics covered include: methods; arrays and strings; inheritance; packages; interfaces; I/O streams; applications, the Java AWT and multimedia.

**Prerequisites:** *Minimum grade of C- in 107-143 Micro Programming II.*

**107-147 Client/Server I 3 Credits**

Client/Server I is a lecture/lab split into two parts: 1) A general overview of database theory, including relational database management and systems (RDBMSs) and normalization; 2) An introduction to Client/Server hardware (brief) and software (detailed), including the fundamentals of structured query language (SQL).

**Prerequisites:** *Minimum grade of C- in 154-115 Micro Databases.*

**107-148 Client/Server II 3 Credits**

Client/Server II is a lecture/lab course utilizing a software package (e.g., Oracle) in an advanced Client/Server (C/S) environment. Topics covered include: structured query language (SQL), forms, reports, and programming.

**Prerequisites:** *Minimum grade of C- in 107-147 Client/Server I.*

**107-150 Systems Analysis and Design I 2 Credits**

Systems Analysis and Design I is a lecture course designed to present the student with the structured methodology necessary to understand and design a computer-based system. The course will cover the methods of systems analysis and the tools which a systems analyst uses to study, design, and document a system.

**Prerequisites:** *Second semester standing or consent of instructor.*

**107-151 Systems Analysis and Design II 2 Credits**

Systems Analysis and Design II is a lecture/lab course designed to apply the methods and tools learned in Systems Analysis & Design I in a project-oriented environment. Students are presented with a business problem for which they analyze and design a solution using a standard methodology. By designing a system, the student ties together all of the various topics learned so far to produce a complete solution to a typical business problem.

**Prerequisite:** *Minimum grade of "C-" in 107-150 Systems Analysis and Design I.*

**107-155 Current Issues & Trends in Computer Science (PL/SQL) 3 Credits**

The Client/Server III class is a PL/SQL programming class, a continuation of 107-147 (Client/Server I). Ideally, this class is being taken in conjunction with 107-148 (C/S II). Topics covered include: 1) PL/SQL language fundamentals. 2) PL/SQL variables. 3) PL/SQL conditional and looping constructs. 4) The use of cursors. 5) Exception handling. 6) Records in PL/SQL. 7) Tables in PL/SQL. 8) PL/SQL built-in character, date, conversion, and numeric functions. 9) PL/SQL procedures and functions. 10) PL/SQL packages.

**Prerequisite:** *107-147 Client/Server I or consent of instructor.*

**107-157 Web Programming I 3 Credits**

This is a beginning course in Web Programming. Students will learn beginning Internet programming techniques utilizing both client-side languages (e.g. HyperText Markup Language (HTML), JavaScript and/or VBScript) and server-side languages (e.g. Perl and/or Active Server pages (ASP)).

**Prerequisites:** *A grade of "C-" or better in 107-119 Micro Programming Logic and familiarity with the Internet and browser usage.*

**107-158 Web Programming II 3 Credits**

This is an intermediate course in Web Programming, concentrating on the extensible Markup Language (XML). Topics include: 1) XML syntax. 2) Document type definitions (DTDs). 3) XML Schema Definition Language (XSD). 4) XML namespaces. 5) XML Path Language (XPath). 6) XML Link Language (XLink). 7) XML Pointer Language (XPointer). 8) The XML Document Objective Model (DOM). 9) The Simple API for XML (SAX). 10) Using cascading style sheets (CSS) with XML. 11) The Extensible Stylesheet Language (XSL). 12) The Extensible Stylesheet Language Transformations (XSLT).

**Prerequisites:** *A grade of "C-" or better in 107-157 Web Programming I or consent of instructor.*

**107-181 Micro Programmer Internship 2 Credits**

Micro Programmer Internship is a course that prepares the student for the transition from the classroom to the work place. Students will be employed in actual jobs in their field. They will use this opportunity to apply learned concepts and skills in practical situations and acquire the knowledge and experience of current techniques, methods, and theories in a data processing environment. The intern's progress will be monitored and evaluated by the sponsoring employer and a BTC internship advisor. The desired outcome of the course is to qualify the student for eventual employment in an entry-level CIS position.

**Prerequisites:** *Completion of 14 credits of CIS Technical courses, 7 credits of CIS Technical Support courses, and 9 credits of General Education courses.*



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## 107-182 Micro Programmer Field Study 1 Credit

Micro Programmer Field Study is a course designed to equip the student 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. Students will also cover the organization of a typical data processing department.

**Prerequisites:** Completion of 14 credits of CIS Technical courses, 7 credits of CIS Technical Support courses, and 9 credits of General Education courses. Minimum grade of "C-" in 107-150 Systems Analysis and Design.

## 150-120 Micro Operating Systems I 3 Credits

Micro Operating Systems I is a lecture/hands-on course designed to teach popular microcomputer client operating systems in a data processing environment. Operating Systems covered include: Microsoft Windows 2000 Professional, MS-DOS Command Line via Microsoft Windows 2000. Topics include: A hands-on emphasis of Operating System commands; how and when to use Operating System commands; customization of the Operating System user interface(s); file system design, creation, and maintenance; software installation; Operating System installation and troubleshooting; and the advantages/disadvantages of different Operating Systems.

## 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.). Cisco learning materials will be introduced. Intended for all computer information systems program students.



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## 154-112 Micro Software Applications 2 Credits

Micro Software Applications is a lecture/hands-on course designed to introduce students to the word processing, spreadsheet, and database components of a popular microcomputer software package. Students will learn the fundamental concepts associated with each component.

## 154-115 Micro Databases 3 Credits

Micro Databases is a hands-on course designed to familiarize students with a standard microcomputer-based relational database management system (RDBMS) currently in popular use. Topics covered include the following components: concepts and terminology; planning, building, and testing a database; creating and maintaining database tables; defining table relationships; finding records in a database (querying); and printing database objects.

**Corequisite:** 154-112 Micro Software Applications.

## 154-122 Internet Applications 2 Credits

Internet Applications is a hands-on course designed to introduce students to the Internet. Topics covered include: Internet Basics; using Internet search tools; using the Internet as a research tool; using E-mail; downloading files using FTP; accessing and using the World Wide Web; and using Hypertext Markup Language (HTML) to develop World Wide Web pages.

**Prerequisites:** Minimum grade of C- in 150-120 Micro Operating Systems I or consent of instructor.

### General Education Course Descriptions on Pages 38-41.

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-111 Math Data Processing 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits

Regardless of a business' size, type, or clientele, microcomputers have become an essential tool. In today's ever changing market, Computer Information Systems are able to quickly provide management with current information concerning the economy, markets, production, sales, etc.. In fact, a seemingly endless variety of useful information is now available to the microcomputer user.

The Microcomputer Specialist program prepares students for a career in business data processing. Typical graduates enter the industry as entry level Microcomputer System Specialists or Productivity Applications Specialists. With additional training and work experience, more advanced positions become available.

### Potential Employment Opportunities

PC Software Specialist, PC Support Specialist, PC System Specialist, PC Technician.

Students planning to enter this program should possess analytical and creative problem-solving ability. Keyboarding experience is highly recommended. The MS program provides specialized instruction in microcomputer software application packages, including client/server, Internet and multimedia applications, and systems analysis and design. In addition, the program includes introductory courses in microcomputer hardware, local area networks, and programming.

### Also Available

The opportunity exists for double majors in Microcomputer Specialist and any other Business Occupations specialty. Because of the number of courses shared between the three programs— Microcomputer Specialist, Network Specialist and Programmer Specialist—it is especially easy to complete a double major with one of these other two.

Special microcomputer aptitude testing is available, as well as academic and career counseling and advising.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
154-112	Micro Software Applications	2	1 - 2
154-115	Micro Databases	3	2 - 2
107-119	Micro Programming Logic	3	2 - 2
150-120	Micro Operating Systems I	3	2 - 2
150-130	Network Design	3	2 - 2
801-195	Written Communications	3	3 - 0
<b>Semester 2</b>			
154-113	Micro Hardware Applications	3	2 - 2
154-114	Micro Spreadsheets	3	2 - 2
107-142	Micro Programming I <sup>1</sup>	3	2 - 2
107-150	Systems Analysis & Design I <sup>1</sup>	2	1 - 2
801-196	Oral/Interpersonal Communications	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
<b>Semester 3</b>			
102-148	Business Organization	3	3 - 0
	<b>OR</b>		
104-140	eCommerce	3	3 - 0
154-122	Internet Applications <sup>1</sup>	2	2 - 0
107-147	Client Server I <sup>1</sup>	3	2 - 2

### Semester 3 (cont.)

107-151	System Analysis & Design II <sup>1</sup>	2	1 - 2
154-182	Microcomputer Specialist Field Study <sup>1&amp;2</sup>	1	1 - 0
804-111	Math Data Processing	3	3 - 0
	<b>Elective</b>	3	3 - 0

### Semester 4

154-123	Multimedia <sup>1</sup>		
	<b>OR</b>	3	2 - 2
107-157	Web Programming	3	
107-139	Current Issues & Trends In Computer Science	3	2 - 2
154-181	Microcomputer Internship <sup>1&amp;2</sup>	2	8 - 0
809-195	Economics	3	3 - 0
809-196	Introduction To Sociology	3	3 - 0
	<b>Elective</b>	3	3 - 0

### TOTAL CREDITS

**66 or 68 (with Internship)**

<sup>1</sup>Course has prerequisites.

<sup>2</sup>Students may take 154-181 and/or 154-182 to satisfy program requirements

## COMPUTER APPLICATIONS SPECIALIST CERTIFICATE

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
106-140	Typing/Keyboarding	1	2 - 0
154-112	Micro Software Applications	2	3 - 0
154-115	Micro DataBases	3	4 - 0
150-120	Micro Operating Systems I	3	3 - 0
<b>Semester 2</b>			
154-113	Micro Hardware Applications	3	3 - 0
154-114	Micro Spreadsheets	3	4 - 0
154-122	Internet Applications+	2	2 - 0
107-139	Current Issues and Trends	3	3 - 0
<b>Preparatory Courses</b>			
154-103	Basic Computer Concepts	3	3 - 0
854-787	Math Review	1	2 - 0
	<b>OR</b>		
804-106	Introduction To College Math	3	3 - 0
<b>Recommended Support Courses</b>			
102-148	Business Organization	3	3 - 0
106-146	Word Processing Applications	3	4 - 0
801-195	Written Communications	3	3 - 0
801-196	Oral/Interpersonal Communications	3	3 - 0

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**Course Descriptions**
**102-148 Business Organization 3 Credits**

An in-depth look is given to the various activities which make up a business enterprise. It offers the student an insight into the responsibilities connected with the operation of a business from the viewpoint of the organization, management and employee.

**104-140 eCommerce 3 Credits**

This course provides an overview of electronic commerce. Business models underlying these electronic commerce applications are studied from both an operational 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 eCommerce will be explored.

**107-119 Micro Programming Logic 3 Credits**

Micro Programming Logic is a lecture/lab course that includes a discussion of problem-solving principles and how to apply those principles to develop algorithms to solve typical business problems. Structured programming (sequence, selection, and iteration) utilizing pseudocode is covered in detail. An introduction to object-oriented programming terminology is also given.

**107-139 Current Issues & Trends In Computer Science 3 Credits**

Current Issues & Trends in Computer Science is a course designed to cover a "hot" computer area. Possible topics include: Advanced applications; object orientated programming; computer security; computer ethics; and Internet programming.

*Prerequisites: Consent of Instructor.*

**107-142 Micro Programming I 3 Credits**

Micro Programming I is a lecture/lab course introducing the student to the Visual Basic (VB) computer programming language. Emphasis will be on the methods, procedures and thought processes necessary for effectively programming a computer using VB. Topics covered include: Program logic design; program coding; the utilization of modules, procedures, functions, and variables; sequence; selection; iteration; arrays; and file handling.

*Prerequisites: Minimum grade of C- in 107-119 Micro Programming Logic.*

**107-147 Client/Server I 3 Credits**

Client/Server I is a lecture/lab split into two parts: 1) A general overview of database theory, including relational database management and systems (RDBMSs) and normalization; 2) An introduction to Client/Server hardware (brief) and software (detailed), including the fundamentals of structured query language (SQL).

*Prerequisites: Minimum grade of C- in 154-115 Micro Databases.*

**107-150 Systems Analysis and Design I 2 Credits**

Systems Analysis and Design I is a lecture course designed to present the student with the structured methodology necessary to understand and design a computer-based system. The course will cover the methods of systems analysis and the tools which a systems analyst uses to study, design, and document a system.

*Prerequisites: Second semester standing or consent of instructor.*

**107-151 Systems Analysis and Design II 2 Credits**

Systems Analysis and Design II is a lecture/lab course designed to apply the methods and tools learned in Systems Analysis & Design I in a project-oriented environment. Students are presented with a business problem for which they analyze and design a solution using a standard methodology. By designing a system, the student ties together all of the various topics learned so far to produce a complete solution to a typical business problem.

*Prerequisites: Minimum grade of C- in 107-150 Systems Analysis and Design.*

**107-157 Web Programming I 3 Credits**

This is a beginning course in Web Programming. Students will learn beginning Internet programming techniques utilizing both client-side languages (e.g. HyperText Markup Language (HTML), JavaScript and/or VBScript) and server-side languages (e.g. Perl and/or Active Server pages (ASP)).

*Prerequisites: A grade of "C-" or better in 107-119 Micro Programming Logic and familiarity with the Internet and browser usage.*

**150-120 Micro Operating Systems I 3 Credits**

Micro Operating Systems I is a lecture/hands-on course designed to teach popular microcomputer client operating systems in a data processing environment. Operating Systems covered include: Microsoft Windows 2000 Professional, MS-DOS Command Line via Microsoft Windows 2000. Topics include: A hands-on emphasis of Operating System commands; how and when to use Operating System commands; customization of the Operating System user interface(s); file system design, creation, and maintenance; software installation; Operating System installation and troubleshooting; and the advantages/disadvantages of different Operating Systems.

**150-121 Micro Operating Systems II 3 Credits**

Micro Operating Systems II is a lecture/hands-on course designed to teach popular microcomputer client operating systems in a data processing environment. Operating Systems covered include: Microsoft Windows NT Workstation, DOS, Windows 9x, Linux, and Macintosh OS. Topics include: A hands-on emphasis of Operating System commands; how and when to use Operating System commands; customization of the Operating System user interface(s); file system design, creation, and maintenance; software installation; Operating System installation and troubleshooting; and the advantages/disadvantages of different Operating Systems.

*Prerequisites: Minimum grade of C- in 150-120 Micro Operating Systems I and 150-130 Network Design.*

**150-130 Network Design**
**3 Credits**

Network Design is a lecture/hands-on course designed to introduce students to network design fundamentals. Topics covered include: OSI Reference Model; LAN and WAN topologies; cabling systems; access methods; protocols; internet working devices (e.g. hubs, bridges, routers, switches, etc.); basic network design; Novell Directory Services design; Windows NT domain design; and Internet/Intranet. Use of a network design and documentation tool will also be introduced.

**154-112 Micro Software Applications**
**2 Credits**

Micro Software Applications is a lecture/hands-on course designed to introduce students to the word processing, and electronic presentations components of a popular microcomputer software package. Students will learn the fundamental concepts associated with each component.

**154-113 Micro Hardware Applications**
**3 Credits**

Micro Hardware Applications is a lecture/hands-on course designed to teach students microcomputer hardware fundamentals. Topics include: Basic computer setup, hardware installation, and troubleshooting.

*Prerequisites: Minimum grade of C- in 150-120 Micro Operating Systems I.*

**154-114 Micro Spreadsheets**
**3 Credits**

Micro Spreadsheets is a hands-on course designed to teach a popular microcomputer spreadsheet package in a data processing environment. Topics covered typically include: Planning, building, testing and documenting; formatting and printing; system and user-defined functions; charts and graphing; utilizing multiple spreadsheets in the same file; scenario management; object linking and embedding (OLE); dynamic data exchange (DDE); macro generation; and an introduction to programming.

*Prerequisites: Minimum grade of C- in 154-112 Micro Software Applications.*

**154-115 Micro Databases**
**2 Credits**

Micro Databases is a hands-on course designed to familiarize students with a standard microcomputer-based relational database management system (RDBMS) currently in popular use. Topics covered include the following components: Concepts and terminology; planning, building, and testing a database; creating and maintaining database tables; defining table relationships; finding records in a database (querying); and printing database objects.

*Prerequisites: Minimum grade of C- in 154-112 Micro Software Applications.*

**154-122 Internet Applications**
**2 Credits**

Internet Applications is a hands-on course designed to introduce students to the Internet. Topics covered include: Internet Basics; using Internet search tools; using the Internet as a research tool; using E-mail; downloading files using FTP; accessing and using the World Wide Web; and using Hypertext Markup Language (HTML) to develop World Wide Web pages.

*Prerequisites: Minimum grade of C- in 150-120 Micro Operating Systems I or consent of instructor.*

**154-123 Multimedia**
**3 Credits**

Multimedia is a hands-on course designed to introduce students to basic multimedia concepts. Topics covered include: Basic essentials; production, application structure and organization; capturing sound and video; user interface and graphics design; and packaging, distributing, and presenting. *Prerequisites: Minimum grade of C- in 154-112 Micro Software Applications and 154-122 Internet Applications; or consent of instructor.*

**154-181 Microcomputer Internship**
**2 Credits**

Data Processing Internship is a course that prepares the student for the transition from the classroom to the work place. Students will be employed in actual jobs in their field. They will use this opportunity to apply learned concepts and skills in practical situations and acquire the knowledge and experience of current techniques, methods, and theories in a data processing environment. The intern's progress will be monitored and evaluated by the sponsoring employer and a BTC internship advisor. The desired outcome of the course is to qualify the student for eventual employment in an entry-level CIS position.

*Prerequisites: Completion of 14 credits of CIS Technical courses, 7 credits of CIS Technical Support courses, and 9 credits of General Education courses.*

**154-182 Microcomputer Specialist Field Study**
**1 Credit**

Data Processing Field Study is a course designed to equip the student 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. Students will also cover the organization of a typical data processing department.

*Prerequisites: Completion of 14 credits of CIS Technical courses, 7 credits of CIS Technical Support courses, and 9 credits of General Education courses. Minimum grade of "C-" in 107-150 Systems Analysis and Design .*

**General Education Course Descriptions on Pages 38-41.**

- |   |           |
|---|-----------|
| • 801-195 Written Communications            | 3 Credits |
| • 801-196 Oral/Interpersonal Communications | 3 Credits |
| • 804-111 Math Data Processing              | 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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The Network Specialist Associate Degree prepares students for a career in computer network support and integrated technology in order to meet the corporate demands for information sharing. Students receive training in network design, installation, troubleshooting, administration, and management.



After graduating, you would be qualified to complete the following duties:

- Troubleshoot and diagnose computer hardware and software problems
- Manage computer networks
- Install and configure computer network operating systems and client software
- Upgrade computer network hardware and software components

*After completing this program, the student will be eligible to take the Novell Certified Network Administrator (CNA) Exam.*

## Potential Employment Opportunities

Network Administrator, Network/Personal Computer Analyst, and Network Support Specialist

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
154-112	Micro Software Applications	2	1 - 2
154-115	Micro Databases	3	2 - 2
107-119	Micro Programming Logic	3	2 - 2
150-120	Micro Operating Systems I	3	2 - 2
150-130	Network Design	3	2 - 2
801-195	Written Communications	3	3 - 0
<b>Semester 2</b>			
102-148	Business Organization <b>OR</b>	3	3 - 0
104-140	eCommerce	3	
154-113	Micro Hardware Applications <sup>1</sup>	3	2 - 2
150-121	Micro Operating Systems II <sup>1</sup>	3	2 - 2
107-150	Systems Analysis & Design I <sup>1</sup>	2	1 - 2
801-196	Oral/Interpersonal Communications	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
<b>Semester 3</b>			
150-127	Network Operating Systems I <sup>1</sup>	3	2 - 2
150-128	Network Operating Systems II <sup>1</sup>	3	2 - 2
150-131	Network Installation/Troubleshooting <sup>1</sup>	3	2 - 2
107-151	Systems Analysis & Design II <sup>1</sup>	2	1 - 2
150-182	Data Processing Field Study <sup>1&amp;3</sup>	1	1 - 0
804-111	Math Data Processing <sup>1</sup>	3	3 - 0
	Elective <sup>2</sup>	3	3 - 0
<b>Semester 4</b>			
150-117	LAN/WAN Integration <sup>1</sup>	3	2 - 2
150-132	Network Management <sup>1</sup>	3	2 - 2
150-181	Networking Internship <sup>1&amp;3</sup>	2	8 - 0
809-195	Economics	3	3 - 0
809-196	Introduction to Sociology	3	3 - 0
	Elective <sup>2</sup>	3	3 - 0
		16	14 - 4

**TOTAL CREDITS**

**67 or 69 (with Internship)**

<sup>1</sup> Course has prerequisites.

<sup>2</sup> Recommended Elective 107-139 Current Issues & Trends in Computer Science. (Note: May be taken more than once.)

<sup>3</sup> Students may take 150-181 and/or 150-182 to satisfy program requirements.

## Course Descriptions

### 102-148 Business Organization

**3 Credits**

An in-depth look is given to the various activities, which make up a business enterprise. It offers the student an insight into the responsibilities connected with the operation of a business from the viewpoint of the organization, management and employee.

### 104-140 eCommerce

**3 Credits**

This course provides an overview of electronic commerce. Business models underlying these electronic commerce applications are studied from both an operational 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 eCommerce will be explored.

### 107-119 Micro Programming Logic

**3 Credits**

Micro Programming Logic is a lecture/lab course that includes a discussion of problem-solving principles and how to apply those principles to develop algorithms to solve typical business problems. Structured programming (sequence, selection, and iteration) utilizing pseudocode is covered in detail. An introduction to object-oriented programming terminology is also given.

### 107-150 Systems Analysis and Design I

**2 Credits**

Systems Analysis and Design I is a lecture course designed to present the student with the structured methodology necessary to understand and design a computer-based system. The course will cover the methods of systems analysis and the tools which a systems analyst uses to study, design, and document a system.

**Prerequisites:** Second semester standing or consent of instructor.

### 107-151 Systems Analysis and Design II

**2 Credits**

Systems Analysis and Design II is a lecture/lab course designed to apply the methods and tools learned in Systems Analysis & Design I in a project-oriented environment. Students are presented with a business problem for which they analyze and design a solution using a standard methodology. By designing a system, the student ties together all of the various topics learned so far to produce a complete solution to a typical business problem.

**Prerequisite:** Minimum grade of "C-" in 107-150 Systems Analysis and Design I.

### 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, and WAN Technologies.

**Prerequisite:** Minimum Grade of "C-" in 150-131 Network Installation/Troubleshooting, 150-127 Network Operating Systems I, 150-128 Network Operating Systems II and 154-113 Micro Hardware Applications.

**150-120 Micro Operating Systems I 3 Credits**

Micro Operating Systems I is a lecture/hands-on course designed to teach popular microcomputer client operating systems in a data processing environment. Operating Systems covered include: Microsoft Windows 2000 Professional, MS-DOS Command Line via Microsoft Windows 2000. Topics include: A hands-on emphasis of Operating System commands; how and when to use Operating System commands; customization of the Operating System user interface(s); file system design, creation, and maintenance; software installation; Operating System installation and troubleshooting; and the advantages/disadvantages of different Operating Systems.

**150-121 Micro Operating Systems II 3 Credits**

Micro Operating Systems II is a lecture/hands-on course designed to teach the installing, configuring and administering of Windows 2000 Professional, the use and administration of Novell Netware, and an introduction to Linux. Course includes the installation of Windows 2000 Professional and various network clients as well as the use of users, groups, profiles and policies for desktop machine administration. An introduction to the Novell Networking client and the management of users and server resources will also be included. Linux commands and configuration will also be discussed.

**Prerequisites:** Minimum grade of "C-" in 150-120 Micro Operating Systems I and 150-130 Network Design.

**150-127 Network Operating Systems I 2 Credits**

Network Operating Systems I is a lecture/hands-on course designed to teach basic network administration. This course concentrates on Microsoft Network Operating Systems. Topics include: Network administrator responsibilities; login security, file system security and design; Active Directory administration and design; user administration; client installation, configuration, and troubleshooting; print management; software installation and troubleshooting.

**Prerequisite:** Minimum grade of C- in 150-120 Micro Operating Systems I, 150-121 Micro Operating Systems II and 154-113 Micro Hardware Applications.

**150-128 Network Operating Systems II 2 Credits**

Network Operating Systems II is a lecture/hands-on course designed to teach basic network administration. This course concentrates on Novell Network Operating Systems. Topics include: Network administrator responsibilities; login security, file system security and design; Novell Directory Services administration and design; user administration; client installation, configuration, and troubleshooting; print management; software installation and troubleshooting.

**Prerequisite:** Minimum grade of C- in 150-120 Micro Operating Systems I, 150-121 Micro Operating Systems II and 154-113 Micro Hardware Applications.

**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.). Cisco learning materials will be introduced. Intended for all computer information systems program students.

**150-131 Network Installation/Troubleshooting 3 Credits**

Network Installation and Troubleshooting is a lecture/hands-on course designed to introduce students to network installation and troubleshooting fundamentals. Topics covered include: Installation of network client software for DOS, Windows for Workgroups, Windows 95, Windows NT, UNIX/Linux, and Macintosh; installation of the following network operating systems: Novell NetWare v3.12, Novell NetWare v4.11, Novell Netware v5.0, Windows NT 4.x, UNIX/Linux, and Appleshare; cabling; network troubleshooting techniques; and tools; and basic router configuration.

**Prerequisites:** Minimum grade of C- in 150-130 Network Design; 150-120 Micro Operating Systems I, 150-121 Micro Operating Systems II, and 108-113 Micro Hardware Applications.

**150-132 Network Management 3 Credits**

Network Management 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, recovery models, project management, network planning, and business models relating to computer networking and IT will be stressed.

**Prerequisites:** Minimum grade of "C-" in 150-131 Network Installation and Troubleshooting, 150-117 LAN/WAN Integration, 150-127 Network Operating Systems I, 150-128 Network Operating Systems II, and 107-151 Systems Analysis II.

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## 150-181 Networking Internship

2 Credits

Networking Internship is a course that prepares the student for the transition from the classroom to the work place. Students will be employed in actual jobs in their field. They will use this opportunity to apply learned concepts and skills in practical situations and acquire the knowledge and experience of current techniques, methods, and theories in a data processing environment. The intern's progress will be monitored and evaluated by the sponsoring employer and a BTC internship advisor. The desired outcome of the course is to qualify the student for eventual employment in an entry-level CIS position.

**Prerequisites:** Completion of 14 credits of CIS Technical courses, 7 credits of CIS Technical Support courses, and 9 credits of General Education courses.

## 150-182 Data Processing Field Study

1 Credit

Networking Field Study is a course designed to equip the student 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. Students will also cover the organization of a typical data processing department.

**Prerequisites:** Completion of 14 credits of CIS Technical courses, 7 credits of CIS Technical Support courses, and 9 credits of General Education courses. Minimum grade of "C-" in 107-150 Systems Analysis and Design.

## 154-112 Micro Software Applications

2 Credits

Micro Software Applications is a lecture/hands-on course designed to introduce students to the word processing, and electronic presentations components of a popular microcomputer software package. Students will learn the fundamental concepts associated with each component.



## 154-113 Micro Hardware Applications

3 Credits

Micro Hardware Applications is a lecture/hands-on course designed to teach students microcomputer hardware fundamentals. Topics include: Basic computer setup; hardware installation, and troubleshooting.

**Prerequisites:** Minimum grade of C- in 150-120 Micro Operating Systems I.

## 154-115 Micro Databases

3 Credits

Micro Databases is a hands-on course designed to familiarize students with a standard microcomputer-based relational database management system (RDBMS) currently in popular use. Topics covered include the following components: Concepts and terminology; planning, building, and testing a database; creating and maintaining database tables; defining table relationships; finding records in a database (querying); and printing database objects.

**Corequisite:** 154-112 Micro Software Applications.

## 154-122 Internet Applications

2 Credits

Internet Applications is a hands-on course designed to introduce students to the Internet. Topics covered include: Internet Basics; using Internet search tools; using the Internet as a research tool; using E-mail; downloading files using FTP; accessing and using the World Wide Web; and using Hypertext Markup Language (HTML) to develop World Wide Web pages.

**Prerequisites:** Minimum grade of C- in 150-120 Micro Operating Systems I or consent of instructor.

### General Education Course Descriptions on Pages 38-41.

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-111 Math Data Processing 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits



The need for fully-trained, professional Computer Service and Support 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.

### A+ and Network Certification

In light of technological innovation and the rapid increase in demand for top-notch PC technicians, just being good at your job is not enough anymore. In order to stay competitive, many technicians enhance their credentials by obtaining A+ and Network Certifications. Both certifications are nationally recognized, industry-wide standards that certify the competency of service technicians and other individuals in the micro-computer industry. Independent technicians with these certifications 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 Computer Service Technician program will prepare you for BOTH certifications.

### Potential Employment Opportunities

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 should 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. The Occupational Outlook Handbook states, "Employment of computer service technicians is expected to grow faster than average for all occupations through the year 2005." The Encyclopedia of Careers & Vocational Guidance identifies the Computer Service Technician area as an emerging occupation. Fully-trained service technicians are paid average yearly salaries of approximately \$30,000. Those who advance in supervisory or management positions, operate their own businesses, or enter major sales and service positions may earn upward of \$48,000 per year or more.

### Job Titles

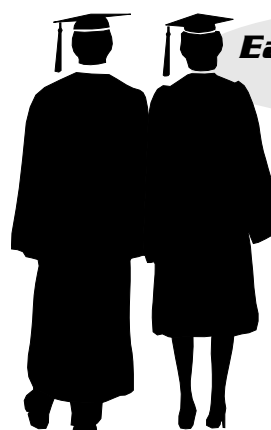
Computer Service Technician, Computer Support Specialist, Service Support Specialist, Service Engineer, Field Service Engineer, Field Service Technician, Communications Technician, LAN Support Specialist, Network Technician and Help Desk Consultant.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
<i>Core Courses</i>			
631-100	Microcomputer Fundamentals	3	2 - 2
631-101	Troubleshooting Operating Systems	3	2 - 2
450-315	Customer Service Fundamentals	2	3 - 0
<i>Computer Hardware Support Certificate Courses</i>			
631-102	Microcomputer Hardware Service	3	2 - 2
450-316	Microcomputer Software Service	2	2 - 2
450-317	Troubleshooting Microcomputers	2	2 - 2
<i>Network Support Certificate Courses</i>			
450-319	Microcomputer Peripherals	2	2 - 2
450-320	Troubleshooting Comm. Systems	2	2 - 2
631-115	LAN/WAN Fundamentals	3	0 - 4
450-321	Troubleshooting Network Hardware	2	
631-116	Troubleshooting Network Oper. Syst.	3	
<i>Occupational Support</i>			
450-322	Service Support Techniques	1	3 - 0
801-195	Written Communications	3	3 - 0
804-101	Algebra (or DP Math)	3	3 - 0
<b>TOTAL CREDITS</b>		<b>33</b>	

*General Education Course Descriptions on Pages 38-41.*

### Certificate Options

• Computer Hardware Support Certificate	15 Credits
• Network Support Certificate	20 Credits
• Computer Service Technician Tech. Diploma	34 Credits



**Earn Your Bachelor's Degree with**

**Blackhawk Technical College**

**Franklin University**

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**608-341-6237**

## 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 interviews and role-playing are included in this course, with emphasis on phone support and documentation skills.

## 450-316 Microcomputer Software Service 2 Credits

This course covers a number of different software topics: use of current popular business applications, computer virus eradication, software compression, and application troubleshooting.

## 450-317 Troubleshooting Microcomputers 2 Credits

This course culminates the three core courses and the two previous Hardware Support courses in 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 data protection devices will also be examined.

## 450-320 Troubleshooting Communications Systems 2 Credits

This course focuses on communications systems diagnosis and repair. Emphasis is placed on printer repair and connection troubleshooting with technologies such as SCSI, USB, Firewire, Telephony, and Wireless.

## 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 is emphasized. Students set-up and troubleshoot a LAN.

## 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. 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.

## 631-101 Troubleshooting Operating Systems 3 Credits

This courses focuses on MS-DOS 6.22, Windows 9X and introduces Enterprise Operating Systems. 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 Syst. 3 Credits

This course centers on the installation, configuration and troubleshooting of network operating systems on client PC's. 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.

### General Education/Occupational Support Course Descriptions on Pages 38-41.

- 801-195 Written Communications 3 Credits
- 804-101 Algebra 3 Credits
- or 804-111 Math Data Processing 3 Credits



This two-year technical diploma program is designed to provide students with a broad technical background in both job-shop and production machining.

This program was designed using the National Institute for Metalworking Standards (NIMS) and National Tooling & Machining Association Standards (NTMAS). Additionally, this program relies on a "hands-on" approach to learning, and each student will spend a large portion of his or her time working in a realistic setting.

Using modern 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 will 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) operation/programming; Computer Assisted Drafting (CAD); and Computer Assisted Manufacturing (CAM) software; precision measuring devices including a CMM; precision CNC bed and knee mills, lathes, and machining centers; blueprint reading; and, applied shop mathematics. Finally, an internship is required for graduation.

### Career Outlook

Employment growth, job opportunities will be excellent 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 transfer to other occupations or retire. The number of openings for CNC machinists is expected to be greater than the number of openings for CNC programmers, primarily because the machinist occupation is larger. Median annual earnings of CNC machinists were \$28,860 in 1998. The middle 50 percent earned between \$22,670 and \$36,100. The lowest 10 percent had earnings of less than \$17,800, while the top 10 percent earned over \$42,480. Median annual earnings of CNC programmers were about \$40,490 in 1998. The middle 50 percent earned between \$33,230 and \$49,620. The lowest 10 percent had earnings of less than \$27,170, whereas the top 10 percent earned over \$72,290.

### Job Titles

After graduating from this program, you will be ready to start your career as a: CNC Technician, CNC Programmer, CNC Machinist, CNC Operator, Machine Tool Operator, Apprentice Machinist, Machine Setup Person, Tool Room Machinist, or Maintenance Machinist.



Course Name	Credits	Lec-Lab
<b>Semester 1</b>		
421-385 Blueprint Reading	2	2 - 2
444-300 Shop Computing	2	2 - 2
444-301 Metrology	2	2 - 2
444-302 Semi-precision Machining	2	2 - 2
444-303 Turning Fundamentals	2	2 - 2
444-304 GD&T Interpretations	1	1 - 1
804-306 Shop Math I	2	3 - 0
804-308 Shop Math II	2	3 - 0
<b>Semester 2</b>		
444-305 Milling Fundamentals	2	2 - 2
444-306 Turning Applications	2	2 - 2
444-307 Manufacturing Support Systems	1	1 - 1
444-308 Milling Applications	2	2 - 2
444-309 CNC Fundamentals	2	2 - 2
444-310 Grinding & Gear Techniques	2	2 - 2
801-196 Oral/Interpersonal Communications	3	3 - 0
806-118 Metal Science	3	3 - 0
<b>Semester 3</b>		
444-311 CNC Turning Operation	2	2 - 2
444-312 CNC Programming - Turning	2	2 - 2
444-313 Tooling & Workholding	2	2 - 2
444-314 CMM Techniques (PC-DMIS)	2	2 - 2
444-315 CNC Programming - Milling	2	2 - 2
444-316 CNC Milling Operation	2	2 - 2
804-309 Shop Math III	2	3 - 0
<b>Semester 4</b>		
444-318 CNC Milling Techniques	2	2 - 2
444-319 CNC Turning Applications	2	2 - 2
444-320 CNC Milling Applications	2	2 - 2
444-321 2-D CAD/CAM	2	2 - 2
444-322 Die & Moldmaking	2	2 - 2
444-324 3-D CAD/CAM	2	2 - 2
444-325 Internship	1	2 - 2
801-195 Written Communications	3	3 - 0
<b>TOTAL CREDITS</b>	<b>62</b>	

### Course Descriptions

**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. The learner may feel as though they are learning a new language. Students will learn about the different types of drawings, proper drawing structure, and drawing terminology. They will learn to produce simple sketches and visualize two and three-dimensional parts. There is so much information given directly and sometimes indirectly that it becomes difficult to gain all this information. While reading a complex blueprint may be a formidable task, it is by far the easiest and most efficient way of communicating the information about a part. The experienced machine operator must be able to decipher the print in order to produce the part to proper specifications.

**444-300 Shop Computing 2 Credits**

The ability to use a computer has become one of the most basic skills. Education is no different. The learner must be able to use a computer to navigate through the learning process as well as being able to use the computer to operate an assortment of machines. Students learn how to operate the computer's operating system to perform many 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 learner will receive an introduction to CAM software, CAD 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 high production situations. 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.

**Prerequisite:** *Shop Computing or consent of instructor*

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

This course is designed to acquaint the student with the machine shop. Students will learn to operate machines that do not machine to close tolerances. 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. 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.

**Prerequisite:** *Successful completion of the Metrology, and Shop Computing courses.*

**444-303 Turning Fundamentals 2 Credits**

This module 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 close tolerances. Anyone who is considered proficient in the metal working area will have experience with lathes. 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.

**Prerequisite:** *Successful completion of the Metrology, and Shop Computing courses.*

**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) symbols and methods of interpretation of these symbols to meet the expectations of the mechanical design engineer that specified them on the drawing.

**Prerequisite:** *Blueprint Reading or experience in reading mechanical drawings*

**444-305 Milling Fundamentals 2 Credits**

This module covers the introduction to the milling machines. Emphasis is on knowing the machine parts, their function, and performing simple lathe 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.

**Prerequisite:** *Successful completion of Metrology, and Shop Computing courses.*

**444-306 Turning Applications 2 Credits**

The advanced turning course involves performing more difficult machining operations, using different materials, and using different work holding devices. The material, work holding devices and setups will present the learning 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.

**Prerequisite:** *Successful completion of the Turning Fundamentals course*

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

This course will introduce the roles of manufacturing/process engineering, production and quality control, and machine maintenance to the production machinist. Manufacturing quality standards, such as ISO-9000, will be introduced where students will learn how process plans or routings, detailed operation documents, and inspection plans relate to each other, what information they contain, and how they promote consistent and efficient manufacturing practices. Simulated inspection results from multiple part production runs will be used for the student to identify faults in a plan and to justify proposed modifications to such plans. Students will be estimating manufacturing costs of machined components to design tolerances and also be analyzing the potential costs of non-conforming material. This course is intended to expose the student to the responsibilities of some of the indirect labor systems within a metal cutting manufacturer and to emphasize the value of teamwork in the success of the operation as a whole.

**Prerequisites:** *Successfully completes Shop Computing, Blueprint Reading, Metrology, Semi-Precision Machining, Turning and Milling Fundamentals, or consent of instructor.*

**444-308 Milling Applications****2 Credits**

The advanced milling course involves performing more difficult machining 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.

**Prerequisite:** *Successful completion of the Milling Fundamentals course*

**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/polar coordinate systems, the word address programming format, and absolute/incremental tool positioning.

**Prerequisite:** *Successful completion of the Shop Computing course*

**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, tooling, safety, and work holding will be taught. This course will result in the learner being able to set up and operate a surface grinding machine to perform simple grinding operation to typical grinding tolerances. The purpose of this 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, therefore, it is only possible for a student to get an introduction. This introduction should prepare the student adequately for a job entry-level position.

**Prerequisite:** *Successful completion of the Milling Fundamentals course.*

**444-311 CNC Turning Operations****2 Credits**

CNC turning centers produce many of the cylindrical shapes machined in production machine shops today. In this course, students will learn ways to set, store and maintain tool and work piece offsets, store and retrieve CNC programs, and perform manual axis movement functions. Routine G-code functions and simple program modification techniques will be introduced.

**Prerequisite:** *Successful completion of CNC Fundamentals, exposure to CNC machines, or consent of instructor.*

**444-312 CNC Programming-Turning****2 Credits**

Productive users of CNC turning centers benefit from the execution of effective and efficient CNC programs. Students will learn how to convert drawing specifications into CNC G-code format using linear and circular interpolation functions as well as how to utilize the benefits of canned cycles for rough turning, threading and grooving. Programs will be entered and edited on personal computers and at the CNC lathe controls.

**Prerequisite:** *CNC Turning Operations or exposure to CNC turning centers.*

**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 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 formulas along with using reference material to obtain the 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.

**Prerequisite:** *Successful completion of the Milling Fundamentals and the Turning Applications courses.*

**444-314 CMM Techniques (PC-DMIS)****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.

**Prerequisites:** *Successful completion of MFG. Support Systems, Shop Computing, Turning Fundamentals, and Milling Fundamentals.*

**444-315 CNC Programming-Milling****2 Credits**

Productive users of CNC machining centers benefit from the execution of effective and efficient CNC programs. Students will become familiar with frequently used G-codes and will be exposed to special G-code cycles. They will learn how to convert drawing specification into CNC G-code format using linear and circular interpolation functions as well as utilizing the benefits of canned cycles used for drilling, reaming, tapping and boring holes. Programs will be entered and edited on personal computers and at the CNC mill/drill controls.

**Prerequisite:** *CNC Fundamentals, or consent of instructor.*

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**444-316 CNC Milling Operation 2 Credits**

Students will learn how to set, store and maintain tools and work piece offsets, store and retrieve CNC programs, and perform manual axis movement functions on a CNC machining center. Manual Data input techniques will also be exercised to perform program commands outside of the stored CNC program. Familiar G-code functions and program modification techniques will be introduced.

**Prerequisite:** *CNC Fundamentals or consent of instructor.*

**444-318 CNC Milling Techniques 2 Credits**

Students will learn the advantages of User Macros on CNC machining centers. The techniques of how to build, store, maintain and call simple to complex User Macro's will be practiced. Students will learn to datum precision probing devices and store data in the CNC control. They will also be exposed to various machine function parameter settings.

**Prerequisite:** *CNC Milling Applications*

**444-319 CNC Turning Applications 2 Credits**

Students will learn advanced lathe programming techniques and be exposed to User Macros on CNC turning centers. The techniques of how to build, store, maintain and call simple to complex user Macro's will be practiced.

**Prerequisite:** *CNC Programming-Turning*

**444-320 CNC Milling Applications 2 Credits**

Students will be introduced to and create programs utilizing multiple work coordinate offsets, hole pattern cycle codes, pattern rotation codes, subroutine (sub-program) calls and techniques, and changes in work planes (G17, G18 & G19). They will learn how to store and retrieve axis and tool offsets within a program and will be introduced to spindle touch probing for precision work piece locating and measurement.

**Prerequisite:** *CNC Milling Operations and CNC Programming-Milling*

**444-321 2-D CAD/CAM 2 Credits**

Computer Aided Design (CAD) and Computer Assisted Manufacturing (CAM) have become standard tools used almost wherever CNC production in metalworking take place. Students will use the Virtual Gibbs software to build geometry, tool and material libraries, and define cutting paths/patterns. Post-processing of these CAD/CAM files will generate CNC programs in machine-specific G-code format.

**Prerequisite:** *CNC Fundamentals or consent of instructor.*

**444-322 Die and Mold Making 2 Credits**

Excess material removed when machining in the production of metal and non-metal component parts can be very expensive to machine away and dispose of. Mold and die makers machine and build tools used to mass-produce items ranging from the smallest electrical connectors to automotive body panels to precision size or near size minimizing costly waste. Plastics and other non-metal and metal components of all shapes and sizes are produced from molds or other forming processes. This course will expose the student to some techniques used in the production of these specialized tools.

**Prerequisite:** *CNC Milling Techniques*

**444-324 3-D CAD/CAM 2 Credits**

Using Virtual Gibbs, students will learn to create and machine regular surface contours such as ruled, swept and surfaces of revolution. They will also be exposed to irregular surface definition and machining using various "splining" techniques.

**Prerequisite:** *2D CAD/CAM and Die and Mold Making*

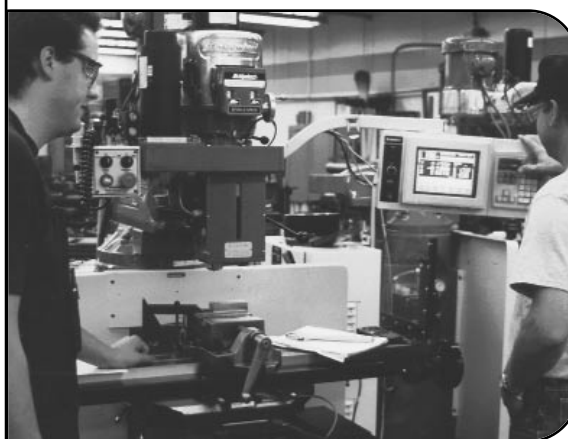
**444-325 Internship 1 Credit**

Students will partner with manufacturers, operating or supporting machine tool operation functions for a few weeks.

**Prerequisite:** *Completion of all machining "Technique" courses and consent of instructor*

**General Education Course Descriptions on Pages 38-41.**

• 801-195 Written Communications	3 Credits
• 801-196 Oral/Interpersonal Communications	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 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.

### Potential Employment Opportunities

Kitchen Manager, Executive Sous Chef, Executive Chef, Restaurant Manager, Lead Cook, Kitchen Supervisor.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
804-117	Business Math	3	3 - 0
316-103	Food Service Industry & Menu Design	2	2 - 0
316-104	Orientation to Quantity Food Prep.	1	1 - 0
316-108	Food Science I	3	1 - 3
316-147	Food Service Safety & Sanitation	3	3 - 0
801-195	Written Communications	3	3 - 0
<b>Semester 2</b>			
154-103	Basic Computer Concepts	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	2 - 0
801-196	Oral/Interpersonal Communication	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
<b>Semester 3</b>			
316-114	Quantity Production of Entrees, Vegetables <sup>1</sup>	4	1 - 6
316-119	Baking for Chefs	3	1 - 2
316-125	Beverage Management	1	1 - 0
316-166	Specialized Foods <sup>2</sup>	3	3 - 0
809-195	Economics	3	3 - 0
809-196	Introduction to Sociology	3	3 - 0
<b>Semester 4</b>			
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 - 2
316-136	Catering/Special Events/Contract Food Service	2	2 - 0
316-142	Ice Sculpting/Decorative Food Display	2	1 - 2
316-160	Gourmet Stocks/Sauces <sup>2</sup>	3	3 - 0
316-165	Gourmet Foods	3	1 - 2

**TOTAL CREDITS**

**67**

Students are allowed to enroll in any associate degree course from any division that is offered at BTC to fulfill elective requirements.

<sup>1</sup>-A seven (7) week externship is offered to third and fourth semester students

<sup>2</sup>-Electives

## 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.

### 154-103 Basic Computer Concepts 3 Credits

This course is designed as a first course in microcomputers, the main purpose being to provide the student with the ability to use a microcomputer and typical applications packages such as word processing, graphics, spread sheet and data base in an integrated environment. No prior knowledge of computers or applications is necessary or expected. A secondary purpose is to provide the foundation skills in computers necessary for subsequent courses that expand the students computer skills into other application areas or use the computer in career-oriented courses. Other topics of the course include: basic computer concepts of hardware and software, introduction to graphics and elementary microcomputer operating systems.

### 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 & Menu Design 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 menus will be developed by each student.

### 316-104 Orientation to Quantity Food Preparation 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 and demonstrated.

### 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.

**Prerequisite:** 316-104, 316-147, 316-108 or instructor approval.

### 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, 316-147.

**316-115 Nutrition**
**2 Credits**

Students will study how food nutritive elements affect the human body and their value to human health. The importance of foodstuff nutritive content, how it is affected by processing, and the role of additives will be discussed.

**316-119 Baking for Chefs**
**3 Credits**

The fundamentals and principles of baking, including yeast products, cakes, pies, cookies, and quick breads. Also included is the proper use and care of baking equipment. Competence in production of baked products to meet industry standards is required.  
*Prerequisite: 316-108 or instructor approval.*

**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**

A study of franchising, specialty breakfast and lunch items, sandwich preparation, marketing of food and increasing sales.

**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: 316-147, 316-104.*

**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.

**316-147 Food Service Safety & Sanitation**
**3 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, fire safety practices, sanitation regulations and enforcement licensing and enforcement regulations, and management of hazardous substances. Serv-safe, Cardio Pulmonary Resuscitation and First Aid Certification are required for completion of the course.

**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 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.

**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.

Course #	Course Title	Credits
303-330	Food Production I	4
303-332	Food Production II	4

**FOOD SERVICE AIDE CLASSES**
**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.

**303-332 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*

**General Education Course Descriptions on Pages 38-41.**

• 801-195 Written Communications	3 Credits
• 801-196 Oral/Interpersonal Communications	3 Credits
• 804-117 Business Math	3 Credits
• 809-195 Economics	3 Credits
• 809-196 Introduction to Sociology	3 Credits
• 809-198 Introduction to Psychology	3 Credits

The dental assistant is a link between the dentist and the patient, professional associates, and vendors of equipment and supplies. The dental assistant works with the dentist, hygienist, and other staff in the office, performing administrative and/or clinical duties.

The trained dental assistant helps the dentist to better serve patients by best utilizing the dentist's time and contributing to a more efficient office routine. The assistant is responsible for sterilizing and preparing the necessary instruments and equipment.

Chairside assisting includes preparing restorative materials, setting up instruments according to type of treatment, and keeping the view of the operative field clear. The skilled dental assistant is proficient in many laboratory procedures related to the making of models, impressions, crowns, bridges, and dentures. Duties may also include exposing x-rays, as well as developing and mounting films.

In the capacity of office manager, the assistant acts as a receptionist, schedules appointments, keeps accounts and records, sends out statements, orders supplies, and is responsible for the general appearance of the office.

Following training as a dental assistant, some individuals may pursue additional education as a dental hygienist. The training as an assistant can be very useful in preparing individuals for this additional education.

### Potential Employment Opportunities

Chairside Dental Assistant, Dental Lab Technician,  
Insurance Claims Processor, Office Manager.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
508-301	Dental Chairside Assisting I	4	3 - 4
508-302	Dental Laboratory Procedures I	3	2 - 4
508-303	Dental Radiology I	2	2 - 2
508-306	Introduction to Dental Assisting	2	3 - 0
508-308	Dental Office Management I	1	2 - 0
509-316	Understanding Human Behavior - Health	1	2 - 0
801-311	Communications I	2	3 - 0
508-309	Integrated Science - Dental Assistant	2	4 - 0
<b>Semester 2</b>			
508-304	Dental Chairside Assisting II	3	3 - 3
508-305	Dental Radiology II	2	2 - 2
508-307	Dental Theory	1	3 - 0
508-310	Dental Office Management II	2	4 - 0
508-315	Preventive Dentistry	1	2 - 0
508-329	Externship - Dental Office	4	0 - 12
801-312	Communications II	2	3 - 0
<b>TOTAL CREDITS</b>		<b>32</b>	

A "C-" is required in all dental courses for graduation. A physical and dental examination is required prior to admission to the program.

### Course Descriptions

#### 508-301 Dental Chairside Assisting I 4 Credits

Students are introduced to the dental equipment and dental instruments normally used in a private dental office. The identification, care, and operation of this equipment is demonstrated and practiced in a laboratory situation. Emphasis is placed on four-handed operative dentistry and infection control.

#### 508-302 Dental Laboratory Procedures I 3 Credits

Emphasis in this course is on the chemical and physical properties of dental materials. The student becomes familiar with basic laboratory equipment while fabricating denture base plates, study models, custom acrylic trays and restoration materials.

#### General Education Course Descriptions on Pages 38-41.

- 801-311/312 Communications I/II 2/2 Credits

#### 508-303 Dental Radiology I 2 Credits

The student is introduced to dental radiography. The theory of X-ray production and protection is combined with laboratory experience in exposing and processing intra-oral radiographs.

**Prerequisite or concurrent with 508-309.**

#### 508-304 Dental Chairside Assisting II 3 Credits

Theory and laboratory sessions continue to focus on chairside skills. Emphasis is on expanded duties and familiarization with various dental specialties. **Prerequisite: 508-301.**

#### 508-305 Dental Radiology II 2 Credits

A continuation of Radiology I with emphasis on bisecting technique, automatic processing, extra-oral radiographs, and patient management. **Prerequisite: 508-303.**

#### 508-306 Introduction to Dental Assisting 2 Credits

Student is introduced to the history of dentistry, dental terminology, and an overview of dental office practice. A nutrition unit correlates the relationship between diet and dental health.

#### 508-307 Dental Theory 1 Credit

This course includes in-depth units on oral pathology, pharmacology, microbiology, first aid, and emergency procedures in the dental office. **Prerequisite: 508-309.**

#### 508-308 Dental Office Management I 1 Credit

The fundamentals of secretarial and administrative duties of the dental assistance are introduced in this course. Emphasis is placed on appointment control, telephone procedures, patient communications, and introduction to the computer keyboard.

#### 508-309 Integrated Science-Dental Assistant 3 Credits

This course includes units on head and neck anatomy, embryology, histology, tooth morphology, and whole body anatomy. Emphasis is placed on the study of the human dentition, dental anomalies, and the oral cavity.

#### 508-310 Dental Office Management II 2 Credits

This course continues to acquaint the student in computer keyboarding skills. Lecture and laboratory sessions stress bookkeeping procedures and insurance processing. Knowledge and skills are applied in a dental setting.

#### 508-315 Preventive Dentistry 1 Credit

An introduction to professional organizations and community agencies is included in this course which is designed to give the student an understanding of the ethical and legal aspects of the dental profession. Dental health presentations are given as a community service. **Prerequisite: Satisfactory completion of all first semester courses for the Dental Assistant program.**

#### 508-329 Externship - Dental Office 4 Credits

The dental assistant student will have practical experience in offices and/or clinics of local dentists. Experience in areas of dental laboratory, clinical and business are included.

**Prerequisite: Satisfactory completion of all required courses of the Dental Assistant program.**

#### 509-316 Understanding Human Behavior - Health 1 Credit

This course introduces students in health occupations to basic concepts of individual differences, motivations, and aspects of mental health. The patient's personal involvement is identified by viewing illness from the patient's viewpoint. The effects of the behavior of health workers on the well-being of the patient is also discussed to better qualify the student to deal effectively in total patient care.

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The Dental Hygiene program provides students with the necessary education to function as an integral member of the dental team. Hygienists provide therapeutic and preventive services with a dentist and are involved in dental health counseling. The program blends academic and clinical course work.

Through a consortium agreement with Waukesha County Technical College (W.C.T.C.) located in Pewaukee, theory and laboratory classes are offered at B.T.C.'s central campus with some content broadcast via interactive television. The Associate Degree is granted by W.C.T.C. who will hold the accreditation for the program.

**Potential Employment Opportunities**  
Jobs for Dental Hygienists are plentiful in private dental clinics.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
508-100	Introduction to Clinical Dental Hygiene	1	0 - 36
508-101	Oral Anatomy	3	3 - 0
508-102	Radiography	2	1 - 3
508-110	Clinical - Dental I	5	2 - 6
<b>Semester 2</b>			
508-112	Dental Materials	2	1 - 2
508-113	Dental Hygiene Theory I	2	2 - 0
508-114	Nutrition	2	2 - 0
508-115	Periodontology	3	3 - 0
508-120	Clinical - Dental II	3	0 - 9
<b>Summer</b>			
508-160*	Community Dental Clinical Module	1	
<b>Semester 3</b>			
508-122	Oral Pathology	3	3 - 0
508-123	Dental Pharmacology	2	2 - 0
508-124	Dental Hygiene Theory II	2	2 - 0
508-130	Clinical - Dental III	4	0 - 12
508-151*	Local Dental Anesthesia	1	
<b>Semester 4</b>			
508-131	Community Dental Health	2	2 - 0
508-140	Clinical - Dental IV	4	0 - 12
<b>General Education Classes</b>			
806-111	Introduction to Biochemistry	3	2 - 2
806-131	Anatomy & Physiology	4	3 - 2
806-197	Introduction to Microbiology	4	3 - 2
801-196	Oral/Interpersonal Communications	3	3 - 0
801-195	Written Communications	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
809-196	Introduction to Sociology	3	3 - 0
809-195	Economics	3	3 - 0
	Electives	6	
<b>TOTAL CREDITS</b>		<b>72</b>	

\* Suggested Program Elective

A Caregiver Background Check WILL be required for clinical portion of the program.

## Course Descriptions

### 508-100 Introduction to Clinical Dental Procedures 1 Credit

This course will assist students in preventing emergency situations from developing through the use of critical evaluation. Students will learn to recognize signs and symptoms of clients experiencing common dental office emergencies. The students will also describe the procedures to be followed for a medical emergency. They will provide and operate necessary equipment used in emergency care. The course will help students to understand standard/universal precautions as stated by the Occupational Safety and Health Administration (OSHA). The etiology of infectious agents will also be discussed. Students will practice standard/universal precautions, disinfection, and sterilization procedures used in the dental office.

**Prerequisite:** Admission to the Dental Hygiene Program.

### 508-101 Oral Anatomy 3 Credits

Oral anatomy, embryology, histology and physiology of normal condition of hard and soft tissue is emphasized. Topics include: dental nomenclature, growth and development, root and crown anatomy, occlusion, osteology, musculature, nerve and blood supply.

**Prerequisite or Corequisite:** Admission to Dental Hygiene Program & 806-131.

### 508-102 Radiography 2 Credits

Students learn radiographic theory and technique by exposing, processing, mounting, evaluating and interpreting dental x-ray films. Correct radiographic technique is attained on mannikins. Radiation hygiene and infection control is emphasized.

**Prerequisite or concurrent:** Admission to Dental Hygiene Program & 508-101.

### 508-110 Clinical - Dental I 5 Credits

Basic principles of clinical dental hygiene is introduced. Skills involving instrumentation, universal precautions, client assessment, preventive treatment and infection control are practiced. Instrumentation skills are performed on mannequins and classmates.

**Prerequisite:** Admission to the Dental Hygiene program.  
**Corequisites:** 508-100, 508-101, 508-102.

### 508-112 Dental Materials 2 Credits

The science of dental biomaterials is studied. The lecture component of the course will emphasize theory while the laboratory component will allow students to apply the theory and the principles of alloys, amalgams, synthetic resins, plastics, gypsum, impression materials and other dental materials. Proficiency in instrumentation and engine polishing is necessary for satisfactory achievement of course objectives.

**Prerequisite:** Admission to Dental Hygiene Program, 508-110.

**508-113 Dental Hygiene Theory I 2 Credits**

This course will expand upon topics and issues introduced in Dental Hygiene Clinic I (508-110). Additional emphasis will be in the areas of oral disease control, client motivational strategies, cultural diversity and dental hygiene care for individuals with special needs.

**Prerequisites:** Admission to Dental Hygiene Program & 508-110, 806-111

**508-115 Periodontology 3 Credits**

Periodontology provides the student with an in-depth study of periodontal disease including description of the inflammatory process, identification of etiological factors, classification of periodontal disease, recognition of gingival conditions, description of periodontal surgical procedures, effectiveness of plaque control measures, preventive periodontal therapy. Recognition of periodontal emergencies is discussed. Research and theoretical concepts are integrated for clinical application.

**Prerequisite:** Admission to Dental Hygiene Program & 508-101. **Corequisites:** 508-112, 508-113, 508-114, 508-120.

**508-120 Clinical – Dental II 3 Credits**

This course emphasizes client assessment, application of dental hygiene care techniques, instrumentation, oral health products, client motivation, and educational techniques. Students will be prepared for possible medical and dental emergencies. Working with special patient populations will be introduced. Theory and techniques from 508-110 will be practiced on community clients.

**Prerequisites or concurrent:** Admission to Dental Hygiene Program & 508-110, 508-112, 508-115.

**508-122 Oral Pathology 3 Credits**

Developmental disturbances, metabolic disorders, infectious diseases, and neoplastic changes are studied. Etiologies, clinical and microscopic features, treatments, and prognosis are stressed.

**Prerequisite:** Admission to Dental Hygiene Program & 508-101.

**508-123 Dental Pharmacology 2 Credits**

Principles, responsibilities, properties, and effects of drugs and drug administration in dentistry are covered.

**Prerequisite:** Admission to Dental Hygiene Program & 508-113.

**508-124 Dental Hygiene Theory II 2 Credits**

The dental hygienist as an educator in client centered consultation is emphasized. Consideration is given to recognizing and minimizing client anxiety and discomfort, and clients with special needs.

**Prerequisite:** Admission to Dental Hygiene Program & 508-113.

**508-130 Clinical - Dental III 4 Credits**

Clinical skills in dental hygiene procedures will continue to be expanded. Client centered consultations will be developed.

**Prerequisite:** Admission to Dental Hygiene Program & 508-120.

**508-131 Community Dental Health 2 Credits**

The student is able to interpret disease indices and apply concepts of epidemiology to dental public health concerns. The dental hygienists' role in the community is clarified through study of dental needs and manpower resources. Through a needs assessment, design, implementation, and evaluation of a community dental health program, the student will identify barriers to access to health care and learn to function as a dental professional in a non-dental community agency.

**Prerequisite:** Admission to Dental Hygiene Program & 508-124.

**508-140 Clinical - Dental IV 4 Credits**

Clinical skills are developed to job entry level through the introduction of advanced instrumentation techniques and an emphasis on self evaluation. Dental specialty practices are discussed.

**Prerequisite:** Admission to Dental Hygiene Program & 508-120, 508-130.

**508-160 Community Dental Clinical Module 1 Credit**

This course will include fourteen, four hour lab sessions at the Madre Angela Dental Clinic. This is an elective course which offers students the opportunity to improve clinical skill. Community patients will be scheduled for the students by the Madre Angela clinical staff.

**508-151 Local Anesthesia for the Dental Hygienist 1 Credit**

This course will encompass basic and current concepts in administration in local anesthesia and pain management. Principles of drug interactions, emphasizing dental related therapeutics and drugs associated with common systematic disorders; information on the selection of professional anesthesia armamentarium; and principles necessary for administering local anesthesia will be incorporated in the learning process. Content of this course meets educational requirements for certification in the state of Wisconsin.

**General Education Course Descriptions on Pages 38-41.**

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 806-111 Introduction to Biochemistry 3 Credits
- 806-131 Anatomy & Physiology 4 Credits
- 806-197 Introduction to Microbiology 4 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits



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 provides 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 interested in the Diesel and Heavy Equipment Technician program should demonstrate mechanical aptitude, as well as strong math and problem-solving skills. The program provides a broad base of skills, which allow the student to enter the large and ever-expanding field of diesel and heavy equipment service and repair.

## Potential Employment Opportunities

Employment opportunities are very good for diesel and heavy equipment technicians. Growth is expected in this field due to greater use of buses, trucks, and other diesel-powered machines. Careers in diesel and related technologies are attractive to many because wages are relatively high and skilled repair work is challenging and varied. Typical salaries in Wisconsin range from \$25,000 to \$36,000 per year. Employers prefer to hire graduates of formal training programs because of the skills they have attained and their ability to quickly advance. Experienced technicians with leadership ability often advance to shop supervisor or service managers. These individuals may earn over \$50,000 per year.

## Potential Job Titles

As a graduate of this program you may expect work as a Diesel Mechanic, Diesel Mechanic Apprentice, Engine Maintenance Mechanic, Farm Equipment Mechanic, Service Engine Repairer, Tune-up Mechanic, Industrial and Construction Equipment Mechanic, Truck Mechanic

## General Education Course Descriptions on Pages 38-41.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
070-341	Electrical Systems	4	4 - 3
070-343	Hydraulic Systems	3	2 - 3
070-345	Service Policy and Procedure	2	3 - 0
412-347	Inspection & Maintenance Procedures	4	4 - 3
801-311	Communications I	2	3 - 0
804-304	Math Fundamentals	2	3 - 0

## Semester 2

070-318	Drive Train Service	4	3 - 4
070-321	Air Conditioning and Refrigeration	2	1 - 2
412-310	Brake Service	4	3 - 4
412-311	Steering and Suspension	2	1 - 2
809-352	Skills for Successful Employees	2	3 - 0

## Semester 3

070-308	Small Gas Engines	3	3 - 2
412-342	Electrical Systems Troubleshooting	4	4 - 3
412-344	Hydraulic Systems Troubleshooting	3	2 - 3
412-349	Equipment Welding	2	1 - 2

## Semester 4

412-304	Diesel Fuel Systems	4	4 - 3
412-350	Diesel Engine Overhaul	8	5 - 10

## TOTAL CREDITS

55

## Course Descriptions

### 070-308 Small Gas Engines

3 Credits

Theory and operation of small engines, fuel, ignition, governing and lubrication, includes trouble-shooting procedures and overhauling two- and four-cycle engines.

### 070-318 Drive Train Service

4 Credits

This course introduces the student to standard hydrostatic and power transmissions and systems; maintenance and repair of automatic and standard transmissions, drive shafts, UJoints, constant velocity joints, differential equalizers, and differential locks.

### 070-321 Air Conditioning and Refrigeration

2 Credits

Fundamentals of air conditioning and refrigeration. Major emphasis is placed on servicing, filling and discharging, evacuating, troubleshooting, and repair of various refrigeration systems. Converting from R12 to R134 systems is covered.

### 070-341 Electrical Systems

4 Credits

Theory, operation, functions and design of the electrical systems. Starting, charging, accessory circuits, electrical troubleshooting, schematics, and wiring diagrams are covered.

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## 070-343 Hydraulic Systems

3 Credits

This course is designed to give the student a working knowledge of hydraulic and pneumatics. Test, service, adjust and repair hydraulic and pneumatics. Test, service, adjust and repair hydraulic actuators. Test, service, adjust and repair hydraulic systems of tractors, trucks and other implements. Included are power steering systems, hydrostatic and power shift transmissions and systems appropriate to a wide range of implements.

## 070-345 Service Policy and Procedure

2 Credits

This course is designed to aid the student to understand the employment opportunities within the industry; to recognize correct shop safety, as well as the identification, selection and use of proper shop tools, diagnostic equipment; record keeping; use of service manuals, and management of shop inventory control.

## 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; maintenance, servicing, repair, and 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

Deals with a comprehensive perspective of electronic utilization. Electronic application, testing, test results and their interpretations, how to read a voltmeter, systems analysis, printed circuits, troubleshooting and the use of specialized tools will be highlighted. The overall intention 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 Procedures

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 (OFC), and Gas Tungsten Arc Welding (GTAW). *Class size is limited.*

## 412-350 Diesel Engine Overhaul

8 Credits

Provides the student with both a theoretical and practical background in the basic operating principles of diesel engines. Practical experience in rebuilding, testing, troubleshooting and tuning of diesel engines, plus the use and application of tools and equipment used. Students will disassemble a diesel engine, learn and inspect parts, explain function of each part and system, reassemble, run engines, and learn maintenance procedures. Auxiliary systems such as lubrication, cooling, intake and exhaust, turbo-charger, and blowers will be emphasized.

### General Education Course Descriptions on Pages 38-41.

- 801-311 Communications I 2 Credits
- 804-304 Math Fundamentals 2 Credits
- 809-352 Skills for Successful Employees 2 Credits

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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:

- Plan and implement developmentally appropriate curriculum for specific age levels.
- Use positive guidance techniques to manage an early childhood classroom.
- Provide for the health, safety, and physical needs of the children in your care.
- Plan and manage daily routines in the classroom.
- Work with parents to provide a link between the child care center and the child's home.
- Maintain a safe environment on a daily basis.

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, Special Education and Chapter I Aide in Public Schools

	Course Name	Credits	Lec-Lab
<b>Quarter 1</b>			
+307-105	Child Health & Safety	3	3 - 0
+307-111	Child Growth & Development I	3	3 - 0
+801-196	Oral/Interpersonal Communications	3	3 - 0
+307-106	Professionalism	2	2 - 0
+307-108	Orientation	3	3 - 0
+307-109	Early Childhood Pract. I (18 wks)	3	1 - 6
<b>Quarter 2</b>			
+307-101	Infant Toddler Caregiver	3	3 - 0
+307-107	Fundamentals	3	3 - 0
+307-110	Creative Expression	3	2 - 2
+809-198	Introduction To Psychology	3	3 - 0
+307-114	Child Growth & Development II	3	3 - 0
<b>Quarter 3</b>			
+307-122	Diversity in Early Childhood	2	2 - 0
+801-195	Written Communications	3	3 - 0
+307-113	Creative Activities	3	2 - 2
307-115	Early Childhood Practicum II	3	1 - 6
307-117	Children w/ Special Needs	3	3 - 0
307-118	Child Guidance	3	3 - 0

## Quarter 4

+307-116	Building Partnerships	2	2 - 0
+307-123	Administration of E.C. Programs	3	3 - 0
+809-196	Introduction To Sociology	3	3 - 0
+307-119	Early Childhood Practicum III	3	1 - 6

## Quarter 5 (Summer)

804-106	Introduction to College Mathematics	3	3 - 0
809-195	Economics	3	3 - 0
	<b>Elective</b>	3	3 - 0
	<b>Elective</b>	3	3 - 0

## TOTAL CREDITS

72

\* All Lecture/Lab Hours are based on 18 weeks

+ Class taught in accelerated learning (8 weeks). Contact program Lead Instructor or Counselor for information on credit given for work experience and previous class work.

Physical information needs to be completed by the 3rd week of school. Practicum students must meet DHFS requirements for information disclosure records and background record checks.

## Course Descriptions

### 307-101 Infant/Toddlers and Caregivers 3 Credits/54 hrs.

This course is an introduction to the development, care and education of children from 0-3. It includes the principles of care giving, developmentally appropriate practice, diversity issues, curriculum, guidance, observation and assessment. Both typical and atypical development are examined. Meets DHFS 15 hour requirement for Infant Toddler Care.

### 307-105 Child Health & Safety 3 Credits/54 hrs.

This class includes health and safety provisions for young children, recognition of symptoms of illness, communicable illness, how to stop the spread of communicable illness, and the part nutrition plays in the well-being of a child. Planning nutritious menus and food activities for young children will be discussed.

### 307-106 Professionalism 2 Credits/36 hrs.

Professionalism and advocacy in early childhood education are stressed. Development of a portfolio is required.

### 307-107 Fundamentals of Child Care 3 Credits/54 hrs.

Topics in this course include group day care regulations, NAEYC accreditation, routines, environments, diversity, and selection of toys and equipment.

### 307-108 Orientation 3 Credits/54 hrs.

This course is a broad overview of the importance of quality child care. The role of the teacher is examined in a quality center. Early Childhood philosophies are examined.

**307-109 Early Childhood Practicum I 3 Credits/126 hrs.**

The student will participate in a child care center in the role of a student assistant. Guided and supervised experiences in assisting children with routines, projects and activities give the student practical knowledge of the role of child care workers, and provide opportunities to apply knowledge and information from other child care courses.

*Prerequisite 307-108.*

**307-110 Creative Expression 3 credits/72 hrs.**

This course is structured for analysis and evaluation of a wide variety of play, art, music, creative materials and activities, and the contribution of each toward growth and development. There is emphasis on promoting creativity in children. The student is involved in a wide variety of learning experiences.

*Con-current 307-109.*

**307-111 Child Growth & Development I 3 Credits/54 hrs.**

Physical, social, emotional, and cognitive development of children from birth to age 2 is studied. Information about development patterns and the nature vs nurture controversy is examined.

**307-113 Creative Activities 3 Credits/72 hrs.**

This course involves the study of the importance of math, science, and language activities in programs designed for young children. The student is involved in planning and designing a variety of appropriate learning experiences, including storybook reading, puppetry, flannel-board presentations, hands on science activities, and math games.

*Con-current 307-115.*

**307-114 Child Growth & Development II 3 Credits/54 hrs.**

Physical, social, emotional, and cognitive development of children from 2.5 to 8 is studied.

**307-115 Early Childhood Practicum II 3 Credits/126 hrs.**

The student builds on previous practicum experience in development routines, projects and activities for young children. The student will have opportunities to demonstrate increasing independent and skills in the practice of being a child care teacher.

*Prerequisite 307-109.*

**307-116 Building Partnerships in Early Childhood Education 2 Credits/36 hrs.**

How family dynamics affect the development of the child is studied along with formal and informal methods of communication with parents/guardians. Community resources for families in our area are discussed.

**307-117 Children With Special Needs 3 Credits/54 hrs.**

This course consists of an overview of the characteristics and educational needs of children with special needs: cognitive, physical, speech, hearing, and visual impairments; learning disabilities, emotionally disturbed and gifted and talented. Supporting families with children who have special needs is emphasized.

**307-118 Child Guidance 3 Credits/54 hrs.**

Techniques to help a child develop self-control are practiced and discussed. Emphasis on using positive guidance techniques when working with children in group and individual settings.

**307-119 Early Childhood Practicum III 3 Credits/126 hrs.**

The student will participate in an early childhood center in the role of a Child Care Teacher. The student will be responsible for planning and presenting 6 days of activities with the children.

*Prerequisite 307-115.*

**307-122 Diversity in Early Childhood 2 Credits/54 hrs.**

Learn how to create an anti-bias free curriculum, and environment for early childhood will be discussed

**307-123 Administration of Early Childhood Programs 3 Credits/54 hrs.**

This course will focus on the responsibilities of a Program Director/Administrator of an Early Childhood Center.

**804-106 Introduction to College Mathematics 3 Credits/54 hrs.**

This course is designed to review and develop fundamental concepts of arithmetic, algebra, geometry and statistics.

**General Education Course Descriptions on Pages 38-41.**

• 801-195 Written Communications	3 Credits
• 801-196 Oral/Interpersonal Communications	3 Credits
• 804-106 Introduction to College Math	3 Credits
• 809-195 Economics	3 Credits
• 809-196 Intro to Sociology	3 Credits
• 809-198 Introduction to Psychology	3 Credits



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Vast networks of wires and cables transmit the electric power produced in generating plants to individual customers; connect telephone central offices to customers telephones and switch-



boards; 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.

## Potential Employment Opportunities

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 than for telephone line workers. Typical entry-level salary for Line workers ranges from \$23,000 to \$45,000 a year.

## Potential Job Titles

Electric Utility Lineman, Telephone Repairman, Cable TV Installer.

## Course Name

Credits Lec-Lab

### Semester 1

413-301	Electric Power Distribution I	10	5 - 15
413-303	Industrial Electricity for Line Technicians	2	1 - 2
413-304	Safety Procedures I - Line Technicians	1	1 - 1
804-304	Math Fundamentals	2	3 - 0

### Semester 2

413-302	Electric Power Distribution II	10	5 - 15
413-305	Safety Procedures II - Line Technicians	1	1 - 1
801-311	Communications I	2	3 - 0
806-315	Applied Science	2	3 - 0
809-352	Skills for Successful Employees	2	3 - 0

### TOTAL CREDITS

32

## Course Descriptions

### 413-301 Electric Power Distribution I 10 Credits

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, structural design and installation will be covered during the laboratory sessions at the pole field.

### 413-302 Electric Power Distribution II 10 Credits

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.

**Prerequisite:** 413-301

### 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.

**Prerequisite:** Enrolled in E.P.D. I

### 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.

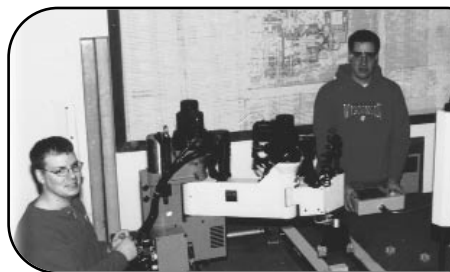
### 413-305 Safety Procedures II - Line Technicians 1 Credit

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.

### General Education Course Descriptions on Pages 38-41.

• 801-311 Communications I	2 Credits
• 804-304 Math Fundamentals	2 Credits
• 806-315 Applied Science	2 Credits
• 809-352 Skills for Successful Employees	2 Credits

Electro-mechanical (Robotics) Technicians fabricate, install, assemble, test, analyze, adjust, repair, and maintain various machinery and devices that are electronic and mechanical in nature. Students learn



the essentials of electronics, fluid power, motors, robots and mechanical devices. They develop skill and knowledge in operating specialized electronic and mechanical test instruments.

This program emphasizes troubleshooting, modification and design of electronic controls and mechanical drives for automated robotic equipment used in an industrial environment. A robot is a computer-driven machine that does repetitive tasks. The Electro-mechanical graduate builds, installs, updates, and services mechanical and electronic-controlled equipment, such as industrial automation, computer-integrated machining, metal and plastic forming, assembly systems, and food processing. Among the many automated systems, which includes robots, the technician's involvement may be within any stage or segment of the development process. They apply the skills of debugging and troubleshooting a system from its initial design to its final installation. Training operators also servicing subsequent breakdown, and make additional system improvements.

The Electro-mechanical program, an in-demand field of study, offers graduates entry skills needed to succeed in a fast-growing, high-energy field of employment. This discipline of study has a shortage of qualified applicants, so potential employment opportunities are in great demand.

## Potential Employment Opportunities

Rapid growth and high demand for qualified persons are anticipated. More business and industrial firms are expanding, updating, and installing complex computerized systems and electronic control devices. The increase in these systems have and will continue to demand more trained technical service people. Typical salaries in this area range from \$27,000 to \$50,000 a year.

Typical job titles for graduates of this program include Electro-mechanical Technician, Field Service Engineer, Automation Technician, Robotics Technician, Electro-mechanical Maintenance Technician, Machine Repair, Electronic Assembly Tester, Instrument Mechanic, Electrical Equipment Repairer, Fluid Power Technician, and Electrical Maintenance Technician.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
605-102	Fundamentals of DC Circuits	3	2 - 3
605-104	Fundamentals of AC Circuits	3	2 - 3
605-135	Technical Documentation & Processes	2	1 - 3
801-195	Written Communications	3	3 - 0
804-151	Technical Mathematics I	5	5 - 0
809-198	Introduction to Psychology	3	3 - 0
<b>Semester 2</b>			
605-116	Industrial Solid State Devices & Circuits	3	2 - 3
605-120	Power Supplies & Power Circuits	3	2 - 3
605-125	Logic & Digital Circuits	3	2 - 3
605-130	Microprocessor Programming	2	1 - 3
804-152	Technical Mathematics II	4	4 - 0
806-151	Technical Science I	3	2 - 2
<b>Semester 3</b>			
605-140	Motors & Servo-mechanisms	3	2 - 3
620-100	Hydraulics & Pneumatics	3	1 - 6
620-160	Robotic Systems	3	2 - 3
806-152	Technical Science II	3	2 - 2
809-197	Contemporary American Society	3	3 - 0
	<b>*Elective</b>	3	
<b>Semester 4</b>			
620-110	Microprocessor & Programmable Controllers	4	3 - 3
620-162	Applied Robotics	4	1 - 9
801-197	Technical Reporting	3	3 - 0
809-195	Economics	3	3 - 0
	<b>*Elective</b>	3	
<b>TOTAL CREDITS</b>		<b>72</b>	

\*Electives may be selected from any associate degree program with the approval of student program advisor

**General Education Course Descriptions on Pages 38-41.**

## Course Descriptions

### 605-102 Fundamentals of DC Circuits 3 Credits

This course is a study of the basic theories, concepts, elements, and principles of DC circuits. The student advances from simple to complex circuits. Topics covered include Ohm's Law, series and parallel circuits, circuit theorems and circuit analysis. The course combines both lecture and laboratory work.

### 605-104 Fundamentals of AC Circuits 3 Credits

This course is a study of the basic theories, concepts, elements, and principles of AC circuits. The student advances from simple to complex circuits. Topics covered include reactance, impedance, resonance, transformers, inductors, and capacitors. The course combines both lecture and laboratory work.

**Prerequisite:** 605-102

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## 605-116 Industrial Solid State Devices & Circuits 3 Credits

This course is designed to provide the students with the basic understanding of the principles and concepts of solid state devices including diodes, SCR's, diac's, triac's, transistors, FET's, and integrated circuits. Characteristics & application of each device will be verified through laboratory experiments.

**Prerequisite:** 605-120.

## 605-120 Power Supplies & Power Circuits 3 Credits

An essential study of the various types of power supplies found in electronic equipment. Both regulated and unregulated designs are covered, including analog and switching types. This course will give the student an insight into the design of power supplies and their components, with special emphasis on op-amps and other integrated circuits.

**Prerequisite:** 605-104.

## 605-125 Logic & Digital Circuits 3 Credits

A course designed to provide the student with the basic understanding of the principles and concepts involving solid state logic and digital circuits. Concepts to be studied shall include waveforms, digital math, multivibrators, logic gates, registers and counters, multiplexers and demultiplexers, as represented in all logic families. Verification of the theory is accomplished through laboratory experiments. Emphasis will be placed on troubleshooting techniques used in servicing digital circuits.

**Prerequisite:** 605-104.

## 605-130 Microprocessor Programming 2 Credits

This course provides an introductory study in programming microprocessors, where the student will be introduced to a high level language. Basic programming will be studied and used to control devices with a special emphasis on electronic and industrial applications. The course includes hands-on laboratory sessions.

**Prerequisite:** 605-104.

## 605-135 Technical Documentation & Processes 2 Credits

Learn to read and interpret blueprints and schematics used in the electronics industry. The course will include elements of machine, electrical and electronics drawings and their respective schematic symbols and the layout and making of printed circuit boards. The course also will include the use of a computerized typing tutor to teach elementary keyboarding techniques.

**Prerequisite:** 605-102 or concurrent with 605-102.

## 605-140 Motors & Servo-mechanisms 3 Credits

A course that covers the principles and components of control applications of AC-DC motors and servomechanisms. Topics covered include: industrial application of motors and controls, open and closed servo systems and the use of electrical and electronic diagrams for thorough understanding of control systems. The application of servomechanisms for automated control in various systems is made in laboratory experiments as well as studying the principles through theory and operation of servo-synchronous devices. Experiments are conducted on hydraulic servo controls systems; DC motors, AC motors, stepper motors, and other controls.

**Prerequisite:** 605-116.

## 620-100 Hydraulics & Pneumatics 3 Credits

This is a course in fundamental principles in the operation of fluid power, as it is used in the transmission of power through various components such as cylinders, motors, pumps, and valves.

## 620-110 Microprocessor & Programmable Controllers 4 Credits

The student will study components that make up a programmable or microprocessor system and the various applications and operations used for digital and process controls in industry. The further use of programming is expanded to include ladder logic and diagrams. Diagnostic troubleshooting is applied along with analysis of interfacing micro-processors and programmable controllers to other control systems.

**Prerequisite:** 605-125 or consent of instructor.

## 620-160 Robotic Systems 3 Credits

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.

**Prerequisite:** 605-130 and 620-100 or concurrent enrollment.

## 620-162 Applied Robotics 4 Credits

The student will apply the concepts of the robot by using system signal flow, block and logic timing diagrams. Knowing the system functions, the student will be able to analyze system malfunctions to the modular level and practice the skills needed to interface and repair them. Gaining this knowledge will be accomplished by completing an applied robotic project.

**Prerequisite:** 620-160.

### General Education Course Descriptions on Pages 38-41.

- 801-195 Written Communications 3 Credits
- 801-197 Technical Reporting 3 Credits
- 804-151 Technical Mathematics I 5 Credits
- 804-152 Technical Mathematics II 4 Credits
- 806-151 Technical Science I 3 Credits
- 806-152 Technical Science II 3 Credits
- 809-195 Economics 3 Credits
- 809-197 Contemporary American Society 3 Credits
- 809-198 Introduction to Psychology 3 Credits

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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 and EMT-Paramedic training. EMT-Basic is 4 credits at 8 hours per week totalling 140 hours plus 10+ hours in a hospital emergency room setting and ambulance ride-along training.

**A Caregiver Background Check WILL be required for clinical portion of the program.**

Semester 1	Course Name	Credits	Lec-Lab
531-301	EMT-Basic	4	4 - 4

## Other EMS Courses

531-400	Basic First Aid	8
531-411	Pediatric CPR	9
531-412	First Responder-Refresher	18
531-415	Emergency Vehicle Operations-Ambulance*	20
531-420	EMT-Basic Refresher	36
531-430	Automatic Electronic Defibrillation (AED)**	6
531-431	Heartsaver Plus-CPR	9
531-433	Basic Trauma Life Support (BTLS)*	16
531-434	Healthcare Provider-CPR	9
531-436	CPR-Refresher	6
531-438	Heartsaver-CPR	4
531-440	First Responder	46
531-455	Heartsaver AED	4

**Also**—Continuing Education for the EMT and Special Seminars.

## Course Descriptions

### 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 and EMT-Paramedic training. EMT-Basic is 4 credits at 8 hours per week totalling 140 hours plus 10+ hours in a hospital emergency room setting and ambulance ride-along training.

### 531-400 Basic First Aid 6 Hours

Basic first aid for the general public, business, and industrial personnel. The course consists of the principles and techniques for aiding the victim until more help arrives (OSHA approved).

### 531-411 Pediatric CPR 9 Hours

The course consists of airway obstruction and CPR for infants and children under 8-10 years old, based on the newest American Heart Association techniques. Target audiences—daycare centers (OSHA approved).

### 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\* 20 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 36 Hours

Biennial State of Wisconsin mandated refresher course for licensure renewal. Basic skills are emphasized along with new protocols for the two-year period.

### 531-430 Automatic Electronic Defibrillation\*\* 6 Hours

This course is for EMTs and First Responders only.

### 531-431 Heartsaver Plus-CPR 9 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).

### 531-433 Basic Trauma Life Support (BTLS)-Ambulance\* 16 Hours

This course is for EMTs based on the "loan and go" theory with or without helicopter support.

### 531-434 Healthcare Provider-CPR 9 Hours

For any medical staff personnel, medical type students, EMTs, nursing students, and nursing personnel. The course consists of airway obstruction and CPR, two person CPR, using adjunct equipment for infants, children, and adults based on the newest American Heart Association techniques (OSHA approved).

### 531-436 CPR-Refresher 6 Hours

Biennial update for those already certified in CPR.

### 531-438 Heartsaver-CPR 4 Hours

The course consists of airway obstruction and CPR for adults only, based on the newest American Heart Association techniques. Target audiences—business and industry (OSHA approved).

### 531-440 First Responder 46 Hours

Advanced first aid and other medical procedures below the EMT levels. Previously for law enforcement officers, firefighters, and those who initially respond first to an emergency scene.

### 531-455 Heartsavers AED 4 Hours

This course consists of automatic electronic defibrillation during heart attacks. The course is for the general public who have access to an AED.

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Farm Business and Production Management is designed to teach principles of farm management and problem solving based on problems individual enrollees encounter. Enrollment is open to any individual who is beyond high school and is actively engaged in or about to enter farming. This includes farm owners, operators, renters, partners, farm managers, and hired persons. Both men and women are encouraged to enroll. The program is targeted to individuals who have farming as their objective. Enrollees should plan to regularly attend scheduled group instruction sessions and allow time for individual on-the-farm instruction.



Instruction is planned over a six-year period, but individual enrollment is on an annual basis.

The program is planned and conducted on a two-fold basis:

- A minimum of 45 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 pre-scheduled and a calendar is sent to you each month listing your visit for that month.

## Career Outlook

Outlook is affected each year by the cost and availability of money, by government supports, and import quotas on meat and dairy products. Rising cost of machinery, feed, and chemicals, daily changes in the prices of farm products affects a farmer's ability to stay in business. The development of corporate farms and the strength of family farms or cooperatives also affect the farming business. The trend toward fewer but larger farms will continue to limit opportunities for farmers. Typical salary range for farmers in the state of Wisconsin is from \$16,000 to \$23,000 per year. A farmer's net earnings or profits vary greatly, depending on weather, food prices, operating costs, and interest rates on loans.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
090-381	Operating the Farm Business	3	varies
090-382	Soils Management	3	varies
090-383	Crop Management	3	varies
090-384	Livestock Nutrition	3	varies
090-385	Livestock Management	3	varies
090-386	Farm Records & Business Management	3	varies

## TOTAL CREDITS

18

*To graduate, a student must successfully complete the six course areas listed for 18 credits.*

## 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 in 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. Student's entire farming operation is assessed and plans are developed for future 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 how to prepare and implement a land-use plan, take and understand soil testing procedures and reports. Students will receive instruction on making, understanding and implementing 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 of cropping strategies to meet the students 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 farm 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.

### 090-384 Livestock Nutrition 3 Credits

Emphasizes the skills, techniques and concepts necessary for sound feeding management. It includes determining feed values – economics of feed; nutritional terminology and requirements; feed consumption of livestock; breeding and understanding feed tag labels for protein, energy, mineral and vitamins; evaluation of base feed and feeding programs; and metabolic disease of lactating livestock. Livestock feeding efficiency will be measured by use of the farm business analysis.

### 090-385 Livestock Management 3 Credits

Livestock management provides instruction on the various phases of selection, breeding, herd health, raising of replacement stock, and marketing livestock and livestock products. It includes the selection, operation, and maintenance of milking, feed, ventilation, manure handling, equipment and farm buildings. In addition, the livestock program will be managed through use of the farm business analysis.

### 090-386 Farm Records and Business Management 3 Credits

Instruction is provided which 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 and analysis.

The Fire Science 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 rare blend of technical skills, management concepts and abilities as a communicator of fire prevention information.

Another area of employment opportunity exists in the field of sales with companies which manufacture fire protection equipment and related supplies.

Expanding industrialization and population 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 and industry.

### Fire Service Training

This series is for all active firefighters 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
<b>Technical Core Courses</b>			
503-108	Building Construction & Fire Ordinances	4	4 - 0
503-109	Introduction to Hazardous Materials	3	3 - 0
503-113	Supervisory Techniques for Fire Service	3	3 - 0
503-115	Handling Hazardous Materials	3	3 - 0
503-117	Fire Prevention/Systems	4	4 - 0
503-122	Fire Service Hydraulics	3	3 - 0
503-126	Fire Department Administration	3	3 - 0
503-135	Fire/Arson Investigation	3	3 - 0
503-148	Tactical Problems & Disaster Planning	3	3 - 0
503-150	Personnel Management for Fire Service	3	3 - 0

### General Education Courses

801-195	Written Communications	3	3 - 0
801-196	Oral/Interpersonal Communications	3	3 - 0
804-105	General Math	3	3 - 0
806-121	Basic Chemistry	3	2 - 2
809-195	Economics	3	3 - 0
809-196	Introduction to Sociology	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0

### Technical Support Courses

154-103	Basic Computer Concepts	3	3 - 0
503-144	Directed Independent Research	3	3 - 0

### Fire Science Certificate

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 Pumping (33 Hours)	1 Credit
Driver/Operator Aerial (60 Hours)	1.5 Credits

### Suggested Electives (Minimum of 6 credits required)

503-118	Fire Suppression	3	3 - 0
503-146	Directed Independent Research II	2	2 - 0
504-118	Procedures of Interviewing	3	3 - 0
504-136	Rules of Evidence	3	3 - 0
531-301	EMT-Basic	4	4 - 4

### TOTAL CREDITS

65

### Course Descriptions

#### 503-108 Building Construction & Fire Ordinances 4 Credits

The basic principles of structural design, masonry, frame, veneer, structural steel and reinforced construction are studied, with fire ordinances that apply during construction.

#### 503-109 Introduction to Hazardous Materials 3 Credits

This course provides an introduction to the Hazardous materials problem by presenting the foundation needed to go further in the study of hazardous materials, such as "hands on" courses and incident-command courses. The chemistry presented in this course is designed to be the minimum a firefighter will need to understand and recognize in each hazard class. In general, each hazard class shows what a firefighter can expect in fire and non-fire situations.

#### 503-113 Supervisory Techniques-Fire Science 3 Credits

This course is designed to give the student an overview of such supervisory skills as leadership and interpersonal skills, planning, staffing, organizing, and control at the first-time supervision level. The duties and responsibilities of supervisors, the role of supervision in an organization and making the transition to supervisor are also included.

#### 503-115 Handling Hazardous Materials 3 Credits

This is a study of the properties, derivations, and uses of explosives and other dangerous chemicals such as flammable liquids, flammable solids, oxidizing materials, corrosive liquids and solids, compressed gasses, radioactive materials, poisons and their modes of transportation and storage. The procedures as to dealing with these chemicals on the foreground are also studied.

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**503-117 Fire Prevention Systems 4 Credits**

This course discusses the organization and function of fire prevention and fire protection systems. Topics include inspection, surveying and mapping procedures, recommendations for correction of fire hazards, engineering as a solution to fire hazards, code enforcement at the federal, state, and local levels, public relations as affected by fire prevention, portable fire extinguisher equipment, sprinkler systems, standpipe systems, protection systems for special hazards, and fire alarm and protection systems. Students will visit local facilities to make mock inspections and to see how fire protection equipment and systems work in order that critical appraisals can be made.

**503-118 Fire Suppression 3 Credits**

Fire fighting problems are presented that are commonly encountered by the firefighter at the company level. Fundamental strategy and methods of attack employed for each fire problem presented are thoroughly reviewed.

**503-122 Fire Service Hydraulics 3 Credits**

This course is designed to give the student a basic knowledge of hydraulics relative to the fire service field. The theoretical aspects as well as the practical fire ground approach is studied.

**503-126 Fire Department Administration 3 Credits**

The scope and functions of administrative management personnel in the fire department are studied. Discussions include fire service role in the community, selection, training and advancement, line and staff functions, and developing and conducting short courses on fire protection subjects.

**503-135 Fire/Arson Investigation 3 Credits**

Problems and techniques of fire and arson investigation are studied with emphasis on the application and assistance of various aids to the investigation.

**503-144 Directed Independent Research I 3 Credits**

This course is designed to allow a student to research and dissect a problem area in Fire Science.

**503-146 Directed Independent Research II 2 Credits**

This course is designed to allow a student to research and dissect a second problem area in Fire Science.

**503-148 Tactical Problems & Disaster Planning 3 Credits**

This course allows the student to make knowledgeable decisions regarding fire ground tactics both from a battalion and company level, and provides insight into unusual circumstances often encountered in the fire service. The student will also learn the procedures used in the development of disaster planning and the relationship between various local, state, and federal agencies from an administrative viewpoint.

**503-150 Personnel Management for Fire Service 3 Credits**

Students need to understand how officers and personnel units work together to manage firefighters. This course presents basic ideas that all officers need to effectively manage personnel activities.

**504-118 Procedures in Interviewing 3 Credits**

This course emphasizes the general and specialized skills in human communication. The student will be introduced to the various techniques and fundamentals in interviewing and interrogation as well as nonverbal communication skills as they relate to law enforcement.

**504-136 Rules of Evidence 3 Credits**

This course presents a comprehensive study of the nature, kinds and degrees of evidence. The vital importance of "why" and "how" evidence is handled by the law enforcement officer for proper presentation and admission into the trial, in accordance with historical and judicial rules governing the admissibility of evidence in court, is emphasized.

**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 and EMT-Paramedic training. EMT-Basic is 4 credits at 8 hours per week totalling 128 hours plus 10+ hours in a hospital emergency room setting and ambulance ride-along training.

**General Education Course Descriptions on Pages 38-41.**

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-105 General Math 3 Credits
- 806-121 Basic Chemistry 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits



Health Unit Coordinators are employed in hospitals, medical clinics, nursing homes and other extended care facilities. The Unit Coordinator assumes many of the clerical functions related to nursing care.



The Health Unit Coordinator is the liaison between physicians, nurses, and patients. This professional coordinates, communicates, maintains unit and patient records and forms, requisitions services from various departments, transcribes doctors' orders, and completes clerical duties for admissions, discharges, and transfers.

Graduates of the Health Unit Coordinator program will have a basic understanding of medical terminology, medications and their classifications, and a variety of medical tests and their corresponding preparation.

A key characteristic of the successful Health Unit Coordinator is the ability to function in a fast-paced, dynamic environment, using good judgment and prioritizing work load.

A clinical experience is scheduled for externship.

### Potential Employment Opportunities

Health Unit Coordinator, Unit Secretary, Health Information Clerk, Registration Clerk, Receptionist/Scheduling, Patient Services, Medical Receptionist.

<i>Semester 1</i>	Course Name	Credits	Lec-Lab
509-113	Ethical/Legal Issues	2	2 - 0
509-114	Pharmacology Terminology	2	2 - 0
509-316	Understanding Human Behavior	1	2 - 0
510-117	Medical Terminology	3	3 - 0
510-330	Health Unit Coordinator Procedures	3	4 - 2
510-332	Health Unit Coordinator Externship	3	0 - 6

### Technical Support Courses

106-140	Keyboarding	1	0 - 2
107-301	Computer Basics	1	0 - 2

### General Education Courses

801-311	Communications I	2	3 - 0
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**TOTAL CREDITS** **18**

A physical examination is required for enrollment in this program.

*A Caregiver Background Check may be required for Externship.*

### Course Descriptions

#### 509-113 Ethical/Legal Issues in Health Care 2 Credits

This course is intended to introduce ethical/legal issues in health care delivery systems and to provide a foundation of information to be used as a guide against which individual behaviors may be measured.

#### 509-114 Pharmacology Terminology 2 Credits

An introduction to the use of pharmacologic terminology and context. Included are medication actions, dosage forms, routes of administration, and uses. Emphasis is on the terminology necessary for medical reports.

#### 509-316 Understanding Human Behavior - Health 1 Credit

This course introduces students in health occupations to basic concepts of individual differences, motivations, and aspects of mental health. The patient's personal involvement is identified by viewing illness from the patient's viewpoint. The effects of the behavior of health workers on the well-being of the patient is also discussed to better qualify the student to deal effectively in total patient care.

#### 510-117 Medical Terminology 3 Credits

A comprehensive study of medical vocabulary. The student learns the pronunciation, spelling, definition, and correct usage of medical terms used in a variety of health care settings.

#### 510-327 Transcribing Orders 1 Credit

This course will prepare students to transcribe orders in a hospital or nursing home using traditional and computerized systems. Kardexing, classification of doctors' orders, and the purpose and process of requisitioning will be covered. Transcription symbols as well as rules, responsibilities and ethics of transcription are also included.

#### 510-330 Health Unit Coordinator Procedures 3 Credits

Theory and practice in executing procedures of a clerical and receptionist nature in a system of health care delivery are emphasized.

#### 510-332 Health Unit Coordinator Externship 3 Credits

The 4-week clinical experience in health care settings is scheduled upon completion of all required courses in the Health Unit Coordinator program.

#### 106-140 Keyboarding 1 Credit

Students 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.

#### 154-103 Basic Computer Concepts 1 Credit

Basic Computer Concepts is a hands-on course designed to enhance computer competency of students in the Health Unit Coordinator program at BTC. Topics typically covered are: Internet use (Internet Explorer) and Email, Word Processing (Word), Spreadsheets (Excel), and some Database concepts. The course is administered through lecture, demonstration, and hands-on experience in-class.

#### General Education Course Descriptions on Pages 38-41.

- 801-311 Communications I 2 Credits

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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, along with an occupational mentor, designs an occupational degree program into a unique Associate degree.



Two objectives of the Individualized Technical Studies Associate Degree are 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

BTC maintains an Individualized Technical Studies Degree Committee. This committee will be responsible for reviewing each student's application and career plan in order to grant admission into the program.

Admission requires each student to participate in advising and planning sessions, which include the following:

- Assignment of a program advisor before acceptance into the program
- Development of a plan outlining his or her 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
- Completion of an Individualized Technical Studies Degree portfolio, which is to be filed with the district's Individualized Technical Studies Degree Committee as part of the program admission process

General Education courses will be drawn from communications skills, Mathematics, Science, and behavioral and social sciences. Each student also will complete a minimum of 40 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 on 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.

In addition, each student must complete six credit hours of electives that are relevant to the student's career goals. A students may use their electives to take additional technical studies courses.

## Program Requirements

General Education—18 credit hours

### General Education Course Descriptions on Pages 38-41.

A minimum of three credits is required from each of the following four categories for the General Education core. The remaining six credits will be chosen from any of the remaining listed courses. However, students are encouraged to complete a minimum of six credits in communications.

#### Communications

801-195	Written Communications	3
801-196	Oral/Interpersonal Communications	3
801-197	Technical Reporting (Prerequisite: Written Communications)	3
801-198	Speech	3

#### Social Science

809-195	Economics	3
809-196	Introduction to Sociology	3
809-197	Contemporary American Society	3

#### Behavioral Science

809-198	Introduction to Psychology	3
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#### Mathematics/Science

3

**Individualized Technical Studies Core** 40-48 credit hours

**Electives** 6 credit hours

**Total Program Credit Hours** 64-72 credit hours

For further information or to obtain a personal planning guide, contact BTC counselor Dan Tester at the Central Campus (757-7708) or Cindy Alfano at the Monroe Campus (328-1660).



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 the 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.

## Career Outlook

Well-qualified Industrial Engineering Technicians should experience good employment opportunities through the year 2005. Employment is expected to increase due to the expected continued growth in the output of technical products. Competitive pressures and advancing technology will force companies to improve and update manufacturing facilities and product designs more rapidly than in the past. The typical salary range in the state of Wisconsin ranges from \$25,000 to \$36,000 a year.

## Potential Employment Opportunities

Industrial Engineering Technician, Engineering Assistant, Engineering Analyst, Engineering Development Technician, Engineering Liaison Person, Mechanical Assistant--Mechanical Equipment, Methods/Motion/Time Study Analyst

Course Name	Credits	Lec-Lab
<b>Technical (Core) Courses</b>		
154-103 Basic Computer Concepts	3	3 - 0
196-191 Supervision	3	3 - 0
422-100 Metallurgy	3	3 - 0
606-101 Introduction to Computer Aided Drafting <sup>1</sup>	3	2 - 2
623-121 Engineering Drawings & Measurement <sup>1</sup>	3	self-paced
623-155 SPC-Statistical Process Control	2	2 - 0
623-160 Manufacturing Materials & Processes	3	3 - 0
623-165 Facilities Planning	3	3 - 0
623-170 Industrial Organization & Structure	3	3 - 0
623-192 Process Planning <sup>1</sup>	3	3 - 0
623-196 Standards & Regulations	1	self-paced
625-101 Foundations of Quality <sup>2</sup>	3	3 - 0
<b>OR</b>		
623-166 Industry & Quality Control <sup>2</sup>	3	self paced
625-102 Human Elements of Quality	3	3 - 0

## Technical Support Courses

804-151	Technical Mathematics I	5	5 - 0
806-151	Technical Science I	3	2 - 2
806-152	Technical Science II	3	2 - 2

## General Education Courses

801-195	Written Communications	3	3 - 0
801-196	Oral/Interpersonal Communications	3	3 - 0
809-195	Economics	3	3 - 0
809-197	Contemporary American Society	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
	Electives <sup>3</sup>	6	

## TOTAL CREDITS

65

Evening core courses and technical support courses are offered on a rotational basis. General Education courses are offered more frequently. Students are therefore advised to take core and technical support courses whenever possible, to avoid delays in completing your degree. Several core courses are offered continuously in a self-paced format, and additional self-paced courses will be added in the future. Inquire for details and availability of these courses.

<sup>1</sup>Course 623-121, or a demonstrated knowledge of drawings and dimensioning, is a prerequisite for courses 606-101 and 623-192.

<sup>2</sup>Self-paced course 623-166 Industry & Quality Control is an acceptable substitute for 625-101 Foundations of Quality.

<sup>3</sup>Electives may be selected from any associate degree program with the approval of the student's program advisor.

## Course Descriptions

### 154-103 Basic Computer Concepts

3 Credits

This course is designed as a first course in microcomputers, the main purpose being to provide the student with the ability to use a microcomputer and typical applications packages such as word processing, graphics, spread sheet and data base in an integrated environment. No prior knowledge of computers or applications is necessary or expected. A secondary purpose is to provide the foundation skills in computers necessary for subsequent courses that expand the students computer skills into other application areas or use the computer in career-oriented courses. Other topics of the course include: basic computer concepts of hardware and software, introduction to graphics and elementary microcomputer operating systems.

### 196-191 Supervision

3 Credits

Designed to help participants build the skills required to effectively direct the work of others within the structure of an organization. Emphasis is placed on the human behavioral aspect of supervision. Focus is on application of the managerial process to the daily job of a supervisor.

### 422-100 Metallurgy

3 Credits

This course examines the nature, properties, and processing of metals. Subjects presented include history, occurrence, recovery from ores, manufacture, structure, heat treatment, theory of alloys, and basics of materials science. Steels, cast iron, and common non-ferrous metals receive the major emphasis.

## 606-101 Intro. to Computer Aided Drafting (CAD) 3 Credits

This is an introductory course intended to familiarize the student with technical drawing and the basic operation of a CAD system through directed practice. Beginning with simple objects, drawings of increasing complexity will be assigned so the student gradually progresses from basic figures to the more advanced features and commands. Class sessions will combine lecture, group exercises, individual practice, and instructor assistance as required.

**Prerequisite:** 623-121 or equivalent knowledge with permission of the instructor. Students with prior CAD experience may apply for advanced status or test-out.

## 623-121 Engineering Drawings & Measurements 3 Credits Self Paced Format Only

This 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 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.)**

## 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.

## 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, adhesives, 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, fabrication, welding, forging, etc., as they relate to efficient production practices. **(Also available in self-paced format).**

## 623-165 Plant Layout & Materials Handling 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. **(This course 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. **The content is similar to Course 625-101 Fundamentals of Quality and 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. The student also selects the type of tooling and equipment needed in terms of materials, quantity, tolerances, and surface quality requirements.

## 623-196 Standards & Regulations 1 Credit

This 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 self-paced 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 Descriptions on Pages 38-41.

• 801-195 Written Communications	3 Credits
• 801-196 Oral/Interpersonal Communications	3 Credits
• 804-151 Technical Mathematics I	5 Credits
• 806-151 Technical Science I	3 Credits
• 806-152 Technical Science II	3 Credits
• 809-195 Economics	3 Credits
• 809-197 Contemporary American Society	3 Credits
• 809-198 Introduction to Psychology	3 Credits

The Industrial Mechanic Program has been designed to give knowledge and the multi-craft skills needed to maintain complex and integrated manufacturing systems. This program seeks to provide a broad base of skills that are suitable for initial or upgrade training. Blackhawk Technical College's faculty brings real-world experience to the classroom. The major training areas will be: machining, electricity and hydraulics. Supporting disciplines are: blue print reading, welding, rigging, refrigeration fundamentals, and drives and linkages. Classes combine lecture and laboratory experience to provide the maximum amount of information and practical exposure. Safety policies and procedures will be taught and strictly adhered to.

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 601-120 (Refrigeration Fundamentals), students will be eligible to take the EPA refrigerant handling 608 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.

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.

### Potential Employment Opportunities

Industrial or Maintenance Mechanic, Machine Adjuster  
Machine Assembler, Machine Erector, Machine Repairer

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
421-390	Blueprint Reading - Maintenance	2	4 - 0
462-300	Electricity for Industrial Maintenance	3	6 - 0
462-305	Maintenance Welding	2	4 - 0
462-310	CNC Machining for Industrial Maint.	3	6 - 0
623-175	Manufacturing Processes	2	2 - 0
804-105	General Mathematics	3	3 - 0
<b>Semester 2</b>			
462-315	Industrial Maintenance Hydraulics	3	6 - 0
462-320	Adv. Manufacturing - Drives & Linkages	3	6 - 0
462-325	Machine Rigging	1	2 - 0
462-330	Motors and Controls	2	4 - 0
601-120	Refrigeration Fundamentals	3	4 - 0
801-196	Oral/Interpersonal Communication	3	3 - 0
<b>TOTAL CREDITS</b>		<b>30</b>	

### Course Descriptions

#### 421-390 Reading - Maintenance 2 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 CNC Machining for Industrial Maint. 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 Adv. 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 end play. 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

**1 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 weights, center of gravity and mechanical advantage are also covered.

## 462-330 Motors and Controls

**2 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.

## 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 a technician would use on the job. This course is a combination lecture/lab using actual HVAC/R equipment. Computer simulators will be introduced as teaching aids. On the job and lab safety will be emphasized.

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blackhawk.edu**



## 623-175 Manufacturing Processes

**2 Credits**

This is an individualized/independent study course that presents a comprehensive overview of the fundamental process families. This course is intended to cover seven learning plans of instruction which include manufacturing operations, forming, classification of tools, material removal, speeds and feeds, joining and routing.

## 801-196 Oral/Interpersonal Communications

**3 Credits**

This survey course explores effective interpersonal, small group, and public communication skills. Students gain practical experience by exploring a variety of topics that may include: understanding communication, interpersonal relationships, listening, nonverbal communication, obstacles to communication, interviewing, small group problem-solving and leadership, and informative and persuasive public speaking.

## 804-105 General Mathematics

**3 Credits**

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, 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 as an elective to review these topics. It serves as the foundation for additional study of mathematics.



Attractively designed, healthy, and well-maintained lawns, gardens, trees, and shrubbery create a positive first impression, establish a peaceful mood and increase property values. A growing number of individuals and organizations rely on Landscape and Turf professionals to create and care for these landscapes. Landscape and Turf professionals often work on large construction projects, such as office buildings and shopping malls. Following the plans drawn up by the Landscape Architect, these professionals plant trees, hedges, and flowering plants, and apply mulch for protection. For residential customers, landscapers terrace hillsides, build retaining walls, and install patios and small ponds, as well as plant flowers, trees, and shrubs. Other landscape professionals work primarily with athletic fields and golf courses to establish and maintain healthy turf.



Landscape and Turf Services is designed to provide job skills for the landscape worker, park employee, nursery person, garden center employee, turf worker, greens keeper, and the horticultural machine maintenance mechanic. The program is offered on a part-time evening and Saturday basis. Workers already employed, as well as those just beginning in the field, may take advantage of the flexible programming.

The program will help the student identify and propagate plants; control plant diseases, weeds, and pests; prepare and improve soils; apply techniques of landscape design; establish and maintain planned landscapes; maintain and improve lawn and turf grasses; operate and maintain horticulture equipment, and identify proper business management practices.

The courses include lecture, demonstration, discussion, and hands-on working experience offered in three-hour sessions, one evening per week and one Saturday morning session.

Mandatory courses cover basic horticultural concepts while elective courses have been developed to fit the diversity of job opportunities in the horticulture industry.

### Career Outlook

The increasing demand for landscaping services points to plentiful job openings in this occupation.

### Potential Employment Opportunities

Landscape Worker, Nursery Worker, Greens keeper, Garden Center Worker, Forester, Horticulture Machine Maintenance Worker, Turf Worker, Arborist.

	Course Name	Credits	Lec-Lab
<b>Required Courses</b>			
001-301	Diseases, Weeds, & Pests	1	1 - 1
001-302	Landscape Design I	1	1 - 1
001-303	Horticultural Pest Control	1	1 - 1
001-304	Outdoor Power Equipment Operation & Maintenance	1	1 - 1
001-305	Soils & Fertilizers	1	1 - 1
001-307	Landscape Construction	1	1 - 1

### Required Courses (cont.)

001-308	Turf & Lawn Grasses	1	1 - 1
001-309	Landscape Design II	1	1 - 1
001-317	Landscape Plants (Annuals & Perennials)	1	1 - 1
001-318	Landscape Plants-(Trees & Shrubs)	1	1 - 1

### Additional Courses (4 credits required):

001-306	Arboriculture and Grounds Maintenance	1	1 - 1
001-310	Business Operations	1	1 - 1
001-313	Athletic Field & Golf Course Maintenance	1	1 - 1
001-321	Landscape Design III-Advanced	1	1 - 1
001-322	Independent Study	1	0 - 2
001-323	Orchard and Fruit Culture	1	1 - 1
001-324	Plant Propagation and Management	1	1 - 1
001-325	Interior Plantscapes	1	1 - 1

**Fourteen credits required for graduation. Short-term certificate options are available. Classes available for audit upon request.**

### Course Descriptions

#### 001-301 Diseases, Weeds and Pests 1 Credit

Control of diseases, weeds and pests specific to Wisconsin Landscape Plants. Identification and correct diagnosis is emphasized while examining various landscape settings.

#### 001-302 Landscape Design I 1 Credit

The learner develops basic landscape plans with an emphasis on function, design principles, and composition.

**Prerequisite: 001-318**

#### 001-303 Horticultural Pest Control 1 Credit

The study of various types of pesticides, their use, 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 Outdoor Power Equipment Operation and Maintenance 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.

#### 001-305 Soils and Fertilizers 1 Credit

This class emphasizes soil identification, evaluation, and factors affecting plant growth. Learners will calculate fertilizer rates and employ proper application methods. They will also explore composts and other amendments as they relate to soil preparation.

#### 001-306 Arboriculture and Grounds Maintenance 1 Credit

Care of flowers, lawns, shrubs, trees, and woodlots are covered in this class. Emphasis will also be placed on watering, transplanting, pruning, cutting and chemical applications.

#### 001-307 Landscape Construction 1 Credit

A hands-on course covering establishment of proper slope and plantings according to a landscape design plan. Installation of retaining walls, walkways, and other hardscapes are also covered.

## 001-308 Turf and Lawn Grasses

1 Credit

This class covers the establishment and maintenance of various kinds of turf grasses according to planned use. Special emphasis is on problems associated with home lawns and golf courses, along with other high-use areas.

## 001-309 Landscape Design II

1 Credit

Continuation of Landscape Design I, students will continue their plans started in the Landscape Design I class. New principles of composition and design will be studied including sections, elevations, and simple perspectives.

*Prerequisite: 001-302*

## 001-310 Business Operations

1 Credit

This class provides the learner with entry level skills for operating a business in the horticulture industry. Students create basic financial, marketing and business plans.

## 001-313 Athletic Field & Golf Course Maintenance

1 Credit

This course emphasizes solutions to problems unique to athletic fields and golf course operations. This includes maintenance of plants and associated equipment.

## 001-317 Landscape Plants (Annuals and Perennials)

1 Credit

Identification of various annuals and perennials and their appropriate uses for Wisconsin landscapes is covered in this class. Cultural practices necessary to maximize their value to the landscape are studied.

## 001-318 Landscape Plants, (Trees and Shrubs)

1 Credit

Learners select trees and shrubs appropriate for various landscape schemes in Wisconsin based on physical characteristics, cultural needs, and customer preference.



## 001-321 Landscape Design III-Advanced

1 Credit

Students complete landscape design projects and have them evaluated for practicality and maintainability. Some design projects may be constructed by landscape students.

*Prerequisite: 001-309*

## 001-322 Independent Study

1 Credit

Students have an opportunity to propose a special project to instructional staff for the purpose of studying a special problem associated with the Landscape and Turf service industry. The student will receive direction from the staff on the project.

## 001-323 Orchard and Fruit Culture

1 Credit

Identify recommended cultivars of apples, small fruit, and related species along with planting, management, and harvesting. Both home orchard and commercial fruit culture will be included.

## 001-324 Plant Propagation and Management

1 Credit

Starting and growing plants from seeds, cuttings, divisions, layering and grafting are covered in this course. Information on growing structures, environmental controls, and cultural practices are explored along with marketing and merchandising.

## 001-325 Interior Landscapes

1 Credit

Utilizing landscape principles within interior design techniques, identifying and caring for house plants from violets to weeping figs, use of plants to decorate living spaces from apartments to malls is covered in this class.



The Legal Secretary 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 skilled employees who have some substantive and procedural knowledge of the law. Legal Secretary 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.

### Potential Employment Opportunities

Legal Secretary, Legal Assistant, Deputy Court Clerk, Judicial Assistant, Clerk-Typist, Assistant Office Manager, Receptionist, Correspondence Clerk, Word Processing Operator, Potential advancement to Professional Legal Secretary (PLS), Legal Assistant, Paralegal, Office Manager, and Office Administrator.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
102-160	Business Law	3	3 - 0
106-126	Records Management	3	3 - 0
106-149	Legal Secretary Orientation	1	1 - 0
801-132	Secretarial Communications	3	2 - 2
804-106	Introduction to College Mathematics	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
	<b>Electives:</b>		
106-140	Keyboarding	1	0 - 2
106-143	Typing/Keyboard Skillbuilding	1	
106-131	Keyboarding Applications*	3	1 - 4
<b>Semester 2</b>			
101-102	Office Accounting	3	2 - 2
105-140	Legal Terminology and Court Structure	3	3 - 0
106-133	Document Formatting*	3	1 - 4
106-145	Information Technology Essentials*	3	2 - 2
801-195	Written Communications	3	3 - 0
809-196	Introduction to Sociology	3	3 - 0
<b>Semester 3</b>			
106-110	Pre-transcription for Secretaries*	3	1 - 4
106-141	Legal Document Processing*	3	1 - 4
106-146	Word Processing Applications*	3	1 - 4
106-152	Techniques of Legal Practice I*	3	1 - 4
801-196	Oral/Interpersonal Communications	3	3 - 0
<b>Semester 4</b>			
106-132	Legal Document Transcription*	3	1 - 4
106-134	Legal Documentation*	2	2 - 0
106-151	Legal Office Management*	3	3 - 0
106-154	Techniques of Legal Practice II*	3	3 - 0
809-195	Economics	3	3 - 0
	<b>Elective(s)</b>	3	varies
106-163	Internship		
106-106	Notetaking		
106-163	Legal Secretary Internship		

**TOTAL CREDITS** **69**

\*Course has prerequisite.

## Course Descriptions

### 101-102 Office Accounting 3 Credits

A basic course in accounting principles and bookkeeping procedures. Topics include journalizing and posting transactions, preparing the worksheet, adjusting and closing entries, and preparing the financial statements. Emphasis is on the service enterprise and accounting for cash. Labs will introduce the use of the microcomputer in accounting.

### 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.

### 105-140 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. A "C-" in this course is required for graduation.

### 106-110 Pretranscription for Secretaries 3 Credits

This course is a review of business English, including grammar, spelling, capitalization, number usage, and punctuation. In learning to use transcription equipment, students develop listening, keyboarding and proofreading skills, while building their legal vocabulary. Students also compose and proofread letters and memos at their computers. This course introduces Wisconsin civil procedure, real estate documentation, and divorce procedures as well. A "C-" is required in this course for enrollment in Legal Document Transcription.

**Prerequisite:** 105-140 Legal Terminology and Court Structure, 801-195 Written Communications or 801-132 Secretarial Communications with a grade of "C-" or better.

### 106-126 Records Management 3 Credits

Records Management is 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; organizing, managing, and controlling the records management system; potential careers; and trends and technology. A simulation will provide hands-on experience with major filing classification systems in both paper and computer database format using the Association of Record Managers and Administrators (ARMA) rules.

### 106-132 Legal Document Transcription 3 Credits

Instruction is given on the use of transcribing machines with emphasis on the production of legal correspondence and documents on the computer. The goal in this class is the production of mailable documents and correspondence with periodic timed exercises to check progress in production. There is added emphasis on the improvement of English, proofreading, and listening skills. Student will continue to learn how to read, understand, and keyboard legal documents. He/She will acquire experience by typing and transcribing a variety of lawyer-prepared correspondence and documents, printed forms, and court papers. The student will prepare the documents as well as apply information given in a variety of scenarios to "test" the prepared documents. The majority of the documents will be completed using WordPerfect.

**Prerequisite:** 106-141 Legal Document Processing with touch keyboarding skill of 50 wpm for 5 minutes with 5 or fewer uncorrected errors, 106-110 Pretranscription for Secretaries. (both with a grade of "C-" or better)

**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 proofreading techniques to produce mailable copy. Team projects involve the students in simulated office projects utilizing document production techniques, decision-making abilities, and interpersonal skills.  
**Prerequisites:** 106-131 *Keyboarding Applications with a grade of "C-" or better (or equivalent skills); format basic letters, memos, reports, and tables; and touch keyboarding skill of 40 wpm for 5 minutes with 5 or fewer uncorrected errors.*

**106-134 Legal Documentation** **2 Credits**  
This course teaches students how to find and cite federal and state cases, statutes, regulations, legislative history, treatises, law reviews, and other legal sources when they prepare legal correspondence, memoranda, and briefs. Students conduct book-based and computerized legal research and compose simple legal memoranda and other legal documents.  
**Prerequisite:** 106-131 *Keyboarding Applications or minimum keyboarding rate of 35 wpm.*

**106-141 Legal Document Processing** **3 Credits**  
Students will learn how to read, understand, and keyboard legal documents. They will acquire experience in formatting and creating a variety of documents, printed forms, and court papers. Proofreading habits will be refined. A notebook will be required to develop organizational skills. A word processing program will be used in this class.  
**Prerequisite:** 106-133 *Document Formatting with a minimum grade of "C-" or demonstrated equivalent and touch keyboarding skill of 50 wpm for 5 minutes with 5 or fewer uncorrected errors, and 105-140 Legal Terminology and Court Structure.*

**106-145 Information Technology Essentials** **3 Credits**  
This course provides an introduction to computers and information processing, terminology, hardware, software, networks, and buying a computer. Major topics include effective use of a web browser, Microsoft Outlook 2000, and Windows 2000 operating system.

**106-146 Word Processing Applications** **3 Credits**  
This course involves learning word processing theories and functions and applying them to create, edit, enhance, and print a wide variety of business documents. In this 90-hour course students master a popular word processing software package used in area businesses.  
**Prerequisites:** 106-145 *Information Technology Essentials (for Legal and Administrative Assistant program students only) and touch keyboarding skill of 40 wpm for 5 minutes with 5 or fewer uncorrected errors (for all students).*

**106-149 Legal Secretary Orientation** **1 Credit**  
This course is *required* for the first semester students to provide the student a program overview, including expectations and graduation requirements. In addition, the student will be provided information regarding student resources, advisors, job placement, and study skills.

**106-151 Legal Office Management** **3 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; a mock interview will be required.  
**Prerequisites:** 105-140 *Legal Terminology & Court Structure and 106-152 Techniques of Legal Practice I.*

**106-152 Techniques of Legal Practice 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 are civil litigation, real estate, and divorce. Other topics covered include ethics, client interviews and interview forms, telephone techniques, and court structure.  
**Prerequisite:** 106-133 *Document Formatting with a minimum grade of "C-" and demonstrated equivalent skill of 50 WPM; 105-140 Legal Terminology and Court Structure.*

**106-154 Techniques of Legal Practice** **3 Credits**  
This is an advanced legal procedures course intended to provide in-depth training related to the techniques and procedures used in several fields of law, including business organizations, estate planning, probate, bankruptcy, and criminal defense. In addition to learning procedural information and preparing documents, students conduct legal research and study aspects of professionalism and legal ethics. Students who complete the course should be prepared to perform entry-level jobs in law firms and other law-related organizations. As students accept increasing responsibilities in the course, they often develop an interest in paralegal-type work.  
**Prerequisite:** 106-152 *Techniques of Legal Practice I with a grade of "C-" or better.*

**106-163 Legal Secretary Internship** **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:** *Completion of formal instruction in all courses of the first three (3) semesters or a minimum total of 48 credits of the Legal Secretary Program; a minimum of a "C-" average in all "core" courses in the program.*

**General Education Course Descriptions on Pages 38-41.**

- 801-132 Secretarial Communications 3 Credits
- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-106 Introduction to College Math 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits

Marketing is the driving force behind business and covers a range of business activities and career choices.



There are the highly visible jobs in sales, advertising, and customer service. These jobs can pay well and are both challenging and rewarding.

“Behind the scenes” Marketing jobs involving managing departments territories, small businesses, or a marketing function within corporate profit centers. In these positions, Marketing graduates are responsible and accountable for resources involving dollars, inventories and employees.

Because of the diversity of career opportunities within the broad field of marketing, students are exposed to business-to-business marketing and business-to-consumer marketing.

The Marketing program prepares students for these kinds of jobs and for other career advancements. This is accomplished by providing students with two kinds of job skills: (A) those which deal with problem-solving and decision-making, interpersonal relations, communications, and leadership skills that apply in a broad range of supervisory and management positions (B) those skills which apply to the specific functions that will be expected to be performed upon job entry.

### Potential Employment Opportunities

While there are over 300 job titles in manufacturing, wholesaling and retailing in fields ranging from sports marketing to fashion merchandising to hospitality marketing, the following are typical job descriptions: account executives, sales representatives, customer service managers, retail managers, merchandisers, buyers, marketing coordinators, sales supervisors, marketing directors, advertising and project coordinators and entrepreneurship.

The marketing program also serves as a foundation for licensing in investment counseling, stock brokerage, and real estate sales.

### Marketing Certificate

A Marketing Certificate is awarded by completing the following courses:

- 104-102 Marketing Principles
- 104-104 Selling Principles
- 104-117 Promotion Principles
- 104-160 Marketing Research

These credits apply to an Associate Degree in marketing. Completion of this certificate may enhance employability options for any graduates of any BTC program.

### Promotion Certificate

To be awarded a Promotion Certificate, the following courses need to be completed:

- 104-102 Marketing Principles
- 104-117 Promotion Principles
- 104-125 Marketing Media
- 104-144 Graphic Applications in Marketing

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
104-102	Marketing Principles <sup>2</sup>	3	3 - 0
104-104	Selling Principles <sup>2</sup>	3	3 - 0
104-149	Marketing Orientation	1	1 - 0
105-135	Professional Profiles	3	3 - 0
154-103	Basic Computer Concepts	3	3 - 0
801-195	Written Communications	3	3 - 0
<b>Semester 2</b>			
104-113	Marketing Career Strategies	1	0 - 2
104-144	Graphic Applications in Marketing <sup>1</sup>	3	1 - 4
104-190	Retail Principles	3	3 - 0
104-193	Supervision <sup>1</sup>	3	3 - 0
801-196	Oral/Interpersonal Communications	3	3 - 0
804-117	Business Math	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
<b>Semester 3</b>			
104-117	Promotion Principles <sup>1&amp;2</sup>	3	3 - 0
104-125	Marketing Media	3	3 - 0
104-154	Marketing Internship <sup>1</sup>	2	0 - 8
104-160	Marketing Research <sup>1&amp;2</sup>	3	3 - 0
809-195	Economics	3	3 - 0
	<b>Elective</b> (e.g., Merchandise Management)	3	3 - 0
<b>Semester 4</b>			
104-111	Computer Applications in Marketing <sup>1</sup>	3	2 - 2
104-118	Design Concepts <sup>1</sup>	2	1 - 2
104-140	E-Commerce <sup>1</sup>	3	3 - 0
104-146	Marketing Management <sup>1</sup>	3	3 - 0
809-196	Introduction To Sociology	3	3 - 0
	<b>Elective</b> (e.g., International Marketing)	3	3 - 0

### TOTAL CREDITS

**69**

<sup>1</sup>Course has a prerequisite.

<sup>2</sup>Core course: A “C-” or higher grade is required for graduation.

*Proficiency in keyboarding is required for the Basic Computer Concepts course. You may test out or enroll in a Keyboarding course concurrently with Basic Computer Concepts.*

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## Course Descriptions

- 104-102 Marketing Principles** **3 Credits**  
Basic marketing concepts and terminology for Marketing and non Marketing students. In addition to developing the rationale for a marketing approach to strategic planning, specific topics include: Target Market Selection, and issues related to Product, Price Distribution and Promotion decisions.
- 104-104 Selling Principles** **3 Credits**  
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 learn and practice the professional principles involved in relationship selling.
- 104-111 Computer Applications in Marketing** **3 Credits**  
This course develops fundamental skills in the use and integration of word processing, spreadsheets, graphics, and database software for business data analysis and related marketing applications. PC and Macintosh software will be used.  
*Prerequisite: Basic Computer Concepts*
- 104-113 Marketing Career Strategies** **1 Credit**  
Traditional and alternative job-finding 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.
- 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 promotions.  
*Prerequisite: Marketing Principles*
- 104-118 Design Concepts** **2 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.  
*Prerequisite: 104-144 Graphic Applications in Marketing or consent of instructor.*
- 104-125 Marketing Media** **3 Credits**  
This course provides a broad overview of the major elements of advertising 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 of thinking.

## 104-140 E-Commerce **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: 154-103 Basic Computer Concepts.*

## 104-144 Graphic Applications in Marketing **3 Credits**

In this 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. Students will learn to use sophisticated 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. Students are also exposed to evolving technologies in interconnectivity and distance televideo communications.

*Prerequisite: Basic Computer Concepts or Consent of Instructor.*

## 104-146 Marketing Management **3 Credits**

This course enables the student to learn how to manage a profitable enterprise and to make decisions based on compiled data. 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 result is a decision that will stand the test of inquiry. The course helps the learner make not only informed decisions, but also build a rationale to defend it.

*Prerequisite: 104-160 Marketing Research*

## 104-149 Marketing Orientation **1 Credit**

Students receive information to improve their likelihood of success in pursuing both their academic studies and their chosen careers. The course covers academic expectations of students in the Marketing Department and the institutional resources available to help meet individual needs and achieve objectives.



**104-154 Marketing Internship 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 internship involves marketing-related, mid-management or specialist employment based on the student's marketing career goals. The internship provides the student with an opportunity to apply and strengthen concepts and skills learned in the classroom and provides an opportunity to learn operational skills not taught in the classroom.

**Prerequisite:** Minimum of 30 credits toward degree in marketing.

**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 introduced students to the various methods of collecting secondary data. Concepts will be reinforced through group projects.

**Prerequisite:** Marketing Principles or Consent of Instructor.

**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.

**104-192 Merchandise Management 3 Credits**

This course enables the student to learn how to manage a profitable retail enterprise. Elements of planning and control are covered for a retail enterprise. Students will analyze sales and gross margin performance as well as their relationship to markup, markdowns, stock turns, cost of goods sold, and open-to-buy. Basic theories of merchandising are covered and applied to the current retail environment.

**Prerequisite:** 804-117 Business Math.

**104-193 Supervision 3 Credits**

Through experiential and cognitive exercises and processes, learners will model the qualities of effective leaders and practice their role in creating conditions that empower members of the marketing organization. They will develop skills in motivating, managing, and taking charge of projects and working with people. Learners will apply continuous improvement strategies and leadership skills while functioning as members of a functional team.

**Prerequisite:** Professional Profiles or consent of instructor.

**105-135 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.

**154-103 Basic Computer Concepts 3 Credits**

This course is designed as a first course in microcomputers, the main purpose being to provide the student with the ability to use a microcomputer and typical applications packages such as word processing, graphics, spread sheet and data base in an integrated environment. No prior knowledge of computers or applications is necessary or expected. A secondary purpose is to provide the foundation skills in computers necessary for subsequent courses that expand the students computer skills into other application areas or use the computer in career-oriented courses. Other topics of the course include: basic computer concepts of hardware and software, introduction to graphics and elementary microcomputer operating systems.

**804-117 Business Math 2 Credits**

Topics covered have mathematical applications for Marketing students whose customers may be a business (middle channel of distribution) and/or the ultimate user. Review of basic calculations will aid in obtaining money for the company and calculating profitability. Product pricing includes calculating discounts, markups and markdowns. The control of inventory will assist in decision making. Product knowledge is included for the student to choose from four specialized career fields.

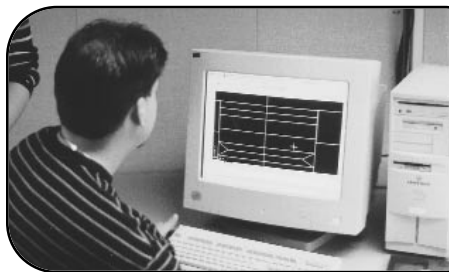
**Prerequisites:** Satisfactory preregistration assessment score on mathematics.

**General Education Course Descriptions on Pages 38-41.**

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-117 Business Math 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits



The 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, equipment testing, redesign of components, drawing preparation and development for fabrication and assembly of new or modified mechanical components of machinery.

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. He or she may also be called upon to apply knowledge of basic engineering principles to solve particular 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 associated with the field of mechanical engineering. Potential for advancement beyond entry level employment is limited only by the ability and efforts of the individual.

## Potential Employment Opportunities

Well-qualified Mechanical Design Technicians should experience good employment opportunities through the year 2005. 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. Typical salary range in the state of Wisconsin ranges from \$28,000 to \$38,000 a year.

## Job titles include

Mechanical Design Technician, Mechanical Draftsperson, Industrial Engineering Assistant, Mechanical Design Technician/Supervisor, Tool & Die Designer, Tool Designer/Engineer, Technical Illustrator, and Engineering/Manufacturing Liaison.

## Course Name

Credits Lec-Lab

### Semester 1

606-123	Drafting Orientation	2	1 - 2
606-124	Orthographic Projection	3	2 - 2
623-160	Manufacturing Materials and Processes	3	3 - 0
801-196	Oral/Interpersonal Communications	3	3 - 0
804-151	Technical Mathematics I	5	5 - 0
809-198	Introduction to Psychology	3	3 - 0

### Semester 2

606-125	Drafting Representations	2	1 - 2
606-126	Fasteners and Processes	3	2 - 2
606-127	2-Dimensional CAD	3	2 - 2
606-120	Strength of Materials	3	3 - 0
804-152	Technical Mathematics II	4	4 - 0
806-151	Technical Science I	3	2 - 2

### Semester 3

606-128	3-Dimensional CAD	3	2 - 2
606-129	Kinematics	3	2 - 2
606-130	Actuators	3	2 - 2
809-197	Contemporary American Society	3	3 - 0
	<b>*Elective</b>	3	

### Semester 4

420-109	Basic Machining	2	1 - 2
606-131	Geometric Dimensioning and Tolerancing	2	1 - 2
606-132	Design Applications	2	1 - 2
801-195	Written Communications	3	3 - 0
809-195	Economics	3	3 - 0
	<b>*Elective</b>	3	

## TOTAL CREDITS

67

\*Electives may be selected from any associate degree program with the approval of student program advisor.

## Course Descriptions

### 420-109 Basic Machining

2 Credits

The basic machining course affords the student the opportunity of hands-on work in a machine shop much the same as they may encounter in the industrial world. This course is invaluable in introducing "order of operations" as well as the "cost of machining" that they will need to evaluate when designing a mechanical component.

### 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 Drafting Orientation

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 Two 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.

**Prerequisite:** 606-124 - Orthographic Projection

**606-128 Three 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.

**Prerequisite:** 606-127 - Two Dimensional CAD

**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 Descriptions on Pages 38-41.**

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-151 Technical Mathematics I 5 Credits
- 804-152 Technical Mathematics II 4 Credits
- 806-151 Technical Science I 3 Credits
- 809-195 Economics 3 Credits
- 809-197 Contemporary American Society 3 Credits
- 809-198 Introduction to Psychology 3 Credits



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This program provides educational opportunities for those interested in working as a Medical Administrative Specialist in single- or multi-physician practices or large health care and allied health organizations



such as clinics, hospitals, foundations, insurance companies, medical publishers, research organizations, medical product manufacturers, or wherever knowledge of medical terminology and professional procedures and ethics is required. In addition to administrative secretarial training, Medical Administrative Specialist students receive specialized training in medical ethics, medical terminology, anatomy, health insurance, medical billing, medical transcription, coding and office suite software.

The Medical Administrative Specialist associate degree program offers students a choice of taking courses with a transcription or a coding emphasis. These two tracks begin in the second year of the program. Students may want to consider taking classes from both areas as their elective credits.

Students must have a total of 65 credits from the sequence of courses listed. Program facilitators will help student plan their course study in the time frame that works best for them individually—be it as a full-time or a part-time student.

## One-Year Certificate Option

Students may elect to receive a Medical Office Specialist Certificate upon satisfactory completion of the first year of this Associate Degree program. Students who choose this option may return to Blackhawk Technical College at a later date (in accordance with the College's advance standing policy) to complete the Medical Administrative Specialist Associate Degree.

## Potential Employment Opportunities

Medical Transcriptionist, Medical Administrative Specialist, Administrative Secretary, Medical Records Technician, Medical Records Clerk, Medical Voucher Clerk, Receptionist, Underwriting Clerk, Medical Clerk/Typist, Clinic Clerk, Hospital Clerk, Admissions Clerk, and Entry-Level Coder.

## Course Name

## Credits Lec-Lab

### Semester 1

106-101	Medical Secretary Orientation	1	1 - 0
106-113	Health Care Insurance	2	1 - 2
106-114	Health Care Records Management	3	2 - 2
106-131	Keyboarding Applications*	3	1 - 4
106-115	Health Care Office Ethical/Legal Issues	2	2 - 0
801-195	Written Communications	3	3 - 0

### Semester 2

106-107	Patient Billing *	3	2 - 2
106-127	Health Care Documentation*	3	1 - 4
106-128	Health Care Office Technologies*	3	1 - 4
510-117	Medical Terminology	3	3 - 0
801-196	Oral/Interpersonal Communications	3	3 - 0

### Semester 3

101-102	Office Accounting	3	2 - 2
106-103	Medical Transcription I* <b>OR</b>	4	1 - 6
106-135	<i>Introduction to Basic Coding* AND</i>	1	1 - 0
106-136	<i>Advanced Patient Billing*</i>	3	2 - 2
106-118	Pharmacology for Transcription/Coding	2	2 - 0
806-194	Survey of Anatomy & Physiology	3	2 - 2
809-198	Introduction to Psychology	3	3 - 0
<b>Elective(s)</b>		3	varies

### Semester 4

106-104	Medical Transcription II* <b>OR</b>	3	1 - 4
530-102	<i>CPT-4 Coding Introduction</i>	3	2 - 2
106-105	Radiology/Pathology Transcription* <b>OR</b>	3	1 - 4
530-103	<i>ICD-9 Coding Introduction</i>	3	2 - 2
106-109	Medical Office Administration*	3	2 - 2
809-195	Economics	3	3 - 0
809-196	Introduction to Sociology	3	3 - 0
<b>Elective(s)</b>		3	varies

## TOTAL CREDITS

65

\* Course has prerequisites.

Suggested Elective:

106-124 Medical Secretary Internship/Field Study\* 1 credit

## Course Descriptions

### 101-102 Office Accounting

3 Credits

A basic course in accounting principles and bookkeeping procedures. Topics include journalizing and posting transactions, preparing the worksheet, adjusting and closing entries, and preparing the financial statements. Emphasis is on the service enterprise and accounting for cash. Labs will introduce the use of the microcomputer in accounting.

### 106-101 Medical Secretary Orientation

1 Credit

This course is required for first semester students to provide the student a program overview, including expectations and graduation requirements. In addition, the student will be provided information regarding student resources, advisors, job placement, and study skills.

**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 will include a module on the use of speech recognition software.

**Prerequisites:** 106-131 *Keyboarding Applications* (or 106-133 *Document Formatting*) with a minimum grade of "C-" or demonstrated equivalent, touch keyboarding skill of 40 wpm for 5 minutes with 5 or fewer uncorrected errors, and 510-117 *Medical Terminology*.

**106-104 Medical Transcription II**
**3 Credits**

In this course, the student transcribes cardiology, pulmonary, gastroenterology, orthopedic, and psychiatric reports, correspondence, and patient progress notes from cassette-type transcribing machines using a word processing program. Format, grammar, spelling, and punctuation are reviewed.

**Prerequisites:** 106-103 *Medical Transcription I* with a minimum grade of "C-" or demonstrated equivalent, touch keyboarding skill of 45 wpm for 5 minutes with 5 or fewer uncorrected errors, and 806-194, *Survey of Anatomy & Physiology*

**106-105 Radiology/Pathology Transcription**
**3 Credits**

In this course, the student transcribes pathology, radiology, and foreign-accent dictated reports, correspondence, and patient progress notes from cassette-type transcribing machines using a word processing program. Format, grammar, spelling, and punctuation are reviewed.

**Prerequisites:** 106-104 *Medical Transcription II* with a minimum grade of "C-" or demonstrated equivalent and touch keyboarding skill of 45 wpm for 5 minutes with 5 or fewer uncorrected errors.

**106-107 Patient Billing**
**3 Credits**

This course emphasizes manual and computerized patient billing procedures in the medical office environment. The students will input patient information, charges, payments, and appointments. In addition, reports and medical insurance forms will be generated using a microcomputer-billing program. Students will review coding and linkage guidelines and develop skills in creating a "clean bill." A review of the collection process will be performed.

**Prerequisites:** 106-113 *Health Care Insurance* with a minimum grade of "C-" and touch keyboarding skill of 30 wpm for 3 minutes with 3 or fewer uncorrected errors.

**106-109 Medical Office Administration**
**3 Credits**

This course is designed to build upon professional skills and attitudes needed in the medical environment. Work independently and as part of a team is stressed. Course content relates directly to the medical field and includes applications in the areas of research projects; professional reading; planning and developing meetings, diversity and management. Units of instruction will also include career development, i.e., resumes, cover letters, and interview techniques.

**Prerequisite:** Touch keyboarding skill of 40 wpm for 5 minutes with 5 or fewer uncorrected errors. Student must be in last semester of program to enroll in this course.

**106-113 Health Care Insurance**
**2 Credits**

Students gain knowledge in insurance terminology, legal considerations, basic diagnostic and procedural coding and various types of medical insurance. The students will develop skills in information seeking and problem solving through exercises in coding and claims preparation and payment.

**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. A simulation will provide hands-on experience with major filing classification systems in both paper and computer database format.

**106-115 Health Care Office Ethical/Legal Issues**
**2 Credits**

Students are introduced to the legal side of the health care delivery system as it relates to health care office workers. It provides a foundation of law to be used as a guide against which individual behavior may be measured. Current ethical issues in the health field will also be covered.

**106-118 Pharmacology for Transcription/Coding**
**2 Credits**

This course will provide an introduction to the use of pharmacology terminology and context. 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.

**106-124 Medical Secretary Internship/Field Study**
**1 Credit**

In this course, students apply and interview for Medical Administrative Specialist internship placements. Once selected, the student will apply the knowledge and skills obtained in the classroom to a work environment.

**Prerequisites:** Completion of 48 credits with grades of "C-" or better in all core courses of the *Medical Administrative Specialist Program*.

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## 106-127 Health Care Documentation

3 Credits

Health Care Documentation will include a basic introduction to computers, e-mail, and 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.

**Prerequisites:** 106-131 *Keyboarding Applications with a minimum grade of "C-" or demonstrated equivalent, touch keyboarding skill of 40 wpm for 5 minutes with 5 or fewer uncorrected errors and 801-195 Written Communications with minimum grade of "C-."*

## 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, database, 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.

**Prerequisites:** 106-131 *Keyboarding Applications with a minimum grade of "C-" or demonstrated equivalent and touch keyboarding skill of 40 wpm for 5 minutes with 5 or fewer uncorrected errors.*

## 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 also be a focus as well as developing the basic concepts of word processing software. In order to receive credit for this course, the student must be a touch typist (no finger or key watching) and must strike keys with the proper fingers.

**Prerequisite:** *Touch keyboarding skill of 30 wpm for 3 minutes with 3 or fewer uncorrected errors.*

## 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. Extracting information from the medical record and applying proper procedures in locating codes will be emphasized and practiced.

**Prerequisites:** *A minimum grade of "C-" in both 106-113 Health Care Insurance and 106-107 Patient Billing.*

## 106-136 Advanced Patient Billing

3 Credits

This course will build upon skills learned in Patient Billing by utilizing the advanced features of electronic billing. Introduction and review of the collection processes will be presented. Further development of skills presented in Health Care Insurance will be enhanced with further training on pre-certification, coding, HIPAA, and release of information.

**Prerequisites:** *A minimum grade of "C-" in both 106-113 Health Care Insurance and 106-107 Patient Billing.*



## 510-117 Medical Terminology

3 Credits

A comprehensive study of medical vocabulary. The student learns the pronunciation, spelling, definition, and correct usage of medical terms used in a variety of health care settings.

## 530-102 CPT-4 Introduction

3 Credits

This course will focus on the CPT-4 book and an in-depth review of extracting medical information. It will include further review and practice in interpreting medical reports and using proper coding skills.

**Prerequisite:** 106-135 *Introduction to Basic Coding with minimum grade of "C-."*

## 530-103 ICD-9 Introduction

3 Credits

This course will focus on the ICD-9 book and an in-depth review of extracting medical information. It will include further review and practice in interpreting medical reports and using proper coding skills.

**Prerequisite:** 106-135 *Introduction to Basic Coding with minimum grade of "C-."*

## 806-194 Survey of Anatomy & Physiology

3 Credits

This course is designed to assist the Medical Administrative Specialist with the transcription of medical notes, information, and documented application of medical, surgical, and human anatomy terminology, and provide a basic understanding of human physiology.

**Prerequisite:** 510-117 *Medical Terminology.*

### General Education Course Descriptions on Pages 38-41.

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 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 four 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.

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.*

Blackhawk Technical College's Medical Assistant program is accredited by the Commission on Accreditation of Allied Health Programs (CAAHEP).

### Potential Employment Opportunities

Medical Assistant, Medical Laboratory Assistant, Medical Administrative Specialist, Medical Records/Transcriptionist, Office Clinic Receptionist, Medical Clerk.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
105-304	Patient Billing Systems	2	3 - 0
106-334	Medical Assistant Document Applications	3	2 - 3
509-303	The Human Body in Health & Disease I*	2	4 - 0
509-310	Medical Laboratory I*	2	2 - 2
509-311	Medical and Professional Skills I	2	2 - 2
509-312	Medical Insurance	1	2 - 0
509-340	Medical Law & Ethics*	1	2 - 0
510-117	Medical Terminology	3	3 - 0
801-311	Communications I*	2	3 - 0

Semester 2 courses are conducted during the first 14 weeks of the semester. The last 4 weeks of the semester focuses on 160 hours of externship participation.

### Semester 2

106-329	Medical Assistant Transcription	1	2 - 2
106-342	Medical Office Procedures*	3	5 - 0
509-321	Medical and Professional Skills II	3	7.5 - 2
509-327	The Human Body in Health & Disease II*	2	4 - 0
509-335	Medical Laboratory II*	2	2 - 2
801-312	Communications II*	2	3 - 0
809-198	Introduction to Psychology	3	3 - 0
509-329	Externship-Medical Assistant	1	
<i>(160 hours: the last 4 weeks of the second semester).</i>			

### TOTAL CREDITS

**35**

The standard for promotion in the Medical Assistant program requires a "C-" in all courses marked with an asterisk (\*). Satisfactory completion of all on-campus courses and a physical examination are required before externship.

**Note: A Caregiver Background Check is required.**

Students in the Medical Assistant program may wish to adjust their schedules for a lighter course load over 3 or 4 semesters. Students may also elect to talk to their counselors regarding taking associate degree courses that may substitute for the Technical Diploma courses. However, all students must complete their final year from August to May to include advanced course work AND externship.

## Course Descriptions

### 105-304 Patient Billing Systems

**2 Credits**

Students learn and practice practical patient billing procedures. A one-semester course with no accounting prerequisites, it provides Medical Assistant program students with the knowledge to complete office tasks requiring a knowledge of basic patient billing concepts, banking, credit, and collections. Students will enter transactions using a microcomputer-billing program, the pegboard system, and the double entry method. In addition, basic payroll computation and procedures will be studied.

**Prerequisite: Completion or concurrent enrollment in 106-334 Medical Assistant Document Applications or 106-140 Keyboarding or touch keyboarding skill of 25 wpm for 3 minutes with 5 or fewer uncorrected errors. Completion or concurrent enrollment in 509-312 Medical Insurance.**

### 106-329 Medical Assistant Transcription

**1 Credit**

This Medical Assistant program course provides the student with instruction on voice transcribing machines using medically-oriented materials. Medical reports are keyed from physician dictated tapes. The following skills are applied in this course: spelling, punctuation, capitalization, proofreading, hearing ability and knowledge gained in Human Body in Health and Disease, Medical Skills, Medical Lab, Medical Terminology, and Medical Assistant Document Applications.

**Prerequisite: 106-334 Medical Assistant Document Applications.**

## 106-334 Medical Assistant Document Applications 3 Credits

In this course, general typing techniques and procedures will be reviewed (keyboard, horizontal and vertical spacing, centering, tables, word division, proofreading, and correspondence parts and format). In addition, medical reports will be keyed and assembled. The students will learn the basics of a word processing program and will key all documents using this program.

**Prerequisite:** *Touch keyboarding skill of 25 wpm for 3 minutes with 5 or fewer uncorrected errors.*

## 106-342 Medical Office Procedures 3 Credits

A practical working knowledge of desirable office procedures is provided to students in the Medical Assistant Program. Units of instruction include filing, processing mail, public relations, office management, appointment scheduling, and telephone procedures.

**Prerequisite:** *Touch keyboarding skill of 25 wpm for 3 minutes with 5 or fewer uncorrected errors. Students must be in last semester of program.*

## 509-303 The Human Body in Health & Disease I 2 Credits

This course begins to acquaint the student with the necessary fundamental knowledge of human body structure and function in health and disease, enabling the student to relate with a reasonable amount of intelligence, understanding and practical proficiency in health occupations. Pharmacology related to systems disorders is included.

**The Human Body in Health and Disease II (509-327) completes this subject.**

## 509-310 Medical Laboratory I 2 Credits

This course is designed to familiarize the medical assistant student with the basic laboratory equipment and procedures. Principles are stressed along with the mechanics, giving the student an understanding to complement the technical skills developed. Major emphasis is on the basic hematology procedures.

**Medical Laboratory II (509-335) completes this subject.**

## 509-311 Medical and Professional Skills I 2 Credits

This course is designed to give the medical assistant student knowledge and practice in skills needed in a medical office. Included are the principles of asepsis, sterilization techniques, housekeeping and inventory methods, assisting with examinations, treatments, and drugs and pharmacology. A standard first-aid course is included. Lectures are correlated with laboratory practice.

**Medical and Professional Skills II (509-321) completes this subject.**

## 509-312 Medical Insurance 1 Credit

Students gain knowledge in insurance terminology, basic diagnostic and procedural coding and types of medical insurance. The student will develop skills in information seeking and problem solving through exercises in coding and claims preparation and payment.

## 509-321 Medical and Professional Skills II 3 Credits

This course continues to offer the student knowledge and practice in medical assisting skills required in an office. The principles of sterile techniques are studied and applied in assisting with minor surgical procedures. An electrocardiograph (ECG) technician's course and a cardiopulmonary resuscitation (CPR) course are included. Principles of assisting in specialized areas of medicine are studied as well as assisting with diagnostic and therapeutic procedures.

**Prerequisite:** *509-311.*

## 509-327 The Human Body in Health & Disease II 2 Credits

This course continues to acquaint the student with the necessary fundamentals of human body structure and function in health and disease. Divisions of study include units in food and oxygen distribution and waste removal, control and coordination of body functions, and continuation of the species. Specific body systems are clarified under these units and normal-abnormal conditions studied with pharmacology are included.

**Prerequisite:** *509-303.*

## 509-329 Externship - Medical Assistant 1 Credit

The Medical Assistant student will have practical experience in offices and clinics of qualified health care providers. During this experience the student participates in a balanced practicum in administrative and clinical work under the supervision and evaluation of qualified medical personnel and the general supervision and evaluation of the college staff.

**Prerequisite:** *Satisfactory completion of formal instruction in all required courses for the Medical Assistant program, as well as a current physical exam.*

## 509-335 Medical Laboratory II 2 Credits

This course continues to familiarize the medical assistant student with basic laboratory equipment and procedures. Emphasis continues in hematology as well as introducing areas of urinalysis, microbiology, and bacteriology. Phlebotomy skills are developed. Lectures are correlated with laboratory practice.

**Prerequisite:** *509-310.*

## 509-340 Medical Law & Ethics 1 Credit

This course is intended to introduce the legal side of the health care delivery system to students and provide a foundation of law to be used as a guide against which individual behavior may be measured. A study of medical ethics is also included.

## 510-117 Medical Terminology 3 Credits

A comprehensive study of medical vocabulary. The student learns the pronunciation, spelling, definition and correct usage of medical terms used in a variety of health care settings.

### General Education Course Descriptions on Pages 38-41.

- 801-311 Communications I 2 Credits
- 801-312 Communications II 2 Credits
- 809-198 Introduction to Psychology 3 Credits

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 1-800-669-1656.



The Associate Degree Nursing program consists of a minimum of four semesters and a summer session. Completion of the program may take longer depending upon the number of students waiting 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.

Applications for clinical classes are distributed in January for the following fall. Notify the program coordinator if you do not receive an application by January 15. Students may apply for testing for licensure as a L.P.N. (Licensed Practical Nurse) after successfully completing all courses through the summer semester. Students desiring to re-enter the program must appear before the Admissions and Promotion Committee and have their application approved by the entire faculty.

L.P.N.'s entering into the ADN program may receive credit for past clinical education based on their current knowledge, skills and judgment. Additional information on this transfer of credit is available from the Program Coordinator.

### Potential Employment Opportunities

Graduates may work as a Registered Nurse or Licensed Practical Nurse in a variety of settings including acute care, long term care, or some community settings.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
510-103	Foundations of Nursing	4	4 - 12
510-131	Nursing 1: Acute Care	4	4 - 12
806-195	Anatomy and Physiology I*	4	3 - 2
809-120	Developmental Psychology*	3	3 - 0
<b>Semester 2</b>			
510-132	Nursing 2: Well Family Care	4	4 - 12
510-133	Nursing 3: Common Problems Across the Lifespan	4	4 - 12
801-195	Written Communications*	3	3 - 0
806-196	Anatomy and Physiology II*	4	3 - 2
809-198	Introduction to Psychology*	3	3 - 0

### Summer Semester

510-134	Nursing 4: Introduction to Patient Management	3	5 - 11
801-196	Oral/Interpersonal Communications*	3	3 - 0

### Semester 3

510-135	Nursing 5: Oxygenation	4	2 - 16
510-136	Nursing 6: Mental Health	4	2 - 16
806-197	Microbiology*	4	3 - 2
809-196	Introduction to Sociology* OR	3	3 - 0
809-197	Contemporary American Society*	3	3 - 0

### Semester 4

510-137	Nursing 7: Metabolism & Growth	5	6 - 12
510-138	Nursing 8: Comprehensive	4	2 - 16
510-139	Nursing 9: Preceptorship Electives*	1 6	

**TOTAL CREDITS** **70**

<sup>1</sup> Nursing Assistant certification is required before entering clinical nursing classes.

\* 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, biology, and algebra with a grade of "C-" or higher  
**OR**  
successful completion of one semester of college chemistry, biology, and algebra with a grade of "C-" or higher
3. Completion of COMPASS Testing (with equivalent scores) or ACT with composite score of 18 or above.
4. Complete BTC application and pay \$30 application fee

#### B. Apply to enter clinical nursing classes:

1. Complete application to clinicals. Obtain and return to Service Occupations counselor
2. Acquire CPR Certification—Provider Course (yearly)
3. Obtain physical exam with immunization record within 3 months of admission.
4. Complete three-hour orientation session
5. Clear Caregiver Background Check
6. Obtain medical insurance coverage
7. Complete Release of Responsibility form
8. Copy of current Wisconsin Nursing Assistant Certification (CNA).

## Course Descriptions

### 510-103 Foundations of Nursing 4 Credits

This course is an introduction to the practice of nursing. Legal, ethical, and professional issues in nursing area are addressed. Skills are developed in assessment of the individual. Students utilize assessment skills in the classroom, Auto-Tutorial Lab (ATL), long-term care facilities (LTC) and in a community experience. The clinical setting is a long-term care facility. Students will perform an interview with an older person living independently in the community for the purpose of comparing/contrasting health status of older adults in the LTC with an older adult living independently.

**Prerequisites:** Admission to Clinical courses.

**Corequisites:** 806-195, 809-120

### 510-131 Nursing 1: Acute Care 4 Credits

Learning experiences focus on acquiring knowledge and in developing skills needed to use the nursing process in order to care for patients in selected settings with emphasis on geriatric and surgical clients.

**Prerequisites:** 510-103. **Corequisites:** 806-195, 809-120.

### 510-132 Nursing 2: Well Family Care 4 Credits

This course focuses on health promotion and maintenance across the life span. The clinical time is split between community sites where pediatric patients are seen, and in-patient Obstetric sites caring for families through the childbearing cycle. Principles of teaching and learning are applied in both clinical settings.

**Prerequisites:** 510-103, 510-131, 806-195, 809-120.

**Corequisites:** 806-196, 809-198, 801-195.

### 510-133 Nursing 3: Common Problems Across the Life Span 4 Credits

This course provides content in common concepts of illness and its effect on individuals throughout the life span. Concepts involving stages of illness, immunity, fluid balance, pain, sleep, cancer, cognitive/sensory impairment and skin disease are addressed. Students utilize the nursing process in the classroom and nursing lab as well as various clinical and community settings. Experiences focus on persons of all ages with an emphasis upon the elderly client.

**Prerequisites:** 510-103, 510-131, 806-195, 809-120. **Corequisites:** 806-196, 809-198, 801-195.

### 510-134 Nursing 4: Introduction to Patient Management 3 Credits

This course will focus on principles related to the care of the individual with orthopedic and neurologic conditions in acute and rehabilitation settings. The course will provide an opportunity for the student to organize and prioritize the administration of medications to a small group of patients. The small assembly sessions (SAS) will provide an opportunity for principles of group dynamics and leadership to be discussed, analyzed and applied.

**Prerequisites:** 510-103, 510-131, 510-132, 510-133, 806-195, 806-196, 809-120, 809-198, 801-195, 801-196,

### 510-135 Nursing Care 5: Oxygenation 4 Credits

This course focuses on applying the nursing process to individuals across the life span who are experiencing problems in oxygenation. The professional nursing practice of analysis, application, and evaluation are emphasized in the nursing process. Clinical experiences include community and acute care settings.

**Prerequisites:** 510-103, 510-131, 510-132, 510-133, 510-134, 806-195, 806-196, 801-196, 809-120, 809-198, 801-195. **Corequisites:** 806-197, 809-196.

### 510-136 Nursing Care 6: Mental Health 4 Credits

The Mental Health issues of clients throughout the life span are studied using holistic health concepts. Students apply the nursing process and observe patient services in a variety of settings.

**Prerequisites:** 510-103, 510-131, 510-132, 510-133, 510-134, 806-195, 806-196, 801-196, 809-120, 809-198, 801-195, **Corequisites:** 806-197, 809-196.

### 510-137 Nursing Care 7: Metabolism & Growth 5 Credits

Students apply the nursing process to clients who are experiencing threats to metabolism and growth, especially during the perioperative period. Special focus is given to nursing care required for patients whose surgical experience is complicated by common and recurring health problems and psychosocial needs. Planning, evaluation, and assessment are applied thoroughly to individual patients and groups of patients.

**Prerequisites:** 510-103, 510-131, 510-132, 510-133, 510-134, 510-135, 510-136, 806-195, 806-196, 801-196, 809-120, 809-198, 801-195, 806-197, 809-196.

### 510-138 Nursing Care 8: Comprehensive 4 Credits

This course emphasizes the transition from the student role to the staff nurse role. The student applies the nursing process in managing care for a group of residents in the Long-Term Care setting. Management and leadership principles, the planning process, and communication skills are reviewed. Delegation and supervision are emphasized along with legal implications. Observation of the home health nurse role and trends and issues of care related to infectious diseases are also included.

**Prerequisites:** 510-103, 510-131, 510-132, 510-133, 510-134, 510-135, 510-136, 510-137, 806-195, 806-196, 801-196, 809-120, 809-198, 801-195, 806-197, 809-196.

### 510-139 Nursing Care 9: Preceptorship 1 Credit

This course is a work experience with a practicing registered nurse in a role which can be fulfilled by an ADN.

**Prerequisite:** 510-138.

### General Education Course Descriptions on Pages 38-41.

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 806-195 Anatomy & Physiology I 4 Credits
- 806-196 Anatomy & Physiology II 4 Credits
- 806-197 Microbiology 4 Credits
- 809-120 Developmental Psychology 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-197 Contemporary American Society 3 Credits
- 809-198 Introduction to Psychology 3 Credits

Nursing Assistants are members of the health care team. They help care for patients under the supervision of a professional registered nurse in hospitals, nursing homes, and home health care.

Blackhawk Technical College has two Nursing Assistant programs.

### **SKILLED NURSING ASSISTANT 180-Hour Program (5 Credits)—510-300**

Some basic tasks and procedures performed by skilled nursing assistants are bed-making techniques, personal bedside care of the patient, measuring intake and output, caring for patients in isolation, taking temperature, pulse, respiration and blood pressures, serving and feeding patients, specimen collection, and pre-op and post-op patient care.

The program contains 90 hours of classroom instruction and laboratory experience and 90 hours of clinical experience working with patients under the supervision of the instructor.

A textbook, handout book and videos are used in theory. A laboratory room is used for practice. The written exams and return demonstrations will be used for evaluation.

*A complete physical examination is required.*

The curriculum will cover the following areas:

- Introduction to Being a Nursing Assistant
- Communication & the Patient (Client Rights)
- Human Anatomy & Physiology
- Infection Control
- Your Working Environment
- Lifting, Moving & Transporting Patients
- Personal Care of the Patient
- Nutrition & Food Service
- Intake & Output
- Specimen Collection
- Special Treatments
- Measuring & Recording Vital Signs
- Patient Admission
- Transfer & Discharge
- Body Position, Tubes & Tubing
- Warm & Cold Applications
- Pre-Operative & Post-Operative Care (Acute Illnesses)
- Extended Care (Chronic Illnesses and Dementias)
- Care of the Dying
- Introduction to Medical Terms
- Safety & Emergency Care
- The Geriatric Patient
- Rehabilitation



### **SKILLED NURSING ASSISTANT COMPLETION 90-Hour Program (2 Credits)—510-300**

This course is designed for a Nursing Assistant who is on the State of Wisconsin Nursing Assistant Directory, but has not had the theory or the clinical experience in Acute Care (Hospital clinicals). It is the last 90 hours of the 180 hour Skilled Nursing Assistant Course.

*Criminal Background Checks are required for anyone entering Health Occupations courses.*



Physical Therapist Assistants work under the supervision of a physical therapist. Their duties include assisting the physical therapist with treatment programs according to the plan of care, training patients in exercises and activities of daily living, conducting treatments, using special equipment, administering modalities and other treatment procedures, and reporting to the physical therapist on the patient's responses.



## Potential Employment Opportunities

Employment opportunities are located in hospitals, rehabilitation centers, outpatient clinics, sports medicine centers, skilled nursing and long term care facilities, schools, specialty units, home health agencies, and industrial health clinics.

*Accreditation granted by the Commission on Accreditation in Physical Therapy Education.*

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
524-110	Physical Therapy Interventions I <sup>1</sup>	7	4 - 6
801-195	Written Communications	3	3 - 0
806-131	Anatomy & Physiology	4	3 - 2
806-140	General Physics	3	2 - 2
<b>Semester 2</b>			
524-115	Physical Therapy Clinical Practice I <sup>1</sup>	2	0 - 6
524-120	Physical Therapy Interventions II <sup>1</sup>	6	4 - 4
801-196	Oral/Interpersonal Communications	3	3 - 0
806-108	Applied Anatomy & Physiology	5	3 - 4
<b>Summer</b>			
809-195	Economics	3	3 - 0
809-197	Contemporary American Society	3	3 - 0
<b>Semester 3</b>			
524-125	Physical Therapy Clinical Practice II <sup>1</sup>	4	0 - 15
524-130	Physical Therapy Interventions III <sup>1</sup>	7	4 - 6
809-198	Introduction to Psychology	3	3 - 0
	<b>Elective</b>	3	
<b>Semester 4</b>			
524-135	Physical Therapy Clinical Practice III <sup>1</sup> (2nd 9 Wks.)	5	0 - 18
524-140	Physical Therapy Life Span Applications <sup>1</sup> (1st 9 Wks.)	3	3 - 0
524-145	Physical Therapy Health Care Systems <sup>1</sup> (1st 9 Wks.)	2	2 - 0
524-150	Physical Therapy Administration <sup>1</sup> (1st 9 Wks.)	1	1 - 0
	<b>Elective</b>	3	
<b>TOTAL CREDITS</b>		<b>70</b>	
<b>Suggested Electives:</b>			
510-117	Medical Terminology	3	
809-120	Developmental Psychology	3	
154-103	Basic Computer Concepts	3	

## <sup>1</sup>Program Admission Prerequisite

Physical Therapist Assistants complete a five semester program and graduates receive an Associate Degree. The Blackhawk Technical College Physical Therapist Assistant program is accredited by the Commission on Accreditation in Physical Therapy Education. Currently, Wisconsin does not offer licensure or registration; however, most graduates become licensed in surrounding states.

In addition to the usual tuition and fees, the student is required to purchase liability insurance, personal health insurance, and a lab jacket. The student is expected to provide his/her own transportation to clinical facilities. A Caregiver Background Check is required for the clinical portion of this program.

## Course Descriptions

### 154-103 Basic Computer Concepts

**3 Credits**

This course is designed as a first course in microcomputers, the main purpose being to provide the student with the ability to use a microcomputer and typical applications packages such as word processing, graphics, spread sheet and data base in an integrated environment. No prior knowledge of computers or applications is necessary or expected. A secondary purpose is to provide the foundation skills in computers necessary for subsequent courses that expand the students computer skills into other application areas or use the computer in career-oriented courses. Other topics of the course include: basic computer concepts of hardware and software, introduction to graphics and elementary microcomputer operating systems.

### 510-117 Medical Terminology

**3 Credits**

A comprehensive study of medical vocabulary. The student learns the pronunciation, spelling, definition, and correct usage of medical terms used in a variety of health care settings.

### 524-110 Physical Therapy Interventions I

**7 Credits**

This course introduces the student to the history of physical therapy, legal and ethical issues, healthcare team members, and healthcare professional organizations involved in physical therapy. An overview of physical therapy facilities, models and system, is included. Medical terminology, abbreviations, and documentation techniques are introduced. Principles of psychology, sociology, and communication are applied to the care of patients with physical disabilities. Fundamentals of patient care including vital signs, turning and positioning, transfers, transporting patients, aseptic techniques, and bandaging and slings are covered. The application of physical agents massage, and soft tissue mobilization are covered.

**Pre- or Corequisites:** Admission to the PTA Program; 801-195, 806-140,

### 524-115 Physical Therapy Clinical Practice I

**2 Credits**

This course introduces the student to the clinic. Students will apply skills learned in Physical Therapy Interventions I & II, and Applied Anatomy & Physiology to direct patient care in selected clinical education sites. This course introduces documentation, fire safety, and first aid. Written medical reports and oral presentations focus on the patient interview and collection of medical information.

**Prerequisites:** Admission to the PTA Program; 524-110

**Corequisites:** 524-120, 806-108, 809-196.

**524-120 Physical Therapy Interventions II 6 Credits**

This course will cover elements of patient assessment including but not limited to muscle flexibility, goniometry and manual muscle testing. The student will learn how to design an exercise program for various musculoskeletal pathologies based upon a given treatment plan and be able to perform that exercise program. The student will apply lumbar and cervical traction treatments.

**Prerequisites:** Admission to the PTA Program; 524-110.

**Corequisites:** 524-115, 806-108, 809-196.

**524-125 Physical Therapy Clinical Practice II 4 Credits**

This course provides intermediate clinical experiences. Students will apply and refine skills learned in Physical Therapy Interventions I, II, and III to direct patient care in selected clinical education sites. In-depth written case histories require examination of diagnosis, medical history, and physical therapy programs. Documentation is emphasized, and oral presentations by students are included.

**Prerequisites:** Admission to the PTA Program; 524-120, 524-115, 809-195, 809-197. **Corequisite:** 524-130.

**524-130 Physical Therapy Interventions III 7 Credits**

This course focuses on pathological gait and gait training; application of therapeutic electricity; techniques of pain management; cardiac rehabilitation and chest physical therapy; circulatory disorders; amputees and prosthetics; central nervous system development, assessment, pathophysiology, and rehabilitation procedures for CVA, head trauma, and spinal cord injury; and orthotics.

**Prerequisites:** Admission to the PTA Program; 524-120, 524-115. **Corequisites:** 524-125.

**524-135 Physical Therapy Clinical Practice III 5 Credits**

This course provides full-time, terminal clinical experiences. Students will apply and refine skills learned in all previous academic and clinical course work. Experiences will be offered in selected clinical settings; specialty areas are included.

**Prerequisites:** Admission to the PTA Program; Satisfactory completion of all required courses.

**524-140 Physical Therapy Life Span Applications 3 Credits**

This course covers normal growth and development in all areas throughout the life span. Selected neuromusculoskeletal conditions commonly treated in physical therapy are described as they apply to infants, children, adolescents, young adults, middle adults, and older adults. Students focus on developing specific treatment interventions for these conditions based on established goals and treatment plans.

**Prerequisites:** Admission to the PTA Program; 524-125, 524-130. **Corequisites:** 524-145, 524-150, 809-197.

**524-145 Physical Therapy Health Care Systems 2 Credits**

This course focuses on the role of the Physical Therapist Assistant as a facilitator, assisting the patient to achieve optimum health, mobility, and independence. Principles of social responsibility as related to physical therapy and the Physical Therapist Assistant as an interdisciplinary team member are discussed. Advanced interpersonal communication, healthcare interviewing, the teaching/learning process, and patient compliance are emphasized. Discharge planning includes self-care/home management, community/work reintegration and wheelchair prescription.

**Prerequisites:** Admission to the PTA Program; 524-130, 524-125. **Corequisites:** 524-140, 524-150, 809-197.

**524-150 Physical Therapy Administration 1 Credits**

This course discusses physical therapy departmental administration, organization, maintenance, staff supervision, and professional development. The role and utilization of the Physical Therapist Assistant with emphasis on legal, ethical, and practice perspectives is included. This course explores current issues and trends of the profession with related impact on physical therapy services and examines various types of healthcare financing, documentation requirements, quality management, and outcome measurement. Basic job seeking skills are also included.

**Prerequisites:** Admission to the PTA Program; 524-125, 524-130. **Corequisites:** 524-140, 524-145, 809-197.

**806-108 Applied Anatomy & Physiology PTA 5 Credits**

This course builds on a basic knowledge of skeletal, muscle and nervous systems and presents an in-depth study of their structure and functions. The integration of these systems to produce motion is studied. Critical thinking skills are encouraged as to analyze the relationships of these systems to normal movement, posture and gait. The development of observation and palpation skills is emphasized. Independent study of the pathophysiology of the major body systems is also included.

**Prerequisites:** 806-131, 806-140.

**General Education Course Descriptions on Pages 38-41.**

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 806-108 Applied Anatomy & Physiology 3 Credits
- 806-131 Anatomy & Physiology 3 Credits
- 806-140 General Physics 3 Credits
- 809-120 Developmental Psychology 3 Credits
- 809-195 Economics 3 Credits
- 809-197 Contemporary American Society 3 Credits
- 809-198 Introduction to Psychology 3 Credits

Police Officers employed by federal, state and local agencies are charged with the responsibility of protecting life and property and preserving the peace. Policewomen and policemen carry out the activities through which protection is achieved. These activities include preventive patrol, detection, arrest and prosecution of criminal offenders, traffic enforcement, juvenile guidance, and many other specialized enforcement tasks.

A job in Law Enforcement requires a comprehensive background check on the individual applying for such a job. State and Federal law prevent any person from becoming a police officer who has an unpardoned conviction for any felony. The applicant shall have a valid Wisconsin driver's license. The applicant shall also be of good character, as determined by checking with neighbors, teachers, friends and acquaintances.

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 our computerized, user-interactive firearms automated training system to help hone your skills in making split-second decisions on whether the use of deadly force is appropriate in a particular situation.
- Make traffic stops using two fully-equipped police squad cars.
- Conduct interviews of "suspects."
- Take statements and present written documentation of investigation.
- Write police reports.
- Fully process crime scenes, including collection and preservation of evidence.

**The Criminal Justice Program of BTC offers several distinct programs designed to meet your needs in becoming a police officer:**

- Associate Degree
- Law Enforcement Academy
- Re-certification Training

**Potential Employment Opportunities**

Police Officer, Correction Officer, Private Guard, Conservation Warden, Probation/Parole Agent, Police Dispatcher, Juvenile Detention Worker

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
504-100	Introduction to Criminal Justice	3	3 - 0
504-122	Juvenile Justice	3	3 - 0
801-195	Written Communications	3	3 - 0
809-196	Introduction to Sociology	3	3 - 0
809-198	Introduction to Psychology	3	3 - 0
<b>Semester 2</b>			
504-121	Criminal Law	3	3 - 0
504-124	Police Organization & Administration	3	3 - 0
504-136	Rules of Evidence	3	3 - 0
801-196	Oral/Interpersonal Communications	3	3 - 0
804-105	General Math	3	3 - 0
809-171	Social Problems	3	3 - 0

**Semester 3**

504-112	Criminal Investigation <sup>1</sup>	3	3 - 0
504-141	Police Report Writing I	3	3 - 0
504-165	Police & Community Relations	3	3 - 0
809-155	Abnormal Psychology	3	3 - 0
809-195	Economics	3	3 - 0
	<b>Elective*</b>	3	

**Semester 4**

504-101	Police Field Services <sup>2</sup>	3	3 - 0
504-118	Procedures in Interviewing	3	3 - 0
504-140	Criminology	3	3 - 0
504-142	Police Report Writing II	4	3 - 0
806-110	Forensic Science	3	2 - 2
	<b>Elective*</b>	3	

**TOTAL CREDITS**

**70**

\*A total of 6 elective credits will also be required. Students are permitted to enroll in any Associate Degree course offered with approval of the program advisor. **Electives offered by the Criminal Justice Department include:**

504-102	Police Issues & Functions	3	3 - 0
504-113	Criminal Procedure <sup>3</sup>	3	3 - 0
504-119	Introduction to Probation & Parole	3	3 - 0
504-137	Introduction to Corrections	3	3 - 0
504-170	Internship	3	0 - 12
504-175	Private Security	3	3 - 0
802-102	Spanish for Emergency & Health Services	3	3 - 0

<sup>1</sup>Prerequisite: Criminal Law & Rules of Evidence, or consent of instructor.

<sup>2</sup>Prerequisite: Must be 4th semester student to enroll, or have consent of instructor.

<sup>3</sup>Prerequisite: Criminal Law and Rules of Evidence or consent of instructor; this course is required for advanced standing in future police academies.

**Course Descriptions**

**504-100 Introduction to Criminal Justice 3 Credits**

This is an introductory course dealing with the process, institutions, and administration of criminal justice in America. Covered are an overview and a look at the issues of law enforcement, courts, corrections and the juvenile justice process. The objectives of the course are to provide the student with a background for more advanced studies and a fundamental understanding of the criminal justice system.

**504-101 Police Field Services 3 Credits**

An overview of those specialized areas of training which support today's highly trained police officer as he/she patrols the streets and highways of our communities. Included will be basic patrol procedures, traffic investigation, arrest and transport of suspects, citizen complaints, building searches, traffic and felony stops, and similar areas.

**Prerequisite:** 4th semester students only or, consent of instructor.

**504-102 Police Issues & Functions 3 Credits**

This course is designed to review the various functions and issues related to policing in modern day society. It will examine a wide range of current issues facing the law enforcement professional.

**504-112 Criminal Investigation 3 Credits**

This course is an analysis of the theory and techniques of an investigation, from the preliminary investigation, through evidence procedures, interviewing, specific crime investigation and reporting.

**Prerequisite:** 504-121 and 504-136 or, consent of the instructor.

- 504-113 Criminal Procedure** **3 Credits**  
This course is concerned with the laws of arrest, and search and seizure as they relate to the law enforcement officer. A study will be made of court decisions interpreting the applicable portions of the U.S. and Wisconsin Constitutions, as well as federal and state statutes.  
*Prerequisite: Successful completion of 504-121 and 504-136 with a grade of "C-" or above, or, consent of the instructor.*
- 504-118 Procedures in Interviewing** **3 Credits**  
This course emphasizes the general and specialized skills in human communication. The student will be introduced to the various techniques and fundamentals in interviewing and interrogation as well as nonverbal communication skills as they relate to law enforcement.
- 504-119 Introduction to Probation & Parole** **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 is a study of criminal law from the basic concepts, the balancing of Constitutional right, with the need for public order. The course also looks closely at elements of various crimes such as crimes against the person, against property, sex crimes and other criminal conduct.
- 504-122 Juvenile Justice** **3 Credits**  
This introductory course deals with the processing of juveniles through the juvenile justice system. Juvenile institutions, treatment and care are covered. The course also covers crimes against children, abuse, neglect, etc.
- 504-124 Police Organization & Administration** **3 Credits**  
This is a study of coordination and management of resources in the field of law enforcement. Also studied are the basic guidelines of administrative policy and the unification of personal and organizational goals into a meaningful administrative strategy.
- 504-136 Rules of Evidence** **3 Credits**  
This course presents a comprehensive study of the nature, kinds and degrees of evidence. The vital importance of "why" and "how" evidence is handled by the law enforcement officer for proper presentation and admission into the trial, in accordance with historical and judicial rules governing the admissibility of evidence in court, is emphasized.
- 504-137 Introduction to Corrections** **3 Credits**  
This course will provide the student with the necessary fundamental knowledge of the operations of corrections. It will enable the student to relate to others with a reasonable amount of understanding of these fundamentals of corrections.
- 504-140 Criminology** **3 Credits**  
Criminology is a study of the patterns of anti-social behavior through analysis of types of crime and criminals, cause and costs of crime and delinquency, and individual and social attitudes toward crime.

- 504-141 Police Report Writing I** **3 Credits**  
This course is designed to supply the student with the purposes and the acceptable principles of police report writing. Attention will be focused on the improvement of spelling, sentence structure, punctuation, vocabulary, and research in the use of routine police language. Emphasis is placed on the police report as a powerful investigative tool, and its position in the criminal justice system. Practical exercises shall be employed in the preparation of an acceptable police report.  
*Prerequisite: Successful completion of 801-195 with a grade of "C-" or above.*
- 504-142 Police Report Writing II** **4 Credits**  
Police Report Writing II is designed to enhance and build upon the student's writing skills developed through Written Communications and Police Report Writing I, 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 prosecutive action will be the foundation of this course. Focus areas include reports on the collection of evidence, statements, complaints, and mobile data communications.  
*Prerequisites: Successful completion of 801-195 and 504-141 with a grade of "C-" or above.*
- 504-165 Police & Community Relations** **3 Credits**  
This course introduces the student to the principles of community relations, including materials from the field of history, psychology, communication skills, law and sociology. The course stresses human understanding, police-citizen relationships, and deals with realistic police problems in the area of criminal justice.
- 504-170 Internship** **3 Credits**  
This course involves a professionally planned and supervised program of experience in a law enforcement related discipline.  
*Prerequisite: Successful completion of 50% of required core courses and consent of instructor.*
- 504-175 Private Security** **3 Credits**  
This course is designed to offer training to the person interested in the specialized occupation of private security. The course objectives are to increase professional competence and to impart the confidence that comes with knowing the job.

**General Education Course Descriptions on Pages 38-41.**

- 801-195 Written Communication 3 Credits
- 801-196 Oral/Interperson Communications 3 Credits
- 804-105 General Math 3 Credits
- 806-110 Forensic Science 3 Credits
- 809-171 Social Problems 3 Credits
- 809-155 Abnormal Psychology 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits

*See Police Recruit Academy in Special Programs Section Page 130.*

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Radiography is the fellowship of art and science resulting in the production of diagnostic radiographic (x-ray) images.

A multitude of professional settings are available in which the trained radiographer may practice, including:

- Hospitals
- Physician's Offices
- Imaging Clinics
- Mobile Imaging Companies
- Research Facilities
- Industrial Plants

The salary of a practicing radiographer will also vary depending on geographic location, type of institution, work shift, and specialization. As a rule, radiographers enjoy a higher than average salary and benefits.

This wide range of placement opportunities allows the graduate radiographer many options with respect to full- and part-time work, as well as the availability of different shifts. It also allows the radiographer the flexibility to accommodate the scheduling conflicts of normal adult life.

## Program Mission

To prepare the student to practice diagnostic medical radiography.

## Program Goal

to fulfill the program mission through the achievement of the following Program Outcomes.

## Program Outcomes

The program learner will:

possess the knowledge and academic skills necessary to practice radiography in the clinical setting as well as successfully write the ARRT certification exam in Radiography. **Academic Outcome.**

practice general diagnostic radiography in any clinical setting. **Clinical Education Outcome.**

pass the Certification Examination in Radiography prepared by the American Registry of Radiologic Technologists (ARRT) at a rate which is consistent with or exceeds state and national averages for the current five-year period. **Certification Examination Outcome.**

complete the program at a rate of 75% of all students starting the radiography curriculum within 1.5 times of the normal program completion times. **Student Retention/Attrition Outcome.**

practice radiation protection and safety techniques in a way that minimizes radiation exposure to self, patients, and all others. **Radiation Safety Outcome.**

provide patient care and comfort as well as recognize emergency patient conditions and initiate emergency life saving first aid and basic life support. **Patient Care and Safety Outcome.**

communicate effectively and professionally in the medical environment and function as a team member in the radiology department. **Patient Interaction Outcome.**

possess the critical thinking and problem solving skills necessary to act appropriately in non-routine and emergency situations. **Critical Thinking and Problem Solving Outcome.**

participate in professional activities and continuing education, demonstrate an understanding of advanced imaging modalities, and utilize insights gained in general education courses to promote continued professional and personal growth. **Professional Development Outcome.**

be placed in the workforce as a diagnostic radiographer or continue the educational process in a specialty area of Medical Imaging. **Graduate Placement Outcome.**

be satisfied with the educational experience with respect to both academic and clinical abilities. **Graduate Satisfaction Outcome.**

satisfy the needs of employers with respect to content knowledge, affective behaviors, and clinical radiographic skills. **Employer Satisfaction Outcome.**

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.*

## Program Prerequisite Requirements

- Participate in clinical observation tour set by Radiography Coordinator
- Attend program orientation session
- Complete physical examination and 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.



Course Name	Credits	Lec-Lab
<b>Program Courses</b>		
526-101 Introduction to Radiography	3	3 - 0
526-102 Radiographic Procedures I	4	3 - 2
526-103 Principles 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
526-112 Applied Clinical Radiography V	2	0 - 24
526-115 Methods of Patient Care	2	3 - 0
526-116 Special Imaging	3	2 - 0
526-117 Principles of Radiographic Pathology	2	3 - 0
526-118 Radiation Physics	3	2 - 0
526-120 Radiographic Film Evaluation	2	3 - 0
Total	38	

### Technical Support Courses

154-103 Basic Computer Concepts	3	3 - 0
806-195 Anatomy and Physiology I	4	3 - 0
806-196 Anatomy and Physiology II	4	3 - 2
Total	11	

### General Education Courses

801-195 Written Communications	3	3 - 0
801-196 Oral/Interpersonal Communications	3	3 - 0
809-193 Introduction to Psychology	3	3 - 0
809-195 Economics	3	3 - 0
809-196 Introduction to Sociology	3	3 - 0
Electives <sup>1</sup>	6	
Total	15	

**TOTAL PROGRAM CREDITS** 70

Electives may be any associate degree level course totaling 6 credits.

<sup>1</sup>**Suggested Electives:** 526-113 Registry Review (3 credits)

526-114 Introduction to Cross-Sectional Anatomy (3 credits)

## 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.

**Prerequisites:** Admission to the Radiography Program.

**Corequisites:** 526-115

### 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 extremities, 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.

**Corequisites:** 526-115, 526-104, 526-105.

### 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, 526-104, and 526-105.

**Corequisites:** 526-106, 526-108.

### 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, 526-115.

**Corequisites:** 526-102, 526-105

### 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.

**Prerequisite:** 526-101, 526-115.

**Corequisites:** 526-102, 526-104, 526-115.

### 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, 526-104, 526-105.

**Corequisites:** 526-103, 526-108.

### 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 spinal column, bony thorax, gastrointestinal tract, biliary and urinary systems and skull.

**Prerequisites:** 526-102, 526-104, 526-105.

**Corequisites:** 526-103, 526-106.

## 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, 526-106, 526-108.

**Corequisite:** 526-120.

## 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, 526-126. **Corequisite:** 526-118, 526-116.

## 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, 526-116, 526-118. **Corequisite:** 526-117.

## 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, 526-116, 526-118 (or permission of the Radiography Coordinator). **Corequisites:** 526-112, 526-117 (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. (Suggested Elective)

**Prerequisites:** 806-195, 806-196, (or permission of Radiography Coordinator). **Corequisites:** 526-110, 526-116, 526-118 (or permission of 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 Radiography Program.

**Corequisite:** 526-101, 526-102, 526-104, 526-105.

## 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:** 526-103, 526-106, 526-108. **Corequisite:** 526-109.

## 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, 526-116, 526-118. **Corequisite:** 526-112.

## 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, 526-116, 526-120.

**Corequisites:** 526-110, 526-119.

## 526-118 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.

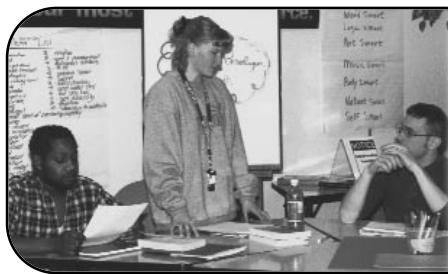
**Prerequisites:** 526-103, 526-106, 526-108.

**Corequisites:** 526-109.

## General Education Course Descriptions on Pages 38-41.

- 154-103 Basic Computer Concepts 3 Credits
- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 806-195 Anatomy & Physiology I 4 Credits
- 806-196 Anatomy and Physiology II 4 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits

**Mission Statement:** To provide a learning foundation that will be valuable, flexible, and relevant to meet ever-changing supervisory and management needs in the business community.



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 in:

**Project Management**

**Leadership**

**Quality**

**Managing Diversity & Change**

**Safety Issues**

**Problem-Solving**

**Supervision**

**Legal Issues**

The Management Development Program is intended specifically for working adults whose knowledge and expertise are an important part of the learning process. All classes are designed for collaborative learning. Knowledge is immediately applicable to your work environment.

*You can receive an Associate Degree in the following two formats to fit your schedule:*

**Traditional Management Development  
(Supervisory Management Associate Degree):**

Classes typically meet once a week in the evening and follows the traditional college calendar. (August – May)

Completion of degree usually within 3 – 4 years.

**Accelerated Management Development  
(Supervisory Management Associate Degree):**

Classes meet for four hours a week, either day or evening, for 6 weeks.

Classes are not bound by the traditional college calendar.

Students spend less time in class and more time in independent and group study.

Student may complete degree in less time (2 – 3 years), but this format requires more commitment.

Qualified individuals should contact the Business Occupations Division at **(608) 757-7624** for an appointment.

**Students of the Management Development Program may choose from two program options in addition to the Supervisory Management Associate Degree: (66 Credits)**

**18-Credit Management Development Certificate**

Students may earn this certificate by taking eighteen (18) credits from the Occupation Specific courses.

**33-Credit Management Development Certificate**

Students may earn this certificate by taking an additional nine credits from Occupation Specific courses; three credits from the Occupational Support; and credits from the General Education required courses.

Course Name	Credits	Lec-Lab
<b>Occupation Specific Courses</b>		
196-191 Supervision	3	3 - 0
196-113 Organizational Development	3	3 - 0
196-135 Team Building/Problem Solving	3	3 - 0
196-192 Managing for Quality	3	3 - 0
196-193 Human Resource Management	3	3 - 0
196-190 Leadership Development	3	3 - 0
196-105 Safety Issues	3	3 - 0
196-104 Legal Issues	3	3 - 0
196-166 Managing Diversity and Change	3	3 - 0
196-111 Project Management	3	3 - 0
196-112 Applications of Technology	3	3 - 0
<b>Occupational Support Courses</b>		
101-117 Accounting Fundamentals	3	3 - 0
102-160 Business Law	3	3 - 0
154-103 Basic Computer Concepts	3	3 - 0
<b>General Education Courses</b>		
801-195 Written Communications	3	3 - 0
801-196 Oral/Interpersonal Communications	3	3 - 0
804-112 Data Collection, Analysis, & Presentation	3	3 - 0
809-195 Economics	3	3 - 0
809-196 Introduction to Sociology	3	3 - 0
809-198 Introduction to Psychology	3	3 - 0
Elective	3	3 - 0
Elective	3	3 - 0

**TOTAL CREDITS**

**66**

*To obtain the Associate Degree in Supervisory Management Associate Degree, students must complete the courses listed above, for a total of 66 credits.*

## Course Descriptions

**101-117 Accounting Fundamentals 3 Credits**

Accounting Fundamentals is a study of accounting from the user's perspective. This course will emphasize the effects of transactions on financial statements, the interrelationship among the financial statements, and the interpretation of financial statement information by taking an analytical and interpretative approach.

**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.

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## 154-103 Basic Computer Concepts 3 Credits

This course is designed as a first course in microcomputers, the main purpose being to provide the student with the ability to use a microcomputer and typical applications packages such as word processing, graphics, spread sheet and data base in an integrated environment. No prior knowledge of computers or applications is necessary or expected. A secondary purpose is to provide the foundation skills in computers necessary for subsequent courses that expand the students computer skills into other application areas or use the computer in career-oriented courses. Other topics of the course include: basic computer concepts of hardware and software, introduction to graphics and elementary microcomputer operating systems.

## 196-104 Legal Issues 3 Credits

Student will thoroughly explore the issues surrounding the employee/employee 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 Issues 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 interests 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.

## 196-135 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.

## 196-166 Managing Diversity and Change 3 Credits

Addresses changes taking place in the workforce and their effect on the supervisor and the organization. Explores an broadened view of diversity, including values, age, disabilities, education and cultural. Provides an action framework for the supervisor to gain advantage by blending and capitalizing on the different skills and perspectives of people and creating an organization where everyone gives his or her best.

## 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 an organization. Emphasis is placed on the human behavioral aspect of supervision. Focus is on application of the 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.

### General Education Course Descriptions on Pages 38-41.

- 801-195 Written Communications 3 Credits
- 801-196 Oral/Interpersonal Communications 3 Credits
- 804-112 Data Collection, Analysis & Presentation 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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Welding is the most common way of permanently joining metal parts. Heating 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.

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 will be experienced 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).

### Potential Employment Opportunities

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. Typical salary range for welders in the state of Wisconsin is \$22,000 to \$29,000 per year.

### Job Titles

Welder Helper, Welder Tacker, Production Line Welder, Fabrication Helper, Fabricator, Machine Maintenance Helper - Welder, and others that go along with these titles.



### Semester 2

442-304	Welding II	10	5 - 15
442-305	Metal Fabrication	3	2 - 3
801-311	Communications I	2	3 - 0
804-308	Shop Math II	2	3 - 0

### TOTAL CREDITS

33

Short-term certificate options are also available.

## 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)

3 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.

### 442-303 Welding I

10 Credits

This is an introductory course designed for students who desire to learn the theories and skills of welding. The course is divided into the following three basic welding areas, each six weeks in length: Area I, Orientation and Process Introduction; Area II, Gas Metal Arc Welding (GMAW); Area III, Flux Core Arc Welding (FCAW). Health hazards and safety rules are discussed along with wire brushing and grinding, welding symbols, metal testing--destructive and non-destructive, metal shearing, joint design, and welding certification procedures. Library research, written assignment and tests, and basic metallurgy are all units of instruction involved in each of the above areas.

### 442-304 Welding II

10 Credits

This is an introductory course designed for students who want to learn the theories and skills of welding. The course is divided into the following three basic welding areas, each six weeks in length: Area IV, Shielded Metal Electrode Arc Welding (SMAW low hydrogen E-7018 electrodes); Area V, Shielded Metal Electrode Arc Welding (SMAW non-low hydrogen electrodes-E-6010 and E-6011); Area VI, Inert Gas Tungsten Arc Welding (TIG). Health hazards and safety rules are discussed along with metal weldability, electrode classifications, welding gasses, steel classifications, and welding inspection. Library research, written assignments and tests, and basic welding metallurgy are all units of instruction involved in each of the above units.

### General Education Course Descriptions on Pages 38-41.

- 801-311 Communications I 2 Credits
- 804-306 Shop Math I 2 Credits
- 804-308 Shop Math II 2 Credits

### Course Name

### Credits Lec-Lab

#### Semester 1

420-310	Machine Shop Fundamentals	1	0 - 2
421-380	Blueprint Reading (Welding)	3	2 - 3
442-303	Welding I	10	5 - 15
804-306	Shop Math I	2	3 - 0

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# INTERPRETER TECHNICIAN-Shared Program

The Interpreter Technician Program is a shared program with Gateway Technical College-Elkhorn Campus, with program classes at the Elkhorn facility.

## Program Description

This program educates the student in the areas of Deaf history, culture, and American Sign Language (ASL). Course work includes an introduction to Deaf culture, psycho-social aspects of Deafness, history of the Deaf community in America, and linguistics aspects of English and ASL with emphasis being placed on receptive and expressive ASL skill development.

## Aptitudes and Interests

The following is needed: 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 well independently, deal with pressure from conflict between cultures in a professional manner, friendly, and open-minded.

## Physical requirements

Employers may place physical requirements on various jobs in this career field. We strongly encourage you to investigate these physical 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.

	Course Name	Credits	Lec-Lab
<i>Occupational Specific</i>			
533-101	Introduction to Deafness	3	3 - 0
533-102	ASL 1	4	4 - 0
533-103	Interpreter Practicum I	3	2-0-0-4
533-104	ASL 2	4	4 - 0
533-105	Cultural Sensitivity in Interpreting	2	2 - 0
533-106	ASL Structure & Function	3	3 - 0
533-107	ASL 3	4	4 - 0
533-109	Deaf Culture in America	3	3 - 0
533-110	ASL 4	4	4 - 0
533-111	Interpreter Practicum II	3	1-0-0-8
533-112	Professional Development for Interpreter		22 - 0
<b>Total Required</b>		<b>35</b>	
<i>Occupational Support</i>			
105-131	Introduction to Microcomputers*	3	2 - 2
533-108	Alternative Communication Techniques & Adaptive Equipment for the Deaf	2	1 - 2
101-112	Accounting for Business*	3	3 - 0
145-101	Entrepreneurship*	2	2 - 0
804-160	College Mathematics*	3	3 - 0
<b>Total Required</b>		<b>11</b>	
<i>General Education Courses</i>			
801-195	Written Communications*	3	3 - 0
809-198	Introduction to Psychology*	3	3 - 0
801-198	Speech*	3	3 - 0
809-197	Contemporary American Society/ Multicultural*	3	3 - 0
801-196	Oral/Interpersonal Communications*	3	3 - 0
<b>Total Required</b>		<b>15</b>	
<i>Suggested Electives</i>			
530-101	Language of Medicine	3	3 - 0
533-113	ASL Skillbuilding 1	1	0 - 2
533-114	ASL Skillbuilding 2	1	0 - 2

533-115	ASL Skillbuilding 3	1	0 - 2
533-116	ASL Skillbuilding 4	1	0 - 2
145-101	Entrepreneurship	2	2 - 0
196-148	Stress Management*	1	1 - 0
<b>OR</b>			
196-149	Time Management*	1	1 - 0
<b>Total Required</b>		<b>6</b>	

## 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.

## 533-102 ASL 1

4 Credits

This course focuses on intensive vocabulary development and basic ASL sentence structure. The students will begin to develop both expressive and receptive ASL skills.

## 533-103 Interpreter Practicum I

3 Credits

This course will give the student an opportunity to observe a variety of ASL users in educational and/or social settings.

**Prerequisite/Corequisite:** 533-102

## 533-104 ASL 2

4 Credits

This is a continuation in the development from phases and simple sentences to complex structures. It will focus on the development of conversational ASL skills.

**Prerequisite:** 533-102, 533-103

## 533-105 Cultural Sensitivity in Interpreting

2 Credits

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. **Prerequisite:** 533-103

## 533-106 ASL Structure and Function

3 Credits

This course is designed to expose the student to a comparison of the linguistic structure and function of ASL. It will cover the study and use of phonemes and morphemes in ASL.

**Prerequisite:** 533-104

## 533-107 ASL 3 Introduction to Interpreting

4 Credits

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.

**Prerequisite:** 533-104

## 533-108 Alternative Communication Techniques & Adaptive Equipment for the Deaf

2 Credits

This course will discuss the many different communication techniques used by the Deaf/hard of hearing, or speech impaired individuals. It will give the student an opportunity to develop expertise in the use of adaptive equipment such as TTYOs, Assistive Listening Devices, and Alert Systems for the Deaf.

## 533-109 Deaf Culture in America 3 Credits

This course will expose the students to Deaf Culture since its beginnings in the U.S. It will discuss famous Deaf Americans and how they have impacted the lives of Deaf and hearing people in America.

## 533-110 ASL 4 Interpreting 4 Credits

This course will expand the student's ability to interpret from ASL to English and from English to ASL. The full spectrum on simple sentences to complex ASL sentences and idioms will be developed.

**Prerequisite:** 533-107

## 533-111 Interpreter Practicum II 3 Credits

In this course the students will observe and participate in activities with Deaf children and/or adults.

**Prerequisite:** 533-105

## 533-112 Professional Dev. for the Interpreter 2 Credits

Emphasis is placed on the importance of following the Code of Ethics for Interpreters; the development of poise and communication techniques for personal and professional success; and the importance of personal appearance and attitudes.

**Prerequisite:** 533-110

## MEDICAL LABORATORY TECHNICIAN

The Medical 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.

The Medical Laboratory Technician Program is approved by the National Accrediting Agency for Clinical Laboratory Science. The program prepares individuals for work in medical laboratories under the supervision of medical technologists. An instructional combination of fundamental principles of selected laboratory techniques as well as clinical experience in medical laboratories prepares graduates for work in both public and private laboratories serving the health sector. The medical laboratory technician/clinical laboratory technician is trained to perform routine laboratory procedures in microbiology, blood banking, clinical chemistry, hematology, serology and urinalysis. The final semester practicum is in hospitals in Madison and throughout the MATC District. The list of hospitals used is available in the program director's office. Graduates of the program qualify for both the 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 for Clinical Laboratory Science.

Students interested in enrolling in the Medical Laboratory Technician program should contact the Blackhawk Technical College counseling office for information about admissions.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
513-100	Introduction to Medical Lab Careers	3	2 - 3
513-101	Clinical Microscopy	3	2 - 3
513-102	Introduction to Immunology	1	
801-151	Communication Skills OR	3	3 - 0
806-101	General Introduction To Chemistry	5	4 - 2
806-173	Microbiology	3	3 - 2

## Semester 2

513-104	Hematology	5	3 - 6
513-111	Clinical Microbiology	5	3 - 6
801-152	Communication Skills II OR	3	3 - 0
806-106	Introduction To Anatomy Physiology	4	3 - 2

## Semester 3

513-107	Instrumentation	2	1 - 2
513-108	Clinical Immunology	5	3 - 6
513-109	Clinical Chemistry	5	3 - 6
809-195	Economics	3	3 - 0
809-197	Contemporary American Society	3	3 - 0
809-199	PSychology of Human Relations	3	
	<b>Elective</b>	3	----

## Semester 4

513-112	Seminar	1	1 - 0
513-113	Practicum (18 Weeks)	10	0 - 40
	<b>Elective</b>	3	E

## Recommended Electives

513-114	Sp Prob Clinical	1	1 - 0
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## TOTAL CREDITS

**41 + E**

## 513-100 Introduction to Medical Laboratory Careers 3 Credits

This course is a foundational overview of the professional role of the medical laboratory technician. It emphasizes medical terminology, lab safety, the collection and processing of blood specimens, medical laboratory techniques, medical ethics, and professionalism. It provides a lab tour and eight hour on-site clinical experience.

**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 of algebra and one year of geometry; and a satisfactory score on the ACT or a comparable substitute.

## 513-101 Clinical Microscopy 3 Credits

This is a procedure-oriented course covering the physical, chemical, and microscopic examination of urine. Some special urine and body fluid procedures are performed and/or discussed.

**Prerequisites:** High school graduation, HSED or GED with "C-" or better grades; 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 of algebra and one year of geometry; and a satisfactory score on the ACT or a comparable substitute.

## 513-104 Hematology 5 Credits

This course covers the principles of blood cell production/function and blood coagulation. It explores mechanisms involved in the development of hematologic diseases and coagulation disorders, and emphasizes lab techniques used to diagnose disease and monitor treatment.

**Prerequisites:** Satisfactory completion of all first semester, first year Medical Laboratory Technician courses.

## 513-107 Instrumentation 2 Credits

This class explores the analytical theory and principles of clinical lab instrumentation. Presentations by company representatives and on-site visits to area labs highlight the course.

**Prerequisites:** Satisfactory completion of all second semester, first year Medical Laboratory Technician courses and 806-201 and 806-210.

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**513-108 Clinical Immunology 5 Credits**

This course provides theory and practical application of immunological principles in serology and blood banking. It emphasizes serodiagnostic methods used for identification of disease states and blood compatibility testing protocols.

**Prerequisites:** Satisfactory completion of all second semester, first year Medical Laboratory Technician courses.

**513-109 Clinical Chemistry 5 Credits**

This course includes various methodologies, including spectrophotometry, potentiometry, coulometry, and electrophoresis used to perform routine and special chemistry testing. Principles and techniques of pipetting, quality assurance, total quality management, statistics, solution chemistry, computer data analysis, and automated instrument operation are also incorporated.

**Prerequisites:** Satisfactory completion of all second semester, first year Medical Laboratory Technician courses and 806-201 and 806-210.

**513-111 Clinical Microbiology 5 Credits**

Includes the study and application of laboratory methods used to isolate and identify pathologic microorganisms, and sensitivity testing of antimicrobics. It also provides an overview of the clinical basis of infection and specimen collection procedures for viral and rickettsial diseases.

**Prerequisites:** Satisfactory completion of all first semester, first year Medical Laboratory Technician courses and 806-273.

**513-112 Seminar 1 Credit**

This session is held prior to and following the clinical externship to prepare students for the practicum and allow students to provide feedback concerning their training. Also included are a series of examination administered during the practicum which reinforce theories and principles learned throughout the MLT program.

**Prerequisite:** Successful completion of all program courses plus simultaneous enrollment in 513-112.

**513-113 Practicum 10 Credits**

This is an 18-week clinical externship at a hospital or clinic laboratory in the area.

**Prerequisite:** Successful completion of all program courses plus simultaneous enrollment in 513-112.

**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.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
514-111	Therapeutic Skills I	2	2 - 2
514-148	Minor Media	1	1 - 2
801-151	Communication Skills I	3	3 - 0
806-107	Anatomy & Physiology I	4	3 - 2
809-199	Psychology of Human Relations OR	3	3 - 0
<b>Semester 2</b>			
514-112	Therapeutic Skills II	2	1 - 3
514-115	Developmental Principles	4	3 - 3
514-117	Biological Foundations of Human Perf.	2	1 - 3
514-120	Occupational Theory Process	4	2 - 6
514-149	Minor Media	1	1 - 2
801-152	Communication Skills II	3	3 - 0
809-133	Developmental Psychology	3	3 - 0
<b>Semester 3</b>			
514-105	Field Observation	2	2 - 2
514-125	Community Practice	3	2 - 3
514-130	Physical Rehabilitation Practice	4	2 - 6
514-135	Mental health Practice	4	2 - 6
514-140	Health Care System	2	2 - 0
514-150	Media & Skills	3	3 - 0
<b>Semester 4</b>			
514-160	Fieldwork I	5	0 - 20
514-165	Fieldwork II	5	0 - 20
514-170	Seminar/Practice & Management	2	0 - 4
	Elective	3	
<b>Recommended Electives</b>			
514-101	Introduction To Occupational Therapy	3	3 - 0
514-145	Recreation Practice	3	3 - 0
514-180	Special Problems	3	3 - 0

**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 Prerequisites plus completion of 806-207 or concurrent enrollment in 514-111 and 514-148.

**514-105 Field Observation 2 Credits**

This course orients 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 competencies 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 process. 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 class 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 & 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 & 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 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.

## 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 Communications. -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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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.

	Course Name	Credits	Lec-Lab
513-410	Phlebotomy Procedures (non credit)		2 - 2
513-312	Phlebotomy Practicum	3	varies

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.*



This 450-hour program exceeds the requirements of the Wisconsin Law Enforcement Standards Board for the training component of certification as a police officer. Students completing this course become certifiable as police officers in Wisconsin. The course topics include Laws of Arrest and Search and Seizure, Defense and Arrest Tactics, Issues in Policing, and Firearms Training, among others.



Admission is restricted to those who qualify under the administrative rules of the Wisconsin Law Enforcement Standards Board and the Training and Standards Bureau.

Class size is also limited. For more information, contact the Criminal Justice Department at Blackhawk Technical College.

	Course Name	Credits	Lec-Lab
504-390	Police Recruit Academy Module I	1	9.5 - .5
504-391	Police Recruit Academy Module II	1	9.5 - .5
504-392	Police Recruit Academy Module III	1	5 - 5
504-393	Police Recruit Academy Module IV	1	9 - 1
504-394	Police Recruit Academy Module V	1	9.5 - .5
504-395	Police Recruit Academy Module VI	1	8.5 - 1.5
531-396	Police Recruit Academy Module VII	1	14.5 - 5.5
504-397	Police Recruit Academy Module VIII	1	9.5 - .5
504-398	Police Recruit Academy Module IX	1	9.5 - .5
504-399	Police Recruit Academy Module X	1	9.5 - .5

#### **504-390 Police Recruit Academy Module I 1 Credit**

Topics to be discussed in this module include professional orientation, sources of law, laws of arrest, search and seizure law, laws of confessions and statements, elements of criminal offenses, and concepts of evidence.

#### **504-391 Police Recruit Academy Module II 1 Credit**

Topics to be covered in this module include interviewing of suspects, victims and witnesses, as well as proper preparation of reports and field notes.

#### **504-392 Police Recruit Academy Module III 1 Credit**

This course teaches the recruit officer techniques of self-defense, as well as the proper procedures for taking suspects into custody. The course includes instruction in handcuffing techniques and search techniques for misdemeanors and felons.

#### **504-393 Police Recruit Academy Module IV 1 Credit**

This module is devoted solely to the familiarization of firearms. Recruits will be instructed in the proper safety methods of handling firearms, as well as participate in extensive practice shooting. Students can expect to fire approximately 1,000 rounds of ammunition from their own service weapon, as well as 50 rounds from a shotgun. Students will be instructed in both day and nighttime shooting techniques, and will be exposed to numerous shoot/don't shoot simulations.

#### **504-394 Police Recruit Academy Module V 1 Credit**

This module will teach recruits the proper methods in conducting low and high risk vehicle stops, as well as the enforcement of traffic laws.

#### **504-395 Police Recruit Academy Module VI 1 Credit**

Recruits will be taught the proper emergency vehicle driving techniques ("E.V.O.C."). Additionally, recruits will receive instruction on proper patrol techniques.

#### **504-397 Police Recruit Academy Module VIII 1 Credit**

Topics to be covered in this module include traffic accident investigation, alcohol beverage laws, narcotics laws, victim/witness assistance and crisis intervention, friendly and hostile groups, disasters and hazardous materials.

#### **504-398 Police Recruit Academy Module IX 1 Credit**

This module covers the topics of juvenile law and crimes against children, the Mental Health Act, community awareness, and principles of crime prevention.

#### **504-399 Police Recruit Academy Module X 1 Credit**

In this module, recruits will conduct preliminary investigations, identify, collect, and preserve evidence, be instructed on the topics of crimes against persons and crimes against property, and receive instruction in the proper preparation of cases for trial, including how to testify in court.

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**www.  
blackhawk.edu**



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## **Business Occupations Division**



### **Accounting**

*(Associate Degree)\**

### **Administrative Assistant**

*(Associate Degree)\**

### **CIS-Microcomputer Specialist**

*(Associate Degree)*

### **CIS-Microprogrammer Specialist**

*(Associate Degree)*

### **CIS-Network Specialist**

*(Associate Degree)*

### **Legal Secretary**

*(Associate Degree)*

### **Marketing**

*(Associate Degree)\**

### **Medical Administrative Specialist**

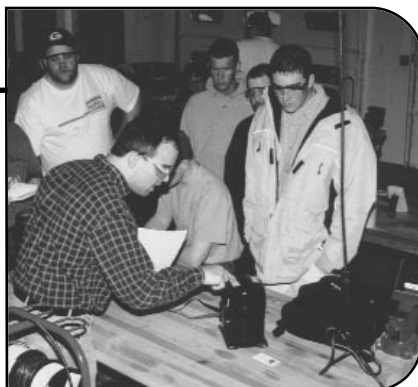
*(Associate Degree)\**

### **Supervisory Management**

*(Associate Degree)\**

*\*-short-term certificates available in these programs*





## **Industrial and Agricultural Occupations**

- Air Conditioning, Heating, Ventilation & Refrigeration Technology (HVAC/R)** *(Associate Degree)*
- Airframe & Powerplant Mechanic (Aviation Maintenance Technician)** *(Two-Year Technical Diploma)*
- Apprenticeship** *(Special Certification)*
- Automotive Technician** *(Two-Year Technical Diploma)\**
- Computer Numerical Control (CNC) Technician-** *(Two-Year Technical Diploma)\**
- Computer Service Technician** *(One-Year Technical Diploma)*
- Diesel & Heavy Equipment Technician** *(Two-Year Technical Diploma)*
- Electric Power Distribution** *(One-Year Technical Diploma)*
- Electro-Mechanical Technology** *(Associate Degree)*
- Farm Business and Production Management** *(Diploma Program)*
- Industrial Engineering Technician** *(Associate Degree)*
- Industrial Mechanic** *(One-Year Technical Diploma)*
- Landscape & Turf Services** *(Program Diploma)*
- Mechanical Design Technician** *(Associate Degree)*
- Technical Studies-Journeyworker** *(Associate Degree)*
- Welding** *(One-Year Technical Diploma)\**

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## **Service Occupations Division**

- Culinary Arts** (*Associate Degree*)\*
- Dental Hygiene** (*Associate Degree*)
- Dental Assistant** (*One-Year Technical Diploma*)
- Early Childhood Education** (*Associate Degree*)
- Fire Science** (*Associate Degree*)
- Medical Assistant** (*One-Year Technical Diploma*)
- Nursing (RN)** (*Associate Degree*)
- Physical Therapist Assistant** (*Associate Degree*)
- Criminal Justice** (*Associate Degree*)
- Radiography** (*Associate Degree*)



## **Others--Certificate/Special Programs**

- Basic Police Recruit School**
- Emergency Medical Technician**
- Food Service Aide**
- Health Unit Coordinator**
- Nursing Assistant**
- Phlebotomy**



## **Offered in cooperation with Waukesha County Technical College (WCTC)/MATC-Madison:**

- Dental Hygiene & Physical Therapist Assistant (WCTC)**
- Medical Laboratory Technician & Occupational Therapist Assistant (MATC)**



*\*-short-term certificates available in these programs*

**Eric A. Larson**, President/District Director–B.A., Franklin Pierce College; M.B.A., Syracuse University; Ed.D., Northern Illinois University

**Lucy Abram**, Basic Skills Education Instructor–B.A., Mount Mary College; M.E.P.D., UW-Whitewater

**Cindy Alfano**, Counselor, Monroe Campus–B.S., UW-Oshkosh; M.S., UW-Milwaukee

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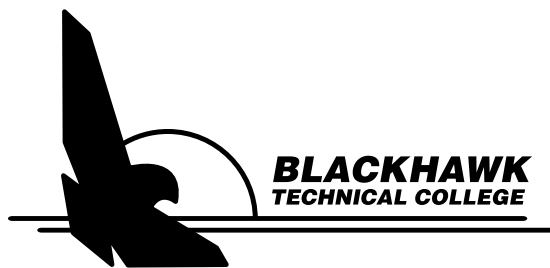
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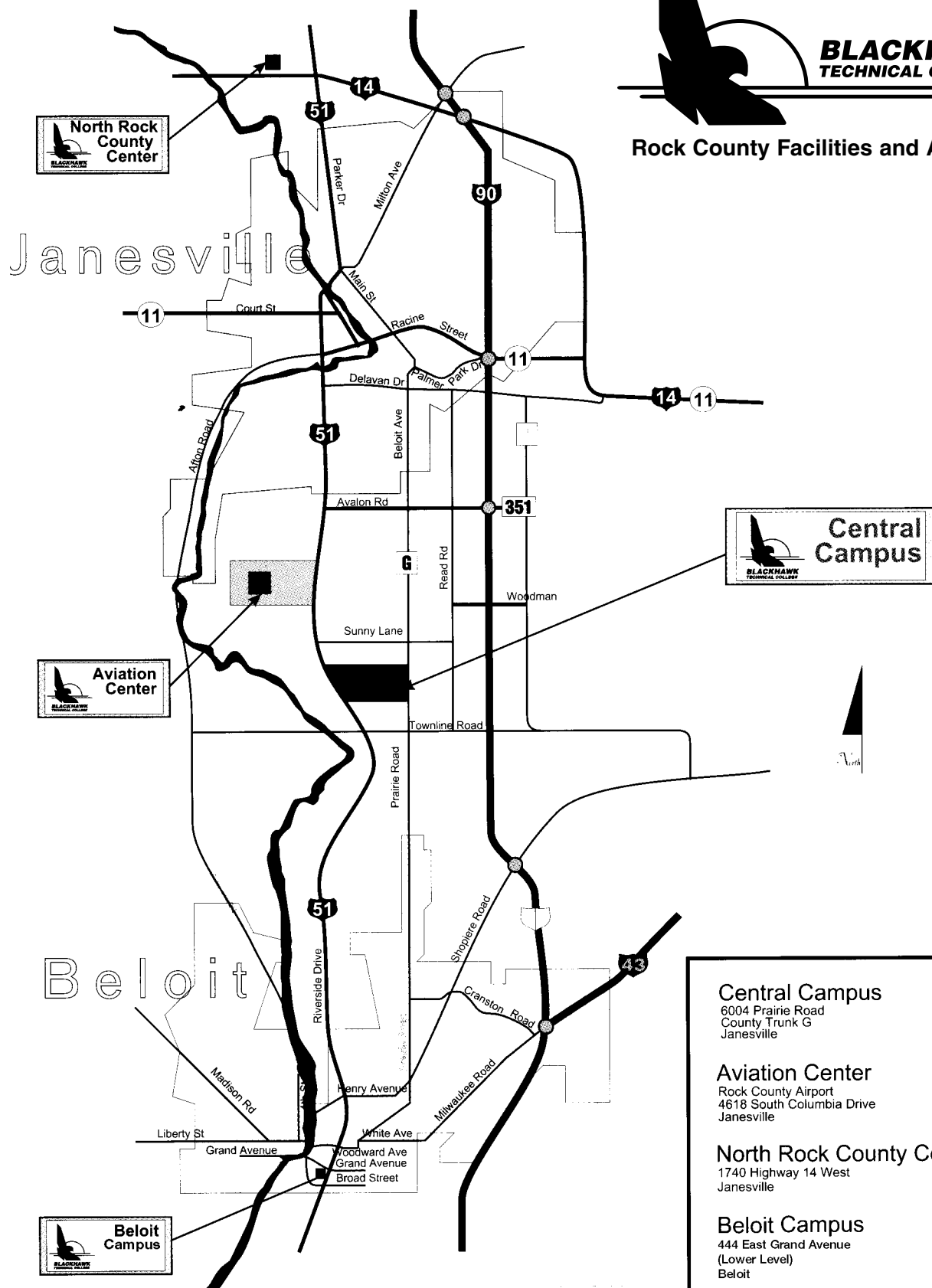
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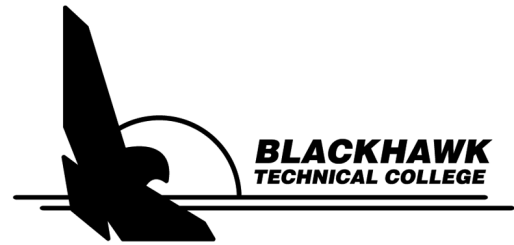
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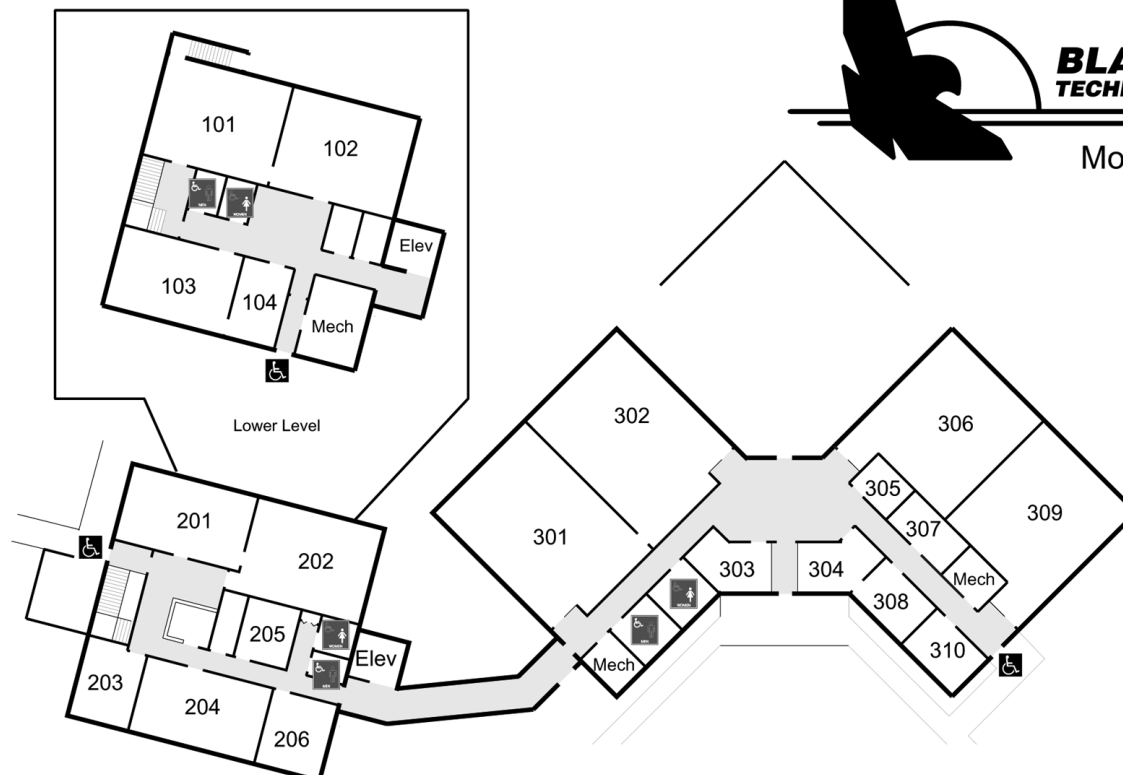
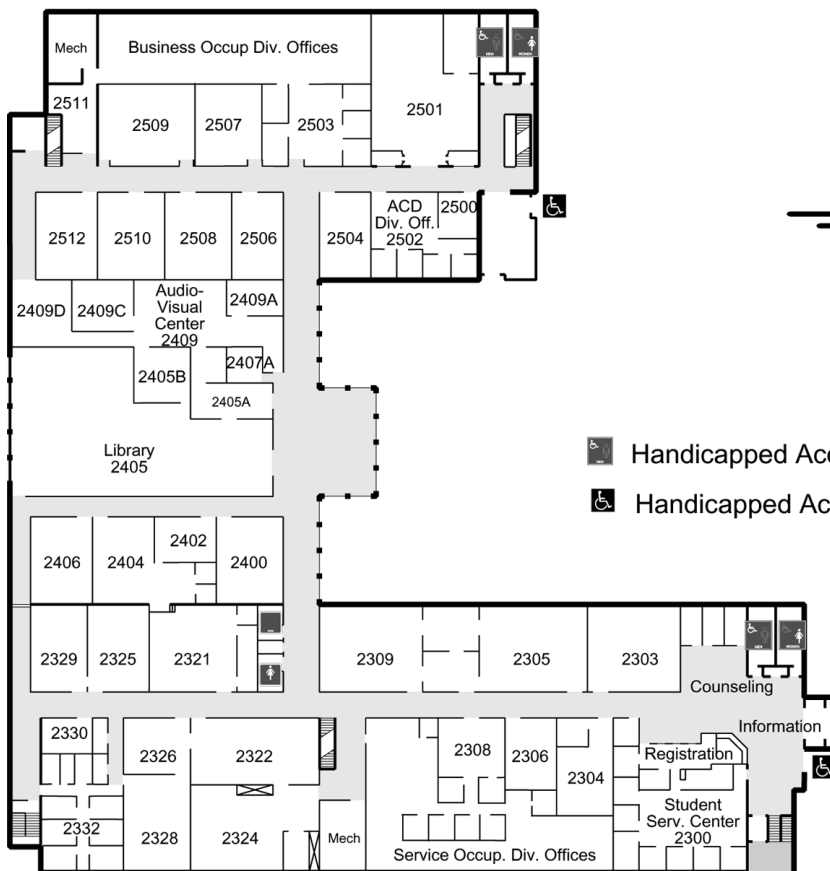
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