

YOUR

FUTURE'S



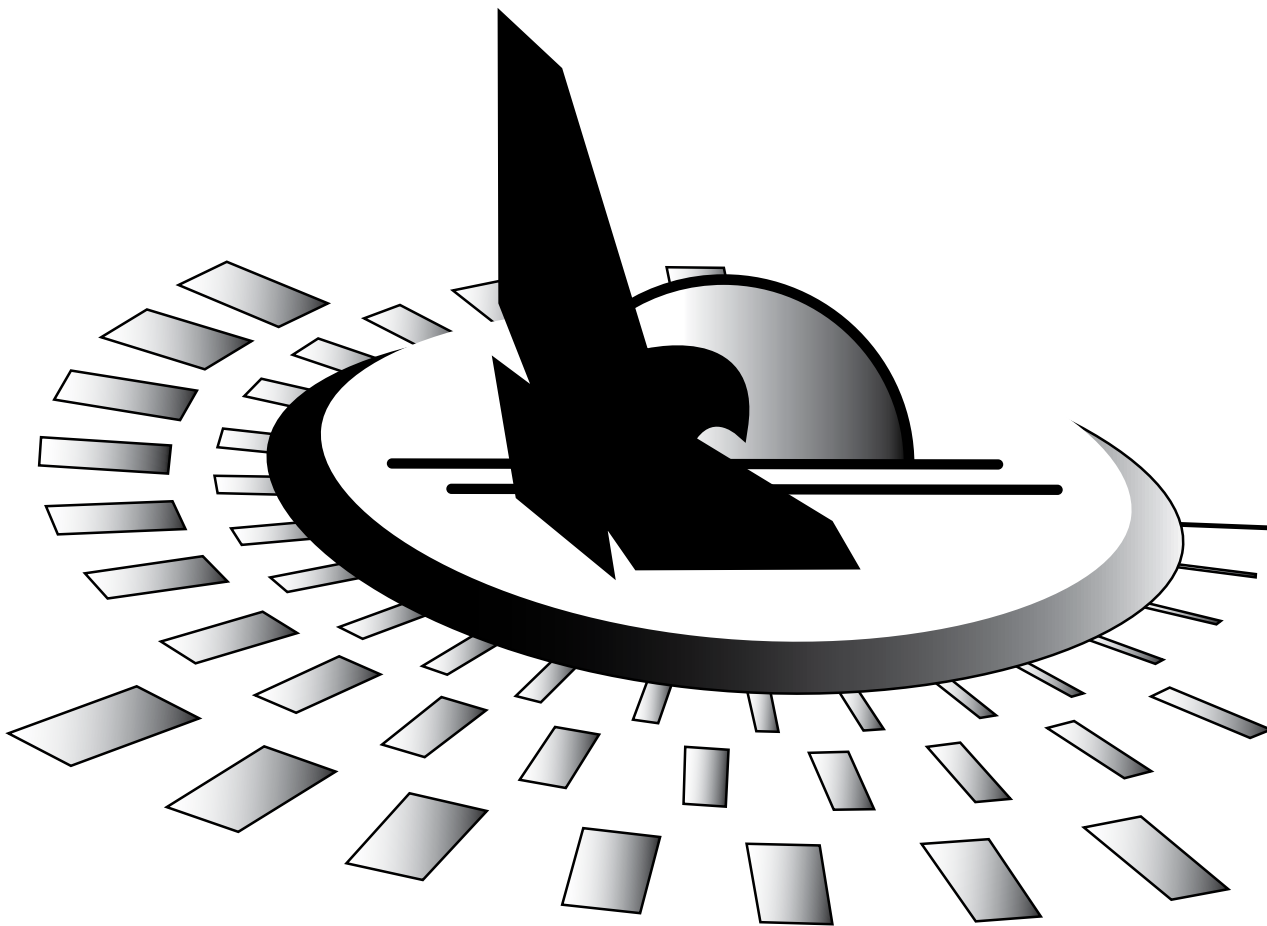
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Blackhawk Technical College  
2001–2002 CATALOG

# BLACKHAWK TECHNICAL COLLEGE

## 2001-2002 CATALOG



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.

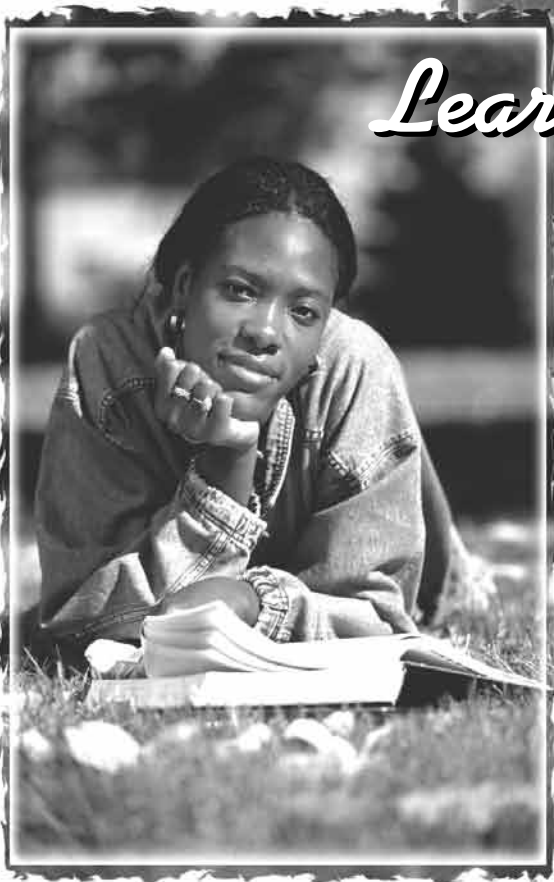
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**Information Hotline at: (608) 757-7710 or TTY (608) 767-7661**

**Phone: (608) 758-6900**

**6004 Prairie Road • County Trunk G • P.O. Box 5009  
Janesville, Wisconsin 53547 • [www.blackhawktech.org](http://www.blackhawktech.org)**

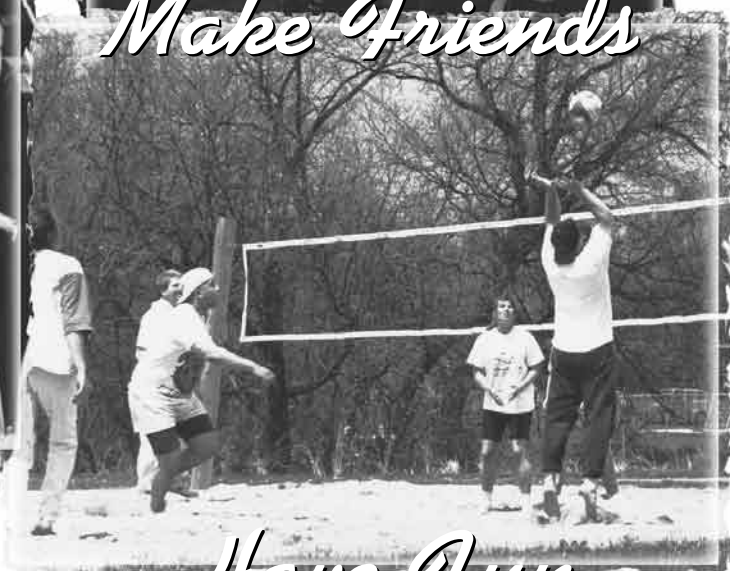
*Learn*



*Achieve*



*Make Friends*



*Have Fun*

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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.

## 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.

## 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.





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*Blackhawk Technical College*



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Board Secretary, Secretary  
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Wisconsin School for  
Visually Handicapped  
*Beloit*



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*Janesville*



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



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

## 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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## 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 better community.

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

**Our Vision:** Flexible, Accessible,  
Relevant Learning

**Our Values:** Trust, Diversity,  
Teamwork

credits of retraining, at no cost to the student, under certain conditions. Contact Student Services for more information.

### 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

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## 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

## HOURS OF OPERATION

The general operating hours of Blackhawk Technical College are Monday through Friday, **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.

## 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 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.

### 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, police science, 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.



## Aviation Center

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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 Center

The Beloit Center for Pre-technical studies is conveniently located in downtown Beloit. The Center provides basic academic instruction, remedial education, and English as a Second Language (ESL) classes at 167 West Grand Avenue, Beloit, WI 53511, phone number: **(608) 757-7669.** Plans call for this facility to be moving to a new location in the lower level of 444 E. Grand Ave. in downtown Beloit on or about July 1, 2001. (Building being renovated, shown below).



## North Rock County Center



This 26,000 square foot facility is located north of Janesville on U.S. Highway 14, about one-quarter mile west of the intersection with Highway 51 [at 1740 Highway 14 West, Janesville, WI 53545, phone **(608) 743-4470.**]

The center contains two large shops for Apprenticeship and Diesel and Heavy Equipment Technician programs. Facilities also include three classrooms, a library, a microcomputer lab, faculty offices, and a student lounge. All agricultural and 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 U.S. Highway 14.



## 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 center 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

## 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 Asset or Compass assessment instruments. The Asset is a timed paper and pencil assessment. The Compass is an untimed assessment taken on computer. Both the Asset and Compass are basic skills assessments in reading, language usage, and numerical skills. A \$10.00 assessment fee will be collected at the assessment site. You will need to complete the Compass or Asset 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 or Asset 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. Timely completion of all admission and registration requirements is also beneficial for those applying for financial aid.

### Apply On-line

Applicants can now conveniently apply via computer by accessing the BTC web site at [www.blackhawktech.org](http://www.blackhawktech.org). The application fee and transcripts will need to be sent separately to BTC.

## 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 transcripted credit and advanced standing program may vary from high school to high school. Students wishing to apply for college credit or obtain a complete listing of the high school courses that qualify under the BTC agreement should contact their high school guidance counselor.

## 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.

## 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

## 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.

## What is a TOP Grant?

**TOP (Technical and Occupational Program) Grants** of up to \$1,000 are available for recent Wisconsin high school graduates who have completed high school or an HSED within the past three years and who are enrolling full-time (12 or more credits) in a technical occupation program within a Wisconsin technical college. Students can receive \$250 per semester for up to four semesters while enrolled in a technical college program. TOP Grants are not based on a student’s family income. For an application or more information, contact the Student Services office.

## 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 \$3,700 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 (7.59 % 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.

New student borrowers must wait 30 days before receiving their first disbursement of student loans. Tuition and fees are deducted from PELL and SEOG grant checks before disbursement.

## 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. A class may be audited one time. 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



## Prior Credit/Advanced Standing

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.

You initiate a schedule change by completing a student course change form. The form can be obtained from the counseling office. Once you have filled out the form completely, return it to your counselor for review and signature. 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.

After the third week of the semester, you must have both your present instructor and the new instructor sign the drop/add form. The current instructor will sign it first, noting your grade at the time of the switch as well as the number of hours attended. This information will then be available for the new instructor to include in any follow-up reporting requirements.

Once your schedule change has been fully approved, you will take the completed form to the Registration Office where fee adjustments will be made. 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.

Failure to complete the steps as outlined may mean that your schedule change is not properly processed. 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 \$2 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 you with early feedback about your academic progress. Mid-term grade reports will be mailed to you after the eighth week of each 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:

### 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.

## 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.

## 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 and above with a class nine credits or more. Students with a cumulative GPA of 3.5 or better for the duration of their enrollment in a one- or two-year program have been noted on placement records. Persons achieving a 4.0 GPA are also recognized by a special "High Honors" notation.



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## 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 small charge of \$3 per transcript to be paid before the transcript is sent to you.

## Access to Student Records

The Family Education Rights and Privacy Act of 1974 (FERPA) provides you certain rights regarding your educational records. The following information is provided as notification of your rights in compliance with this law.

You are entitled to review your official educational record and other information maintained by BTC. You may also request a hearing regarding any information that you feel to be "inaccurate, misleading, or inappropriate" in your official college record. Access and review of your official file is subject to the following conditions:

- Any request for access must be made in writing and submitted to the Student Services Manager.
- BTC has reasonable time not to exceed forty-five (45) days, in which to reply to any request.
- All information declared confidential by the Act or deemed confidential by the writer, which was placed in your file prior to January 1, 1975 is not available for inspection.

After reviewing your records, you may request that certain information be removed or modified because it is believed to be misleading, inaccurate, or inappropriate. Your request should be made to the Student Services Manager. If your request is denied, you may submit a statement of explanation which will be placed in your file. You may also file an appeal requesting reconsideration of the decision to remove the material. Any requests for an appeal should also be submitted to the Student Services Manager.

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, 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, and 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.

## 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.

## 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 invited 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. A full-time counselor is also available at the Monroe Campus. 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. Counseling services are also 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

### 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



## Learning Center/Tutorial Services

Learning Centers are available at the Central Campus, Monroe Campus, and Beloit Center to assist you with academic and study skills needed to be successful in vocational/technical programs. The center 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 noon. Services are provided at no cost to you. Call the Monroe Campus at (608) 328-1660 and the Beloit Center at 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 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](http://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 Department.

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.
- **Police Science Club**—This club is an organization of interested students and staff working together to enhance training and education in the Police Science 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.

## 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.

### 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 1997, 1998, and 1999:

	1997	1998	1999
<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>	1	0	0
<b>Burglary</b>	0	0	0
<b>Motor Vehicle Theft</b>	0	0	0
<b>Arson</b>	0	0	0

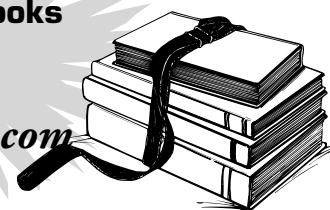
#### Statistics About Arrests On BTC Facilities

Local police agencies report the following information regarding arrests on BTC facilities during 1997, 1998, and 1999:

	1997	1998	1999
<b>Liquor Law Violations</b>	0	0	0
<b>Drug Abuse Violations</b>	0	0	0
<b>Weapons Possessions</b>	0	0	0

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## 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) 767-7661

## 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,

Check Out BTC's Website at:

[www.blackhawktech.org](http://www.blackhawktech.org)



## IMPORTANT INFORMATION

### 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

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

#### TELEVISION

WISC	— Channel 3 —	Madison
WKOW	— Channel 27 —	Madison
WMTV	— Channel 15 —	Madison
WTVO	— Channel 17 —	Rockford
WREX	— Channel 13 —	Rockford
WIFR	— Channel 23 —	Rockford

### 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. By observing these standards of behavior and being sensitive to persons around you, your experiences at BTC will be more productive and enjoyable.

BTC is concerned about academic misconduct (cheating) and its effects upon students and the academic integrity of BTC. If you have concerns about cheating, or if you witness cheating in any of your classes, you 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 you or 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 you believe that you 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.

You, 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

You 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 you and the staff member are unable to reach a satisfactory agreement, you 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), you 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.

## 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—167 West Grand Ave., 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 Listing

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



# PROGRAMS & SERVICES—Academic & Career Development

## Course No. — Course Name

Overview of BTC	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
	75-861-778	English as a 2nd Language, High Intermediate, Reading
	75-861-791	English as a 2nd Language, Low Advanced, Communications
Getting Started	75-861-794	English as a 2nd Language, Low Advanced, Math
	75-861-795	English as a 2nd Language, Low Advanced
Services for Students	75-861-798	English as a 2nd Language, Low Advanced, Reading
	76-851-791	ASE High School English
Important Information	76-851-793	ASE Literature and Composition
	76-853-791	ASE American History A
Programs & Services	76-853-792	ASE American History B
	76-854-790	ASE General Math
Academic Programs	76-854-791	ASE Introduction to Algebra & Geometry
	76-854-792	ASE Pre-Algebra A
Special Programs	76-854-793	ASE Pre-Algebra B
	76-854-794	ASE Algebra 1A
Staff Listing	76-854-795	ASE Algebra 1B
	76-854-796	ASE Geometry A
Campus Maps	76-854-797	ASE Geometry B
	76-854-798	ASE Algebra 2A
Index	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, 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, 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.

## 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 practices. 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, with 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, 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 and coping skills, and study skills. The students develop a variety of learning strategies including test taking and note taking skills, study skills, computer skills, and organization/time management skills. The course will also include an orientation to campus, information about other support agencies, training in self-advocacy, and development of an individualized educational plan.

## 851-791 ASE High School English

This course prepares students in writing concise and accurate sentences and paragraphs by focusing on basic grammar, punctuation, and spelling.

## 851-793 ASE Literature and Composition

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

## 853-791 ASE American History A

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

## 853-792 ASE American History B

Covers the time beginning with the turn of the century through the 1980's. Units include: World War I, the Twenties, the Great Depression, World War II, the Cold War, civil rights and recent changes.

**854-790 ASE General Math**

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

**854-791 ASE Intro to Algebra and Geometry**

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

**854-792 ASE Pre-Algebra A**

This course introduces algebraic equations and problem solving by reviewing topics in integers, number theory, fractions, probability, decimals and percents.

**854-793 ASE Pre-Algebra B**

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

**854-794 ASE Algebra 1A**

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

**854-795 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, relations and functions. Trigonometry and statistics are also introduced.

**854-796 ASE Geometry A**

This course covers plane geometry, proofs, parallelism, congruent triangles, polygons, special quadrilaterals and similarity.

**854-797 ASE Geometry B**

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

**854-798 ASE Algebra 2A**

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

**854-789 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, 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, participating in class discussions and laboratory experiments.

**858-790 ASE College Prep Reading**

This course concentrates on developing high level comprehension and reasoning skills, stressing vocabulary development, reading flexibility and rate, study skills and critical thinking skills.

**859-790 ASE Government**

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

**859-791 ASE Social Studies**

Concentrates heavily on content in the areas of history, economics, geography, political science and behavioral sciences.

**859-792 ASE Current Social Issues**

This course reviews the federal government and then moves on to look at major domestic policy issues followed by major foreign policy issues.

**859-793 ASE Sociology**

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

**859-794 ASE Economics**

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

**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.



## 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 Law s. 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 Cert. HSED-High School Equivalency Diploma

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

State Department of Public Instruction-approved testing centers for the Blackhawk Technical College District are at the Central Campus, Beloit 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, and displaced homemakers.

### 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

Additional assistance is provided for displaced homemakers, those who are widowed, divorced, separated, or who have a disabled spouse. Some of these include brush-up classes, financial assistance, and job seeking skills assistance. All services are provided in a caring and confidential manner.

## 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, telecourse (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.

### Telecourse:

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.

**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.

**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 ratios, proportions, and percent; basic principles and application of algebra, geometry, graphing, and statistics; measurement skills in U.S. Customary and Metric Systems; and the use of calculators as a tool.

**804-111 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*



## 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 PTA student with basic concepts of physics and their applications in the health occupations. 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 I 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

### 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.

### Kay Moormann—Coordinator, Center for Continuing Education—(608)757-7701

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

- Personal Development
- CDL (Certified Drivers License) Training
- Communications Skills
- Industrial Occupations
- Languages
- Occupational Preparation, Career Change, Skills Upgrading

In **BUSINESS OCCUPATIONS**, 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.

## Business Continuing Education Courses

(Sample Listing)

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

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

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.

## Personal Development Continuing Education Courses

(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 courses is offered in the **INDUSTRIAL OCCUPATIONS** area. Classes range from Basic Electricity to Programmable Logic Controllers.

Interested students take these courses for self-improvement in their current vocation or to help open the door for new challenges 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 Occupations 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.



## Apprenticeship

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
- Steamfitting
- 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	Credits
Journey level Certificate (400 hour minimum)	32-40

Associate Degree-Level Courses Student-selected occupational support	6-14
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General Education	15
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)	
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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.

**This program is also available at the Monroe Campus.**



## 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:

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

## Semester 3

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

## Semester 4

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		varies
101-131	Applied Accounting Information Systems <sup>2</sup>	3	1 - 4
809-195	Economics	3	3 - 0
809-197	Contemporary American Society	3	3 - 0
	Elective <sup>3</sup>	3	varies

## TOTAL CREDITS

<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

**67**

## 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.

(196) Supervisory Management or (107) Computer Information Systems areas.

## 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.

### 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 mock interviews are a requirement.



## 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:** *Word, Excel and 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.

**Accounting Majors-Prerequisite:** *Minimum grade of C in Accounting I and Algebra; Other Majors-Prerequisite:* *Minimum grade of C in Accounting I and permission of instructor.*

## 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 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 Taxes 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 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 Accounting II.*

## 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.

## 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, project management and decision making. He or she will understand the main transaction cycles and how each 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.

**Prerequisite:** *Minimum grade of C in Accounting Information Systems, Accounting III, and 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.

**Co-requisites:** *Algebra and Accounting I.*

## 101-136 Computerized Accounting 1 Credit

This course provides "hands-on" experience in maintaining accounting records utilizing a popular accounting software package.

## 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 business and individuals. Emphasis is placed on business law as it pertains to contracts, sales of goods, and negotiable instruments.

## 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.

**Prerequisite:** *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
- 809-197 Contemporary American Society 3 Credits
- 809-198 Introduction to Psychology 3 Credits



# ADMINISTRATIVE ASSISTANT

The administrative professional of this millennium is not doing the same things on the job as five years ago. BTC's Administrative Assistant two-year associate degree is designed for today's executive secretaries, administrative assistants, and project coordinators 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 the core 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.

**A One-Year Office Specialist Certificate is also available at the Monroe Campus (see page 50).**

## 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

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
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	Adm. 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
<b>Semester 2</b>			
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
<b>Semester 3</b>			
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
<b>Semester 4</b>			
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.

## 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 business and individuals. Emphasis is placed on business law as it pertains to contracts, sales of goods, and negotiable instruments.

## 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.

**106-131 Keyboarding Applications 3 Credits**

This course is designed to enhance keyboarding skills and to develop basic document formatting techniques while applying decision-making skills. In order to receive credit for this course, the student must be a touch typist (no finger or key watching) and must strike the keys with the proper fingers.

**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 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; 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

### One-year Certificate Option at Monroe Campus

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.

### Required Courses for Monroe Center

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
106-131	Keyboarding Applications*	3	1 - 4
106-145	Information Technology Essentials *	3	2 - 2
106-157	Administrative Assistant Fundamentals	1	1 - 0
107-112	Micro Software Applications	2	2 - 2
801-195	Written Communications	3	3 - 0
804-106	Introduction to College Mathematics or 804-101 Algebra	3	3 - 0
<b>Semester 2</b>			
101-111	Accounting I or	4	3 - 2
101-102	Office Accounting	3	2 - 2
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

### Preparatory Courses

106-140	Typing/Keyboarding	
106-143	Skillbuilding	1





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

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.

	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	3	3 - 2
402-339	Turbine Engine Systems	3	3 - 3

### 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

**67**

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.

**Co-requisite: 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.

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## 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.

## 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

3 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 **Co-requisite:** 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 **Co-requisite:** 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
<b>Semester 1</b>			
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

<b>Semester 2</b>			
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

<b>Semester 3</b>			
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

<b>Semester 4</b>			
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 Credit

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 |

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 Computer Information Systems/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 CIS/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.

**This program is also available at the Monroe Campus.**

## 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 CIS 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.

**A One-year Computer Applications certificate is also available at the Monroe Campus.**

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
107-112	Micro Software Applications	2	2 - 2
107-115	Micro Databases	3	2 - 2
107-119	Micro Programming Logic	3	3 - 0
107-120	Micro Operating Systems I	3	2 - 2
107-130	Network Design	3	2 - 2
801-195	Written Communications	3	3 - 0
<b>Semester 2</b>			
107-113	Micro Hardware Applications	3	2 - 2
107-114	Micro Spreadsheets	3	0 - 4
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

## Semester 3

102-148	Business Organization	3	3 - 0
107-122	Internet Applications <sup>1</sup>	2	1 - 2
107-147	Client Server I <sup>1</sup>	3	2 - 2
107-151	System Analysis & Design II <sup>1</sup>	2	1 - 2
107-182	Data Processing Field Study <sup>1&amp;2</sup>	1	1 - 0
804-111	Math Data Processing	3	3 - 0
	Elective	3	3 - 0

## Semester 4

107-123	Multimedia <sup>1</sup>	3	2 - 2
107-139	Current Issues & Trends In Computer Science	3	2 - 2
107-181	Data Processing Internship <sup>1&amp;2</sup>	1	1 - 0
809-195	Economics	3	3 - 0
809-197	Contemporary American Society	3	3 - 0
	Elective	3	3 - 0

## TOTAL CREDITS

**67**

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

<sup>2</sup>Students may take 107-181 and/or 107-182 to satisfy program requirements

**Recommended Elective:** 107-139 Current Issues & Trends in Computer Science

**NOTE: 67 credits are required for graduation.**



## 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.

**107-112 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.

**107-113 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 107-120 Micro Operating Systems I.*

**107-114 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 107-112 Micro Software Applications.*

**107-115 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 107-112 Micro Software Applications.*

**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.

**107-120 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.

**107-121 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 107-120 Micro Operating Systems I.*

**107-122 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 107-120 Micro Operating Systems I or consent of instructor.*

**107-123 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 107-112 Micro Software Applications and 107-122 Internet Applications; or consent of instructor.*

**107-130 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.

**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 107-115 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 .*

**107-181 Data Processing Internship****1 Credit**

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.*

**107-182 Data Processing 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.*

The Computer Information System-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>		
107-112 Micro Software Applications	2	1 - 2
107-115 Micro Databases	3	2 - 2
107-119 Micro Programming Logic	3	2 - 2
107-120 Micro Operating Systems I	3	2 - 2
107-130 Network Design	3	2 - 2
801-195 Written Communications	3	3 - 0
<b>Semester 2</b>		
102-148 Business Organization	3	3 - 0
107-122 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 Data Processing 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 Data Processing Internship <sup>1&amp;3</sup>	1	1 - 0
809-198 Introduction to Psychology	3	3 - 0
809-195 Economics	3	3 - 0
809-197 Contemporary American Society	3	3 - 0
Elective <sup>2</sup>	3	3 - 0
<b>TOTAL CREDITS</b>	<b>67</b>	

<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 107-181 and/or 107-182  
to satisfy program requirements.

<sup>4</sup> 107-139k Current Issues & Trends in Computer Science

## Course Descriptions

### 107-112 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.

### 107-115 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.

**Prerequisites:** Minimum grade of "C" in 107-112 Micro Software Applications.

### 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.

### 107-120 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.

### 107-122 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 107-120 Micro Operating Systems I or 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.

## 107-143 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 107-115 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.

## 107-181 Data Processing Internship 1 Credit

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.

## 107-182 Data Processing 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
- 809-197 Contemporary American Society 3 Credits
- 809-198 Introduction to Psychology 3 Credits





The Computer Information Systems/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>			
107-112	Micro Software Applications	2	1 - 2
107-115	Micro Databases	3	2 - 2
107-119	Micro Programming Logic	3	2 - 2
107-120	Micro Operating Systems I	3	2 - 2
107-130	Network Design	3	2 - 2
801-195	Written Communications	3	3 - 0
<b>Semester 2</b>			
102-148	Business Organization	3	3 - 0
107-113	Micro Hardware Applications <sup>1</sup>	3	2 - 2
107-121	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>			
107-122	Internet Applications <sup>1</sup>	2	1 - 2
107-127	Network Operating Systems I <sup>1</sup>	2	2 - 2
107-128	Network Operating Systems II <sup>1</sup>	2	1 - 2
107-131	Network Installation/Troubleshooting <sup>1</sup>	3	2 - 2
107-151	Systems Analysis & Design II <sup>1</sup>	2	1 - 2
107-182	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

### Semester 4

107-117	LAN/WAN Integration <sup>1</sup>	3	2 - 2
107-132	Network Management <sup>1</sup>	3	2 - 2
107-181	Data Processing Internship <sup>1&amp;3</sup>	1	1 - 0
809-195	Economics	3	3 - 0
809-197	Contemporary American Society	3	3 - 0
	Elective <sup>2</sup>	3	3 - 0
		16	14 - 4

### TOTAL CREDITS

**68**

<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 107-181 and/or 107-182 to satisfy program requirements.

## Course Descriptions

### 102-148 Business Organization

**3 Credits**

This class is an in-depth look at 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.

### 107-112 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.

### 107-113 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 107-120 Micro Operating Systems I.

### 107-115 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.

**Prerequisites:** Minimum grade of C in 107-112 Micro Software Applications.

### 107-117 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 107-131 Network Installation/Troubleshooting, 107-127 Network Operating Systems I and 107-128 Network Operating Systems II.

**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.

**107-120 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.

**107-121 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.

**Prerequisite:** *Minimum Grade of C in 107-120 Micro Operating Systems I.*

**107-122 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 107-120 Micro Operating Systems I or consent of instructor.*

**107-127 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 107-120 Micro Operating Systems I and 107-121 Micro Operating Systems II.*

**107-128 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 107-120 Micro Operating Systems I and 107-121 Micro Operating Systems II.*

**107-130 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.

**107-131 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 107-130 Network Design,; 107-120 Micro Operating Systems I, 107-121 Micro Operating Systems II, and 108-113 Micro Hardware Applications.*




**107-132 Network Management 3 Credits**

Network Management is a lecture/hands-on course designed to teach students network management fundamentals. Topics covered include: Managing a network via SNMP and/or RMON; configuring and administering network devices; disaster recovery; backup; network traffic management; modifying network design; network security; and planning for network growth.

**Prerequisites:** *Minimum grade of C in 107-130 Network Design, 107-120 Micro Operating System I, and 107-121 Micro Operating Systems II.*

**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.*

**107-181 Data Processing Internship 1 Credit**

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.*

**107-182 Data Processing 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
• 809-197 Contemporary American Society	3 Credits
• 809-198 Introduction to Psychology	3 Credits

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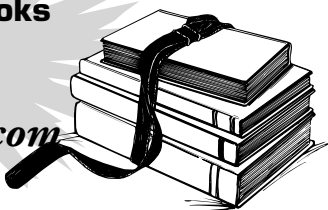
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This two-year technical diploma program is designed to provide students with a broad technical background in both job-shop and production machining. This program was designed using the National Institute for Metalworking Standards (NIMS) and National 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	Shop Practices	2	2 - 2
444-302	Semi-precision Machining	2	2 - 2
444-303	Turning Fundamentals	2	2 - 2
444-304	GD&T Interpretations	2	2 - 2
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	Advanced Shop Practices	2	2 - 2
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
444-317	CMM Programming(PC-DMIS)	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
444-323	Production & Scheduling	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>68</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 Shop Practices****2 Credits**

Consistency in precision machining requires the proper maintenance of the machinery, a safe work environment, handling of work pieces and the use and care of precision measuring tools. Students will be introduced to machine shop safety practices and why they exist, preventative maintenance to machine manufacturers' standards, and learn how to use and care for precision measuring devices such as steel rules, calipers and micrometers.

**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 Shop Practices 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 Shop Practices and Shop Computing courses.*

**444-304 GD&T Interpretations****2 Credits**

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

**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. Milling machines are one of the basic machine types. They have the ability to produce prismatic parts to close tolerances. Anyone who is considered proficient in the metal working area will have experience with mills. 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 Shop Practices 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 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 Turning Fundamentals course.*

**444-307 Advanced Shop Practices****2 Credits**

In this learning plan, you will learn about non-precision and precision measuring instruments. You will learn their names, uses, limitations, how to care for them, and how to use them. The learner will use squares, dial calipers, electronic calipers, vernier calipers, assorted types of micrometers, depth gages, height gages, gage blocks, and granite plates. It isn't possible to list all the instruments that the student will use. It should be noted that each instrument should be understood in detail. These tools are used routinely in a shop. Nearly any mistake while using a measuring instrument can and will result in a part out of specifications.

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

## 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 workpiece 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:** *Introduction to CNC, 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 students 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.

**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.

**Prerequisite:** *Successful completion of the Advanced Measurement Techniques, Shop Computing and Basic Machining course.*

## 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 specifications 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:** *Introductions to CNC or exposure to CNC machining centers.*

## 444-316 CNC Milling Operation 2 Credits

Students will learn how to set, store and maintain tools and workpiece 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:** *Introduction to CNC, exposure to CNC machines or consent of instructor.*



**444-317 CMM Programming (PC-DMIS) 2 Credits**

In this course you will learn to program a Coordinate Measuring Machine (CMM). The software used for operating and programming the machine is PC-DMIS. Students will write programs and measure parts.

**Prerequisite:** *Successful completion of the CMM Techniques (PC-DMIS) course.*

**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 set 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 workpiece 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:** *Introduction to CNC 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.*


**444-323 Production & Scheduling 2 Credits**

Producing machined parts routinely requires that components be cut on different machines in a specified sequence. While dozens to thousands of different parts may be at various stages of completion at any given instant within a manufacturing facility, it is necessary that these parts be sequenced properly and progress tracked so the product can be shipped to the customer when expected. Students will be exposed to this environment and will learn to understand how sudden changes (scrap/rework) influence this critical manufacturing function.

**Prerequisite:** *Shop Practices or consent of instructor.*

**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 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 certifies 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 appli-

cations 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>Communication Support Certificate Courses</i>			
415-318	Digital Communication	2	2 - 2
450-319	Microcomputer Peripherals	2	2 - 2
450-320	Troubleshooting Communications Systems	2	2 - 2
<i>Network Support Certificate Courses</i>			
631-115	LAN/WAN Fundamentals	3	2 - 2
450-321	Troubleshooting Network Hardware	2	2 - 2
450-322	Service Support Techniques	1	0 - 4
<i>General Education/Occupational Support</i>			
801-195	Written Communications	3	3 - 0
804-101	Algebra	3	3 - 0
	or		
804-111	Math Data Processing	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
• Communication Support Certificate	14 Credits
• Network Support Certificate	14 Credits

## 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.

## 450-316 Microcomputer Software Service 2 Credits

This course covers a number of different software topics: computer program creation, use of current popular business applications, computer virus eradication, software compression, and user guide creation.

## 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.

## 450-318 Digital Communication 2 Credits

This course covers a variety of areas in communication technology. Parallel and serial communications, wireless technologies, telephone systems, USB, FireWire, SCSI and the Internet are the major areas covered.

## 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. Modem access to the Internet and for remote file access and troubleshooting is also included.

## 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, using Windows 95/98, Windows N and Windows 2000.

## 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 history and function 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 course focuses on MS-DOS 6.22, and Windows 95/98 and Windows MC. 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 an emphasis placed on the common office LAN.

### 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



## CULINARY ARTS

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	3 - 0
316-147	Food Service Safety & Sanitation	3	3 - 0
801-195	Written Communications	3	3 - 0
<b>Semester 2</b>			
107-103	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	2 - 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	2 - 2

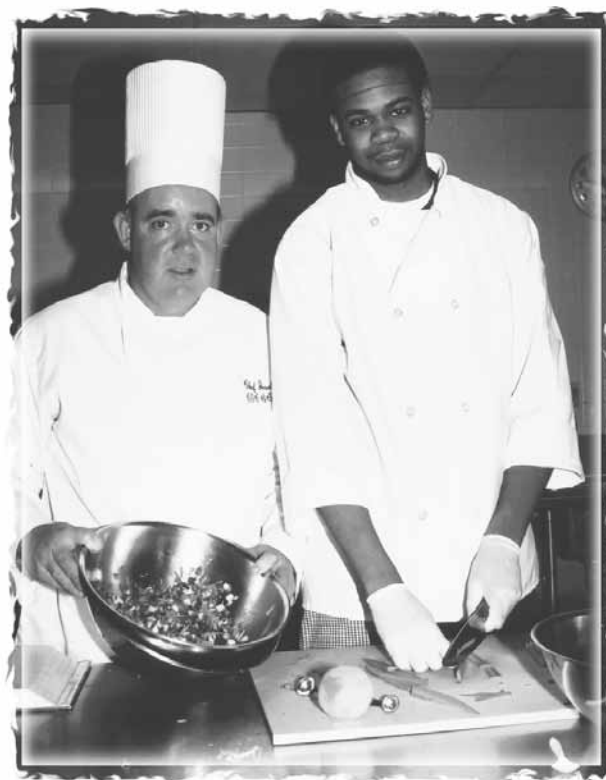
### TOTAL CREDITS

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.

### 107-103 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 is 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 menu 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.

*Prerequisites: 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 Program

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

**TOTAL CREDITS** 32

A "C" is required in all dental courses for graduation. A physical and dental examination is required prior to admission to the program.

The Dental Assistant Program is available for completion on a part-time basis within a two-year period. If this option is selected, the courses must be completed in the following sequence (any variation to this sequence must be approved by an instructor and counselor):

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
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>			
508-307	Dental Theory	1	3 - 0
508-310	Dental Office Management II	2	4 - 0
801-312	Communications II	2	3 - 0
<b>Semester 3</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
<b>Semester 4</b>			
508-304	Dental Chairside Assisting II	3	3 - 3
508-305	Dental Radiology II	2	2 - 2
508-315	Preventive Dentistry	1	2 - 0
508-329	Externship - Dental Office	4	0 - 12



### 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.

## 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.

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

- 801-311 Communications I 2 Credits
- 801-312 Communications II 2 Credits



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	

**TOTAL CREDITS** **72**

\* 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
<b>Semester 2</b>			
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

## AGRICULTURE IMPLEMENT SERVICING Certificate

Agribusiness has gone high tech. Complex farm implements use hydraulics, computer technology, advanced electronics, and diesel power in their operation, requiring a mechanic to have technical skills and mechanical aptitude.

Whether you wish to return to the farm, work for an implement dealership, or work on industrial implements, this certificate will give you the knowledge of maintenance, diagnosis, and repair of today's agriculture and industrial machinery.

Students taking the agriculture implement service certificate option work on tractors, combines, forage harvesting, planting, tillage, and loading equipment in a modern, extensively-equipped lab.

## Potential Employment Opportunities:

The increase in the average size of farms and in the complexity of farming are expected to spur demand for highly-trained and experienced farm equipment repair persons. In addition, demand will come from the increasing sales of smaller lawn and garden equipment. Typical salary range for Agriculture Equipment Mechanics in Wisconsin is between \$20,000 and \$29,000 per year. Likely job titles for graduates of this certificate program include: Farm Equipment Servicing Mechanic, Industrial Equipment Servicing Mechanic, Air Conditioning Mechanic, Construction Equipment Mechanic, Logging Equipment Mechanic, Field Equipment Maintenance Mechanic, Farm Machine Set-Up Mechanic, Tractor Mechanic, Assembly Repairperson, and Endless Track Vehicle Mechanic.

Course Name	Credits
070-331 Implement Servicing-Planting and Tillage Equipment	3
070-333 Implement Servicing-Harvesting	

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## 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, UBjoints, 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.

### 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

**Check Out BTC's Website at:**

***www.blackhawktech.org***





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.

**Many childcare classes are also available at the Monroe Campus.**

## 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
+801-196	Oral/Interpersonal Communications	3	3 - 0
+307-106	Professionalism	2	2 - 0
+307-107	Fundamentals of Child Care	3	3 - 0
+307-108	Orientation/Observation In Early Childhood Education	3	2 - 2
531-101	First Responder	2	.5 - 0
<b>Quarter 2</b>			
307-109	Early Childhood Practicum I	3	1 - 6
+307-110	Creative Expression	3	2 - 2
+809-198	Introduction To Psychology	3	3 - 0
+307-111	Child Growth & Development I	3	3 - 0
<b>Quarter 3</b>			
+307-112	Infant/Toddler Activities	2	1 - 6
+801-195	Written Communications	3	3 - 0
+307-113	Creative Activities	3	2 - 2
+307-114	Child Growth & Development II	3	3 - 0
307-115	Early Childhood Practicum II	3	1 - 6
<b>Quarter 4</b>			
+307-116	Building Partnerships	2	2 - 0
+307-117	Children With Special Needs	3	3 - 0
+809-197	Contemporary American Society	3	3 - 0
+307-118	Child Guidance	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
	Elective	3	3 - 0
	Elective	3	3 - 0

## Total Program Credits

**68 Credits**

\*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

- 307-110 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.**
- 307-118 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.
- 307-111 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.
- 307-114 Child Growth & Development II 3 Credits/54 hrs.**  
Physical, social, emotional, and cognitive development of children from 2.5 to 8 is studied.

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## 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.*

## 307-109 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.*

## 307-115 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.*

## 307-119 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.*

## 307-105 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.

## 307-108 Orientation/Observation to Early Childhood 3 Credits/72 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. Observations in early childhood centers are 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.

## 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.



## 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.

## 531-101 First Responder 2 Credits/54 hrs.

CPR and Firstaid are covered in this class along with other skills needed by individuals first on the scene of an accident.

## 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.

## 307-112 Infant Toddler Activities 2 Credits/36 hrs.

Developmentally appropriate practice for infant and toddler classrooms are analyzed along with the State regulations. Activities that meet the needs of this age group are shared.

### 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
- 809-197 Contemporary American Society 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 switchboards; and extend cable TV to residential and commercial customers. These networks are constructed and maintained by line installers and cable splicers. To install new electric power or telephone lines, line installers or line erectors install poles and terminals, erect towers, and

place wires and cables. Power equipment is typically used to dig holes and set poles. Line installers climb the poles or use truck-mounted buckets (aerial work platforms) and use hand tools to attach the cables. When working with electric power lines, installers bolt or clamp insulators onto the pole before attaching the cable. They may also install transformers, circuit breakers, switches, or other equipment. To bury underground cable, they use trenchers, plows, and other power equipment.

The Electric Power Distribution program prepares a student to advance to an electric line technician apprenticeship and related occupations. Students learn how to properly climb poles and install line hardware and equipment. Safety policies and procedures will be taught and strictly adhered to. Students will learn motor vehicle operation and maintenance, attain a working knowledge of ropes and rigging, proper application of rubber protective equipment and use of hot sticks. Students will also study and apply mapping and laying out lines for construction. Students will set poles at proper depth, install guys and anchors of the required strength to hold various lines.

AC and DC current will be taught along with Introduction to Fundamentals of Electricity.

#### 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.

#### Possible jobs include:

Electric Utility Lineman, Telephone Repairman, Cable TV Installer.

Course Name	Credits	Lec-Lab
<b>Semester 1</b>		
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
<b>Semester 2</b>		
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
<b>Total Credits</b>	<b>32</b>	

### 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
*Elective	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
*Elective	3	

**TOTAL CREDITS** 72

\*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**

## 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.

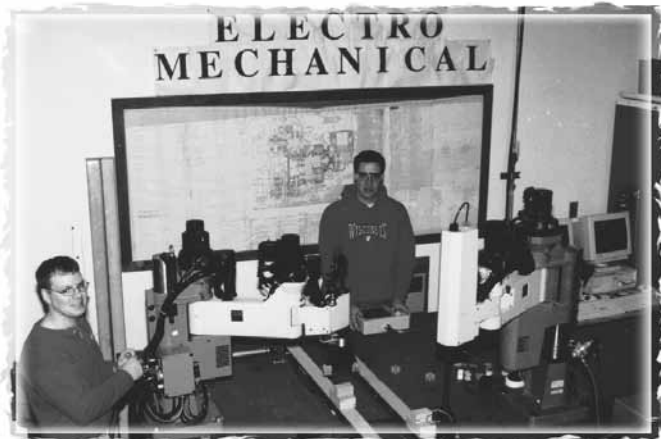
## 620-162 Applied Robotics 4 Credits

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 |



Electronics technology promises continued career growth opportunities into the next century. This occupation offers a range of options in many different areas of specialization.

Electronic Technicians perform a variety of duties in the manufacture of electronic equipment, research and development of new equipment, or the repair and maintenance of existing equipment. Electronic Technicians install, test, repair, and calibrate equipment to ensure that it functions properly. They keep detailed records on each piece of equipment to provide a history of tests, performance problems, and repairs.

Typical skills include tests and inspections of electronic equipment on the assembly line; testing, adjusting and repairing completed equipment; building experimental models of equipment; making complex tests of newly developed instruments called systems; inspecting equipment while in use and performing preventative maintenance; locating troubles and repairing or replacing defective parts; and reading diagrams and following mathematical formulas in diagnosing problems.

When equipment breaks down, technicians first examine a work order, which indicates problems, or talk to equipment operators. They then check for common causes of trouble such as loose connections or obviously defective components. If routine checks do not locate the trouble, technicians may refer to blueprints and manufacturers' specifications that show the connections and provide instructions on how to locate problems. They use voltmeters, ohmmeters, signal generators, ammeters, oscilloscopes, and run diagnostic programs to pinpoint malfunctions. It may take several hours to locate a problem but only a few minutes to fix it. However, more equipment now has self-diagnosing features, which greatly simplifies the work.

The nature of electronics technology requires aptitudes and interests in mathematics and problem solving, science, and analytical thinking, manual dexterity, mechanics and the use of tools.

Work setting in the electronics field may vary widely, and electronics technicians are employed in many different types of operations. In addition to manufacturing and other industrial environments, electronics technicians are found in communications, customer engineering, radio and television, medicine, and other fields that utilize sophisticated electronic apparatus. Depending on the specific demands of their jobs, they may work independently, with groups of technicians, or under the supervision of electronics engineers.

## Potential Employment Opportunities

Positions for computer and office machine technicians are projected to be plentiful through the year 2005. Developments in electrical and electronics components influence the need for technicians. Other growing fields include biomedical electronics, robotics, and other specialties. Graduates of post-secondary training programs will have the best opportunities. Typical salary ranges in the state of Wisconsin are between \$25,000 and \$37,000 a year for Electronic Technician, Electronic Systems Technician, Computer/Digital Systems Technician, Electronic Engineering Assistant, Laboratory/Service Technician, Tech-Reps, Technical Support/Service Reps, Radar & Communication Technicians, Electronic Engineering Assistants and Laboratory Technicians, Electronic Printed Circuit Board/Layout Drafter,

Instrumentation Technician, Electronic Systems Analyzer, Electronic Maintenance Supervisor, Technical Writer

	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>			
605-137	Microprocessor Applications & Interfacing	3	2 - 3
605-140	Motors & Servo-mechanisms	3	2 - 3
806-152	Technical Science II	3	2 - 2
809-197	Contemporary American Society	3	3 - 0
	*Elective	3	

<b>Semester 4</b>			
605-144	Microprocessor Troubleshooting Tech.	3	2 - 3
605-150	Introduction to Electronics Communication	3	2 - 2
605-169	Research Problems	2	1 - 3
801-197	Technical Reporting	3	3 - 0
809-195	Economics	3	3 - 0
	*Elective	3	

## TOTAL CREDITS

69

\*Electives may be selected from any associate degree program with the approval of student program advisor

## 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.**



**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 analog devices including op amps, radio receivers, SCR's, diac's, triac'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 analog solid state devices found in electronic equipment. Both regulated and unregulated power supply designs are covered. This course will give the student an insight into the design of power supplies and their components. The course will also cover transistor 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 is an introductory course in programming microprocessors, where the student will be introduced to a high level language. Basic pascal 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.

**605-137 Microprocessor Applications & Interfacing 3 Credits**

This course is a study of the basic IC components, software, and interfacing techniques used in making up a microprocessor based system. The course will cover the individual elements of a microprocessor system from the component level.

Applications related to the data processing, digital equipment and machine control fields will be discussed.

**Prerequisite:** 605-116 & 605-130.

**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.

**605-144 Microprocessor Troubleshooting Techniques 3 Credits**

The student will learn the necessary troubleshooting techniques to locate and repair microprocessor and peripheral equipment malfunctions. The student will use many methods, and employ special test equipment such as logic probes, signature analyzers, IC comparators, logic analyzers and will gain practical experience with hands-on laboratory sessions.

**Prerequisite:** 605-137.

**605-150 Introduction to Electronic Communications 3 Credits**

This course is a study of the basic principles and processes used in modern communication systems, and the more specialized basic circuits and processes that have not been studied previously. Topics include amplitude and frequency modulation principles and techniques, plus communication methods, television methods, transmission lines and antennas.

**Prerequisite:** 605-116.

**605-169 Research Problems 2 Credits**

This course is designed to exercise the student's knowledge of electronics through individual or small group projects and to direct the student's attention and exercise his/her skills toward some of the real problems of electronic circuit or system fabrication. It provides time and opportunity for the student to work on the design, fabrication, assembly and testing of some electronics devices, circuits, units or systems. Its purpose is to promote independent study, initiative, and the assumption of responsibility and work without specific instruction upon initiation of the project. The student draw upon all of his/her previous courses of study in order to arrive at satisfactory project completion. It will be necessary for the student to select materials, devices, components, means of fabrication, sizes and dimensions, test and method of performance evaluation.

**Prerequisite:** 605-116, 605-135 and 605-137.

**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

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. **EMT-Basic is available at the Monroe Campus.**

**A Caregiver Background Check WILL be required for clinical portion of the program.**

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
531-301	EMT-Basic	4	4 - 4
531-302	EMT-Intermediate*	3	3 - 3
<b>Other EMS Courses</b>			
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
531-454	EMT-Intermediate Refresher		12
531-455	Heartsaver AED		4

## Also

Continuing Education for the EMT and Special Seminars.

## 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.

## 531-302 EMT-Intermediate 3 Credits

The EMT-Intermediate represents the second component of the three-part EMT system. The course consists of advanced patient assessment/management, ventilatory management, intravenous therapy, and medication skills. The advanced level skills are interwoven with basic skills. The National Registry of EMT's intermediate test is required at the completion of the course for licensure in the State of Wisconsin.

**Prerequisite: Licensed EMT-Basic.**

## 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.

## 531-454 EMT-Intermediate Refresher 12 Hours

Biennial State of Wisconsin mandated refresher course for licensure renewal. Intermediate skills are emphasized along with new protocols for the two-year period.

## 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.

## 531-412 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.





**531-433 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.

**531-400 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).

**531-434 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).

**531-431 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).

**531-438 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).

**531-411 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).

**531-455 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.

**531-436 CPR-Refresher** **6 Hours**  
Biennial update for those already certified in CPR.

**531-430 Automatic Electronic Defibrillation\*\*** **6 Hours**  
This course is for EMTs and First Responders only.







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 on-farm instruction in which individual attention is given to each person. On-farm instruction is pre-scheduled and a calendar is sent to you each month listing your "On-Farm Day" for that month.

**Classes are available at the Monroe Campus.**

**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
<b>General Education Courses</b>		
801-195 Written Communications	3	3 - 0
801-196 Oral/Interpersonal Communications	3	3 - 0
804-105 General Math	3	3 - 0
806-121 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
<b>Technical Support Courses</b>		
107-103 Basic Computer Concepts	3	3 - 0
503-144 Directed Independent Research	3	3 - 0
<b>Suggested Electives (Minimum of 6 credits required)</b>		
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**

### CERTIFIED FIREFIGHTER SERIES

Firefighter I (96 Hours)	3 Credits
Firefighter II (66 Hours)	3 Credits
Fire Apparatus Driver/Operator (81 Hours)	3 Credits

### 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.





## 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 Chemistry 3 Credits
- 809-195 Economics 3 Credits
- 809-196 Introduction to Sociology 3 Credits
- 809-198 Introduction to Psychology 3 Credits



*A Caregiver Background Check ~~may be required for Externship.~~*

## Course Descriptions

### 509-315 Professional Vocational Relations 1 Credit

This course provides an introduction to the professional organizations and various community agencies. Current health issues and career planning are discussed. The development of health care institutions and the practice of medicine today are included.

### 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 4 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 3 Credits

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.

### 107-301 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



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.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
509-315	Professional Vocational Relations	1	2 - 0
509-316	Understanding Human Behavior	1	2 - 0
510-117	Medical Terminology	3	3 - 0
510-327	Transcribing Orders	1	2 - 0
510-330	Health Unit Coordinator Procedures	3	4 - 2
510-332	Health Unit Coordinator Externship	4	0 - 6
<b>Technical Support Courses</b>			
106-140	Keyboarding	1	0 - 2
107-301	Computer Basics	1	0 - 2
<b>General Education Courses</b>			
801-311	Communications I	2	3 - 0
<b>TOTAL CREDITS</b>		<b>17</b>	

A physical examination is required for enrollment in this program.

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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.

**Job Titles:** 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

## Semester 3

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
	Elective	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
	Elective	3	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.

**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.

**601-150 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.

**601-145 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.

**601-160 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.

**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 |



## INDIVIDUAL TECHNICAL STUDIES

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 student may use their electives to take additional technical studies courses.

### Program Requirements:

General Education 18 credit hours

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 Claire O'Dea at the Monroe Campus (328-1660).





## General Education Courses

### 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. This 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.

### 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, and the 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.

*Courses in this degree can be designed for transfer to selected degrees at the University of Wisconsin-Platteville. Contact the Dean of Business Occupations for more information.*

**Check Out BTC's  
Website at:**

***www.blackhawktech.org***



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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.

**Possible job titles for graduates include:** 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>			
107-103	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
	or		
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

### 107-103 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



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.

**Job Titles:** Landscape Worker, Nursery Worker, Greens keeper, Garden Center Worker, Forester, Horticulture Machine Maintenance Worker, Turf Worker, Arborist.

## Course Name

Credits Lec-Lab

### Required Courses

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
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.**

### 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

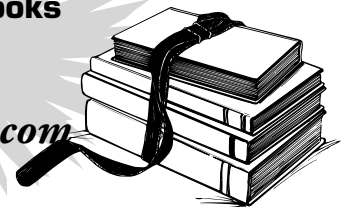
Starting and growing plants from seeds, cuttings, divisions, layering and grafting are covered in this course. Information on growing structures, environmental controls, and cultural practices are explored along with marketing and merchandising.

## 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.

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# LEGAL SECRETARY

The Legal Secretary Program prepares students to become employees for private attorneys, law firms, insurance agencies, real estate agencies, banks, corporate or government offices.

Training is provided in communicating with clients in person and on the telephone. The program will familiarize the students with legal office procedures, ethics and confidentiality. There is special emphasis on building legal vocabulary, preparation of legal documents, as well as project management.

High level skill development in keyboarding, 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, Receptionist, Correspondence Clerk, Word Processing Operator.

Potential Advancement To: Professional Legal Secretary (PLS), Legal Assistant, Paralegal, Office Manager and/or 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>Electives:</b>		
106-106 Notetaking		
106-163 Internship		
<b>TOTAL CREDITS</b>	<b>69</b>	

\*Course has prerequisite.



## 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 business and individuals. Emphasis is placed on business law as it pertains to torts, contracts, and case analysis.

## 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 spelling, capitalization, number usage, punctuation, word division, and proofreading. The operation of transcription equipment is introduced while material is transcribed using legal vocabulary. The course introduces Wisconsin civil procedure, real estate documentation, and divorce procedures. Composition at the computer is also a part of this class. A "C" is required in this class in order to progress to Legal Document Transcription.

**Prerequisite:** *Legal Terminology and Court Structure, Written Communications or Secretarial Communications with a "C" or better grade.*

## 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. A notebook will be required to continually develop organizational skills. 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 covers citing federal and state cases, statutes, legislative history materials, treatises, law reviews, as well as some additional secondary sources. Finding materials in the law library from citations is included. The basics of computerized legal research and writing, along with the preparation of legal documents, are stressed.

**Prerequisite:** 106-131 Keyboarding Applications or keyboarding rate of 35 wpm minimum.

**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**

Information Processing Principles is a computer concepts course designed to develop an understanding of the information processing cycle and workflow, terminology, hardware, software, and related career opportunities. It is a beginning course that provides the background knowledge necessary for students to work efficiently with computers and

software. The major focus in this course is learning computer terms and functional capabilities.

**Prerequisite:** Touch keyboarding skill of 30 wpm.

**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 more "in depth" training on the procedures in several fields of law, which have been recommended by the Legal Secretary Program Advisory Committee. Attorneys with expertise in each of these areas of law assist in teaching the units. The primary course objective is to provide in-depth procedural information in each area of law. This will enable students to enter jobs at entry level and understand what they are doing as well as why the task is necessary. Another objective is to create an interest in paralegal-type work so that continued learning and acceptance of increasing responsibility is apparent.

**Prerequisite:** 106-152 Techniques of Legal Practice I with grade of "C" or better.

**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 covers a range of business activities and career choices. Because each of us has had so many exposures and life experiences with different people who perform important marketing jobs in literally every business and organization, Marketing does mean different things to different people.

- 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 may mean positions of great responsibility. These jobs involve managing departments, territories, small businesses, or a marketing function within corporate profit centers. In these supervisory and managerial positions, Marketing graduates are responsible and accountable for resources involving dollars, inventories and employees.

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

Hundreds of job titles in manufacturing, wholesaling and retailing of consumer and business-to-business products and services.

## 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.

Course Name

Credits

Lec-

## 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 Computer Applications in Marketing

### Lab

#### Semester 1

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
107-103	Basic Computer Concepts	3	3 - 0
801-195	Written Communications	3	3 - 0

#### Semester 2

104-113	Marketing Career Strategies	1	0 - 2
104-117	Promotion Principles <sup>1&amp;2</sup>	3	3 - 0
104-144	Graphic Applications in Marketing <sup>1</sup>	3	1 - 4
104-190	Retail Principles	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

#### Semester 3

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
104-193	Supervision <sup>1</sup>	3	3 - 0
809-195	Economics	3	3 - 0
	Elective (e.g., Merchandise Management)	3	3 - 0

#### Semester 4

104-111	Computer Applications in Marketing <sup>1</sup>	3	2 - 2
104-118	Design Concepts	2	1 - 2
104-140	E-Commerce	3	3 - 0
104-146	Marketing Management <sup>1</sup>	3	3 - 0
809-197	Contemporary American Society	3	3 - 0
	Elective (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.*

## 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 2 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.

**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.

**804-117 Marketing 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.*

**104-144 Computer 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:** *Marketing Principles and satisfactory presentation assignment score.*

**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:** Marketing 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.

## 107-103 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.

### 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
- 809-197 Contemporary American Society 3 Credits
- 809-198 Introduction to Psychology 3 Credits

# MECHANICAL DESIGN TECHNICIAN

**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.



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.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
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
<b>Semester 2</b>			
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
<b>Semester 3</b>			
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
	*Elective	3	
<b>Semester 4</b>			
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
	*Elective	3	
<b>TOTAL CREDITS</b>		<b>67</b>	

\*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



Medical Assistant, Medical Laboratory Assistant, Medical Secretary, 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 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 Skills I*	2	2 - 2
509-312 Medical Insurance	1	2 - 0
509-316 Understanding Human Behavior - Health	1	2 - 0
509-318 Medical Terminology I*	1	2 - 0
509-340 Medical Law & Ethics*	1	2 - 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.

<b>Semester 2</b>		
106-329 Medical Assistant Transcription	1	2 - 2
106-342 Medical Office Procedures*	3	5 - 0
509-321 Medical Skills II*	3	6.5 - 2
509-323 Medical Terminology II*	1	2 - 0
509-324 Professional Vocational Relations-MA	1	2 - 0
509-327 The Human Body in Health & Disease II*	4	4 - 0
509-335 Medical Laboratory II*	2	2 - 2
801-312 Communications II*	2	3 - 0
509-329 Externship-Medical Assistant	2	

(160 hours: the last 4 weeks of the second semester).

**TOTAL CREDITS 34**

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 may be 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.



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**

Overview  
of BTC

Getting  
Started

Services for  
Students

Important  
Information

Programs  
& Services

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Programs

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Programs

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## 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:** Concurrent enrollment in 106-334 Medical Typing and Computer Applications or 106-140 Keyboarding or touch keyboarding skill of 25 wpm for 3 minutes with 5 or fewer uncorrected errors.



### 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 Document Applications 3 Credits

In this course, general typing techniques and procedures are reviewed (keyboard, horizontal and vertical spacing, centering, tables, spacing with punctuation, word division, proofreading, and correspondence parts and format). In addition, medical reports including the following systems will be typed: circulatory, digestive, endocrine, genitourinary, integumentary, musculoskeletal, nervous, EENT, and respiratory. The students will learn the basics of a word processing program and will key all assignments 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.

### 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 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 Skills II (509-321) completes this subject.**

### 509-312 Medical Insurance 1 Credit

Students gain knowledge in insurance terminology, legal considerations, 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.

### 509-316 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.

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



## 509-318 Medical Terminology I

1 Credit

This course is an orientation to assist the student in developing a medical vocabulary. The student learns to recognize, spell, define and pronounce medical terms. A system of word building by learning word roots, prefixes and suffixes, and methods of combining them, is presented.

*Medical Terminology II (509-323) completes this subject.*

## 509-321 Medical 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.*

## 509-323 Medical Terminology II

1 Credit

This course continues to assist the student in developing a medical vocabulary. It is closely correlated with the Human Body in Health and Disease II sections to better clarify terminology specific to each body system.

*Prerequisite: 509-318.*

## 509-324 Professional Vocational Relations - MA

1 Credit

This course continues to assist the student in developing a "professional conscience." Issues arising from current technologies are discussed. The medical specialties, health associations and community services are studied to help the medical assistant better serve his/her patient and physician. The significance of professional organizations is further explored with emphasis on the American Association of Medical Assistants (AAMA). Certification, continuing education and activities at local, state, and national levels are discussed as well.

## 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

2 Credits

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.

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

- 801-311 Communications I 2 Credits
- 801-312 Communications II 2 Credits



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This program provides educational opportunities for those interested in working as a Medical Secretary 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 Secretary students receive specialized training in medical ethics, medical terminology, anatomy, health insurance, medical billing, medical transcription and word processing.



## Potential Employment Opportunities

Medical Transcriptionist, Medical Secretary, Administrative Secretary, Medical Records Technician, Medical Records Clerk, Medical Voucher Clerk, Receptionist, Underwriting Clerk, Medical Clerk/Typist, Clinic Clerk, Hospital Clerk, and Admissions Clerk

Course Name	Credits	Lec-Lab
<b>Semester 1</b>		
106-101 Medical Secretary Orientation	1	1 - 0
106-126 Records Management	3	3 - 0
106-131 Keyboarding Applications*	3	1 - 4
509-112 Medical Insurance	2	1 - 2
509-113 Ethical/Legal Issues in Health Care	2	2 - 0
801-195 Written Communications	3	3 - 0
<b>Semester 2</b>		
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
<b>Semester 3</b>		
101-102 Office Accounting	3	2 - 2
106-103 Medical Transcription I*	4	1 - 6
509-114 Pharmacology Terminology	2	2 - 0
806-194 Survey of Anatomy & Physiology	3	2 - 2
809-198 Introduction to Psychology	3	3 - 0
Elective(s)	3	varies
<b>Semester 4</b>		
106-104 Medical Transcription II*	3	1 - 4
106-105 Radiology/Pathology Transcription*	3	1 - 4
106-109 Medical Office Administration*	3	2 - 2
809-195 Economics	3	3 - 0
809-196 Introduction to Sociology	3	3 - 0
Elective(s)	3	varies
<b>TOTAL CREDITS</b>	<b>65</b>	

\* Course has prerequisites.

Suggested Elective:

106-124 Medical Secretary Internship/Field Study 1 credit

## 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 Secretary 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.

### 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 on voice transcribing machines using 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, grammar, spelling, and punctuation are reviewed. The student will produce various medical and surgical reports representative of those typed in hospitals and clinics using a word processing program.

**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 computerized patient billing procedures in the medical office environment. The students will input patient information, charges, payments, and appointments. In addition, reports and insurance forms are generated using a microcomputer billing program. Introduction to letter and procurement are introduced. Phone skills are reinforced.

**Prerequisite:** *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.*

**106-124 Medical Secretary Internship/Field Study 1 Credit**

In this course, students apply and interview for medical secretary 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 Secretary Program.*

**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.

**106-127 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.*

**509-112 Medical Insurance 2 Credits**

This course offers the student knowledge in understanding medical insurance. Insurance terminology, legal considerations, diagnostic and procedural coding, and types of medical insurance are studied. Develop skill in information seeking and problem solving through exercises in coding and claims preparation and payment.

**509-113 Ethical/Legal Issues in Health Care 2 Credits**

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.

**509-114 Pharmacology Terminology 1 Credit**

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.

**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.

**806-194 Survey of Anatomy & 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.*

**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 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 (NLN). For more information, contact NLN at 350 Hudson Street, New York, NY, 10014, 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 November for the following fall. Notify the program coordinator if you do not receive an application by November 25. Students may apply for testing for licensure as a L.P.N. 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 Staff Registered Nurse in acute care, long term care, or some community settings.

Course Name	Credits	Lec-Lab
<b>Semester 1</b>		
510-103 Foundations of Nursing	3	4 - 8
510-131 Nursing 1: Acute Care	5	6 - 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: Specialization 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 Asset Test (42 or higher) or 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).

**510-103 Foundations of Nursing****3 Credits**

This course is an introduction to the practice of nursing. Legal, ethical, and professional issues in nursing area 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****5 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 OB sites caring 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:** 510-101, 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 of management of the care of the individual with orthopedic and neurologic conditions in acute and rehabilitation settings. The course will emphasize principles related to working with and caring for groups of individuals. the small assembly sessions (SAS) will provide an opportunity for principles of group dynamics to be analyzed and applied.

**Prerequisites:** 510-103, 510-131, 510-132, 510-133, 806-196, 806-197, 809-120, 806-196, 809-198, 801-195, Current CPR Certification.

**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 clinical 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:** 510-101, 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: Specialization****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

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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)

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.

**This program is also available at the Monroe Campus.**

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)

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 - 4
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	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	4	0 - 15
524-130	Physical Therapy Interventions III <sup>1</sup>	7	4 - 4
809-198	Introduction to Psychology	3	3 - 0
	Elective	3	
<b>Semester 4</b>			
524-135	Physical Therapy Clinical Practice III (2nd 9 Wks.)	5	0 - 18
524-140	Physical Therapy Life Span Applications (1st 9 Wks.)	3	3 - 0
524-145	Physical Therapy Health Care Systems I (1st 9 Wks.)	2	2 - 0
524-150	Physical Therapy Administration (1st 9 Wks.)	1	1 - 0
	Elective	3	
<b>TOTAL CREDITS</b>		<b>70</b>	

## Suggested Electives:

510-117	Medical Terminology	3
809-120	Developmental Psychology	3
107-103	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

### 107-103 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, the roles of the team members, and the professional organizations involved in physical therapy. An overview of physical therapy facilities, as well as health care models and systems, 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 is also included.

**Pre- or Corequisites:** Admission to the PTA Program, 801-195, 806-140, 806-131.

# PHYSICAL THERAPIST ASSISTANT

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## 524-115 Physical Therapy Clinical Practice I 2 Credits

This course introduces the student to the clinic. Students will apply skills learned in Introduction to Physical Therapist Assistant, Physical Therapist Assistant I, and Applied Anatomy & Physiology to direct patient care in selected clinical affiliations. This course also includes fire safety, first aid, and CPR. 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 7 Credits

This course prepares the student in application of therapeutic exercise, and basic commonly used treatment and re-assessment techniques including goniometry and manual muscle testing. The appropriate pathophysiology and patient response are emphasized. This course also focuses on pathophysiology and treatment of musculoskeletal conditions; traction; isokinetics; and documentation in physical therapy.

**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 Therapist Assistant I, II, and III to direct patient care in selected clinical affiliations. In-depth written case histories require examination of diagnosis, medical history, and physical therapy programs. S.O.A.P. notes are 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 6 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, 24-120, 524-115. **Corequisites:** 524-125.

## 524-135 Physical Therapy Clinical Practice III 5 Credits

During this terminal full-time clinical experience, students will apply concepts and 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 Life Span Applications 3 Credits

Identification is made of normal and abnormal growth and development throughout the life span. Selected medical, neurological, and orthopedic conditions common to pediatrics, adolescence, and adulthood are described and treatment routines are introduced. The normal aging process, the pathology of aging, and functional and psychosocial aspects of geriatrics are emphasized.

**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

Discusses physical therapy departmental administration, organization, maintenance, staff supervision, and professional development. Focuses on the role and utilization of the Physical Therapist Assistant with emphasis on legal, ethical, and practice perspectives. Explores current issues and trends of the profession with related impact on physical therapy services. Provides basic job seeking skills. Examines various types of healthcare financing, documentation requirements, quality management, and outcome measurement.

**Prerequisites:** Admission to the PTA Program, 524-125, 524-130. **Corequisites:** 524-140, 524-145, 809-197.



### 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 Police Science Associate Degree program at Blackhawk Technical College.

#### As a BTC police officer-in-training 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 Police Science Department 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
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#### Semester 1

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

#### Semester 2

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
	Elective*	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
	Elective*	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.



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
- Mobile Imaging Companies
- Physician's Offices
- Research Facilities
- Imaging Clinics
- 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 ASSET Test score = 42 (taken at BTC) or COMPASS Test equivalent

### 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>Summer Year 1</b>		
526-101 Introduction to Radiography	3	3 - 0
510-117 Medical Terminology	3	3 - 0
<b>Fall Semester, Year 1</b>		
526-102 Radiographic Procedures I	4	3 - 2
526-104 Radiation Protection & Biology	3	3 - 0
526-105 Applied Clinical Radiography I	2	0 - 16
526-115 Methods of Patient Care	3	3 - 0
806-195 Anatomy and Physiology I	4	3 - 2
<b>Spring Semester, Year 1</b>		
526-103 Principles of Radiographic Exposure	3	3 - 0
526-106 Radiographic Procedures II	4	3 - 2
526-108 Applied Clinical Radiography II	2	0 - 16
801-196 Oral/Interpersonal Communications	3	3 - 0
806-196 Anatomy and Physiology II	4	3 - 2
<b>Summer Year 2</b>		
526-109 Applied Clinical Radiography III	1	0 - 24
526-116 Special Imaging	2	2 - 0
809-195 Economics	3	3 - 0
<b>Fall Semester, Year 2</b>		
107-103 Basic Computer Concepts	3	3 - 0
526-110 Applied Clinical Radiography IV	2	0 - 24
526-118 Radiation Physics	2	2 - 0
801-195 Written Communications	3	3 - 0
Elective	1	3
<b>Spring Semester, Year 2</b>		
526-112 Applied Clinical Radiography V	2	0 - 24
526-117 Principles of Radiographic Pathology	2	3 - 0
809-198 Introduction to Psychology	3	3 - 0
809-197 Contemporary American Society	3	3 - 0
Elective	2	3
<b>TOTAL CREDITS</b>	<b>70</b>	

Electives may be any associate degree level course totaling 6 credits.

**Suggested Electives:** 2526-113 Registry Review, 1526-114 Introduction to Cross-Sectional Anatomy

## 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:** None.

## 526-102 Radiographic Procedures I 4 Credits

This course encompasses the radiographic anatomy, positioning and its terminology, image evaluation, and radiographic pathology pertinent to the performance of radiographic examinations of the chest, abdomen, upper and lower extremity/ies, spinal column, and bony thorax. The laboratory portion of this course allows the student to simulate all radiographic examinations to the satisfaction of the instructor before performing procedures on patients.

**Prerequisites:** 526-101. **Corequisites:** 526-115, 526-104 and 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, 526-115, and 526-105.

**Corequisites:** 526-106, and 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. **Corequisites:** 526-102, 526-115 and 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; **Co-requisites:** 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, 526-115.

**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, 526-115.

**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:** 526-116.

**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, 526-116. **Corequisite:** 526-118.

**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, 526-118. **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, 526-118 (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:** 526-109, 526-116, 806-195, 806-196, (or permission of Radiography Coordinator). **Corequisites:** 526-110, 526-118 (or permission of Radiography Coordinator).

**526-115 Methods of Patient Care 3 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:** 526-101. **Corequisite:** 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, 526-118. **Corequisite:** 526-112.

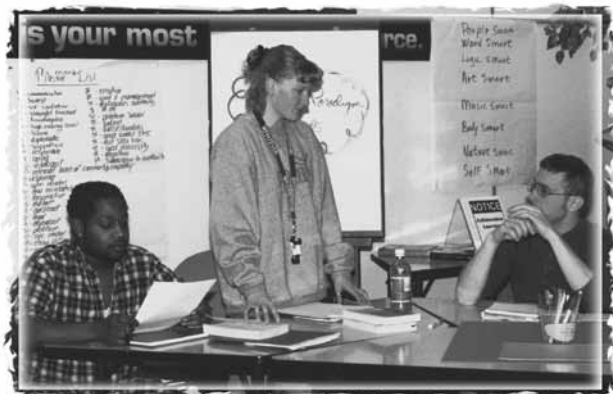
**526-118 Radiation Physics 2 Credits**

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. **Corequisites:** 526-110.

**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 and Physiology II 4 Credits
- 809-195 Economics 3 Credits
- 809-197 Contemporary American Society 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 Supervisory Management (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 Supervisory Management (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 Supervisory Management (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.

**The Supervisory Management (Management Development) Associate Degree and the 18 + 33 credit certificates are available at the Monroe Campus.**

***You can receive an Associate Degree in the following two formats to fit your schedule:***

## **Traditional Management Development (Supervisory Management):**

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):**

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 Supervisory Management (Management Development) Program may choose from two program options in addition to the Associate Degree: (66 Credits)**

**18-Credit Supervisory Management (Management Development) Certificate**

Students may earn this certificate by taking eighteen (18) credits from the Occupation Specific courses.

**33-Credit Supervisory Management (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

## **Occupational Support Courses**

101-117 Accounting Fundamentals	3	3 - 0
102-160 Business Law	3	3 - 0
107-103 Basic Computer Concepts	3	3 - 0

## **General Education Courses**

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 (Management Development), students must complete the courses listed above, for a total of 66 credits.



## Course Descriptions

### 101-117 Accounting Fundamentals 4 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 business and individuals. Emphasis is placed on business law as it pertains to contracts, sales of goods, and negotiable instruments.

### 107-103 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



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.

Welders have many different titles in industry such as: Welder Helper, Welder Tacker, Production Line Welder, Fabrication Helper, Fabricator, Machine Maintenance Helper - Welder, and others that go along with these titles.

	Course Name	Credits	Lec-Lab
<b>Semester 1</b>			
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
<b>Semester 2</b>			
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
<b>TOTAL CREDITS</b>		<b>33</b>	

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.

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.

## Curriculum: Occupational Specific

Course #	Course Title	Credits	Hrs/Wk Lec – Lab
533-101	Introduction to Deafness	3	3 - 0
533-102	ASL Beginning	4	4 - 0
533-103	Interpreter Practicum I	3	2-0-0-4
533-104	ASL Intermediate	4	4 - 0
533-105	Cultural Sensitivity in Interpreting	2	2 - 0
533-106	ASL Structure & Function	3	3 - 0
533-107	ASL Intermediate II	4	4 - 0
533-109	Deaf Culture in America	3	3 - 0
533-110	ASL Advanced	4	4 - 0
533-111	Interpreter Practicum II	3	1-0-0-8
533-112	Professional Development for Interpreter	22	22 - 0
<b>Total Required</b>		<b>35</b>	

## Occupational Support

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
196-148	Stress Management*	1	1 - 0

## OR

196-149	Time Management*	1	1 - 0
<b>Total Required</b>		<b>11</b>	

## General Education Courses

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

**Total Required 15**

## Suggested Electives

530-101	Language of Medicine	3	3 - 0
106-155	Legal Terminology	2	2 - 0
196-143	Interpersonal Relations	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-Beginning 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.

## 533-104 ASL Intermediate 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.

## 533-107ASL-Intermediate II 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.

## 533-110 ASL-Advanced 4 Credits

This course will expand the student's ability to interpret from ASL to English and from English to ASL. The full spectrum from simple sentences to complex ASL sentences and idioms will be developed.

## 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.

## 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.

## 533-105 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.

## 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.

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## 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.

## 533-111 Interpreter Practicum II 3 Credits

In this course the students will observe and participate in activities with Deaf children and/or adults.

## 533-112 Professional Development 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.

## 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.

### CURRICULUM

	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
801-151	Communication Skills OR	3	3 - 0
801-201	English Composition I	(3)	(3-0)
806-201	General Organic & Biological Chemistry	5	4 - 2
806-273	Microbiology	3	3 - 2
<b>Semester 2</b>			
513-104	Hematology	5	3 - 6
513-111	Clinical Microbiology	5	3 - 6
801-152	Communication Skills II OR	3	3 - 0
801-202	English Composition II	(3)	(3-0)
806-206	General Anatomy & Physiology	4	3 - 2

### Summer Session

809-197	Contemporary American Society OR	3	3 - 0
809-203	Introduction to Sociology	(3)	(3-0)
809-199	Psychology of Human Relations OR	3	3 - 0
809-231	Introduction to Psychology	(3)	(3-0)

### 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 OR	3	3 - 0
809-122	State & local Government	(3)	(3-0)
	Elective	3	----

### Semester 4

513-112	Seminar	1	1 - 0
513-113	Practicum (18 Weeks)	10	0 - 40
	Elective	3	E
<b>Semester Total</b>		<b>14</b>	<b>41 + E</b>

## 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.



## 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.

### CURRICULUM

Course Name	Credits	Lec-Lab
<b>Semester 1</b>		
514-101 Introduction to Occupational Therapy	3	3 - 0
514-111 Therapeutic Skills I	2	2 - 2
514-148 Minor Media	1	1 - 2
801-153 Communication Skills I OR	3	3 - 0
801-201 English Composition I	(3)	(3-0)
806-207 Anatomy & Physiology I	4	3 - 2
809-199 Psychology of Human Relations OR	3	3 - 0
809-231 Introduction to Psychology	(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 OR	3	3 - 0
801-202 English Composition II OR	(3)	(3-0)
810-242 Public Speaking	(3)	(3-0)
809-237 Abnormal Psychology	3	3 - 0
<b>Summer Session</b>		
514-150 Media & Skills	4	0 - 18
809-197 Contemporary American Society OR	3	3 - 0
809-203 Introduction to Sociology	(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
514-145 Recreation Practice	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

## 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.

# OCCUPATIONAL THERAPIST ASSISTANT–Shared Program

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## 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.



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.

**This program is also available at the Monroe Campus.**

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.*



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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 Police Science 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.



## Business Occupations Division

- Accounting (Associate Degree)\*
- Administrative Assistant (Associate Degree)\*
- Computer Information Systems-Microcomputer Specialist (Associate Degree)
- Computer Information Systems-Microprogrammer Specialist (Associate Degree)
- Computer Information Systems-Network Specialist (Associate Degree)
- Legal Secretary (Associate Degree)
- Marketing (Associate Degree)\*
- Medical Secretary (Associate Degree)\*
- Supervisory Management (Management Development) (Associate Degree)\*



## 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)
- Electronic Technology (Associate Degree)
- Farm Business and Production Management (Certificate Program)
- Industrial Engineering Technician (Associate Degree)
- Landscape & Turf Services (One-Year Technical Diploma)
- Mechanical Design Technician (Associate Degree)
- Technical Studies-Journeyworker (Covers all Divisions) (Associate Degree)



\*-short-term certificates available in these programs

## Service Occupations

- 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)
- Medical Secretary (Associate Degree)
- Nursing (RN) (Associate Degree)
- Physical Therapist Assistant (Associate Degree)
- Police Science (Associate Degree)
- Radiography (Associate Degree)



## Others—Certificate/Special Programs

- Basic Police Recruit School
- Clerical Skills Training
- Computer Applications Specialist
- Emergency Medical Technician
- Food Service Aide
- Geographic Information Systems (GIS) (EMT)--Basic & Intermediate
- Health Unit Coordinator
- Nursing Assistant
- Office Specialist
- Quality Improvement Specialist
- Small Business Management

## Offered in cooperation with Waukesha County Technical College (WCTC)/MATC-Madison:

- Dental Hygiene & Physical Therapist Assistant (WCTC)
- Medical Laboratory Technician & Occupational Therapist Assistant (MATC)





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**Sheila Jones**, Secretary – Aviation Center

**Karla Kennedy**, Placement Clerk – Student Services

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**Teri Palombi**, Secretary – Institutional Advancement

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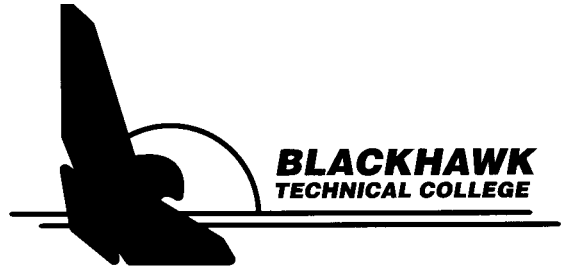
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**Darlene Wagner**, Receptionist/Secretary – District Office

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**BLACKHAWK  
TECHNICAL COLLEGE**

**Rock County Facilities  
and Area Map**

Janesville



Beloit

**Central Campus**

6004 Prairie Road  
County Trunk G  
Janesville

**Aviation Center**

Rock County Airport  
4618 South Columbia Drive  
Janesville

**North Rock County Center**

1740 Highway 14 West  
Janesville

**Beloit Campus**

167 West Grand Avenue  
Beloit







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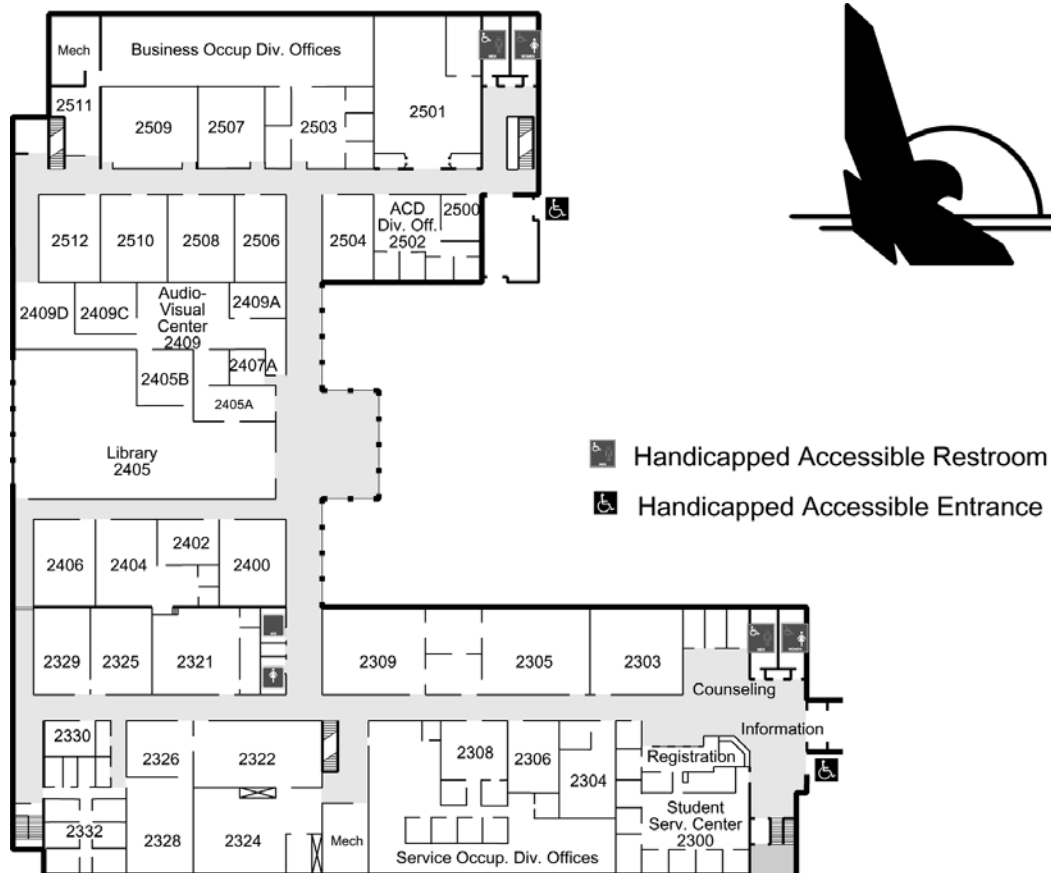
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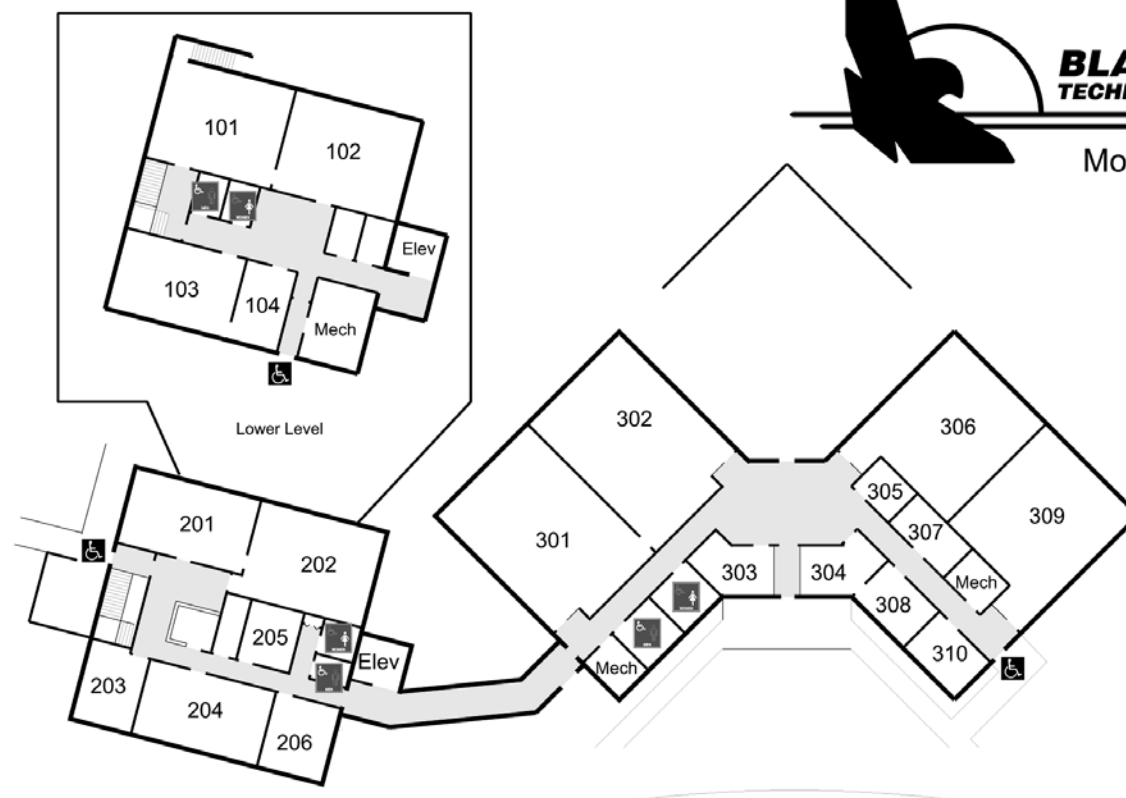
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