Ivy Tech State College offers degree credit programs, courses, career development and technical certificates, and community service offerings. The College provides open admission, counseling, and placement services for all persons, regardless of race, color, creed, religion, gender, limited English proficiency, national origin, physical or mental handicap, limited English comprehension, age, or veteran status.

Disclaimer

This catalog is intended to supply accurate information to the reader. From time to time, certain information may be changed.

The College may revise any matter described in this catalog at any time without publishing a revised version of the catalog. Information which appears to apply to a particular student should be verified by the Registrar's Office. This publication and its provisions are not in any way a contract between the student and Ivy Tech State College.
## TABLE OF CONTENTS

**General Information**  
1 **Introduction**  
2 **Program Information**  
5 **Admissions Information**  
5 Admission  
5 Readmission  
5 Limited Admission Enrollment  
6 Success Seminars  
6 Transferring to the College  
6 Transferring to other Colleges  
6 Tech Prep  
7 Special Needs  
7 International Students  
8 **Financial Assistance**  
11 **Fee Information/Refund Policy/Registration**  
11 College Fees  
11 Additional Expenses  
11 Payment of Fees  
11 Miscellaneous Fees  
12 Registering for Classes  
12 Dropping and Adding  
12 Student Withdrawal  
13 **Student Records**  
13 Dependency Provision  
14 **Academic Information**  
14 Testing Out of Classes  
14 Academic Grading  
14 Grades  
14 Status Codes  
16 Academic Standards of Progress  
16 Academic Problems  
16 Dean's List  
17 Commencement  
17 Attendance  
18 **Student Development/Support Services**  
18 Computer-Assisted Instructional Lab  
18 Testing Lab  
18 Tutoring Lab  
18 Writing Center  
18 Career Counseling  
18 Office of Career and Employment Services  
19 Learning Resource Center/Library  
19 College Bookstore  
19 Child Development Center  
19 Student Government Association  
20 Student Organizations  
20 Alumni Association  
20 Student Right to Know  
20 Communicable Disease Policy  
21 Workplace Violence Policy  
21 Campus Crime Awareness  
22 Sexual Harassment Policy  
23 Drug Policy  
23 Student Rights/Responsibilities  
23 College Rules  
25 Violations  
26 Student Grievance Policy  
28 **Student Information**  
28 Accreditation/Approvals  
28 Nondiscrimination Policy  
28 Telephone  
28 Fire  
28 Tornado  
28 Lounge/Food Service  
28 Non-Smoking Policy  
28 Parking and Housing  
29 **Business and Technology Division**  
51 **Health and Human Services Division**  
61 **General Education and Support Services Division**  
68 **Course Descriptions**  
104 **Ivy Tech Personnel**  
104 Board of Trustees  
104 Administrative Staff  
104 Full-time Faculty
## CALENDAR

### Fall 1995
- August 14 - 18: Faculty Report  
- August 21: First day of classes  
- September 4: Labor Day Holiday  
- November 21-26: Fall Break  
- November 27: Classes begin after Break  
- December 17: Last day of classes  
- December 18 - January 1: Winter Break

### Spring 1996
- January 2-5: Faculty Report  
- January 8: First Day of classes  
- March 4-10: Spring Break  
- March 11: Classes begin after Break  
- April 26: Commencement  
- May 5: Last day of classes

### Summer 1996
- May 6-17: Summer Break  
- May 23: First Day of Classes  
- May 27: Memorial Day Holiday  
- July 4: Holiday  
- August 9: Last Day of Classes

### Fall 1996-97
- April 19-23: Faculty Report  
- August 26: First Day of Classes  
- September 2: Labor Day Holiday  
- November 26-27: Fall Break  
- November 28-December 1: Thanksgiving  
- December 2: Classes Begin After Break  
- December 22: Last Day of Classes  
- December 23-January 5: Winter Break

### Spring 1997-98
- January 6-10: Faculty Report  
- January 13: First Day of Classes  
- March 10-16: Spring Break  
- March 17: Classes Begin After Break  
- May 2: Commencement  
- May 10: Last Day of Classes
In just over a quarter of a century, Ivy Tech State College, formerly known as Indiana Vocational Technical College, has grown from an idea to a thriving postsecondary institution. On June 1, 1995, Ivy Tech adopted the new name to reflect the College's 32-year evolution from a postsecondary vocational school originally designed to provide short-term, job-specific training to a college system with highly sophisticated offerings.

In 1963, the Indiana General Assembly established Ivy Tech State College as Indiana's first statewide vocational technical college by appropriating $50,000 for its development. Following appointment of a State Board of Trustees, a president was named and the first training program was established in 1965. Later amendments to the enabling legislation authorized the College's present regional structure of 13 administrative centers to provide accessible technical educational opportunities to all Indiana citizens. Thirteen regional boards of trustees were appointed, and 13 regions were chartered between 1966 and 1969.

Ivy Tech State College is a public, statewide, open-access, community-based college. The College's mission is to enable individuals to develop to their fullest potential and to support the economic development of Indiana. Ivy Tech State College prepares residents of Indiana with the general and technical education needed for successful careers or for continuation in further higher education. The College provides courses, certificate and degree programs, counseling and related services, technical assistance, and community service to individuals, communities, and businesses and industries across the state. Ivy Tech State College promotes educational mobility through partnerships with local schools and other higher education institutions.

Ivy Tech - Central Indiana offers instruction in three instructional areas: Business and Technology, Health and Human Services, and General Education.

The College's regional office of Business and Industry Training works closely with Indiana businesses to provide customized training and retraining in response to specific company needs. These training programs are available on campus or in the workplace.

Regional History

Ivy Tech State College--Central Indiana, one of the College's 13 regions, opened its doors in 1966 to serve residents of Marion, Morgan, Hancock, Johnson, Shelby, Boone, Hendricks, and Hamilton counties. In 1966, the College enrolled 367 students in three technical programs; in Fall 1994, the College enrolled 6,050 students in 22 areas of study.

Facilities

The Ivy Tech State College--Central Indiana campus is located north of downtown Indianapolis at One West 26th Street, corner of Fall Creek Parkway and North Meridian Street. The central campus is comprised of the North Meridian Center, Technology Center, and the Child Development Center. In addition, the College holds selected classes in area high schools throughout Marion County and the seven surrounding counties.
Ivy Tech State College programs are designed to meet the needs of the student population, accommodating those who wish to enroll in a few classes as well as those who prefer a full program. Credit programs normally culminate in the Associate in Science degree, the Associate in Applied Science degree or the Technical Certificate. The three divisions are Business and Technology, Health and Human Services, and General Education.

Short-term training is available in selected credit courses, in sequences of credit courses, and in custom-designed courses for local business and industry. Also available are contract training programs and non-credit institutional activities, such as seminars, workshops, and conferences.

In addition to program and custom-designed courses, Ivy Tech State College offers basic skills instruction for students who require academic support and/or study skills to assist them in successful completion of a regular program of study. Enrollment in certain basic skills courses is designed to prepare the student for the GED examination.

**Associate in Applied Science (AAS) Degree and Associate in Science (AS) Degree Programs**

Associate in Applied Science degree programs prepare students for career mobility within occupational clusters at the technician or technology level. The programs offer education in recognized specialties with emphasis on analysis, synthesis, and evaluation. The program content, which is approximately 75 percent technical and 25 percent general education, provides both depth and breadth in conceptual and manipulative skills. The general education courses, offered in the areas of communications, humanities, mathematics, life and physical sciences, and social sciences, equip students with the life skills they need to be fully functioning, contributing members of society. Some, but not all, AAS degree programs may transfer to four-year institutions. Ask for details in the Admissions Office.

Associate in Science degree programs prepare students for careers and also enable students who have an interest and ability to transfer Ivy Tech State College credits to cooperating four-year institutions. These programs emphasize cognitive skills intended as pre-baccalaureate study and provide courses equivalent to those prescribed in the lower division of the receiving four-year college or university.

**Technical Certificate (TC) Programs**

The Technical Certificate programs provide training in conceptual and manipulative skills for specific occupations.

Each program contains a sequence of required courses in a recognized specialty within one of the technologies taught at the College. The program content is designed to develop competency in the comprehension of general and technical skills in that specialty.

**Career Development Certificates (CDC)**

Ivy Tech State College provides short-term programs for individuals who desire to develop competencies in a specific area. These programs are less than 32 semester credits in length. Instruction is delivered through methods that include regular courses and specifically-designed courses. Many of these courses are based on a sequence of learning experiences determined by a certifying state or national association or organization. Completion of certain short-term programs qualifies students to sit for certification examinations. The number and types of short-term programs vary.

**Business and Industry Training Programs**

Ivy Tech State College offers specialized training services for business and industry. The Office of Business and Industry Training develops custom-designed programs and services to meet the training needs of local businesses. The office works with business and industry, trade unions, and public and community economic development groups to assess training needs and to deliver training when and where it is needed, often in-plant. Call (317) 921-4775 for more information.

**General Technical Studies Program**

The General Technical Studies Program provides an option for students who may not be ready to enter a degree program. As such, the program serves primarily as a beginning point for students as they define and meet their educational objectives. It is designed to meet the diverse needs of the students Ivy Tech serves. The program will:

- Provide an opportunity for students to correct skill deficiencies before enrolling in a technical degree program;
- Provide a program for students who have not selected a specific educational or career goal by the time they have entered the college;
- Allow students who are waiting for admission into a selective program to enter the college;
- Provide a directed program of career-oriented educational exploration to encourage an examination of occupational program areas;
- Increase student retention by providing a vehicle which promotes informed choices;
- Provide undecided students the opportunity to pursue coursework which will serve as a foundation for related one- or two-year programs while engaged in career exploration;
- Provide an opportunity for a student to pursue a one-year program of general technical studies.

### Approved Degree Programs

#### Associate in Science Degree
- Accounting Technology
- Administrative Office Technology
- Associate Degree Nursing
- Child Development
- Occupational Therapy Assistant

#### Associate in Applied Science Degree
- Accounting Technology
- Administrative Office Technology
  - Legal Specialty
  - Administrative Office Specialty
- Automotive Technology
  - Automotive Service Specialty
  - ASSET-Ford Motor Company
  - ASEP-General Motors
- T-TEN-Toyota
- Business Administration
  - Management Specialty
  - Logistics Management Specialty
  - Marketing Specialty
- Computer Information Systems
  - Microcomputer Specialty
  - Programming Specialty
- Design Technology
  - Architecture Specialty
  - Civil Specialty
  - Computer Graphic Design Specialty
  - Mechanical Specialty
- Electronics Technology
  - Communications Specialty
  - Industrial Specialty
  - Microwave Systems Specialty
- Hospitality Administration
  - Culinary Arts Specialty
  - Hotel/Restaurant Administration Specialty
- Baking and Pastry Arts Specialty
- Human Services Technology
  - Criminal Justice Specialty
  - Gerontology Specialty
  - Generalist Specialty
  - Substance Abuse Specialty
  - Mental Health Specialty
- Industrial Technology
  - Heating/Ventilation/Air Conditioning Specialty
- Industrial Maintenance Specialty
- Manufacturing Technology
  - Computer Aided Design CAD/CAM Specialty
  - Computer Integrated Manufacturing (CIM) Specialty
- Medical Assistant
- Paralegal
- Public Safety Technology
  - Environmental Care Specialty
  - Fire Science Specialty
  - Hazardous Materials Specialty
  - Public Administration Specialty
- Radiologic Technology
- Respiratory Care Technology
- Surgical Technology

#### Technical Certificate
- Administrative Office Technology
  - Medical Specialty
  - Administrative Specialty
- Child Development
- Design Technology
- Industrial Technology
  - Heating/Ventilation/Air Conditioning Specialty
  - Welding
- Manufacturing Technology
  - Computer Numerical (CNC) Specialty
- Medical Assistant
  - Clinical Specialty
  - Administrative Specialty
  - Pharmacy Technician Specialty
- Practical Nursing

#### General Technical Studies
- Business
- Technology
- Health and Human Resources
Weekend College

Weekend College is Ivy Tech State College's way of providing an educational opportunity to individuals who are unable to attend during regular weekday or evening hours.

Individuals interested in Weekend College include:
1. Individuals whose work and home schedules create a need to attend classes on Friday evenings, Saturdays, or Sunday afternoon;
2. Individuals anticipating a career change;
3. Current students who want to accelerate their academic progress;
4. Individuals interested in enhancing their skills and staying abreast of advancing technology in their fields.

Weekend College offers a wide selection of credit courses and continuing education programs to a diverse group of people.

Basic Skills Advancement Program Services

Ivy Tech State College offers a Basic Skills Advancement Program to help ensure the success of students in the completion of their educational goals. The College is concerned about the success of its students, and this program is designed to ensure that every student has the opportunity to be successful.

Services provided include diagnostic assessment and evaluation, and career counseling. The need for these services may be identified at the time of admission; however, a student may utilize any or all services upon encountering academic difficulty during a course of study. Professional basic skills advancement instructors and laboratory technicians provide supplemental instruction in the areas of reading, writing, mathematics, science, study skills, computer literacy, and keyboarding.

Special Needs Services provide supportive services to students with special challenges to aid in their achieving academic and employment goals. The services include interpreters for the deaf, adaptations for the hearing impaired, taped books, tutoring services, counseling and liaison with other agencies.

For further information about the College's Basic Skills Advancement Program, contact either the Admissions Office or the General Education and Support Services Division.

Off-Campus Classes

Ivy Tech State College provides credit courses at a number of off-campus instructional sites.

Ben Davis High School
1200 North Girls School Road, Indianapolis

Blue River Career Center
789 St. Joseph Street, Shelbyville

Carmel Junior High School
300 S. Guilford Ave., Carmel

Greenfield Central High School
810 North Broadway, Greenfield

Greenwood High School
615 West Smith Valley Rd., Greenwood

Lebanon High School
510 Essex Drive, Lebanon

Manual High School
2405 Madison Ave., Indianapolis

Mooresville High School
550 N. Indiana, Mooresville

Mt. Vernon High School
8112 N. 200, Fortville

Noblesville High School
300 N. 17th Street, Noblesville

Pike High School
6701 Zionsville Road, Indianapolis

Walker Career Center
9651 East 21st Street, Indianapolis
Students who are high school graduates, have a high school equivalency degree (GED), or those who demonstrate "ability to benefit" are eligible for admission to Ivy Tech State College.

To enroll in an Ivy Tech program/specialty:

1. Fill out an Ivy Tech State College application for Admission*. Mail or hand deliver the completed application to the College.

2. Have your high school and/or college transcripts sent directly to Ivy Tech State College, Registrar's Office. With a GED, the applicant should request an official copy be sent or bring a copy of the original transcript of GED scores to the Office of the Registrar.

3. All applicants are required to attend an ASSET Success Seminar which includes orientation, assessment testing, and advisement.

Some admitted students may be required to participate in pre-technical/basic skills advancement courses. All placements are based on a review of ASSET placement test scores and high school (or GED) and college transcripts.

Pre-technical courses enable the student to develop or strengthen important academic skills by taking prescribed classes. A pre-technical class is designed to enhance the student's academic success and is based on the student's goal, a review of placement test scores, high school and/or college transcripts and an academic advising session.

If you wish to earn an associate degree or technical certificate, you must complete the entire admission process. Acceptance is based on the policy "first-come, first-qualified, first-served."

*Information required on the application concerning race, age, color, national origin, gender, marital status, or physical disabilities will be used for reporting purposes only. Information gathered on physical disabilities will provide the College information regarding accommodations or adjustments that may be required. This information will be kept confidential.

If you are interested in taking a course only and you meet the course prerequisites (if any), you are ready to enroll.

Readmission

Should a student's course of study at Ivy Tech State College be interrupted during a semester, an official drop form must be completed or an F grade will be assigned. If a student is withdrawing from classes or not re-enrolling for classes, the student may request readmission at a later date.

This is accomplished by contacting the Admissions and Counseling offices. Information on eligibility for financial assistance will be available to returning students from the Financial Assistance Office.

Limited Admission Enrollment

Sometimes the number of students admitted and enrolled in programs and/or courses is limited by College resources or facilities—including available lab equipment or the number of available health program clinical work settings. The Admissions Office should be contacted regarding the status of different programs.

Admission Procedures and Support Documents

For degree-seeking students:

1. A complete student admission data form, which establishes records in the Registrar's Office, is required.

2. Proof of high school graduation or GED completion is normally required for admission into a program leading to a certificate or a degree. The high school graduate or individual who has the GED must request the secondary school or testing center send an official copy of the transcript or GED certification to the Office of the Registrar. Applicants to Associate of Science degrees and Health and Human Services programs must have their high school transcript or GED certification scores on file in the Registrar's Office before the start of the first semester. Applicants for all other programs must have the high school transcript or GED certification scores submitted no later than the end of the first semester of attendance.

3. Students whose high school transcripts are not in English must have their high school transcripts translated into English and verified by an appropriate outside agency. All international students must have their transcripts evaluated and verified by an appropriate outside agency. Please contact the Admissions Office for an international packet.

4. "Home Schooled" students will be required to obtain a GED for admission.

5. The College has counselors available to assist students in selecting a course of study at Ivy Tech State College.
6. The College requires that program-declared students either provide acceptable standardized test scores or participate in the College academic diagnostic testing program.

7. Should a student wish to transfer credits to Ivy Tech State College from another college, the student must have an official copy of the grade transcript forwarded from that institution to Ivy Tech State College. This should be done at the same time as application to the college.

8. The College requires a health examination for certain programs.

Success Seminar

All applicants for admission to a program who are seeking a certificate or degree at Ivy Tech State College must attend an ASSET Success Seminar. The Success Seminar includes an orientation to the College, an overview of academic skills, academic skills assessment test, and advisement on courses and services needed by students to begin their college careers successfully. Success Seminars are conducted at the College on an arranged basis, at no fee to the student.

The Success Seminar lasts 8 hours. Survey results and an orientation session are given in the afternoon. A sample of the assessment is available from the Admissions and Counseling Office.

The academic skills assessment portion of the Success Seminar can be waived if the applicant has earned a minimum of an Associate Degree at an accredited institution or if they have successfully completed certain college-level English and Math courses. Please check with your Program Advisor or Office of Admissions and Counseling.

For a schedule of the times, call (317) 921-4800.

Transferring to the College

The College encourages students who have previously attended other recognized colleges and universities, adult education programs and high school vocational technical programs to forward transcripts to Ivy Tech by the midpoint of the first semester of enrollment or re-enrollment for consideration for transfer of credit and/or advanced placement. Students are responsible for providing pertinent course descriptions and/or copies of the college catalog(s) if further documentation is needed to facilitate the review. The College reserves the right to refuse admission or to accept conditionally those students who have been dismissed for disciplinary reasons from other colleges or universities. In respect to transfer credits from a foreign institution, Ivy Tech will look at an evaluation of those courses done by an external evaluation agency/transfer if appropriate.

Transferring to Other Colleges

It is the right and responsibility of the receiving institution to decide whether to accept credits from another institution. The Associate in Applied Science degree (A.A.S.) and the technical certificate programs offered by Ivy Tech State College are intended to prepare students with the necessary knowledge and skills to enter or advance in the workplace. However, the College has articulation agreements with many four-year institutions which enable students to transfer some or all of their Ivy Tech credits depending upon the program.

The following colleges and universities have an Articulation Agreement with Ivy Tech State College:

- Alcorn State University - Lorman, MS
- Bethune-Cookman College - Daytona Beach, FL
- Central State University - Wilberforce, OH
- Delta State University
- Embry-Riddle Aeronautical University
- Ferris State University - Big Rapids, MI
- Indiana Institute of Technology
- Indiana State University
- Indiana University-Purdue University at Indianapolis
- Indiana Wesleyan University
- Lane College - Jackson, TN
- Manchester College
- Martin University
- Murray State University - Murray, KY
- Northwood University
- Oakland City University
- Prairie View A&M University - Prairie View, TX
- Purdue University
- Saint Mary of the Woods College
- Tri-State University
- University of Arkansas - Pine Bluff, AR
- University of Indianapolis

Tech Prep

Ivy Tech developed a statewide Tech Prep associate degree program in 1993. The purpose of Ivy Tech's Tech Prep program model is to enable Indiana high school students to enter into and complete a postsecondary technical program to learn the skills necessary to succeed in the workforce. This purpose is achieved through three program objectives:
• Provide high school students with the information they need to prepare for college-level technical education, so students can enter directly into a technical program after high school graduation and avoid the need for costly and time-consuming remedial coursework;

• Provide high school students with opportunities for achieving advanced standing, so students who take advantage of this opportunity can complete a technical associate degree program in less than two years of full-time study; and

• Provide opportunities for students to complete an enriched course of study, so qualified students can pursue an advanced technology curriculum.

Special Needs

College programs and facilities are designed to be accessible to students with a documented disability. The college has designated parking and special restroom facilities for the physically challenged. Special Needs Services assists students with a disability, including hearing impairments, physical disability, learning disabilities, and visual impairments. Staff members are available to work with students whose learning or physical disability may impede their progress in their studies at Ivy Tech. The types of services available include: academic, career, and personal counseling; tutorial sessions with a full-time resource instructor; adaptive testing; sign language interpreters for classes and college-sponsored events; supplementary readers and testing services; coordination of taped textbook services; adaptive equipment including telecommunication device for the deaf (TDD), Visual Tech, brailler, "talking" calculator, tape recorders, large print reference books, etc. Special Needs Services works with outside agencies as needed to provide additional resources for students.

Any student with a documented disability is urged to contact the Special Needs Office at (317) 921-4983 for help with special challenges as a student at Ivy Tech State College.

International Students

International students must meet the College admission standards and certain other requirements. Students should request an international packet from the Admissions Office, which has all the details: Ivy Tech State College, Admissions Office, One West 26th Street, PO. Box 1763, Indianapolis, Indiana 46206-1763. ATT: International Counselor.

Note: International students should apply for admission to Ivy Tech State College at least 90 days prior to the beginning of the term they wish to attend.

An international student must also provide proof of adequate financial support for College fees and living expenses for each year while attending the College. Please refer to the international packet.
The purpose of Ivy Tech State College's financial assistance program is to provide financial assistance to those qualified students who, without such aid, would be unable to attend college. Ivy Tech State College offers various types of financial aid to students. Students are encouraged to carefully survey the variety of financial aid options available.

- Scholarships and grants are types of gift assistance which do not require repayment.
- Educational student loans are low-interest loans that must be repaid. Interest and repayment generally begin six months after a student ceases at least half-time enrollment.
- Part-time employment provides meaningful employment for the student, also allowing the student to earn money to help defray education expenses.

**Financial Assistance Programs - Pell Grant Program**

All Pell Grant recipients must meet student eligibility requirements. Students must apply for the Pell Grant before applying for any other financial assistance. The Pell Grant program makes funds available to eligible students enrolled in a program which leads to a certificate or degree. Pell Grant funds do not have to be repaid.

**Supplemental Educational Opportunity Grant Program (SEOG)**

SEOG awards do not have to be paid back and provide aid based on the applicant's need, other aid received, and availability of funds. The student must be Pell eligible.

**Federal Work Study Program**

The Federal Work Study Program provides jobs for students interested in earning part of their educational expenses. Students in eligible programs of study may apply. Limited funds are available. The number of work hours per week is determined by the student's (1) financial need; (2) availability for employment; and (3) class schedule and academic performance. Employment is primarily on campus. Contact the Financial Assistance Office at (317) 921-4777.

**Scholarships**

Scholarships, funded by private contributions, provide assistance to students in certain programs. The Financial Assistance Office considers all applicants for all available funds. Some scholarships are based on grade point average only. Some are based on both merit and need. Please ask your instructor, program chair, and/or the Financial Assistance Office for information on specific program scholarships.

**Loan Program**

Educational loans are one choice for Ivy Tech State College students. Before a loan is processed, federal law requires the student to complete an application for the Pell Grant. Students must receive Ivy Tech State College loan counseling before applying for a loan. All other types of assistance will be considered before the Financial Assistance Office will process a loan application.

**Veteran's Benefits**

Students who served in the Armed Forces may be eligible for Veteran's benefits. Students should contact the Veteran's Affairs Office Counselor for more information at (317) 921-4700.

**Students' Financial Rights and Responsibilities**

Financial aid, as a general rule, can only be awarded to students who are accepted into degree or certain certificate-granting programs; however, part-time students may be eligible.

Students who receive financial assistance are expected to keep themselves informed concerning various terms and conditions of receiving aid, especially those concerning satisfactory progress. Applications for aid in future years should be submitted in a timely manner, usually between January 1 and March 1 of each year to ensure additional aid for Indiana. Some aid programs are administered by the College Financial Aid Office under the policies and guidelines established by state and federal government, other agencies, or outside organizations. A few programs may be available on a regional basis only. Eligibility for most financial aid at Ivy Tech State College is based upon the student's demonstrated financial need. To qualify for any form of financial aid, the student must complete the Free Application for Federal Student Aid (FAFSA) and the Ivy Tech Financial Aid form each year. He/she must also meet additional eligibility requirements (i.e., citizenship or permanent resident status, draft compliance, satisfactory academic progress). Students receiving financial aid may be
eligible for Pro Rate or Title IV refunds in the event that he/she withdraws from all courses.

Students who drop or withdraw from class must see the Financial Assistance Office. Withdrawing from all classes or non-attendance of the classes may have a negative impact on funding from the Pell Program.

Additional information concerning federal, state, and college financial aid and refund rules are available in the financial aid check-list, in the Financial Assistance Office and in the Admissions and Counseling Office.

Financial Assistance Checklist

1) Complete the Ivy Tech State College Financial Assistance Information Form. It is best to do this as early as possible.

2. Pick up the Free Application for Federal Student Aid (FAFSA) from your high school counselor or the Admissions Office. Complete the application and mail it to the Federal Student Aid Programs by March 1, 1996, to be eligible for State of Indiana Aid, or May 2, 1996, to be eligible for Federal Pell grants. You will receive a 1996-97 Student Aid Report in about three weeks.

3. If you are a new student, apply for admission early. For further information, contact Student Affairs. An application for admission must be filled out to qualify for financial aid.

4. Request a financial aid transcript from each college or university that you have attended. This document must be on file before any financial aid can be applied. We can request them for you only with complete addresses and attendance dates.

1996-97 Financial Aid Follow-Up

1. Return the 1996-97 Student Aid Report to the Ivy Tech Financial Assistance Office as soon as you receive it in the mail. Make sure you read and complete it carefully. It may ask you to provide additional documents.

2. Read carefully all instructions before completing and mailing your applications.

3. Keep readily available all taxable and non-taxable income documents for both yourself and your spouse; and your parents, if you are a dependent student. This includes signed 1995 tax forms, W2s, etc. You may be asked to submit certain income documentation for verification purposes.

4. Create a file folder marked “Financial Aid” so that you will have easy access to all forms, letters, award status, and related documents when you have questions.

5. If you drop or add classes, your award may change.

6. Finally, if you have any questions, please do not guess! Schedule an appointment. An advisor will be available to assist you in understanding the process.

Remember, to receive financial aid, it is best to apply early. Applications must be re-submitted in January of each year.

Financial Aid Appeals

The following steps are recommended to students who desire to appeal a financial assistance decision:

1. Schedule a personal conference with the Manager of Financial Assistance to discuss and resolve the issue.

2. If Step 1 is unsatisfactory, schedule a consultation with the Director of Student Affairs.

3. If Step 2 is unsatisfactory, file a financial appeal with the Financial Assistance Appeals Committee.

Students who wish to appeal financial probation or termination should write their appeal to the Financial Assistance Manager. Decisions on probation/termination appeals will be determined by the Financial Assistance Appeals Committee.

Satisfactory Progress for Financial Assistance

In order to maintain Satisfactory Progress, a student must meet the following standards:

Qualitative Standards of Progress

A student must be in good academic standing by earning at least a 2.00 grade point average (GPA) after attempting 15 or more program hours. Students on Academic Probation must raise their cumulative GPA to 2.00, or must receive a 2.00 term GPA (taking six quality hours* or more), by the end of the probationary term, or financial assistance will be denied.

*quality hours=attempted credits

Quantitative Standards of Progress

Quantitative Standards of Satisfactory Progress are measured by (A) the number of credits completed each term, and (B) program completion within the maximum time frame.

Both requirements, as described below, must be met in order to meet Quantitative Standards of progress.
A. By the number of credits completed each term . . .

Completion of credits is defined as earning one of the following grades: A, B, C, or D.

Each term, in order to maintain Satisfactory Progress, a student is required to complete the number of credit hours indicated for his/her enrollment status.

A student who does not earn the minimum credit hours required for his/her enrollment status at the end of his/her first term or at the end of any term immediately following a term of Satisfactory Progress, shall be placed on Academic Probation for the next term. During this probation term, financial assistance eligibility may be continued. However, a student who does not remove his/her probation status by the end of this first probationary term shall be considered as failing to make Satisfactory Progress. Unless he/she successfully appeals this determination, he/she shall be ineligible for financial assistance for the next term of enrollment.

Required Term Enrollment

Enrollment Status: The following designations are used to determine a student's term enrollment status:

- Full-Time: 12 + semester credit hours
- 3/4 Time: 9-11 semester hours
- 1/2-Time: 6-8 semester hours
- Less than 1/2 Time: 1-5 semester hours

Required Term Enrollment Status For Financial Assistance: Each term, the aid recipient must complete at least the minimum number of credit hours depending on his/her enrollment status for that term. This includes Basic Skills Advancement courses.

<table>
<thead>
<tr>
<th>Enrollment Status</th>
<th>Credits per Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-Time:</td>
<td>9</td>
</tr>
<tr>
<td>3/4 Time:</td>
<td>6</td>
</tr>
<tr>
<td>1/2 Time:</td>
<td>4</td>
</tr>
<tr>
<td>Less than 1/2 Time:</td>
<td>All Hours Attempted</td>
</tr>
</tbody>
</table>

B. By program completion within the maximum time frame allowed . . .

A student is expected to complete all requirements for an Associate Degree or Technical Certificate within the maximum allowable time frame. Student maximum time is reached after he/she has attempted (enrolled) 150% of the number of credits that the Technical Certificate or Associate Degree program requires.

If a student reaches the maximum number of credit hours attempted, and the student has not completed his/her declared course of study, suspension of financial assistance will occur regardless of changes from one course of study to another. Reinstatement of aid would take place only if the student completed a course of study and subsequently enrolled in a course of study leading to another degree or certificate. In cases where a student is attempting to complete a subsequent course of study, all hours previously earned which apply toward that subsequent course of study will be counted toward the maximum time frame for that degree or certificate.

Financial Assistance for Basic Skills Advancement Courses

Financial assistance may be granted for up to 30 credit hours of enrollment in Basic Skills Advancement courses. Educationally-disadvantaged students accepted in an eligible program will be able to enroll in Basic Skills Advancement courses (not counted toward the TC, AS, or AAS degree) in order to ensure their future academic good standing.

Financial Assistance will be denied:

1. In those terms following completion of the total maximum time frames. Total maximum time frames include all terms of enrollment during which students are not making satisfactory progress and/or are not receiving financial assistance.

2. In any term(s) within the maximum time frame following the first probation term in which satisfactory progress was not achieved.

Regaining Eligibility for Financial Assistance Standards of Progress

Students who are denied financial assistance as a result of failure to maintain satisfactory progress will regain their eligibility if any of the following conditions are met:

1. Enroll at least half-time at their own expense and receive at least a 2.00 term GPA while meeting the Quantitative Standards of Progress. The student will regain financial assistance eligibility and will be on probationary status the following term.

2. Enroll at their own expense and raise their cumulative GPA to a 2.00 or higher while meeting the Quantitative Standards of Progress. The student will regain financial assistance eligibility and will be in good standing the following term.

3. Students who have been terminated from financial assistance, who are within their maximum time frame, and return to Ivy Tech State College after an absence of 12 or more consecutive months will be on Probationary Status during their first term of re-enrollment but may receive financial assistance.

4. Students who have been suspended from financial assistance more than once, who are within maximum time frame, and return to Ivy Tech State College after an absence of 60 or more consecutive months will be on Probationary Status during their first term of re-enrollment but may receive financial assistance.

Note: Maximum Time Frame suspension cannot be reversed through the appeals process.
College Fees

The College seeks to provide quality education at the lowest possible cost. General fees are based on the number of credit hours for which the student is registered. Additional costs include Divisional fees and special fees pertaining to particular courses or College activities. Out-of-state students pay an additional fee per credit hour.

All student fees are to be paid at the time of registration. Students having fees to be paid by a third party must have fee payment authorization before registering. Fees may be paid by cash, check, money order, MasterCard or Visa.

Late registration fees are charged to students who register the first day of class or after. A $25.00 fee will be charged for all non-sufficient funds and stopped-payment checks.

Additional Expenses

The following additional expenses may apply, depending upon the program of study:

BOOKS: All students are expected to purchase textbooks for their respective programs. The cost of books will vary according to classes taken.

TOOLS: The College furnishes major equipment items for instruction; however, in many programs or courses students must furnish additional hand tools and equipment.

UNIFORMS AND OTHER SPECIAL EQUIPMENT: Several programs require students to furnish uniforms and special safety equipment.

TRAVEL: Transportation costs to and from the College clinical or practicum sites vary according to the distance and the type of transportation used.

For a current schedule of fees and further information, contact the Admissions Office.

Payment of Fees

All enrolled students must pay all applicable fees. A student is officially registered and allowed to attend classes only when all fees have been paid.

Instructional Fees*

Resident of Indiana: $60.30 per credit
Non-Resident: $109.75 per credit

Miscellaneous Fees*

Application fee: No charge
Credit by examination fee (per course): $10.00 per credit
Late registration (first day of classes): $10.00
Check fee (for check returned by bank): $25.00
Student I.D. card: No charge
Transcript fee: No charge for first transcript
(transcript fee after first transcript): $1.00
Parking: No charge
Deferment Charge: $15.00
* subject to change by the State Board of Trustees

Refund Policy

Students choosing to drop or withdraw from a course or courses must notify the College in writing using the Drop/Add Form. The fee refund for voluntary withdrawal from a class, when applicable, will be processed only after the student files a College Drop/Add form or withdrawal form with the Registrar's Office.

The College will refund students' assessed fees, with the exception of the late registration and deferment fee, on a schedule computed as follows for a (fall, spring) semester:

From registration to end of first week of semester: 100% refund
From registration to end of second week of semester: 75% refund
From registration to end of third week of semester: 50% refund
From registration to end of fourth week of semester: 25% refund
After fourth week of semester: No refund.

• The effective date for calculating the fee refund is the date of written notification.
• Certain other fees may be refundable. Further details are available from the Bursar's Office.
• All refunds will be issued by check and mailed to the address shown on the student registration form.
• Cancellation of credit courses by the College will result in total refund of fees collected for those courses.
• Please allow 10 (ten) working days for refunds to be processed.
Registering for Courses

The registration process includes financial aid and program counseling, selection of courses, and payment of fees. Newly-admitted students will be notified when to register for their first semester classes.

Specific days are set aside for registration before the beginning of each semester. Students should seek assistance in course selection from faculty advisors or counselors through the Counseling Office before registering for classes.

The Counseling Office can supply information concerning registration.

NOTE: STUDENTS ARE REGISTERED ONLY WHEN FEES HAVE BEEN PAID.

Open/Late Registration

Please see class schedule for course reservation days and registration times. Registration on or after the first day of classes each term is considered late. Students may register after the first week of classes with the permission of the instructor; however, a late registration fee is assessed beginning the first day of classes. For further information, students are asked to contact the Admissions and Counseling offices.

Dropping and Adding

Courses may be dropped or added during the first two weeks of the regular semester. Students may be eligible for a full or partial refund of the assessed fees for courses dropped during the first four weeks of the semester. Students changing, adding or withdrawing from a class must notify the College in writing using the drop-and-add form. This form must be presented to the Registrar's Office.

Student Withdrawal

From the beginning of the second week to the end of the week marking the completion of 75 percent of the course, a student may withdraw from a course by filing a completed withdrawal form at the Registrar's Office and discontinuing class attendance. Students may be eligible for a full or partial refund of the assessed fees—see Refund Policy. Records will then indicate status of "W" in place of a grade for that course. A student who discontinues class attendance after the last day to withdraw with a "W" will receive a grade commensurate with the course requirements.
**Student Records**

An educational record is maintained for each student who is, or has been, enrolled at Ivy Tech State College-Central Indiana. In accordance with the Family Educational Rights and Privacy Act of 1974, as amended, the following student rights are covered by the Act and afforded to all students at Ivy Tech State College-Central Indiana:

1. The right to inspect and review information contained in the student's educational records.
2. The right to challenge the contents of their educational records.
3. The right to a hearing if the outcome of the challenge is unsatisfactory.
4. The right to submit an explanatory statement for inclusion in the educational record if the outcome of the hearing is unsatisfactory.
5. The right to prevent disclosure, with certain exceptions, of personally identifiable information.
6. The right to secure a copy of the institutional policy.
7. The right to file complaints with the U.S. Department of Education concerning alleged failures by Ivy Tech State College-Central Indiana to comply with the provisions of the Act.

Each of these rights, with any limitations or exceptions, is explained in the Institutional Policy Statement, a copy of which may be obtained in the Admissions Office.

At the discretion of College officials, directory information may be provided in accordance with the provisions of the Act without the written consent of the student unless the student requests, in writing, that such information not be disclosed (see below). These items are designated as directory information and may be released for any reason at the discretion of Ivy Tech State College-Central Indiana unless a request for nondisclosure is on file:

1. Name, address, telephone number, dates of attendance.
2. Previous institution(s) attended, major field of study, awards, honors, degree conferred.

3. Past and present participation in officially recognized sports and activities, physical factors of athletes (height and weight), date and place of birth.

Students may request the withholding of directory information by submitting their request to the Office of the Registrar. The request form must be completed for each term of enrollment. Failure on the part of a student to request the withholding of specific categories of directory information indicates the student's approval of disclosure.

**Dependency Provision**

Ivy Tech State College-Central Indiana reserves the right, as allowed under the Federal Educational Rights and Privacy Act of 1974, to disclose educational records or components thereof, without written consent, to parents of dependent students as defined according to the Internal Revenue Code of 1954- Section 154 (as amended).

However, all Ivy Tech State College-Central Indiana students will be assumed to be "independent." A certified copy of the parents' most recent Federal Income Tax Form establishing the student's dependency status shall be required before any educational records or components thereof will be released to the parent of any student. The student will be required to sign a Release of Information Form.
Testing Out of Courses

Policies regarding testing out of courses vary from program to program. A student who wishes to test out of a course should contact the program advisor. A $10.00-per-credit-hour fee will be charged for the test. The general guidelines for test-out are as follows:

1. Test-out examinations should be taken before the student registers for the course for which the test out is attempted.
2. Test-out examinations are normally completed at one sitting (unless the test is offered in two parts, i.e., lab and written exams).
3. Test-out credits are not included in credit computations for financial aid programs or student grade point averages.

Academic Grading

The academic grading system has both grades and status codes. In certain instances, a status code will appear on the student’s record in place of a grade. Status represents a condition to which no letter grade can be assigned. Grades reflect the quality of performance and level of competency achieved by students who complete a course. Instructors determine and assign grades and status based on objective appraisal and evaluation of students’ performances. Semester grade reports are sent to each student.

Grades

The quality of student performance or competency level, as determined by the instructor at the completion of a course, is indicated by a letter grade of A, B, C, D, or F. Each designation has a numerical value per credit hour, referred to as Quality Points/Per Credit. The meaning and quality point value per credit hour of each letter grade is shown in the table that follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Excellent</td>
<td>4</td>
</tr>
<tr>
<td>B</td>
<td>Good</td>
<td>3</td>
</tr>
<tr>
<td>C</td>
<td>Average</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Minimum Passing</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>Failure</td>
<td>0</td>
</tr>
</tbody>
</table>

While Basic Skills Advancement courses are assigned these grade designations, no quality points or quality hours are generated.

Status Codes

Status codes describe the state or condition of a course appearing on the student's record that has not received a grade. Status code indications carry no grade points. The types of status codes and the symbols used to indicate them:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Incomplete</td>
<td>0</td>
</tr>
<tr>
<td>AU+</td>
<td>Audit</td>
<td>0</td>
</tr>
<tr>
<td>S</td>
<td>Satisfactory</td>
<td>0</td>
</tr>
<tr>
<td>U</td>
<td>Unsatisfactory</td>
<td>0</td>
</tr>
<tr>
<td>V</td>
<td>Verified Competency</td>
<td>0</td>
</tr>
<tr>
<td>NW</td>
<td>No-Show Withdrawal</td>
<td>0</td>
</tr>
<tr>
<td>W</td>
<td>Withdrawal</td>
<td>0</td>
</tr>
</tbody>
</table>

+ Must be declared at time of registration and cannot be used to complete financial assistance eligibility.

These non-grades are used for the following reasons:

1- Incomplete

"I" designations are received by students who have actively pursued a course and are doing passing work at the end of the course, but who have not completed the final examination and/or other specific course assignments. To remove an "I" designation, a student must meet with the instructor to make arrangements to complete the course work. The instructor must submit the grade within 31 calendar days after the beginning of the term following the term the student received the "I" designation. If an "I" status code is not converted within the aforementioned time, an "F" will be assigned. Students who have an "I" status on their record may not register in that specific course. However, if the "I" is changed to an "F," the student may then register only once more for that course in order to earn a passing grade.

AU-Audit

Audit (AU) status indicates enrollment in a course for no grade or credit. The fees for audited courses are the same as those for courses taken for credit. Audit status must be declared no later than the end of the first week of classes with approval of the Instructor or Program Chair.

NW-No-Show Withdrawal

"NW" will be used for "No-Show" Withdrawals.

Instructors shall authorize the Registrar to withdraw a student from any course for which the student did not report to the class for the first two weeks of the term and failed to notify the instructor of intention to attend. This administrative action will be reflected on the official class list.
Refunds will not be processed. A petition for a refund, with documentation for extenuating circumstances, may be filed at the Bursar’s Office. Students can petition to be reinstated by receiving the approval of the instructor and completing a course change request form to add the classes(s) in question.

W-Withdrawal

A “W” status code will be used for student and academic withdrawals. When students find it necessary to withdraw from a course(s), they must give formal notification to the Registrar by completing a drop form. Student Withdrawal (W) is a terminal status, referring to voluntary student withdrawal by a student beginning at the start of the second week of the course up to the end of the week marking the completion of 75 percent of the course.

After 75 percent of the term has elapsed, a student may withdraw only if documented extenuating circumstances are submitted to, and approved by, the Dean of Instructional Affairs or his/her designee. The “W” status code designation will be entered on the student’s academic records.

Instructors may also recommend that a student receive a “W” status code for student nonattendance in class or student disciplinary reasons, with final approval from the Chief Administrative Officer or his/her designee.

S-Satisfactory

The “S” indicates satisfactory completion of course work in situations where a status of either satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement.

Although no grade is assigned, credit is earned. Designation of “S” will not count toward degree and certificate graduation requirements.

U-Unsatisfactory

The “U” indicates unsatisfactory completion of course work in situations where a status of either satisfactory or unsatisfactory (pass/fail) has been arranged by prior agreement by the Dean of Instructional Affairs or his/her designee. Requests for this type of grading-U-can only be made for non-program related courses and must be declared at time of registration. The “U” differs from an “F” in that quality points are not computed.

V-Verified Competency

The “V” indicates satisfactory completion of course work in situations such as test-out credit for experience or training, or College Level Examination Program (CLEP). Credit gained through this method may be used to satisfy degree requirements. This status is approved by the Dean of Instructional Affairs upon recommendation of a faculty advisor, following completion of necessary verification and documentation of competency.

Transfer Credit

Students can receive credit for courses transferred to Ivy Tech State College-Central Indiana. Transfer credit is assigned following an evaluation of equivalence/relevance and is authorized providing the credits were earned with grades of A, B, or C, from a regionally accredited institution, and are not over 10 years old. These credits will be included in earned hours and will appear at the beginning of the student’s transcript. Although counted toward graduation, these credits are not used to calculate cumulative GPA. Final authority for Transfer Credit is with the Dean of Instructional Affairs, upon recommendation of the Department/Program head or Registrar.

Credit Hours

Credit is described in semester hours (the number of credits taken per semester). The number of credits is determined by the demands of the course, course work and the number of contact hours-hours actually spent in the classroom or laboratory.

Credit Hours/Load

A credit hour represents at least one hour of lecture, three hours of laboratory or three hours of clinical instruction per week for the semester. A three-credit-hour lecture course, for example, meets 48 hours during the semester (3 X 16) weeks. An average full-time class load per semester in most programs consists of 12-15 credit hours. To take a class load more than 17 credit hours, a student must have the approval of the Dean of Instructional Affairs or his/her designee.

Enrollment Status

Enrollment status is determined by the total semester credits being taken:

- Full-time: 12 or more credits per semester
- 3/4 time: 9-11 credits per semester
- 1/2 time: 6-8 credits per semester
- Less than 1/2 time: 1-5 credits per semester

A first-year student, by definition, is one who has completed fewer than 30 semester credit hours; a second-year student is one who has completed 30 or more semester credit hours.

Quality Points

Quality points are numerical values indicating the quality of student performance in credit courses: A=4; B=3; C=2; D=1; F=0. The quality points earned for a course equal the quality point value times the number of credits.
A student who earns an A in a 4-credit course earns 16 quality points: the quality point value (4) X the number of credits (4) = total quality points (16).

**Grade Point Averages**

The GPA is calculated by dividing quality points by quality hours. Quality Hours include all nonbasic skills advancement courses graded A-F.

Earned Hours include all credits that can be applied toward a degree objective. Attempted Hours include all formally enrolled hours.

All courses except skills advancement courses are included in the GPA.

**Improving a Grade**

Students, with the approval of faculty advisors, may attempt to improve D or F grades by repeating courses (allowable once in most programs). Financial Assistance recipients, however, should review their situations carefully since payment for repeated courses can be disallowed. Permanent student records contain complete files on all activity. The student's grade point average will reflect the highest grade earned.

**Petition for Course Exclusion**

Under extenuating circumstances, a student may petition the Academic Status Committee to exclude semester hours of course work statistics from the cumulative GPA calculation. Course statistics that are excluded from the cumulative GPA calculation as a result of a petition will not be counted as earned and cannot be used to satisfy requirements for degree-declared students. Petition forms may be obtained from the Registrar's Office.

**Academic Standards of Progress**

Note: This section applies to the College's academic standards of progress. Students with financial assistance should read the financial assistance section that explains that required standards of progress, along with grades, include term progress and maximum time frame.

Ivy Tech State College-Central Indiana has established this Policy for Academic Standards and Appeal of Standards of Progress.

1. A student who has declared a degree or certificate objective and has 15 or more cumulative quality hours must maintain a 2.00 minimum cumulative GPA to be considered in satisfactory academic standing.

2. A student who fails to maintain satisfactory academic progress will be subject to a series of intervention activities and related restrictions until such time as he/she restores satisfactory progress or is dismissed as a degree/certificate seeking student due to repeated unsatisfactory progress. The intervention strategies and restrictions could include, but are limited to: (1) reduced course load, (2) required counseling sessions, (3) enrollment in Basic Skills Advancement courses, and/or (4) disqualification for graduation.

3. A student who is dismissed for unsatisfactory academic progress faces one term of non-enrollment as a certificate or degree/declared student prior to resuming progress toward that certificate or degree, at which time re-enrollment is allowed on a probationary status.

4. A student who is dismissed twice for unsatisfactory academic progress will be terminated for up to five years as a degree or certificate-declared student unless he/she chooses to participate in an extensive Basic Skills Advancement program.

5. Dismissal from one campus constitutes dismissal from the College. Petition for readmission must be initiated at the site where dismissal occurred via the Academic Status Committee.

6. Satisfactory academic progress is restored when a student successfully earns at least six credit hours and re-establishes a 2.00 cumulative grade point average.

**Academic Problems**

If a student has a problem with a grade, he/she should discuss it with the instructor. If the problem cannot be resolved then the student must consult the Divisional Chair. After discussion with a Student Affairs Manager or Divisional Chair, if the matter is still not resolved, the student should contact the Dean of Instructional Affairs. The student may be directed to follow the academic appeals process if the student still does not agree with the solution.

**Dean's List**

The Dean's List, prepared and published each semester, gives recognition to students who achieve a minimum 3.50 grade point average or higher with no D or F grades while earning 12 or more credits during the Fall and Spring semesters or greater than eight credit hours for the summer session. The Dean's List is posted on the bulletin boards in the North Meridian Center and the Technology Center. The Dean's List is released to the press after the completion of each semester.
Commencement

The Associate in Science degree, the Associate in Applied Science degree, or the Technical Certificate is awarded by the College to students who meet graduation and certification eligibility requirements. Commencement ceremonies are held each spring. Graduating students are charged a fee to cover the cost of the ceremonial cap and gown.

A student is considered eligible for graduation when the requirements for graduation or certification have been fulfilled in the selected program. Each student entering the final semester prior to graduation must complete an Application for Graduation form. The application will be certified by the student’s program advisor and forwarded to the Registrar’s Office, where the appropriate diploma will be prepared.

To graduate with the Associate in Science Degree, Associate in Applied Science Degree or Technical Certificate students must:

1. Successfully complete all courses within certification requirements with a cumulative grade point index of at least 2.0.
2. Successful completion of the required number of credits.
3. Completion of at least 15 degree credits as a regular student of Ivy Tech, and not through test-out or other means of advanced placement.
4. Satisfaction of all financial obligations due the College.
5. Satisfaction of program accreditation standards that may have additional requirements.

Attendance

Regular attendance is expected at scheduled class meetings or other activities assigned as part of a course of instruction. Attendance records are kept by instructors.
Student Academic Support Services

The Student Academic Support Services (SASS) at Ivy Tech State College-Central Indiana offers a variety of services to Ivy Tech students. Following is a brief description of services and operation hours during the Fall and Spring Semesters. Summer hours may vary. Students with academic needs are encouraged to call (317) 921-4319 or (317) 921-4972.

Computer Assisted Instruction Lab (CAI)

The CAI Lab offers a variety of services to Ivy Tech students through computer use. Students may visit the lab and utilize the following educational software: ESL, math, developmental science, reading, study skills, and writing.

The CAI Lab hours are 8:00 a.m. to 8:30 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 12 noon. The Center is located in Rooms 252A, 252B, 248, North Meridian Center.

Testing Lab

Students who miss tests or need to retake tests may, with approval from the instructor, visit the Testing Lab.

The Testing Lab hours are 9:00 a.m. to 7:30 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 12 noon. The Center is located in Room 255A, North Meridian Center.

Tutoring Lab

Students have the opportunity to work with professional tutors in math, reading, chemistry, and anatomy and physiology.

The Tutoring Lab hours are 8:00 a.m. to 8:30 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 12 noon. The Center is located in Room 258, North Meridian Center.

Writing Center

Students have the opportunity for one-on-one tutoring. The Writing Center helps students generate ideas for papers, helps students with their designated deficiencies and provides feedback and suggestions.

The Writing Center hours are 8:00 a.m. to 12 noon and 1:00 p.m. to 5:00 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 12 noon. The Center is located in Room 258A, North Meridian Center.

Career Counseling

The Offices of Admissions, Counseling, and Employment and Career Services offer career counseling to all interested students. Students may obtain individual counseling and/or assessment to assist them in identifying their abilities or occupational interests. Counseling and assessment are also helpful in developing realistic education and career plans through use of occupational outlook data.

In addition to the services offered by the Counseling Office, the College utilizes a faculty advisor system. On admission, each degree student is assigned a faculty advisor whose purpose is to:

1. Assist the student in course selection and program planning;
2. Guide the student in meeting the requirements for graduation as prescribed by the College;
3. Ensure that appropriate technical and general education electives are included in the chosen course of study.

Office of Career and Employment Services

The Office of Employment and Career Services assists registered graduates and enrolled students of the College in career development, student employment, and resume assistance. The Employment and Career Services staff and program advisors coordinate efforts to refer qualified candidates to appropriate employment opportunities.

The Employment and Career Services philosophy is "helping students/graduates to optimize the employment process and assisting them in making a smooth transition into the world of work."

The Office of Employment and Career Services offers a full range of services which includes but is not limited to the following:

1. Individual employment counseling and career assistance;
2. On-campus recruitment with employers from business and industry;
3. Job Search/Interviewing and Resume Writing Workshops;
4. Classroom presentations;
5. Annual Job Fair;
6. Resume referral: Over 5,000 jobs are listed annually;
7. Credential files and references: Maintained on all
registered graduates and undergraduates for job matching and resume referral purposes;

8. Various computerized services offered in the Office of Employment and Career Services: Resumes by Ralph, State Employment Services (JSMS), KiNexus (candidate registration process), Choices and Passport To Your Future (career exploration software packages);

9. Resource Center: Includes career information, company literature, annual reports, job vacancy notices, application forms, information on four-year colleges, and free job search booklets and handouts.

Students are encouraged to register early in their college careers and take full advantage of opportunities available to them from the Office of Employment and Career Services.

**Learning Resource Center/Library**

The Learning Resource Center's hours are 8:00 a.m. to 9:00 p.m., Monday through Thursday; Friday, 8:00 a.m. to 4:30 p.m.; and Saturday 9:00 a.m. to 1:00 p.m. Summer hours may vary. The Center is located on the fourth floor of the North Meridian Center.

The Ivy Tech State College Learning Resource Center (LRC) houses Library Services, Audio Visual Services, and Distance Learning Services. The Library has a collection of print, non-print, and automated on-line materials suited to the objectives and programs of the College. Library resources include: the general book collection, reference books, periodicals, pamphlets, audiovisual materials, CD-ROM journal indexes and full-text databases. The Library offers access to other library collections through interlibrary loan networks.

The Library's book collection has over 13,000 books arranged by the Library of Congress classification system. The Library subscribes to 400 periodicals and CD Rom titles.

Books may be checked out for two weeks and renewed for later weeks if they are not needed by others. To check out books and other materials from the Library, students must use an Ivy Tech library card which is issued after verification of registration. The Library sends notices of overdue books and fines. The fine is five cents per day after the due date (Saturdays, Sundays and Holidays are excluded).

The Library's Audio Visual Department contains all of the Library's software, listening stations, and viewing stations.

Software and equipment may be scheduled for class presentations by students.

**College Bookstore**

The College Bookstore's hours are 8:00 a.m. to 5:30 p.m., Monday through Thursday; and Friday, 8:00 a.m. to 4:30 p.m. The Bookstore is located on the fourth floor of the North Meridian Center. Cash, personal checks with proper ID, Visa, and MasterCard are accepted for payment.

Refunds on books are limited. To receive a full refund for textbooks, the following conditions must be met:

1. All textbooks must be returned in new, unmarked mint condition with the cash register receipt.
2. All textbooks must be returned within 3 weeks of the date the textbooks were purchased.

A 75% refund will be given for textbooks purchased new that are not in new, resalable condition. This includes any markings, stains, or writing in the book (including your name), or any visible binding or cover damage. No refunds are allowed on any supplies/clothing.

**Child Development Center**

Ivy Tech State College-Central Indiana has an on-campus Child Development Center to meet the child care needs of adult students, College staff and faculty, and locally-employed parents and guardians. This licensed center also provides on-site training opportunities for practicum students in the Child Development and other Health and Human Services programs. The model facility is licensed to serve 60 children, ages 2 to 12, from 6:30 a.m. to 10:00 p.m., Monday through Thursday and until 6:00 p.m. on Friday. Note: Hours could vary, depending upon enrollment. The Center is open to visitors interested in either the Child Development Program or the Child Development Center services except during naptime, which is 12:30 to 2:30 p.m. daily. Visitors must register with the center manager upon arrival.

**Student Government Association (SGA)**

Students in each region are encouraged to participate in student government through membership in the Student Government Association. The SGA is the representative governing body of the students and is regulated by the College's rules, policies, and regulations. The SGA is composed of representatives and officers that oversee all clubs and organizations. Student senators and representatives are elected or selected according to the by-laws of each regional Student Senate constitution and serve as stated in those by-laws.

The student body membership may consist of senators of the first-year class, the second-year class, each program area, and an advisor as established in the by-laws.

The SGA was established by students to encourage participation in student government and to promote College spirit and recognition. The SGA exercises the authority, unless otherwise delegated, to legislate on student matters, subject to approval of appropriate College administrative offices.
The constitutions of all student organizations must be approved by a quorum of the SGA, consisting of a simple majority of the total membership and one staff advisor, or as otherwise stated in the by-laws. The functions of the SGA include:

1. Communication of bona fide concerns of the student body and suggestions for improvement to appropriate College officials.
2. Approval of those student organizations deemed beneficial to student life and worthy of being a part of the College.
3. Assurance that copies of the constitution, by-laws, and statement of purpose and objectives of each recognized student organization are on file in the Counseling Office.
4. Referral of student grievances concerning disciplinary matters or student status to appropriate College officials.
5. Planning and conducting of all appropriate extracurricular student activities.
6. Submission of student activity budgets for review and approval by the regional administration.

**Student Organizations**

Current clubs and organizations include:

- Administrative Office Assistants
- Alumni Association
- Amateur Radio Club
- Hospitality-Restaurant Management Student Development Committee
- Human Services Club
- Phi Theta Kappa (PTK)
- Multi-Cultural Society
- National Issues Forum
- Student Paralegal Association
- Student Government Association

These clubs and organizations provide opportunities for leadership training and community service, promote an intellectual climate for an interchange of ideas and ideals, and foster the desire for continued education. Certain criteria may apply to some clubs. Phi Theta Kappa, for example, requires applicants for initiation to have completed at least 12 semester hours with at least a 3.5 GPA.

**Alumni Association**

Membership in the Ivy Tech State College Alumni Association is open to current students. Others eligible for membership include students who have earned a certificate or degree, former students, current and former faculty and staff, and trustees.

For information on Alumni Association activities, call (317) 921-4312.

**College Professional and Trade Societies**

Student chapters of various professional and trade societies will be formed in the same manner as other student organizations and are subject to the same requirements.

**Student Right-To-Know**

Ivy Tech State College-Central Indiana follows the Student Right-to-Know and Campus Security Act, Public Law 101-542, as amended by the Higher Education Technical Amendments of 1991, Public Law 102-26. Required information is available to prospective and current students through the Admissions Office.

**Communicable Disease Policy**

The Communicable Disease Policy of Ivy Tech State College was developed to ensure the good health and safety of all students and employees.

Communicable disease shall be defined as any condition which is transmitted directly or indirectly to a person from an infected person or animal through the agency of an intermediate animal, host or vector, or through the inanimate environment.

Communicable and infectious disease shall include, but is not limited to:

- Influenza
- Tuberculosis
- Conjunctivitis
- Infectious Mononucleosis
- Acquired Immune Deficiency Syndrome (AIDS) and AIDS Related Complex (ARC)
- Positive HIV antibody status
- Hepatitis A, B, and D
- Meningitis
- Sexually Transmitted Diseases

No student or employee who has a communicable disease will be required to report the condition to any campus official if the disease or their condition does not pose a medically proven threat for transmission of the disease or
condition. However, students and employees should be encouraged to advise local health authorities if they have a communicable disease. Local health authorities should offer counseling to these persons about measures which can be taken to prevent the spread of infection and about ways to protect their own health.

Persons who know or who have reason to believe that they are infected with a communicable disease have an ethical and legal obligation to conduct themselves in accordance with such knowledge in order to protect themselves and others. Students who have communicable diseases, whether symptomatic or not, will be allowed regular classroom and work attendance in an unrestrictive manner as long as they are physically able to attend classes, college activities and/or work, and do not pose a medically-proven threat for transmission of the disease or condition. When there is no medical justification for totally restricting the access of students who have communicable diseases, they will be allowed access to the College Campus.

No person, group, agency, insurer, employer, or institution should be provided any medical information without the prior specific written consent of a student unless required by state and/or federal law. Furthermore, all medical information relating to the communicable diseases of students and employees will be kept confidential, according to an amendment to the Family Education Rights and Privacy Act of 1974.

For more information regarding this policy, please contact the Student Affairs Office.

Workplace Violence Policy

Ivy Tech intends to provide a safe place to work for all students. Violent behavior, direct or indirect threats, harassment or intimidation will not be tolerated.

It is the responsibility of every student to help keep the school safe by monitoring their own behavior and by reporting incidents involving other students which involve any form of violence or threatening behavior.

Experience has shown that there are warning signs to incidents of violence. Examples are: preoccupation with reports of violence, discussion or suggestions about hurting others, continuing complaints, or any threats against other students or faculty/staff.

All students can experience stressful times and they are encouraged to seek assistance when this occurs. Counselors can provide information about appropriate agencies that help people deal with stress.

In order to keep the workplace safe, incidents of violence, threats, harassment, or intimidation will be taken seriously. Through due process, the situation will be investigated and all parties involved will be heard. If verbal abuse, threats, harassing, intimidating, or disruptive behavior is determined, a student may be suspended or his/her enrollment terminated.

Determination of physical assault, battery, or forcible sex offenses will be grounds of immediate dismissal. A student may appeal these sanctions through the Student Status Committee.

All student actions/behaviors are also governed by local state and federal laws and regulations.

Note: Security should be called when there is a violent incident requiring immediate attention.

Security . . . . 921-4806 or 4806 using a campus phone
Pager . . . . *799-0644 (North Meridian Center)
Pager . . . . *799-0646 (Technology Center)
* dial 9 first if using a campus instead of public phone.

Campus Crime Awareness and Campus Security Information

The mission of the Campus Security Department is to provide the safest educational environment possible for all faculty, staff, students, and visitors to all Ivy Tech State College campus locations.

Any student, prospective student, faculty, or staff person who has been a victim of, or witness of, a criminal act which occurred on any of the facilities or grounds of any Ivy Tech campus is encouraged to immediately report this act to Campus Security. Campus Security operational hours are posted on campus.

Each Ivy Tech campus employs security staff to whom all criminal activity should be reported. It is College policy to assist the police in any investigation which they conduct.

Known and suspected violations of Federal and Indiana laws and other emergencies should be reported to the Campus Security by calling (317) 921-4806.

Access to Ivy Tech State College facilities is from 7:00 a.m.-11:00 p.m. each weekday during the semester.

Faculty, staff and students must work together to take steps to protect themselves from becoming victims of a crime.

The Crime Awareness and Campus Security Act of 1990 requires that the following campus statistics be provided for your information.

Offenses Reported for 1992, 1993 and 1994:

<table>
<thead>
<tr>
<th>Incidents</th>
<th>1992</th>
<th>1993</th>
<th>1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murder</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Rape</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Robbery</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
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<tr>
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<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Aggravated Assault/Battery</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Burglary</td>
<td>18</td>
<td>36</td>
<td>23</td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Arrests:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquor Law Violations</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Drug Abuse Violations</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Weapons Possessions</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Students participating in off-campus, college sponsored, activities need to report criminal incidents to the law enforcement agency having jurisdiction, and inform the Campus Security.

**Sexual Harassment and Sexual Assault Policy**

Ivy Tech is committed to the maintenance of an environment which is supportive of its primary educational mission and free from all exploitation and intimidation. The College will not tolerate sexual harassment, sexual assault, rape, or other forms of non-consensual sexual activity. Ivy Tech State College supports this policy for students, faculty, and staff through its educational preventative programs and its counseling support services.

Sexual harassment is defined as unwelcome sexual advances, requests to engage in sexual conduct, and other physical and expressive behavior of a sexual nature where:

1. Submission to such conduct is made either explicitly or implicitly a term or condition of an education;
2. Submission to or rejection of such conduct by an individual is used as the basis for academic probation affecting the individual; or
3. Such conduct has the purpose or effect of substantially interfering with an individual’s academic performance or creating an intimidating, hostile or demeaning employment or educational environment.

Sexual harassment is a form of sex discrimination which is illegal under Title IX of the Education Amendments of 1972 for students.

Ivy Tech will enforce this policy through internal disciplinary procedures, security programs, and the encouragement of external prosecution of alleged offenders through appropriate external judicial forums. Violations of this policy shall include, but not be limited to, the following:

1. Persistence, unwanted attempts to change a professional or educational relationship to a personal one; unwelcome sexual flirtations and inappropriate put-downs of individual persons or classes of people to serious physical abuses such as sexual assault and rape; unwelcome sexual advances; repeated sexually oriented kidding, teasing, joking, or flirting; verbal abuse of a sexual nature; graphic commentary about an individual’s body, sexual prowess, or sexual deficiencies; derogatory or demeaning comments about either gender in general, whether sexual or not; leering, whistling, touching, pinching, or brushing against another’s body; offensive crude language; or displaying objects or pictures which are sexual in nature that would create hostile or offensive work or learning environments.
2. Any form of non-consensual sexual intercourse, committed by physical force, coercion, threat, or intimidation, actual or implied, by a person(s) known to the victim.
3. Any actual or attempted non-consensual sexual activity including, but not limited to: sexual intercourse or sexual touching, committed without physical force, coercion, threat, or intimidation; exhibitionism or sexual language of a threatening nature by a person(s) known or unknown to the victim.

Non-consensual activity shall include, but not be limited to, situations where the victim is unable to consent because he/she is physically helpless, mentally incapacitated, or is unconscious. The inability to consent may be due to drug or alcohol consumption, regardless of whether or not the consumption was with the victim’s consent.

Consensual sexual activity between an instructor or staff member and a student is discouraged.

Victims of sexual harassment or non-consensual sexual activity at any official College function or course sponsored by the College are encouraged to file a complaint through College officials as soon as possible after the alleged incident. Students should file complaints with the Office of Student Affairs and Affirmative Action Office. Victims of sexual assault should seek medical treatment immediately. If physically injured, victims should seek medical treatment immediately or as quickly as possible. Contact campus security or the police as soon as possible to report the incident.

If the offense involves another student on College property or at any official College function or course sponsored by the College, disciplinary action may be initiated within the College. Sanctions may include required counseling, temporary suspension, or dismissal. Both the accuser and the accused are entitled to have others present during any proceeding. The outcome of the proceedings will be provided to both the accuser and the accused for any proceedings where sexual assault is alleged. The College will attempt to assist the victim with requested changes in academic situations whenever reasonably possible.

Students who perceive that they are victims of sexual harassment on College property should contact the campus Affirmative Action Office or the Student Services Office. The
Affirmative Action Office responds to every complaint, providing proper remediation when harassment is determined. Complaints against students will be forwarded to the Office of Student Affairs for resolution within the College’s due process procedures for students.

This policy shall supplement all other College policies relating to sexual assault and harassment, all of which shall remain in effect. All policies shall be applied consistently in such a manner as to accomplish their collective purposes and may be amended from time to time as deemed necessary or desirable by the College.

**Drug Policy**

**Definitions**

Substances referred to under this policy include all illegal drugs, alcoholic beverages and misused legal drugs (both prescription and over-the-counter).

Illegal drugs refer to the illegal manufacture, distribution, dispensation, possession or use of controlled substances listed in the Indiana Controlled Substances Act (IC 35-48-1-1, et seq).

The purpose of the Drug-Free College Policy is to maintain a safe and productive teaching and learning environment and to be in compliance with the Drug-Free Workplace Act of 1988 and the Drug-Free Schools and Communities Act.

All employees are expected to perform their duties and students are expected to attend classes, labs, and College activities unhindered by the substances defined above. The College will establish a drug-free awareness program for employees and students, and employees and students are expected to work together to maintain a teaching and learning environment free of illegal drugs.

The unlawful manufacture, distribution, dispensation, possession, and use of illegal drugs present a hazard to students, employees, and property and are not permitted at any property in use by the College, at any official function sponsored by the College, and at any course conducted by the College. Any employee or student convicted of a criminal drug offense in or on properties controlled by the College, or while conducting College business is required to notify his/her supervisor or the Director of Student Affairs, respectively, within five days of the conviction.

Any employee who violates this policy is subject to disciplinary action. These actions may include, but are not limited to, reprimand, participation in a treatment program, suspension, and/or termination. Each supervisor is responsible for implementing the Drug-Free College Policy as it relates to employees.

Any student who violates this policy is subject to disciplinary action. Such action may include, but is not limited to, dismissal from College classes, programs, and activities. The Director of Student Affairs is responsible for implementing the Drug-Free College Policy as it relates to students. As part of an effort to create a drug-free campus, Ivy Tech State College believes that employees and students should be educated about:

1. The physical and emotional health risks associated with the misuse of alcohol and drugs.
2. Treatment programs available in Indiana.
3. The possible legal consequences of drug and alcohol use.

The College encourages employees and students who experience problems with drugs and/or alcohol to seek help before these problems interfere with their performance at Ivy Tech State College and endanger their health and safety.

**Student Rights and Responsibilities**

**Student Conduct**

The reputation of Ivy Tech State College and the community depends, in large part, upon the behavior of its students. Students enrolled at the College are expected to conduct themselves in a mature, dignified, and honorable manner.

Students are subject to College jurisdiction while enrolled at Ivy Tech State College. The College reserves the right to take disciplinary action against any student whose conduct, in the opinion of Ivy Tech State College representatives, has not been in the best interests of the student, other students, or the College.

All Ivy Tech State College students are expected to abide by the following College rules of conduct.

“Student” as used refers to a student, a group of students, a prospective student, or a group of prospective students.

Ivy Tech State College—Central Indiana complies with regulations governing Drug-Free Schools and Campuses (34 CFR Part 86). Information about community drug and alcohol abuse programs is available in the Counseling Office located on the first floor of the North Meridian Center.

**College Rules**

1. **Alcoholic Beverages**: In compliance with Indiana State Law, consuming, being under the influence of, or possessing intoxicating beverages on College property is not permitted.

2. **Illegal Use of Drugs**: In compliance with Indiana State Law, being under the influence of, use of, possession of, or distributing illegal drugs is not permitted.
3. Smoking: In compliance with Indiana State Law, Ivy Tech State College buildings are classified as “nonsmoking” facilities.

4. Assembly: College policy states that assembly in a manner that obstructs the free movement of others about the campus, inhibits the free and normal use of the College buildings and facilities, or prevents or obstructs the normal operation of the College is not permitted.

5. Signs: Students may erect signs on campus or display signs or posters on designated bulletin boards after receiving written approval from the appropriate College official.

6. Solicitation of Funds: College policy requires that individuals or organizations seeking the use of campus facilities or scheduling activities to solicit funds, must first obtain written approval from the Director of Marketing and Development. (317) 921-4312.

7. Arms/Deadly Weapons: In compliance with Indiana State Law, possession of firearms (except those possessed by police or security officers) and other weapons is prohibited on College property or at any College sponsored activity held elsewhere.

8. Cheating: Cheating on papers or tests is a violation of College rules.

9. Counterfeiting and Altering: College policy states that copying or altering in any manner any record, document, or identification form used or maintained by the College is not permitted.

10. Theft of Property: Theft of personal or College property is a violation of College rules.

11. Vandalism: The destruction or mutilation of Ivy Tech State College books, magazines, equipment or buildings is a violation of College rules.

12. Use of College Facility: Students are permitted on campus during normal hours published by Ivy Tech State College and at other times established in the College calendar. Students wishing to utilize College facilities at other times must request permission from the appropriate College official.

13. Financial Responsibility: Students are expected to pay all fees, fines, or loans in a timely manner.

14. Motor Vehicles: Students are expected to comply with parking regulations. Handicapped parking spaces and visitors’ areas are reserved for those purposes, and vehicles improperly parked in those areas may be ticketed or towed at the owner’s expense.

15. Harassment/Stalking and Intimidation: This is defined as conduct causing alarm, or creating a risk by threatening to commit crimes against persons or their property or making unwelcome sexual advances or requests for sexual favors. This also covers harassment or intimidation of persons involved in a disciplinary hearing and of persons in authority who are in the process of discharging their responsibilities. Harassment, Stalking and Intimidation are not permitted. Perpetrators are also subject to Indiana State Laws.

16. Electronic Equipment or Programs: Use of electronic equipment or programs in a manner that is disruptive to other students, staff, or College processes is prohibited. This includes electronic equipment being played loudly. Students introducing computer virus will be subject to disciplinary action, including dismissal.

17. Sex Offenses- Forcible and Unforcible: Sex offenses are prohibited under Indiana State Laws and College rules.

18. Disruptive Behavior: Behaviors or actions that disrupt the College’s processes (academic and/or non-academic) are in violation.

19. Assault/Battery/Physical and/or Verbal Abuse: Altercations are prohibited under College rules. Perpetrators are also subject to Indiana State Law.

20. Discrimination Activities: Any student involved in discrimination activities towards students or staff will face disciplinary action.

21. Gambling: In compliance with Indiana State Law, gambling as prescribed by the law is not allowed.

22. Hazing: Hazing is a violation of College policy.

23. Use of indecent, abusive or threatening language: Use of indecent, threatening, or abusive language is a violation of College rules.

24. Unauthorized use of College name: Unauthorized use of the College name is a violation of College rules.

25. Lewd or indecent conduct: Indecent conduct is a violation of College rules. Students are also subject to all local, state, and federal laws.

26. Violation of local ordinances or of state or federal laws: Students are also subject to all local, state, and federal laws.

27. Furnishing of false information with intent to deceive: Providing false information is a violation of College rules. Students are also subject to all local, state, and federal laws.
28. Children on Campus: Because of insurance and security purposes, children are not allowed to be on Ivy Tech property without direct supervision. Children are not allowed in classrooms unless through the expressed consent of the instructor.

Violations

The College maintains jurisdiction over matters such as, but not limited to, alcoholic beverages, illegal use of drugs, motor vehicles, assembly, soliciting, use of College facilities, the posting or erection of signs, theft, arms/deadly weapons, vandalism, physical or verbal altercations or abuses, harassment, threats and/or discrimination activities.

The College attempts to protect students from those who might violate laws and ordinances. Local, state, or federal law enforcement officials will be notified of anyone who violates local, state, or federal laws. Violators shall be subject to prosecution by the appropriate law enforcement officials.

Anyone found in violation of College regulations shall be subject to disciplinary action by the College through due process procedures for student conduct violations. The regulations and due process procedures as described in the next two parts of the Catalog and in the Student Handbook are available for reading and review in the College Library/Learning Resource Center. Copies of the Student Handbook also are available through the Admissions Office.

Disciplinary Action

A student who violates the rules and regulations of the College may be subject to any of the following disciplinary actions:

1. Verbal reprimand.
2. Restitution for damages.
3. Restriction of privileges.
4. Withdrawal from a course, program, or the College.
5. Suspension from the College.
6. Dismissal from the College.

Due Process Procedures for Student Conduct Violations

Due process provides the College an appropriate mechanism to deal with violation of student conduct and conversely allows a student with a disagreement to grieve against College personnel's decision affecting that student. The intent of due process is to provide a process or procedure for unbiased review of a particular case or situation. The intent, rather than the mechanism, is the focus of this process. Thus, exceptions to the specifics and mechanisms can and will be made.

1. Cases or appeals of student misconduct and/or lack of academic integrity are to be referred to the appropriate designee of the Vice President/Chancellor, Dean of Instructional Affairs, or Director of Student Affairs. This College representative:
   a. will be responsible to review all initial disciplinary procedures;
   b. may suspend a student for a period of time until the Student Status Committee can meet;
   c. may withdraw the student from a course or program or dismiss the student from the College for disciplinary reasons.
2. Students recommended for suspension, withdrawal, or dismissal will be notified in writing. Students will be given an opportunity to appeal the decision to the Student Status Committee if they so choose. Student Status Committee Appeal forms may be obtained from the Dean of Instructional Affairs or the Director of Student Affairs Offices', second floor of the North Meridian Center.
3. The Student Status Committee deals with all cases relating to disciplinary actions or the academic status of students. Each region has a Student Status Committee that makes recommendations to the Vice President/Chancellor.
4. The Student Status Committee will be composed of at least six members, including two full-time instructional staff members and two administrative staff persons appointed by the Vice President/Chancellor of the region. The additional two members will be students designated by the Student Senate. The Committee's review and subsequent disposition of a formal complaint will begin no later than 30 days after receipt of the written complaint. Staff legal counsel, as needed, will be available to the Committee.
5. The Student Status Committee will assure the student due process. A written statement will first be presented by the student to the chairman of the Student Status Committee. The student will be invited to speak on his or her behalf to the Committee. The name of anyone the student wishes to bring to the meeting must be submitted for approval, in writing, to the Status Committee Chair prior to the meeting. Only the student may address the committee, unless otherwise allowed.
6. The Student Status Committee will issue a recommendation to the Vice President/Chancellor following its deliberation. Disciplinary probation or dismissal from the College will be final only
after review by the Vice President/Chancellor, who may approve or disapprove the recommendation of the Student Status Committee. Students dismissed for disciplinary reasons will not be entitled to refunds.

7. The student will be informed in writing of the decision of the Student Status Committee and of the subsequent recommendations to the Vice President/Chancellor, whose decision is final. All of the written recommendations from the committee will be filed in the student’s folder in the Registrar’s Office.

8. If the student disagrees with the Student Status Committee recommendation, he or she may file a complaint with the Vice President/Chancellor within 72 hours after notification of the Student Status Committee’s decision.

9. Exceptions to these rules may be made in extenuating circumstances at the discretion of the Vice President/Chancellor or his designee, upon request by those involved.

Student Grievances

Students may bring legitimate grievances to the attention of their instructors, counselors or other advisors. Students are asked to put their grievance and possible resolution in writing. Time will be provided for a grievance conference within two weeks of the complaint. The purpose of the conference is to discuss the problem and to find, if possible, a mutually satisfactory resolution. The conferences will be held within two weeks of notice of the complaint.

The first part of the process involves the student working one-to-one with appropriate staff to resolve the situation. If the grievance concerns an instructor or faculty advisor, the student, through a step-ladder process, should first request a conference with a program chair or area supervisor. If the situation is not resolved, the student should address the assistant divisional chairperson. The next step, if there is no resolution, is to meet with the divisional chair. Finally through this part of the process, the student can petition the Dean of Instructional Affairs.

Non-instructional areas follow the same step process. Through Student Affairs, for example, the process would be counselors, then manager, and finally Director of Student Affairs.

If the grievance is against the Dean of Instructional Affairs or Director of Student Affairs, the case will be remanded to the Student Status Committee.

The student who feels his or her grievance has not been resolved to his/her satisfaction through the one-to-one part of the process should then continue the grievance process by requesting a hearing of the Student Status Committee. The Student Status Committee is the final part of the grievance process and involves the Student Status Committee and the Vice President/Chancellor.

Note: If the student has a discrimination complaint, it will be referred to the Affirmative Action Officer to be initially processed under the College Affirmative Action Plan. If a hearing is necessary, the Affirmative Action Officer may return the matter, with advice, to the Student Status Committee, for a formal hearing.

Student Grievance Policy

1. Bring your complaint to the attention of your instructor, advisor, or counselor.

2. Your advisor, instructor, or counselor will provide you with a conference within two weeks of the notice of your complaint.

3. If you feel that such a conference with your instructor, advisor, or counselor would be futile because of the advisor's involvement in the grievance, you may elect to request a conference with a program chairperson or assistant divisional chairperson, division chair or manager as deemed appropriate. This conference will also be held within two weeks of the notice of your complaint.

4. If the complaint is not resolved to your satisfaction through the informal procedure, you may submit the grievance in writing to the Dean of Instructional Affairs or Director of Student Affairs. Exception: If the complaint is filed against a Director or Dean, his/her responsibility in these procedures shall be assumed by another Director/Dean.

5. The formal written complaint brought by a student must:
   a. Clearly state the facts giving rise to the grievance;
   b. Clearly state the remedy sought by the complaining party;
   c. Be signed and dated.

6. If the situation is not resolved at the previous levels, the written complaint shall be forwarded to the chair of the Student Status Committee unless the Vice President/Chancellor decides to resolve the complaint in another way which will be explained to the grievant in writing.

The Student Status Committee is responsible for review and disposition of any such complaint forwarded to it.

The disposition of a formal grievance procedure may be one of the following:
   a. Refuse further action: If no formal case has
been made by the complainant, the matter will be refused in writing to said grievant with reasons for this action. The grievant may resubmit the complaint once within 30 days providing there is additional information to be submitted. If not, the decision is final.

b. Fact-finding and mediation: The Committee itself can engage in investigation of the allegation as an attempt to mediate with parties a mutually agreeable resolution of the matter. A signed agreement should be generated summarizing the issue and resolution, if agreement is reached.

c. Referral: The complaint may be referred to a more appropriate forum for action.

d. If the complaint is a discrimination complaint, it should be referred to the Director of Affirmative Action Programs to be initially processed under the College Affirmative Action Plan. If a hearing is necessary, the Director of Affirmative Action Programs may return the matter, with advice, to the Student Status Committee for a formal hearing.

e. If the Committee believes a policy or procedure of the College is being legitimately challenged, it will refer the grievance to the Vice President/Chancellor with an explanation of its concern.

f. Remand complaint: If it appears no legitimate informal attempt to resolve the matter has taken place and it appears such discussion might lead to resolution of the complaint, then referral of the matter to the student advisor or other appropriate staff person for review and discussion with the student would be in order. If resolved, a report to the Student Status Committee will be made by such staff person. The Student Status Committee will review the agreement reached with the student to assure that, in fact, there was mutual agreement and understanding.

g. Hold formal hearing: If a grievance cannot be resolved utilizing the steps listed above, the committee may hold a formal hearing. If held, the Committee may call witnesses including the parties to the complaint. The name of anyone the student wishes to bring to the meeting must be submitted for approval, in writing. Legal counsel may be present, but not talk on behalf of the student. A recommendation will then be formulated and a report made to the Vice President/Chancellor of the suggested resolution of the matter.
Accreditation

Ivy Tech State College is an accredited member of the North Central Association of Colleges and Schools.

Professional Accreditations:

American Culinary Federation Educational Institute
American Institute for Design and Drafting
Commission on Accreditation of Allied Health Education Program (CAHHEP) with selected professional groups including:
  Joint Review Committee on Education Radiologic Technology
 Accrediting Review Committee for Educational Programs in Surgical Technology
Joint Review Committee for Respiratory Therapy Education
Association of Collegiate Business Schools and Programs
Council for Standards in Human Services Education
Federal Aviation Administrative Collegiate Training Initiative Electronics Program
National Academy of Early Childhood Programs
National Association of Industrial Technology
National Automotive Technician Education Foundation, Inc.
National League of Nursing

Approved By:

Chef de Cuisine Association of Indiana, Inc.
Indiana Commission on Vocational and Technical Education
Indiana State Board of Nursing
Indiana State Board of Health (Qualified Medication Aide, Nurse Aide, Social Service/Long Term Care)

Non-Discrimination Policy

Ivy Tech State College seeks to develop degree credit programs, courses and community service offerings and to provide open admission, counseling and placement services for all persons, regardless of race, color, creed, religion, gender, national origin, physical or mental handicap, age or veteran status.

Questions can be addressed to:
Director of Employee Relations: (317) 921-4762

Fire

In case of fire, please remain calm and move in an orderly fashion to the nearest exit. After you have exited the building, move a safe distance away

Tornado

In the event of a tornado warning, it is usually wise to move to an inner room and lower level away from glass windows.

Non-Smoking Policy

It is the policy of this College, as mandated by state law, to prohibit smoking within the College buildings. Please use the containers located outside the exterior doors to extinguish your cigarettes, etc. Ivy Tech State College appreciates your cooperation.

Lounge/Food Service

Sandwich, soft drink, and candy machines are provided in the student lounge. Students also have access to a microwave oven, television and pay phone. Food items are not to be taken out of the lounge area. Please make use of trash containers to keep tables clean. There is a change machine located in the student lounge in both buildings. Vending machine refunds/problems can be taken care of through the Security Office.

Parking and Housing

Rearview mirror parking hang-tags are provided to the students free of charge. Since Ivy Tech State College is a commuter college, there are no residence halls. If a student is unable to commute, further information can be obtained from the Admissions Office. There is a $5.00 replacement fee for parking tags.
Accounting Technology

In the Accounting Program, students develop an understanding of accounting principles, business law, communications, business equipment and related areas of study in the field. Instruction is offered in computerized accounting systems. Technical skills in financial accounting, cost accounting, and tax preparation are emphasized.

Accounting duties typically include maintaining journals and ledgers, processing banking transactions, billing, preparing payroll, maintaining inventory records, purchasing, processing expense reports, preparing financial statements and analyzing managerial reports. Position titles include junior or staff accountant, junior auditor, cost accounting clerk, bookkeeper, payroll clerk, inventory clerk, accounts receivable clerk, and financial management trainee.

A two-year program requiring 60 credits leads to an Associate in Applied Science degree or an Associate in Science degree. Career development certificates also are available.

Associate in Science (AS) — Accounting Technology

GENERAL EDUCATION CORE (24 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ECN 101</td>
<td>Economic Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENG 112</td>
<td>Exposition and Persuasion</td>
<td>3</td>
</tr>
<tr>
<td>POL 101</td>
<td>Introduction to American Government and Politics</td>
<td>3</td>
</tr>
<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>XXX XXX</td>
<td>Life/Physical Sciences Elective</td>
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TECHNICAL CORE (18 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>ACC 101</td>
<td>Accounting Principles I</td>
<td>3</td>
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<tr>
<td>ACC 102</td>
<td>Accounting Principles II</td>
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<tr>
<td>BUS 101</td>
<td>Introduction to Business</td>
<td>3</td>
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<tr>
<td>BUS 102</td>
<td>Business Law</td>
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<td>CIS 101</td>
<td>Introduction to Microcomputers</td>
<td>3</td>
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<tr>
<td>CIS 115</td>
<td>Electronic Spreadsheets in Business</td>
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SPECIALTY CORE (15 Credits)

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<tr>
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<td>Income Tax I</td>
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<td>ACC 201</td>
<td>Intermediate Accounting I</td>
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<tr>
<td>ACC 202</td>
<td>Intermediate Accounting II</td>
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<td>ACC 203</td>
<td>Cost Accounting I</td>
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<tr>
<td>ACC 209</td>
<td>Auditing</td>
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REGIONALLY DETERMINED CORE (3 Credits)

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<tr>
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<td>ACC 111</td>
<td>Accounting Principles Lab I</td>
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<td>ACC 112</td>
<td>Accounting Principles Lab II</td>
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<tr>
<td>ACC 206</td>
<td>Managerial Accounting</td>
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<tr>
<td>ACC 208</td>
<td>Income Tax II</td>
<td>3</td>
</tr>
<tr>
<td>ACC 222</td>
<td>Accounting Software Application</td>
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TOTAL CREDITS 60

Associate in Applied Science (AAS) — Accounting Technology

GENERAL EDUCATION CORE (18 Credits)

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<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
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<td>ECN 101</td>
<td>Economic Fundamentals</td>
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<tr>
<td>ENG 111</td>
<td>English Composition</td>
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<tr>
<td>MAT 110</td>
<td>Contemporary College Mathematics OR</td>
<td></td>
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<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
<td>3</td>
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<tr>
<td>XXX XXX</td>
<td>Life/Physical Sciences Elective</td>
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<tr>
<td>XXX XXX</td>
<td>Humanities/Social Sciences Elective</td>
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TECHNICAL CORE (18 Credits)

<table>
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<tbody>
<tr>
<td>ACC 101</td>
<td>Accounting Principles I</td>
<td>3</td>
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<tr>
<td>ACC 102</td>
<td>Accounting Principles II</td>
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<tr>
<td>BUS 101</td>
<td>Introduction to Business</td>
<td>3</td>
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<tr>
<td>BUS 102</td>
<td>Business Law</td>
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</tr>
<tr>
<td>CIS 101</td>
<td>Introduction to Microcomputers</td>
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<tr>
<td>CIS 115</td>
<td>Electronic Spreadsheets in Business</td>
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SPECIALTY CORE (12 Credits)

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<tr>
<td>ACC 105</td>
<td>Income Tax I</td>
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<tr>
<td>ACC 201</td>
<td>Intermediate Accounting I</td>
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<tr>
<td>ACC 203</td>
<td>Cost Accounting I</td>
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REGIONALLY DETERMINED CORE (12 Credits)

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<tr>
<th>Course</th>
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<tbody>
<tr>
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<td>Accounting Software Application</td>
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</tr>
</tbody>
</table>

TOTAL CREDITS 60
Administrative Office Technology

The Administrative Office Technology Program prepares students for an automated office environment. Students develop basic office skills and acquire computer skills, including word processing, spreadsheets, databases, and microcomputer operating systems. Several applications (advanced word processing, desktop publishing, and integrated packages) can also be studied in depth.

The Administrative Office Technology Program is designed to accommodate students with different levels of training experiences. Courses are offered which provide initial, advanced and refresher education and assist individuals in achieving professional recognition and career progression. The program prepares graduates as administrative office personnel and provides opportunities for specialized training in such areas as legal, medical, and office automation. Students who complete the recommended sequences of courses are eligible to take the Administrative/Information Processing Specialist (AIPS) or the Certified Professional Secretary (CPS) exams administered by the Institute for Certifying Secretaries of the Professional Secretaries International Association (PSI).

A two-year program requiring 60 credits leads to an Associate in Applied Science degree and an Associate in Science degree. Technical certificates and career development certificates also are available.

Associate in Science (AS) — Administrative Office Technology

GENERAL EDUCATION CORE (24 Credits)

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
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</tr>
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<td>COM 102</td>
<td>Intro to Interpersonal Communications</td>
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<td>ECN 101</td>
<td>Economic Fundamentals</td>
<td>3</td>
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<tr>
<td>ENG 111</td>
<td>English Composition</td>
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</tr>
<tr>
<td>POL 101</td>
<td>Introduction to American Government and Politics</td>
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<tr>
<td>MAT 111</td>
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<tr>
<td>XXX XXX</td>
<td>Humanities/Social Sciences Elective</td>
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TECHNICAL CORE (36 Credits)

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<tr>
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<tr>
<td>ACC 102</td>
<td>Accounting Principles II</td>
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<tr>
<td>AOT 103</td>
<td>Info/Word Processing Concepts</td>
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<tr>
<td>AOT 119</td>
<td>Document Production</td>
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<tr>
<td>AOT 220</td>
<td>Document Management</td>
<td>3</td>
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<tr>
<td>AOT 221</td>
<td>Office Management Procedures</td>
<td>3</td>
</tr>
<tr>
<td>BUS 101</td>
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<td>Business Law</td>
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<td>BUS 105</td>
<td>Principles of Management</td>
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<td>CIS 101</td>
<td>Introduction to Microcomputers</td>
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<td>CIS 115</td>
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<tr>
<td>XXX XXX</td>
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TOTAL CREDITS 60

Associate in Applied Science (AAS) — Administrative Office

GENERAL EDUCATION CORE (18 Credits)

<table>
<thead>
<tr>
<th>Course</th>
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TECHNICAL CORE (18 Credits)

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<td>Accounting Principles I</td>
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<td>ACC 102</td>
<td>Accounting Principles II</td>
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<tr>
<td>AOT 103</td>
<td>Math Word Processing Concepts</td>
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<tr>
<td>AOT 119</td>
<td>Document Production</td>
<td>3</td>
</tr>
<tr>
<td>AOT 219</td>
<td>Specialized Formatting/Transcription</td>
<td>3</td>
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<tr>
<td>BUS 101</td>
<td>Introduction to Business</td>
<td>3</td>
</tr>
<tr>
<td>CIS 103</td>
<td>Introduction to Microcomputers</td>
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SPECIALTY CORE (12 Credits)

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<th>Course</th>
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<tr>
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<td>AOT 202</td>
<td>Information Word Processing Applications</td>
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<tr>
<td>AOT 220</td>
<td>Document Management</td>
<td>3</td>
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<tr>
<td>AOT 221</td>
<td>Office Management/Procedures</td>
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REGIONALLY DETERMINED CORE (6 Credits)

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<td>AOT 212</td>
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<td>CIS 115</td>
<td>Electronic Spreadsheets in Business</td>
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ELECTIVES (6 Credits)

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<td>Shorthand II</td>
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<td>Data Entry</td>
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<td>AOT 113</td>
<td>Office Calculating Machines</td>
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<td>AOT 207</td>
<td>Office Automation Applications</td>
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<td>AOT 216</td>
<td>Desktop Publishing</td>
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<td>AOT 216</td>
<td>Practicum/Internship</td>
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<td>ACC 102</td>
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<td>Business Law</td>
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<tr>
<td>CIS 106</td>
<td>Micro Operating Systems</td>
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TOTAL CREDITS 60

30
### Associate in Applied Science (AAS) — Administrative Office Technology / Legal Specialty

**GENERAL EDUCATION CORE** (18 Credits)
- COM 101 Fundamentals of Public Speaking 3
- ECN 101 Economic Fundamentals 3
- ENG 111 English Composition 3
- MAT 110 Contemporary College Mathematics 3
- XXX XXX 3
- XXX XXX Humanities/Social Sciences Elective 3

**TECHNICAL CORE** (36 Credits)
- ACC 101 Accounting Principles I 3
- AOT 103 Information/Word Processing Concepts 3
- AOT 116 Business Communications 3
- AOT 119 Document Production 3
- AOT 215 Legal Terminology 3
- AOT 219 Specialized Formatting and Transcription 3
- AOT 221 Office Management and Procedures 3
- BUS 101 Introduction to Business 3
- CIS 101 Introduction to Microcomputers 3
- CIS 115 Introduction to Microcomputers 3
- LEG 101 Civil Procedures 3

**REGIONALLY DETERMINED CORE** (6 Credits)
- AOT 212 Microcomputer Word Processing 3
- AOT 214 Desktop Publishing 3
- BUS 102 Business Law 3
- CIS 106 Micro Operating Systems 3
- LEG 109 Family Law 3
- LEG 111 Criminal Law 3
- LEG 202 Litigation 3

**TOTAL CREDITS** 60

### Technical Certificate (TC) — Secretarial Administrative

**GENERAL EDUCATION CORE** (6 Credits)
- ENG 111 English Composition 3
- SOC XXX Social Sciences Elective 3

**TECHNICAL CORE** (24 Credits)
- AOT 103 Information/Word Processing Concepts 3
- AOT 116 Business Communications 3
- AOT 119 Document Production 3
- AOT 219 Specialized Formatting/Transcription 3
- AOT 220 Office Management/Procedures 3
- CIS 101 Introduction to Microcomputers 3
- XXX XXX Elective 3

**ELECTIVES** (3 Credits)
- AOT 108 Shorthand 1 3
- AOT 112 Data Entry 3
- AOT 113 Office Calculating Machines 2
- AOT 202 Info/Word Processing Applications 3
- AOT 207 Office Automation Applications 3
- AOT 214 Desktop Publishing 3
- AOT 216 Practicum/Internship 3
- ACC 101 Accounting Principles I 3
- CIS 106 Micro Operating Systems 3
- CIS 115 Electronic Spreadsheets in Business 3

**TOTAL CREDITS** 30

### Technical Certificate (TC) — Medical Secretary

**GENERAL EDUCATION CORE** (6 Credits)
- ENG 111 English Composition 3
- SOC XXX Social Sciences Elective 3

**TECHNICAL CORE** (24 Credits)
- AOT 103 Info/Word Processing Concepts 3
- AOT 113 Office Calculating Machines 1
- AOT 220 Document Management 3
- AOT 221 Office Management and Procedures 3
- CIS 101 Introduction to Microcomputers 3

**ELECTIVES** (3 Credits)
- ANP 101 Anatomy and Physiology I 3
- ANP 102 Anatomy and Physiology II 3
- AOT 202 Info/Word Processing Applications 3
- AOT 207 Office Automation Applications 3
- AOT 212 Microcomputer Word Processing 3
- CIS 115 Electronic Spreadsheets in Business 3
- MEA 115 Medical Insurance 3

**TOTAL CREDITS** 30

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31
Automotive Technology

The Automotive Technology Program prepares students with the general and technical education needed for successful careers in automotive service, sales, technical support, management and customer relations, and for continuation in higher education. A student in the Automotive Technology Program may specialize in automotive body repair or automotive service. A two-year program requiring 69 credits leads to an Associate in Applied Science degree. Technical and career development certificates also are available.

### Associate in Applied Science (AAS) — Automotive Technology / Automotive Service Specialty *

**GENERAL EDUCATION CORE (18 Credits)**

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
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<td>3</td>
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<tr>
<td>SCI 111</td>
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**TECHNICAL CORE (18 Credits)**

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<td>AMV 101</td>
<td>Chassis/Suspension Principles</td>
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<tr>
<td>AMV 107</td>
<td>Engine Principles &amp; Design</td>
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<td>AMV 113</td>
<td>Electricity for Transportation</td>
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<td>AMV 202</td>
<td>Computer Engine Controls</td>
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<tr>
<td>TEC 104</td>
<td>Computer Fundamentals for Technology</td>
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**SPECIALTY CORE (12 Credits)**

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<td>Fuel Systems</td>
<td>3</td>
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<tr>
<td>AST 201</td>
<td>Heating &amp; Air Conditioning Principles</td>
<td>3</td>
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<tr>
<td>AST 209</td>
<td>Automotive Braking Systems</td>
<td>3</td>
</tr>
<tr>
<td>AST 220</td>
<td>Transmission &amp; Driveline Service</td>
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**REGIONALLY DETERMINED CORE (21 Credits)**

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<td>Two/Four Wheel Alignment</td>
<td>3</td>
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<td>AST 104</td>
<td>Start and Charge Systems</td>
<td>3</td>
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<td>AST 203</td>
<td>Engine Rebuild</td>
<td>3</td>
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<td>AST 204</td>
<td>Automatic Transmission/Transaxle</td>
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<td>AST 205</td>
<td>Manual Transmission/Transaxle</td>
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<td>AST 207</td>
<td>Advanced Engine Performance</td>
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<tr>
<td>AST 288.03</td>
<td>Electronic &amp; Accessory Systems</td>
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**TOTAL CREDITS** 69

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and in all eight areas of the Automotive Service Excellence (ASE) by the National Automotive Technicians Education Foundation (NATEF).

### Associate in Applied Science (AAS) — Automotive Technology / ASSET-Ford Motor Co. Specialty *

**GENERAL EDUCATION CORE (18 Credits)**

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**TECHNICAL CORE (18 Credits)**

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<td>Ford STST Suspension and Steering</td>
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<tr>
<td>AMV 107</td>
<td>Ford Engine Principles &amp; Design</td>
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<tr>
<td>AMV 113</td>
<td>Ford STST Electrical Systems</td>
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<tr>
<td>AMV 202</td>
<td>Ford STST Electronic Engine Controls</td>
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<tr>
<td>TEC 104</td>
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**SPECIALTY CORE (12 Credits)**

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<td>AST 201</td>
<td>Ford STST Climate Control</td>
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<td>AST 209</td>
<td>Ford Automotive Braking Systems</td>
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<tr>
<td>AST 220</td>
<td>Ford Transmission &amp; Driveline Service</td>
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**REGIONALLY DETERMINED CORE (21 Credits)**

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<td>Ford Automatic Transmission/Transaxle</td>
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<td>AST 205</td>
<td>Ford Manual Transmission/Transaxle</td>
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<td>AST 207</td>
<td>Ford STST Advanced Engine Performance</td>
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<td>AST 288.02</td>
<td>Ford STST Automatic Transmission</td>
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**TOTAL CREDITS** 69

NOTE: STST — Service Technician Specialty Training

NOTE: ASSET - Automotive Service Educational Training

* Accredited by the Accreditation board of the National Association of Industrial Technology (NAIT) and in all eight areas of the Automotive Service Excellence (ASE) by the National Automotive Technicians Education Foundation (NATEF).
Associate in Applied Science (AAS) —
Automotive Technology / ASEP-General Motors Specialty *

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**TECHNICAL CORE** (18 Credits)

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<td>GM STG Suspension and Steering</td>
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<td>AMV 107</td>
<td>GM Engine Principles &amp; Design</td>
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<tr>
<td>AMV 113</td>
<td>GM STG Specialized Electronics Training</td>
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<td>AMV 202</td>
<td>GM Computer Engine Controls</td>
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**SPECIALTY CORE** (12 Credits)

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<td>AST 201</td>
<td>GM STG Climate Control</td>
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<td>AST 209</td>
<td>GM STG Braking Systems/RWAL/4WAL</td>
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<td>GM STG Drive Train</td>
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**REGIONALLY DETERMINED CORE** (21 Credits)

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<td>GM Engine Rebuild</td>
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<td>AST 204</td>
<td>GM Automatic Transmission/Transaxle</td>
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<td>AST 288.01</td>
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**TOTAL CREDITS** 69

**NOTE:** STG — Service Technology Group

Associate in Applied Science (AAS) —
Automotive Technology / T-TEN - Toyota Specialty *

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**TECHNICAL CORE** (18 Credits)

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<td>T-TEN Chassis and Suspension</td>
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**SPECIALTY CORE** (12 Credits)

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<td>Toyota Climate Control</td>
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<td>T-TEN Braking Systems</td>
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<td>AST 220</td>
<td>Toyota Transmission &amp; Driveline Service</td>
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**REGIONALLY DETERMINED CORE** (21 Credits)

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<td>Engine Rebuild</td>
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<td>Toyota Engine Performance</td>
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</table>

**TOTAL CREDITS** 69

**NOTE:** T-TEN — Toyota Technical Education Network

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and in all eight areas of the Automotive Service Excellence (ASE) by the National Automotive Technicians Education Foundation (NATEF).
Business Administration

The Business Administration Program gives students the broad background they need for general administrative positions in a variety of business environments. It also provides an opportunity for specialization. A student in the Business Administration Program may specialize in one of the following areas: logistics management, management, marketing, quality management or supervision.

A two-year program requiring 60 credits leads to an Associate in Applied Science degree. Technical certificates and career development certificates also are available.

Associate in Applied Science (AAS) — Business Administration / Management Specialty

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<td>Organizational Behavior</td>
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<td>BUS 210</td>
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TOTAL CREDITS: 60

Associate in Applied Science (AAS) — Business Administration / Logistics Management Specialty

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TOTAL CREDITS: 60
Associate in Applied Science (AAS) — Business Administration / Marketing Specialty

**GENERAL EDUCATION CORE**  (18 Credits)

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<tr>
<td>SUP 224</td>
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**TOTAL CREDITS**  60
Computer Information Systems

The Computer Information Systems curriculum, with specialties in computer programming and microcomputer operations, is designed to provide the flexible and comprehensive training required by employers. The curriculum includes technical courses in computer information systems and related areas, general education, and regionally determined technical courses in each specialty area.

Automated systems allow for the integration of several functionally related applications such as word processing, database management, spreadsheets, programming, electronic mail systems, graphics generation, and telecommunications. These systems may be stand-alone, shared logic, distributed, or integrated. Demand for employees with computer and business skills is particularly high in small and medium-size firms which create, transmit, and control information by using computer technology as a management tool.

A two-year program requiring 60 credits leads to an Associate in Applied Science degree. An Associate in Science degree is available at selected campuses.

## Associate in Applied Science (AAS) — Computer Information Systems / Microcomputer Specialty

### GENERAL EDUCATION CORE (18 Credits)

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### TECHNICAL CORE (18 Credits)

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<tr>
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<td>Introduction to Microcomputers</td>
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<tr>
<td>CIS</td>
<td>Data Processing Fundamentals</td>
<td>3</td>
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<tr>
<td>CIS</td>
<td>Logic, Design, and Programming</td>
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</tr>
<tr>
<td>CIS</td>
<td>Systems Analysis and Design</td>
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### SPECIALTY CORE (12 Credits)

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<tbody>
<tr>
<td>CIS</td>
<td>Microcomputer Operating Systems</td>
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<td>CIS</td>
<td>Electronic Spreadsheets in Business</td>
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<tr>
<td>CIS</td>
<td>Data Communications</td>
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<tr>
<td>CIS</td>
<td>Hardware and Software Troubleshooting</td>
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### REGIONALLY DETERMINED CORE (6 Credits)

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### ELECTIVES (6 Credits)

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<tr>
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<td>CIS</td>
<td>Microcomputer Programming</td>
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<tr>
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<tr>
<td>CIS</td>
<td>Basic Programming Language</td>
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<td>CIS</td>
<td>Systems Development with High Level Tools</td>
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<td>CIS</td>
<td>Electronic Spreadsheets</td>
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<tr>
<td>CIS</td>
<td>RPG Programming Fundamentals</td>
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<td>CIS</td>
<td>Assembler Language Programming</td>
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<tr>
<td>CIS</td>
<td>Advanced RPG Programming (AS/400)</td>
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<tr>
<td>CIS</td>
<td>Shell Command Language for Programmers</td>
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<td>CIS</td>
<td>Advanced &quot;C&quot; Programming</td>
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<tr>
<td>CIS</td>
<td>Integrated Business Software</td>
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<td>CIS</td>
<td>Advanced Database Management Systems</td>
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</tr>
<tr>
<td>CIS</td>
<td>Advanced Electronic Spreadsheets</td>
<td>3</td>
</tr>
<tr>
<td>CIS</td>
<td>Visual Basic Programming</td>
<td>3</td>
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<tr>
<td>CIS</td>
<td>Graphic User Interfaces: Windows</td>
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<tr>
<td>CIS</td>
<td>Local Area Networks</td>
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**TOTAL CREDITS**: 60
Associate in Applied Science (AAS) — Computer Information Systems / Programming Specialty

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<td>CIS 212</td>
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<td>CIS 206</td>
<td>Systems Development with High Level Tools</td>
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<td>CIS 208</td>
<td>Electronic Spreadsheets</td>
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<td>CIS 211</td>
<td>RPG Programming Fundamentals</td>
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<td>CIS 216</td>
<td>Advanced RPG Programming (AS/400)</td>
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<td>CIS 220</td>
<td>Shell Command Language for Programmers</td>
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<td>CIS 221</td>
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<td>CIS 233</td>
<td>Graphic User Interfaces: Windows</td>
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TOTAL CREDITS: 60
The Design Technology Program is competency-based and is designed to be responsive to the needs of business and industry. The program provides an environment conducive to the development of general knowledge, technical skills and critical thinking skills so graduates may enter their profession as entry level technicians. They also will be prepared to respond to future advances and changes in their profession. Included is a blend of traditional “board” techniques with latest hardware and software used in industry today. This balance of skills in both areas helps provide students with the diversity necessary to be competitive in the job market. Graduates will have the necessary skills to choose related careers or continue their education at other post-secondary institutions.

Associate in Applied Science degrees require 64 credits. Specialties include architecture, civil, mechanical and graphic design.

Technical and career development certificates also are available.

### Associate in Applied Science (AAS) — Design Technology / Architectural Specialty*

**GENERAL EDUCATION CORE** (19 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<td>COM 101</td>
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<td>ENG 111</td>
<td>English Composition</td>
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<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
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<tr>
<td>MAT 121</td>
<td>Geometry/Trigonometry</td>
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<tr>
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**TECHNICAL CORE** (21 Credits)

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<td>DSN 103</td>
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<td>Descriptive Geometry</td>
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<td>DSN 220</td>
<td>Advanced CAD</td>
<td>3</td>
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<tr>
<td>DSN 221</td>
<td>Statics</td>
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<tr>
<td>DSN 222</td>
<td>Strength of Materials</td>
<td>3</td>
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<tr>
<td>TEC 102</td>
<td>Technical Graphics</td>
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<tr>
<td>TEC 104</td>
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**SPECIALTY CORE** (12 Credits)

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<td>DCT 105</td>
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<tr>
<td>DCT 109</td>
<td>Construction Materials and Specifications</td>
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<tr>
<td>DCT 204</td>
<td>Architectural CAD</td>
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<td>DCT 208</td>
<td>Structural Detailing</td>
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**REGIONALLY DETERMINED CORE** (12 Credits)

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<td>DCT 202</td>
<td>CAD Programming Language</td>
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<td>DCT 206</td>
<td>Mechanical and Electrical Equipment</td>
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<tr>
<td>DCT 210</td>
<td>Surveying I</td>
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</table>

**TOTAL CREDITS** 64

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and the American Design Drafting Association (ADDA).

### Associate in Applied Science (AS) — Design Technology / Mechanical Specialty*

**GENERAL EDUCATION CORE** (19 Credits)

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<tr>
<td>COM 101</td>
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<td>ENG 111</td>
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<td>MAT 111</td>
<td>Intermediate Algebra</td>
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<td>MAT 121</td>
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**TECHNICAL CORE** (21 Credits)

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<tr>
<td>DSN 103</td>
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**SPECIALTY CORE** (12 Credits)

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<td>DCT 217</td>
<td>Product Design</td>
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<tr>
<td>TEC 101</td>
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**REGIONALLY DETERMINED CORE** (12 Credits)

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<td>DCT 105</td>
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<td>DCT 201</td>
<td>Schematic Drafting</td>
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<td>DCT 216</td>
<td>Jig and Fixture Design</td>
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**TOTAL CREDITS** 64

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and the American Design Drafting Association (ADDA).
## Associate in Applied Science (AAS) — Design Technology / Civil Specialty

### GENERAL EDUCATION CORE (19 Credits)
- **COM 101** Fundamentals of Public Speaking 3
- **ENG 111** English Composition 3
- **MAT 111** Intermediate Algebra 3
- **MAT 121** Geometry/Trigonometry 3
- **PHY 101** Physics I 4
- **ELECTIVE:** Humanities/Social Sciences 3

### TECHNICAL CORE (21 Credits)
- **DSN 103** CAD Fundamentals 3
- **DSN 106** Descriptive Geometry 3
- **DSN 220** Advanced CAD 3
- **DSN 221** Statics 3
- **DSN 222** Strength of Materials 3
- **TEC 102** Technical Graphics 3
- **TEC 104** Computer Fundamentals for Technology 3

### SPECIALTY CORE (12 Credits)
- **DCT 109** Construction Materials & Specifications 3
- **DCT 208** Structural Detailing 3
- **DCT 210** Surveying I 3
- **DCT 213** CAD Mapping 3

### REGIONALLY DETERMINED CORE (12 Credits)
- **DCT 113** Intermediate CAD 3
- **DCT 202** CAD Programming Language 3
- **DCT 228** Civil I 3
- **DCT 229** Civil II 3

**TOTAL CREDITS** 64

## Associate in Applied Science (AAS) — Design Technology / Computer Graphic Specialty

### GENERAL EDUCATION CORE (19 Credits)
- **COM 101** Fundamentals of Public Speaking 3
- **ENG 111** English Composition 3
- **MAT 111** Intermediate Algebra 3
- **MAT 121** Geometry/Trigonometry 3
- **PHY 101** Physics I 4
- **ELECTIVE:** Humanities/Social Sciences 3

### TECHNICAL CORE (21 Credits)
- **DSN 103** CAD Fundamentals 3
- **DSN 106** Descriptive Geometry 3
- **DSN 220** Advanced CAD 3
- **DSN 221** Statics 3
- **DSN 222** Strength of Materials 3
- **TEC 102** Technical Graphics 3
- **TEC 104** Computer Fundamentals for Technology 3

### SPECIALTY CORE (12 Credits)
- **ART 111** Drawing for Visualization 3
- **ART 114** Graphic Design 3
- **VIS 101** Fundamentals of Design 3
- **VIS 115** Introduction to Computer Graphics 3

### REGIONALLY DETERMINED CORE (12 Credits)
- **ART 218** Digital Production 3
- **ART 217** Advanced Graphic Design 3
- **GRA 202** Science of Color 3
- **DCT 230** Fundamentals of Animation 3

**TOTAL CREDITS** 64

## Technical Certificate (TC) — Design Technology

### GENERAL EDUCATION CORE (6 Credits)
- **ENG 111** English Composition 3
- **MAT 111** Intermediate Algebra 3

### TECHNICAL CORE (3 Credits)
- **TEC 104** Computer Fundamentals for Technology 3

### SPECIALTY CORE (6 Credits)
- **DSN 103** CAD Fundamentals 3
- **TEC 102** Technical Graphics 3

### REGIONALLY DETERMINED CORE (18 Credits)
- **DCT 104** Product Drafting 3
- **DCT 105** Facilities Design and Layout 3
- **DCT 113** Intermediate CAD 3
- **DSN 106** Descriptive Geometry 3
- **ELECTIVE:** Humanities/Social Sciences 3

Students should select 3 Credits from the following:
- **DCT 109** Construction Materials and Specifications 3
- **MAT 110** Contemporary College Mathematics 3
- **TEC 101** Manufacturing Processes 3

**TOTAL CREDITS** 33
## Electronics Technology

The Electronics Technology Program is competency-based and is designed to meet the on-going needs of business, industry, and the student. The program is structured to develop technical skills, general knowledge, and the critical thinking and problem solving abilities of graduates, thereby assisting the student in adapting to changes in the work environment and allowing advancement in the field. Additionally, the program prepares the student to transfer into baccalaureate degree-granting institutions.

Associate in Applied Science degrees require 66 credits. Specialties include communications, industrial electronics, and microwave systems. Post-curriculum specialization courses and career development certificates are available.

### Associate in Applied Science (AAS) — Electronics Technology / Communications Specialty*

#### GENERAL EDUCATION CORE (23 Credits)

<table>
<thead>
<tr>
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<td>MAT 131</td>
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<td>MAT 132</td>
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#### SPECIALTY CORE (13 Credits)

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#### REGIONALLY DETERMINED CORE (12 Credits)

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<tr>
<td>ELT 288.01</td>
<td>Special Topics in Solid State</td>
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**TOTAL CREDITS: 66**

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT) and the Federal Aviation Administration (FAA) Airway Facilities Collegiate Training Initiative (AF-CTI)

### Associate in Applied Science (AAS) — Electronics Technology / Industrial Electronics Specialty*

#### GENERAL EDUCATION CORE (23 Credits)

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#### TECHNICAL CORE (18 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ELT 100</td>
<td>Circuits I</td>
<td>4</td>
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<tr>
<td>ELT 101</td>
<td>Circuits II</td>
<td>4</td>
</tr>
<tr>
<td>ELT 103</td>
<td>Digital Principles</td>
<td>3</td>
</tr>
<tr>
<td>ELT 105</td>
<td>Solid State I</td>
<td>4</td>
</tr>
<tr>
<td>TEC 104</td>
<td>Computer Fundamentals for Technology</td>
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#### SPECIALTY CORE (12 Credits)

<table>
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<tbody>
<tr>
<td>AMT 201</td>
<td>Manufacturing System Controls</td>
<td>3</td>
</tr>
<tr>
<td>ELT 203</td>
<td>Introduction to Industrial Controls</td>
<td>3</td>
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<td>ELT 214</td>
<td>Industrial Instrumentation</td>
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</tr>
<tr>
<td>ELT 223</td>
<td>Electrical Machines</td>
<td>3</td>
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#### REGIONALLY DETERMINED CORE (13 Credits)

<table>
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<th>Course</th>
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<tbody>
<tr>
<td>ELT 106</td>
<td>Digital Applications</td>
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<tr>
<td>ELT 201</td>
<td>Solid State II</td>
<td>4</td>
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<tr>
<td>ELT 202</td>
<td>Microprocessors</td>
<td>4</td>
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<tr>
<td>ELT 288.01</td>
<td>Special Topics in Solid State</td>
<td>1</td>
</tr>
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</table>

**TOTAL CREDITS: 66**

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT).
Associate in Applied Science (AAS) — Electronics Technology / Microwave Systems Specialty*

**GENERAL EDUCATION CORE** (23 Credits)
- COM 101 Fundamentals of Public Speaking 3
- ENG 111 English Composition 3
- MAT 131 Algebra/Trigonometry I 3
- MAT 132 Algebra/Trigonometry II 3
- PHY 101 Physics I 4
- PHY 102 Physics II 4
- ELECTIVE: Humanities/Social Sciences 3

**TECHNICAL CORE** (18 Credits)
- ELT 100 Circuits I 4
- ELT 101 Circuits II 4
- ELT 103 Digital Principles 3
- ELT 105 Solid State I 4
- TEC 104 Computer Fundamentals for Technology 3

**SPECIALTY CORE** (13 Credits)
- ELT 201 Solid State II 4
- ELT 227 Peripherals 3
- ELT 229 Telecommunications 3
- ELT 231 Microwave 3

**REGIONALLY DETERMINED CORE** (12 Credits)
- ELT 106 Digital Applications 4
- ELT 202 Microprocessors 4
- ELT 228 Communications Electronics 3
- ELT 288.01 Special Topics in Solid State 1

**TOTAL CREDITS** 66

* Accredited by the Accreditation Board of the National Association of Industrial Technology (NAIT).
Hospitality Administration

The Hospitality Administration program emphasizes the techniques of such hospitality leaders as Ritz, Escoffier, Statler, Hilton, and Marriott. By choosing a specialty area, students begin building leadership skills for the profession of welcoming and serving guests. The hospitality programs offered by Ivy Tech produce graduates who can perform well in the hospitality industry.

Specialties are available in baking and pastry arts, catering, culinary arts, food service (technical certificate only), and hotel and restaurant administration. A two-year program requiring 60-66 credits leads to an Associate in Applied Science degree. Technical certificates and career development certificates are also available.

### Associate in Applied Science (AAS) — Hospitality Administration / Baking and Pastry Arts Specialty

<table>
<thead>
<tr>
<th>GENERAL EDUCATION CORE</th>
<th>(18 Credits)</th>
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<tbody>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>ECN 101</td>
<td>Economic Fundamentals</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Contemporary College Mathematics OR</td>
</tr>
<tr>
<td>PSY 101</td>
<td>Introduction to Psychology</td>
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<tr>
<td>SCI 111</td>
<td>Physical Science</td>
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<table>
<thead>
<tr>
<th>TECHNICAL CORE</th>
<th>(18 Credits)</th>
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<tbody>
<tr>
<td>HOS 101</td>
<td>Sanitation and First Aid</td>
</tr>
<tr>
<td>HOS 102</td>
<td>Basic Foods Theory and Skills</td>
</tr>
<tr>
<td>HOS 104</td>
<td>Nutrition</td>
</tr>
<tr>
<td>HOS 109</td>
<td>Hospitality Purchasing</td>
</tr>
<tr>
<td>HOS 201</td>
<td>Hospitality Organization and Human Resource Management</td>
</tr>
<tr>
<td>HOS 203</td>
<td>Menu, Design, and Layout</td>
</tr>
<tr>
<td>HOS 204</td>
<td>Food and Beverage Cost Control</td>
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<table>
<thead>
<tr>
<th>SPECIALTY CORE</th>
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<tbody>
<tr>
<td>BKR 101</td>
<td>Yeast Raised Breads I</td>
</tr>
<tr>
<td>BKR 102</td>
<td>Plasticized Sweet Dough</td>
</tr>
<tr>
<td>BKR 103</td>
<td>Internship/Baking Science</td>
</tr>
<tr>
<td>BKR 201</td>
<td>Cakes, Icings, and Fillings</td>
</tr>
<tr>
<td>BKR 202</td>
<td>Classical Cake Decoration</td>
</tr>
<tr>
<td>BKR 204</td>
<td>Externship</td>
</tr>
<tr>
<td>HOS 103</td>
<td>Soups, Stocks, and Sauces</td>
</tr>
<tr>
<td>HOS 105</td>
<td>Introduction to Baking</td>
</tr>
<tr>
<td>HOS 106</td>
<td>Pantry and Breakfast</td>
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<tr>
<td>HOS 207</td>
<td>Classical Pastries and Chocolates</td>
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**TOTAL CREDITS** 65

### Associate in Applied Science (AAS) — Hospitality Administration / Culinary Arts Specialty

<table>
<thead>
<tr>
<th>GENERAL EDUCATION CORE</th>
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<tbody>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>ECN 101</td>
<td>Economic Fundamentals</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Contemporary College Mathematics OR</td>
</tr>
<tr>
<td>PSY 101</td>
<td>Introduction to Psychology</td>
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<tr>
<td>SCI 111</td>
<td>Physical Science</td>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>HOS 101</td>
<td>Sanitation and First Aid</td>
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<tr>
<td>HOS 102</td>
<td>Basic Foods Theory and Skills</td>
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<tr>
<td>HOS 104</td>
<td>Nutrition</td>
</tr>
<tr>
<td>HOS 109</td>
<td>Hospitality Purchasing</td>
</tr>
<tr>
<td>HOS 201</td>
<td>Hospitality Organization and Human Resource Management</td>
</tr>
<tr>
<td>HOS 203</td>
<td>Menu, Design, and Layout</td>
</tr>
<tr>
<td>HOS 204</td>
<td>Food and Beverage Cost Control</td>
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</table>

<table>
<thead>
<tr>
<th>SPECIALTY CORE</th>
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<tbody>
<tr>
<td>CUL 110</td>
<td>Meat Cutting</td>
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<tr>
<td>CUL 204</td>
<td>Classical Pastries</td>
</tr>
<tr>
<td>CUL 206</td>
<td>Externship/Internship</td>
</tr>
<tr>
<td>CUL 207</td>
<td>Classical Cuisines</td>
</tr>
<tr>
<td>CUL 212</td>
<td>Fish and Seafood</td>
</tr>
<tr>
<td>HOS 103</td>
<td>Soups, Stocks, and Sauces</td>
</tr>
<tr>
<td>HOS 105</td>
<td>Introduction to Baking</td>
</tr>
<tr>
<td>HOS 106</td>
<td>Pantry and Breakfast</td>
</tr>
<tr>
<td>HOS 107</td>
<td>Hospitality Computers OR</td>
</tr>
<tr>
<td>HOS 108</td>
<td>Table Service</td>
</tr>
<tr>
<td>HOS 202</td>
<td>Garde Manger</td>
</tr>
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</table>

**TOTAL CREDITS** 66
**Associate in Applied Science (AAS) — Hospitality Administration / Hotel and Restaurant Administration Specialty**

**GENERAL EDUCATION CORE**  (18 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
</tr>
<tr>
<td>ECN 101</td>
<td>Economic Fundamentals</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
</tr>
<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
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<tr>
<td>PSY 101</td>
<td>Introduction to Psychology</td>
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<td>SCI 111</td>
<td>Physical Science</td>
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**TECHNICAL CORE**  (18 Credits)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>HOS 101</td>
<td>Sanitation and First Aid</td>
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<tr>
<td>HOS 102</td>
<td>Basic Foods Theory and Skills</td>
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<tr>
<td>HOS 104</td>
<td>Nutrition</td>
</tr>
<tr>
<td>HOS 109</td>
<td>Hospitality Purchasing</td>
</tr>
<tr>
<td>HOS 201</td>
<td>Hospitality Organization and Human Resource Management</td>
</tr>
<tr>
<td>HOS 203</td>
<td>Menu, Design, and Layout</td>
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<tr>
<td>HOS 204</td>
<td>Food and Beverage Cost Control</td>
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**SPECIALTY CORE**  (30 Credits)

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ACC 101</td>
<td>Accounting Principles I</td>
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<tr>
<td>HOS 107</td>
<td>Hospitality Computers</td>
</tr>
<tr>
<td>HOS 108</td>
<td>Table Service</td>
</tr>
<tr>
<td>HOS 114</td>
<td>Hospitality Organization and Administration</td>
</tr>
<tr>
<td>HOS 205</td>
<td>Food &amp; Beverage Cost Control Applications</td>
</tr>
<tr>
<td>HOS 214</td>
<td>Hospitality Law &amp; Security</td>
</tr>
<tr>
<td>HOS 216</td>
<td>Hospitality Marketing &amp; Group Sales</td>
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<tr>
<td>HRM 201</td>
<td>Food &amp; Beverage Management</td>
</tr>
<tr>
<td>HRM 202</td>
<td>Front Office</td>
</tr>
<tr>
<td>HRM 203</td>
<td>Practicum</td>
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<tr>
<td>HRM 206</td>
<td>Housekeeping</td>
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</table>

**TOTAL CREDITS**  66

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**Career Certificate — Hospitality Administration / Institutional Food Management**

**CAREER CERTIFICATE CORE**  (24 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HOS 101</td>
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<tr>
<td>HOS 102</td>
<td>Basic Foods Theory and Skills</td>
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<td>HOS 104</td>
<td>Nutrition</td>
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<td>HOS 114</td>
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<tr>
<td>HOS 201</td>
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<td>HRM 203</td>
<td>Practicum - IFM</td>
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<tr>
<td>HRM 215</td>
<td>Therapeutic Nutrition</td>
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<tr>
<td>HRM 288</td>
<td>Spreadsheets for Foodservice Operators</td>
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**TOTAL CREDITS**  24
Industrial Technology

The Industrial Technology Program is a discipline devoted to the development of skills necessary for the installation, operation and maintenance of industrial equipment and systems. The curriculum is broad-based and offers a diversity of specialties, but focuses on the integration of each area as used in systemic applications. This requires proficiency in mathematics, communication, physics and basic computer skills, as well as the technical subject matter.

In laboratory applications of classroom study, each student uses the tools and instruments associated with the practice of the industrial technology specialty including volt-ohm meters, leak detectors, sonic diagnostic tools, pressure and level testing devices, preventive maintenance software programs, welding and brazing equipment, metallurgical testing instruments, hand tools, and electronic and hand precision measuring devices. Safety equipment and the sale use of tools and materials are integrated into each course in the curriculum.

Associate in Applied Science degrees require 61-64 credits in industrial technology. Specialties are available in heating, ventilation and air conditioning, industrial maintenance, and welding. Technical certificates and career development certificates are available.

Associate in Applied Science (AAS) — Industrial Technology / Heating, Ventilation and Air Conditioning Specialty

**GENERAL EDUCATION CORE** (19 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COM 101</td>
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<td>ENG 111</td>
<td>English Composition</td>
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</tr>
<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>MAT 121</td>
<td>Geometry/Trigonometry</td>
<td>3</td>
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<tr>
<td>PHY 110</td>
<td>Technical Physics</td>
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<td>ELECTIVE: Humanities/Social Sciences</td>
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**TECHNICAL CORE** (18 Credits)

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<th>Course</th>
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<tbody>
<tr>
<td>IDS 102</td>
<td>Introduction to Print Reading</td>
<td>3</td>
</tr>
<tr>
<td>IDS 103</td>
<td>Motors and Motor Controls</td>
<td>3</td>
</tr>
<tr>
<td>IDS 114</td>
<td>Introductory Welding</td>
<td>3</td>
</tr>
<tr>
<td>QSC 101</td>
<td>Quality Control Concepts &amp; Techniques I</td>
<td>3</td>
</tr>
<tr>
<td>TEC 104</td>
<td>Computer Fundamentals for Technology</td>
<td>3</td>
</tr>
<tr>
<td>TEC 113</td>
<td>Basic Electricity</td>
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**SPECIALTY CORE** (15 Credits)

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<tbody>
<tr>
<td>HEA 101</td>
<td>Heating Fundamentals</td>
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<tr>
<td>HEA 103</td>
<td>Air Conditioning and Refrigeration I</td>
<td>3</td>
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<td>HEA 104</td>
<td>Heating Service</td>
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</tr>
<tr>
<td>HEA 106</td>
<td>Air Conditioning and Refrigeration II</td>
<td>3</td>
</tr>
<tr>
<td>HEA 202</td>
<td>Electrical Circuits and Controls</td>
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**REGIONALLY DETERMINED CORE** (12 Credits)

<table>
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<tr>
<th>Course</th>
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<tbody>
<tr>
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<td>HEA 205</td>
<td>Heat Pump Service</td>
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<td>HEA 212</td>
<td>Advanced HVAC Controls</td>
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<tr>
<td>HEA 220</td>
<td>Air Distribution Systems</td>
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TOTAL CREDITS 64

Technical Certificate (TC) — Industrial Technology / Heating, Ventilation and Air Conditioning Specialty

**GENERAL EDUCATION CORE** (6 Credits)

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<th>Course</th>
<th>Title</th>
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<tr>
<td>COM 102</td>
<td>Introduction to Interpersonal Communications</td>
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<tr>
<td>ELECTIVE: Mathematics/Social Sciences/Life/Physical Science</td>
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**TECHNICAL CORE** (3 Credits)

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<tbody>
<tr>
<td>TEC 113</td>
<td>Basic Electricity</td>
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**SPECIALTY CORE** (6 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
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<td>HEA 101</td>
<td>Heating Fundamentals</td>
<td>3</td>
</tr>
<tr>
<td>HEA 103</td>
<td>Air Conditioning and Refrigeration I</td>
<td>3</td>
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**REGIONALLY DETERMINED CORE** (24 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HEA 104</td>
<td>Heating Service</td>
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<tr>
<td>HEA 106</td>
<td>Air Conditioning &amp; Refrigeration II</td>
<td>3</td>
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<tr>
<td>HEA 107</td>
<td>Duct Fabrication</td>
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<tr>
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<td>Cooling Service</td>
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<tr>
<td>HEA 202</td>
<td>Electrical Circuits and Controls</td>
<td>3</td>
</tr>
<tr>
<td>HEA 205</td>
<td>Heat Pump Service</td>
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<tr>
<td>IDS 103</td>
<td>Motors and Motor Controls</td>
<td>3</td>
</tr>
<tr>
<td>TEC 104</td>
<td>Computer Fundamentals for Technology</td>
<td>3</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 39

44
Associate in Applied Science (AAS) — Industrial Technology / Industrial Maintenance Specialty

GENERAL EDUCATION CORE (19 Credits)
COM 101 Fundamentals of Public Speaking 3
ENG 111 English Composition 3
MAT 111 Intermediate Algebra 3
MAT 121 Geometry/Trigonometry 3
PHY 110 Technical Physics 4
ELECTIVE: Humanities/Social Sciences 3

TECHNICAL CORE (18 Credits)
IDS 102 Introduction to Print Reading 3
IDS 103 Motors and Motor Controls 3
IDS 114 Introductory Welding 3
QSC 101 Quality Control Concepts & Techniques I 3
TEC 104 Computer Fundamentals for Technology 3
TEC 113 Basic Electricity 3

SPECIALTY CORE (15 Credits)
AMT 201 Manufacturing Systems Control 3
IDS 104 Fluid Power Basics 3
IMT 201 Fluid Power Systems 3
IMT 203 Machine Maintenance/Installation 3
IMT 207 Electrical Circuits 3

REGIONALLY DETERMINED CORE (12 Credits)
IMT 105 Heating and Air Conditioning Basics 3
IMT 107 Preventative Maintenance 3
IMT 210 Pumps 3

Students should select 3 credits from the following courses:
AMT 102 Introduction to Robotics 3
IMT 106 Millwright 1 3

TOTAL CREDITS 64

Technical Certificate (TC) — Industrial Technology / Welding Specialty

GENERAL EDUCATION CORE (6 Credits)
COM 102 Introduction to Interpersonal Communications 3
ELECTIVE: Mathematics/Social Sciences/Life/Physical Science 3

TECHNICAL CORE (3 Credits)
TEC 113 Basic Electricity 3

SPECIALTY CORE (6 Credits)
WLD 108 Shielded Metal Arc Welding I 3
WLD 207 Gas Metal Arc (MIG) Welding 3

REGIONALLY DETERMINED CORE (24 Credits)
IDS 102 Introduction to Print Reading 3
WLD 109 Oxyacetylene Gas Welding and Cutting 3
WLD 110 Welding Fabrication 3
WLD 120 Metallurgy Fundamentals 3
WLD 203 Pipe Welding 3
WLD 206 Shielded Metal Arc Welding II 3
WLD 208 Gas Tungsten Arc (TIG) Welding 3
WLD 209 Welding Certification 3

TOTAL CREDITS 45
Manufacturing Technology

The Manufacturing Technology Program is a multi-disciplinary program designed to prepare students for technician-level positions. Specialty areas allow students to choose an emphasis in quality assurance, computer-integrated manufacturing, computer-aided design, or computer numerical control. Graduates are prepared to perform many facets of manufacturing including set-up, troubleshooting, processing and quality control.

Skills are acquired through lectures, demonstrations, and hands-on experiences. Lab activities include the use of modern equipment and techniques currently found in industry. This provides a foundation for any graduate to enter the workforce and continue skill enhancement.

Associate in Applied Science degrees require 61-64 credits in Manufacturing Technology.

### Associate in Applied Science (AAS) — Manufacturing Technology / Computer Integrated Manufacturing (CIM) Specialty

**GENERAL EDUCATION CORE** (19 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
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<tr>
<td>ENG 111</td>
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<tr>
<td>MAT 121</td>
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<tr>
<td>PHY 101</td>
<td>Physics I</td>
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**TECHNICAL CORE** (18 Credits)

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<td>Fluid Power Basics</td>
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<td>QSC 101</td>
<td>Quality Control Concepts &amp; Techniques I</td>
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<td>TEC 101</td>
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<td>TEC 102</td>
<td>Technical Graphics</td>
<td>3</td>
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<tr>
<td>TEC 104</td>
<td>Computer Fundamentals for Technology</td>
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**SPECIALTY CORE** (15 Credits)

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**REGIONALLY DETERMINED CORE** (12 Credits)

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**TOTAL CREDITS** 64

### Associate in Applied Science (AAS) — Manufacturing Technology / Computer Aided Design and Manufacturing (CAD/CAM) Specialty

**GENERAL EDUCATION CORE** (19 Credits)

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<td>Quality Control Concepts &amp; Techniques I</td>
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<td>TEC 101</td>
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**TOTAL CREDITS** 64
### Associate in Applied Science (AAS) — Manufacturing Technology / Quality Assurance Specialty

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### GENERAL EDUCATION CORE (19 Credits)

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### SPECIALTY CORE (12 Credits)

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### REGIONALLY DETERMINED CORE (12 Credits)

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<td>QSC 203</td>
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<td>PST 121</td>
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**TOTAL CREDITS**: 61

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### Technical Certificate (TC) — Manufacturing Technology / Computer Numerical Control (CNC) Specialty

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### GENERAL EDUCATION CORE (6 Credits)

### TECHNICAL CORE (3 Credits)

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<td>MTT 106</td>
<td>Advanced Print Interpretation</td>
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<td>MTT 204</td>
<td>Abrasive Processes</td>
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<td>MTT 210</td>
<td>Interactive CNC</td>
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<td>QSC 203</td>
<td>Metrology</td>
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### REGIONALLY DETERMINED CORE (24 Credits)

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<td>Technical Graphics</td>
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**TOTAL CREDITS**: 47
Recognizing the demand for trained paralegals, Ivy Tech has shaped a curriculum with input from attorneys and other professionals associated with the legal field. The advisors offer Ivy Tech the opportunity to establish the qualifications necessary for success in the paralegal field.

Ivy Tech's program provides knowledgeable paralegal professionals ready for an exciting career. The duties of trained paralegals can range from research and writing to interviewing and investigations. As examples, paralegals can be found performing legal research, drafting legal correspondence and legal pleadings, interviewing clients and witnesses, or managing trial documents and exhibits.

Ivy Tech training provides students with the variety of skills necessary to succeed in this career. The curriculum emphasizes written and oral communication skills and provides in-class opportunities for technical skill development. Courses are taught by attorneys who are selected based upon their experience in the subject matter, as well as their familiarity with the function of paralegals as part of the legal team.

A two-year program requiring 60 credits leads to an Associate in Applied Science degree. The complete Paralegal Program is offered in Indianapolis, Ft. Wayne, and Gary. Other campuses may offer a limited number of paralegal courses.
Public Safety

The Public Safety Technology Program is designed to meet the ongoing needs of municipalities, students, businesses, and industries. The program develops technical skills, general knowledge, critical thinking, and problem solving abilities. Broad-based technical skills and critical thinking processes assist students in adapting to changes in the work environment and promoting successful advancement on the job. Additionally, the program prepares graduates to transfer to baccalaureate degree-granting institutions if they wish to continue their education.

Specialty areas allow students to choose an emphasis in environmental care, fire science, hazardous materials, and public administration. Associate in Applied Science degrees require 60-63 credits.

Associate in Applied Science (AAS) — Public Safety / Fire Science Specialty

GENERAL EDUCATION CORE (18 Credits)

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<th>Course</th>
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<td>COM 101</td>
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<td>MAT 111</td>
<td>Intermediate Algebra</td>
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<tr>
<td>POL 101</td>
<td>Introduction to American Government and Politics</td>
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<td>SCI 111</td>
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TECHNICAL CORE (18 Credits)

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<th>Title</th>
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<tr>
<td>PST 120</td>
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<tr>
<td>PST 121</td>
<td>Industrial Safety &amp; Loss Prevention</td>
<td>3</td>
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<tr>
<td>PST 220</td>
<td>Incident Management System</td>
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<tr>
<td>PST 221</td>
<td>Design &amp; Planning for Prevention &amp; Protection</td>
<td>3</td>
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<tr>
<td>TEC 104</td>
<td>Computer Fundamentals for Technology</td>
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<tr>
<td>TEC 106</td>
<td>Hazardous Materials &amp; Control</td>
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SPECIALTY CORE (15 Credits)

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<td>Strategy and Tactics</td>
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<td>Fire Protection Systems</td>
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<td>AFS 202</td>
<td>Fire Service Management</td>
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<td>AFS 105</td>
<td>Fire and Arson Investigation</td>
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<td>AFS 108</td>
<td>Fire Prevention/Inspection</td>
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<td>AFS 109</td>
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TOTAL CREDITS: 63

Associate in Applied Science (AAS) — Public Safety / Environmental Care Specialty

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<td>ILT 288.01</td>
<td>Advanced Municipal Wastewater Treatment</td>
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Elective course in General Education 3

TOTAL CREDITS: 63
### Associate in Applied Science (AAS) — Public Safety / Hazardous Materials Specialty

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<td>PST 220</td>
<td>Incident Management System</td>
<td>3</td>
</tr>
<tr>
<td>PST 221</td>
<td>Design &amp; Planning for Prevention &amp; Protection</td>
<td>3</td>
</tr>
<tr>
<td>TEC 104</td>
<td>Computer Fundamentals for Technology</td>
<td>3</td>
</tr>
<tr>
<td>TEC 106</td>
<td>Hazardous Materials &amp; Control</td>
<td>3</td>
</tr>
</tbody>
</table>

### Specialty Core (12 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMT 100</td>
<td>OSHA Regulations</td>
<td>3</td>
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<tr>
<td>HMT 120</td>
<td>Hazard Communication Standard</td>
<td>3</td>
</tr>
<tr>
<td>HMT 200</td>
<td>Environmental Protection Agency (EPA) Regulations</td>
<td>3</td>
</tr>
<tr>
<td>HMT 220</td>
<td>Hazardous Materials Recovery, Incineration and Disposal</td>
<td>3</td>
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</tbody>
</table>

### Regionally Determined Core (12 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>HMT 104</td>
<td>HAZMAT Health Effects</td>
<td>3</td>
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<tr>
<td>HMT 201</td>
<td>Contingency Planning</td>
<td>3</td>
</tr>
<tr>
<td>HMT 203</td>
<td>Sampling Procedures</td>
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<tr>
<td>HMT 205</td>
<td>DOT Regulations</td>
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**Total Credits: 60**

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### Associate in Applied Science (AAS) — Public Safety / Public Administration Specialty

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>CHM 101</td>
<td>Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>POL 101</td>
<td>Introduction to American Government and Politics</td>
<td>3</td>
</tr>
<tr>
<td>SCI 111</td>
<td>Physical Science</td>
<td>3</td>
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### Technical Core (18 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>PST 120</td>
<td>First Responder</td>
<td>3</td>
</tr>
<tr>
<td>PST 121</td>
<td>Industrial Safety &amp; Loss Prevention</td>
<td>3</td>
</tr>
<tr>
<td>PST 220</td>
<td>Incident Management System</td>
<td>3</td>
</tr>
<tr>
<td>PST 221</td>
<td>Design &amp; Planning for Prevention &amp; Protection</td>
<td>3</td>
</tr>
<tr>
<td>TEC 104</td>
<td>Computer Fundamentals for Technology</td>
<td>3</td>
</tr>
<tr>
<td>TEC 106</td>
<td>Hazardous Materials &amp; Control</td>
<td>3</td>
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### Specialty Core (12 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUS 105</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>BUS 208</td>
<td>Organizational Behavior</td>
<td>3</td>
</tr>
<tr>
<td>SUP 102</td>
<td>Techniques of Supervision</td>
<td>3</td>
</tr>
<tr>
<td>SUP 224</td>
<td>Operations Management</td>
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### Regionally Determined Core (12 Credits)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ACC 101</td>
<td>Accounting Principles</td>
<td>3</td>
</tr>
<tr>
<td>AFS 202</td>
<td>Fire Service Management</td>
<td>3</td>
</tr>
<tr>
<td>PST 288.01</td>
<td>Public Administration</td>
<td>3</td>
</tr>
<tr>
<td>PST 288.02</td>
<td>Internship</td>
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Total credits: 60
HEALTH AND HUMAN SERVICES

Associate in Science Nursing (ASN)

Ivy Tech State College - Central Indiana is approved by the Indiana Commission for Higher Education to offer a two-year generic Associate of Science (AS) nursing program. The program is also accredited by the National League of Nursing. Graduates are eligible to write the NCLEX-RN examination to become Registered Nurses. This program accommodates both students interested in nursing as a career and Licensed Practical Nurses choosing to continue their nursing education.

ADMISSION CRITERIA

FOR COLLEGE ADMISSION:

• Certificate of high school graduation or GED
• SAT or ACT scores* or College Assessment*
• PSB Nursing School Aptitude Test

* Test may be waived by college transcript with grades of "C" or better within the past 10 years for required science courses.

FOR ASN ADMISSION:

• Physical health form and immunizations completed prior to registration for any clinical course.

FOR ALL NURSING STUDENTS:

Associate in Science / Nursing (ASN)

General Education Courses (30 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ANP 101</td>
<td>Anatomy and Physiology I</td>
<td>3</td>
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<tr>
<td>ANP 102</td>
<td>Anatomy and Physiology II</td>
<td>3</td>
</tr>
<tr>
<td>BIO 111</td>
<td>General Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BIO 112</td>
<td>General Microbiology II</td>
<td>3</td>
</tr>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking OR</td>
<td>3</td>
</tr>
<tr>
<td>COM 102</td>
<td>Intro to Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>PSY 101</td>
<td>Intro to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>ANP 201</td>
<td>Advanced Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>PSY 201</td>
<td>Lifespan Development</td>
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Technical Core Courses (40 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>NUR 150</td>
<td>Nursing &amp; Universal Needs</td>
<td>4</td>
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<tr>
<td>NUR 151</td>
<td>Nursing &amp; Universal Needs Practicum</td>
<td>4</td>
</tr>
<tr>
<td>NUR 152</td>
<td>Nursing Related to Health Deviation I Practicum</td>
<td>5</td>
</tr>
<tr>
<td>NUR 153</td>
<td>Nursing Related to Health Deviation</td>
<td>5</td>
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<tr>
<td>NUR 154</td>
<td>Pharmacotherapeutics</td>
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<tr>
<td>NUR 250</td>
<td>Nursing Related to Health Deviation II</td>
<td>5</td>
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<tr>
<td>NUR 251</td>
<td>Nursing Related to Health Deviation II Practicum</td>
<td>5</td>
</tr>
<tr>
<td>NUR 252</td>
<td>Nursing Related to Developmental Needs</td>
<td>4</td>
</tr>
<tr>
<td>NUR 253</td>
<td>Nursing Related to Developmental Needs Practicum</td>
<td>4</td>
</tr>
<tr>
<td>NUR 254</td>
<td>Professional Nursing Issues</td>
<td>2</td>
</tr>
</tbody>
</table>

Total Credits: 51

51
Child Development

The Child Development Program focuses on early childhood growth and development, including adult-child relationships. Emphasis is placed on the development of skills and techniques for providing appropriate environments and care for young children. Instruction is provided in the physical, emotional, social, and cognitive areas of early childhood. The training is appropriate for candidates seeking the Child Development Associate (CDA) credential. The student develops competencies through classroom instruction, observation, and participation in early childhood settings. Employment opportunities include: Day Care, Nursery School, Head Start, Family Day Care, Pediatrics Setting, Nanny Care, and School Child Care.

Ivy Tech State College - Central Indiana has an on-campus Child Development Center to meet the need of adult students, College staff and faculty, and locally employed parents and guardians. This licensed center provides on-site training opportunities for practicum students in the Child Development and other Health and Human Services programs. This model facility is licensed to serve 60 children, ages 2 to 12, from 6:30 a.m. to 10:00 p.m., Monday through Thursday and 6:30 to 6 p.m. on Friday. The center is open to visitors interested in either the Child Development Program or the Child Development Center services except during naptime, which is 12:30 to 2:30 p.m. daily. Visitors check with the Center Manager upon arrival.

 Associate in Science Degree (AS) / Child Development

AS/General Education Requirements

(24 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>ENG 112</td>
<td>Exposition and Persuasion</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Contemporary College Math OR</td>
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</tr>
<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>POL 101</td>
<td>Intro to American Government</td>
<td>3</td>
</tr>
<tr>
<td>PSY 101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
<td>3</td>
</tr>
<tr>
<td>BIO 101</td>
<td>Introductory Biology OR</td>
<td>3</td>
</tr>
<tr>
<td>SCI 111</td>
<td>Physical Science</td>
<td>3</td>
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</table>

AS/Broad Technical Core Courses (18 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 121</td>
<td>Introduction to Early Childhood Profession</td>
<td>3</td>
</tr>
<tr>
<td>CHD 122</td>
<td>Child Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>CHD 123</td>
<td>Health, Safety and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>CHD 124</td>
<td>Developmental and Cultural Awareness</td>
<td>3</td>
</tr>
<tr>
<td>CHD 209</td>
<td>Families in Transition</td>
<td>3</td>
</tr>
<tr>
<td>CHD 221</td>
<td>Emerging Literacy</td>
<td>3</td>
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</table>

AS/Specialty Core (12 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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</thead>
<tbody>
<tr>
<td>CHD 125</td>
<td>Curriculum in the Creative Arts</td>
<td>3</td>
</tr>
<tr>
<td>CHD 128</td>
<td>Practicum I</td>
<td>2</td>
</tr>
<tr>
<td>CHD 129</td>
<td>Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>CHD 131</td>
<td>Seminar in Guidance Techniques</td>
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CHD 225 Cognitive Curriculum 3

AS/Regionally Core (12 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CHD 206</td>
<td>Early Child Administration</td>
<td>3</td>
</tr>
<tr>
<td>CHD 230</td>
<td>Practicum III</td>
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</tr>
<tr>
<td>CHD 231</td>
<td>Seminar II - Issues in E.C.E.</td>
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<tr>
<td>CHD XXX</td>
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Total Credits 66

Technical Certificate (TC) / Child Development

TC/General Education Core Courses (6 Credits)

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
<td>3</td>
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<tr>
<td>SOC 111</td>
<td>Intro to Sociology OR</td>
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</tr>
<tr>
<td>PSY 101</td>
<td>Intro to Psychology</td>
<td>3</td>
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TC/Broad Technical Core (24 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD 121</td>
<td>Intro to the Early Childhood Profession</td>
<td>3</td>
</tr>
<tr>
<td>CHD 122</td>
<td>Child Growth and Development</td>
<td>3</td>
</tr>
<tr>
<td>CHD 123</td>
<td>Health, Safety and Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>CHD 124</td>
<td>Developmental and Cultural Awareness</td>
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</tr>
<tr>
<td>CHD 125</td>
<td>Curriculum in the Creative Arts</td>
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</tr>
<tr>
<td>CHD 128</td>
<td>Practicum I</td>
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</tr>
<tr>
<td>CHD 129</td>
<td>Practicum II</td>
<td>2</td>
</tr>
<tr>
<td>CHD 131</td>
<td>Seminar in Guidance Techniques</td>
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</tr>
<tr>
<td>CHD 221</td>
<td>Emerging Literacy</td>
<td>3</td>
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</table>

Total Credits 30
Human Services

The Human Services program offers students the opportunity to become Human Services Generalists or to concentrate in the areas of Substance Abuse, Gerontology, Mental Health, or Criminal Justice.

As a Human Services professional, one reaches out to individuals, to families, and to communities. The Human Services program provides the broad understanding to help others meet their psychological, social, and environmental needs. The Human Services Generalist may find employment in a variety of settings.

Those who study Human Services with a focus on Substance Abuse may find positions in substance abuse centers (residential, detox, and hospitals) as counselors or residents-in-training. (The program is certified by Indiana Counselors Association on Alcohol Abuse, ICAADA.) Those who focus on Gerontology may find jobs in adult day care centers, senior citizens centers and extended care facilities. Those who focus on Criminal Justice may want to work in probation or parole but will need to continue their education. Those who focus in the area of Mental Health may find employment in group homes and community health centers.

Program objectives include training the entry-level worker, providing education and training to upgrade the skills and knowledge of those currently employed, and providing development and enhancement.

The Associate in Applied Science degree requires 62 credits.

<table>
<thead>
<tr>
<th>Criminal Justice Specialty</th>
<th>Mental Health Specialty</th>
<th>Gerontology Specialty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance Abuse Specialty</td>
<td>Generalist Specialty</td>
<td></td>
</tr>
</tbody>
</table>

Associate in Applied Science (AAS) — Human Services

**General Education Courses** (18 Credits)

- BIO 101 Introductory Biology OR
- SCI 111 Physical Science 3
- COM 101 Fundamentals of Public Speaking 3
- ENG 111 English Composition 3
- MAT 110 Contemporary College Math OR 3
- POL 101 Intro to American Government/Politics 3
- PSY 101 Introduction to Psychology OR 3
- SOC 111 Introduction to Sociology 3

**Technical Core Courses** (18 Credits)

- HMS 101 Introduction to Human Services 3
- HMS 102 Helping Relationship Techniques 3
- HMS 103 Interviewing and Assessment 3
- HMS 205 Behavioral/Reality Techniques 3
- HMS 206 Group Process and Skills 3
- HMS 207 Program Planning/Policy Issues 3

**Regional Courses**

- Internships and Seminars (14 Credits)

<table>
<thead>
<tr>
<th>HMS 201 Internship I 4</th>
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<tbody>
<tr>
<td>HMS 203 Internship Seminar I 3</td>
</tr>
<tr>
<td>HMS 202 Internship II 4</td>
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<tr>
<td>HMS 204 Internship Seminar II 3</td>
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**Generalist Specialty** (12 Credits)

<table>
<thead>
<tr>
<th>CIS 101 Introduction to Microcomputers 3</th>
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<tbody>
<tr>
<td>PSY 201 Lifespan Development 3</td>
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</table>

<table>
<thead>
<tr>
<th>HMS XXX Electives 3</th>
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</thead>
<tbody>
<tr>
<td>Gerontology Specialty (12 Credits)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HMS 108 Psychology of Aging 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMS 111 Long-Term Care Activity Director OR 3</td>
</tr>
<tr>
<td>HMS 114 Social Services In Long-Term Care OR 3</td>
</tr>
<tr>
<td>HMS 140 Loss and Grief OR 3</td>
</tr>
<tr>
<td>CIS 101 Introduction to Microcomputers 3</td>
</tr>
<tr>
<td>HMS 120 Social Aspects of Aging 3</td>
</tr>
<tr>
<td>HMS 130 Health and Aging 3</td>
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<table>
<thead>
<tr>
<th>HMS 105 Criminal Justice Systems 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMS 215 Juvenile Delinquency 3</td>
</tr>
<tr>
<td>PSY 205 Abnormal Psychology 3</td>
</tr>
<tr>
<td>HMS 240 Rehab Process: Probation and Parole 3</td>
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| Mental Health Specialty (12 Credits)|

<table>
<thead>
<tr>
<th>HMS 104 Crisis Intervention 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMS 220 Legal Aspects 3</td>
</tr>
<tr>
<td>PSY 205 Abnormal Psychology 3</td>
</tr>
<tr>
<td>PSY 201 Lifespan Development 3</td>
</tr>
</tbody>
</table>

| Substance Abuse Specialty (12 Credits)|

<table>
<thead>
<tr>
<th>HMS 113 Problems of Substance Abuse in Society 3</th>
</tr>
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<tbody>
<tr>
<td>HMS 208 Treatment Models of Substance Abuse 3</td>
</tr>
<tr>
<td>HMS 209 Counseling issues 3</td>
</tr>
<tr>
<td>HMS 210 Codependency 3</td>
</tr>
</tbody>
</table>

**Total Credits** 62
# Medical Assistant

The graduate of the Medical Assistant Program is a professional multi-skilled health care provider dedicated to assisting in patient care management in ambulatory care settings. The practitioner performs administrative and clinical duties and may manage emergency situations, facilities, and/or personnel. Competence in the field also requires that a Medical Assistant display professionalism, communicate effectively, and provide instruction to patients. A required externship provides valuable on-the-job experience.

- The program is accredited by the American Association of Medical Assistants and the Commission on Accreditation of Allied Health Education Programs (CAAHEP).
- Graduates of the Medical Assistant Program will be prepared to take the Certification Examination of the American Association of Medical Assistants (AAMA) and the American Medical Association (AMA) to obtain CMA status that is recognized nationally.
- The two-year Associate in Applied Science program requires 63 credits for completion. The Technical Certificate requires 30-48 credits.
- Salary range for Medical Assistants is from $7.50 to $14.50 per hour depending upon education, experience, and specialty area.
- The Medical Assistant Program works in cooperation with private physicians' offices, health maintenance organizations, and Immediate Care Centers to provide clinical and administrative experiences for students.
- A one-year part-time limited radiology curriculum is available to medical assistant graduates leading to an opportunity to sit for the IDH Limited General Certificate Examination in radiography.
- Passing this exam qualifies the Limited General Technologist to perform general radiography in non-hospital settings. The salary range is $9.50 to $14.50 per hour.
- Note: Evening classes are available. All but 4-5 classes can be completed in the evening.
- Must type 30 words per minute with fewer than 5 errors for admission to the program.

## Associate in Applied Science Degree (AAS) / Medical Assistant

### General Education Requirements (18 Credits)

- **ANP** 101 Anatomy and Physiology I 3
- **ANP** 102 Anatomy and Physiology II 3
- **COM** 102 Interpersonal Communication 3
- **ENG** 111 English Composition 3
- **MAT** XXX Math Elective 3
- **XXX** XXX Humanities/Social Elective 3

### Broad Technical Core Courses (18 Credits)

- **HHS** 101 Medical Terminology 3
- **HHS** 102 Medical Law and Ethics 2
- **MEA** 102 First Aid and CPR 2
- **MEA** 113 Pharmacology 3
- **MEA** 131 Medical Financial Management 3
- **MEA** 132 Computer Concepts in Medical Office 2
- **MEA** 203 Disease Conditions 3

### Specialty Core Courses (21 Credits)

- **MEA** 114 M.A. Lab Techniques 3
- **MEA** 115 Medical Insurance 2
- **MEA** 120 M.A. Clinical Extern 3
- **MEA** 121 M.A. Administrative Extern 3
- **MEA** 130 M.A. Administrative 2
- **MEA** 133 Clinical Theory 3
- **MEA** 134 Clinical Skills Lab 2
- **MEA** 135 Medical Word Processing/Transcription 3

### Regional Electives (6 Credits)

- * XXX XXX Administrative Elective 3
- * XXX XXX Clinical Elective 3

Total Credits 63

* per approval of program chair
Technical Certificate (TC) / Medical Assistant

General Education Requirements  (6 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM</td>
<td>Introduction to Interpersonal Communications</td>
<td>3</td>
</tr>
<tr>
<td>XXX</td>
<td>Sci/Mat/Hum Elective</td>
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Technical Core Courses  (3 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>HHS</td>
<td>Medical Terminology</td>
<td>3</td>
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OPTION 1

Administrative Specialty Core Courses  (6 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HHS</td>
<td>Medical Law and Ethics</td>
<td>2</td>
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<tr>
<td>MEA</td>
<td>M.A. Administrative</td>
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<tr>
<td>MEA</td>
<td>Computer Concepts in the Medical Office</td>
<td>2</td>
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</table>

Regionally Determined Courses  (15 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Total Administrative Specialty Credits</td>
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<tr>
<td></td>
<td>(total includes the 6 General Education</td>
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<tr>
<td></td>
<td>Credits and the 3 Technical Core Credits)</td>
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OPTION 2

Clinical Specialty Core Courses  (6 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANP</td>
<td>Anatomy and Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>ANP</td>
<td>Anatomy and Physiology II</td>
<td>3</td>
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Regionally Determined Courses  (15 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td></td>
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<td></td>
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<td></td>
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Pharmacy Technician Specialty Core Courses  (21 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANP</td>
<td>Anatomy and Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>ANP</td>
<td>Anatomy and Physiology II</td>
<td>3</td>
</tr>
<tr>
<td>HHS</td>
<td>Medical Law and Ethics</td>
<td>2</td>
</tr>
<tr>
<td>MEA</td>
<td>Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>MEA</td>
<td>Pharmacy Technician I</td>
<td>3</td>
</tr>
<tr>
<td>MEA</td>
<td>Pharmacy Technician II</td>
<td>3</td>
</tr>
<tr>
<td>MEA</td>
<td>Pharmacy Technician Adm.</td>
<td>2</td>
</tr>
<tr>
<td>MEA</td>
<td>Pharmacy Externship</td>
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<table>
<thead>
<tr>
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<th>Credits</th>
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<tr>
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<td></td>
<td>Credits (total includes the 6 General</td>
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<td></td>
<td>Education Credits and the 3 Technical</td>
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</tr>
<tr>
<td></td>
<td>Core Credits)</td>
<td></td>
</tr>
</tbody>
</table>

All but three of these courses are available at the Region 8 campus. Those are available within a one-hour commute on other campuses.
Occupational Therapy Assistant

Occupational therapy directs an individual's participation in selected tasks to restore, reinforce and enhance performance, facilitate learning of those skills and functions essential for adaptation and productivity, diminish or correct pathology, and promote and maintain health. An occupational therapy assistant provides service to individuals whose abilities to cope with living tasks have been threatened or impaired by developmental deficits, the aging process, physical injury or illness, or psychological disability. The profession serves a diverse population in a variety of settings such as hospitals and clinics, rehabilitation facilities, long-term care facilities, extended-care facilities, sheltered workshops, schools and camps, private homes and community agencies.

A two-year program requiring 72 credits leads to an Associate in Science degree.

Associate in Science (AS) / Occupational Therapy Assistant

General Education Core Courses (31 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>ANP 101</td>
<td>Anatomy and Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>ANP 102</td>
<td>Anatomy and Physiology II</td>
<td>3</td>
</tr>
<tr>
<td>ANP 201</td>
<td>Advanced Human Physiology</td>
<td>4</td>
</tr>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111</td>
<td>English Composition</td>
<td>3</td>
</tr>
<tr>
<td>HMS 230</td>
<td>Abnormal Psychology</td>
<td>3</td>
</tr>
<tr>
<td>MAT 110</td>
<td>Contemporary College Math OR</td>
<td>3</td>
</tr>
<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
<td>3</td>
</tr>
<tr>
<td>PSY 101</td>
<td>Introduction to Psychology</td>
<td>3</td>
</tr>
<tr>
<td>PSY 201</td>
<td>Lifespan Development</td>
<td>3</td>
</tr>
<tr>
<td>SOC 111</td>
<td>Introduction to Sociology</td>
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Technical Core Courses (26 Credits)

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<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>OTA 101</td>
<td>Foundations of Occupational Therapy</td>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>OTA 102</td>
<td>Kinesiology</td>
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<tr>
<td>OTA 103</td>
<td>Medical Conditions in Occupational Therapy</td>
<td>3</td>
</tr>
<tr>
<td>OTA 202</td>
<td>Therapeutic Activities</td>
<td>3</td>
</tr>
<tr>
<td>OTA 203</td>
<td>Therapeutic Group Activities</td>
<td>3</td>
</tr>
<tr>
<td>OTA 204</td>
<td>Psychiatric Conditions in Occupational Therapy</td>
<td>3</td>
</tr>
<tr>
<td>OTA 205</td>
<td>COTA in Physical Health</td>
<td>3</td>
</tr>
<tr>
<td>OTA 208</td>
<td>COTA and Interactive Model</td>
<td>3</td>
</tr>
<tr>
<td>OTA 210</td>
<td>COTA in Mental Health</td>
<td>3</td>
</tr>
</tbody>
</table>

Specialty Core Courses (15 Credits)

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>OTA 201</td>
<td>Field Work I - A</td>
<td>1</td>
</tr>
<tr>
<td>OTA 206</td>
<td>Assistive Technology and Adaptive Equipment</td>
<td>2</td>
</tr>
<tr>
<td>OTA 207</td>
<td>Daily Living Skills</td>
<td>3</td>
</tr>
<tr>
<td>OTA 209</td>
<td>Field Work I - B</td>
<td>1</td>
</tr>
<tr>
<td>OTA 211</td>
<td>Clinical Transition and Management</td>
<td>4</td>
</tr>
<tr>
<td>OTA 212</td>
<td>Field Work II - A</td>
<td>2</td>
</tr>
<tr>
<td>OTA 213</td>
<td>Field Work II - B</td>
<td>2</td>
</tr>
</tbody>
</table>

TOTAL CREDITS 72

OCCUPATIONAL THERAPY ASSISTANT PROGRAM (Not yet accredited)

The Occupational Therapy Assistant Program has initiated accreditation procedures with the Accreditation Council for Occupational Therapy Education (ACOTE) of the American Occupational Therapy Association (AOTA), located at 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220. AOTA's phone number is (301) 652-AOTA. Once accreditation of the program has been obtained, its graduates will be able to sit for the national certification examination for the occupational therapy assistant administered by the American Occupational Therapy Certification Board (AOTCB). After successful completion of this exam, the individual will be a Certified Occupational Therapy Assistant (COTA). Most states require licensure in order to practice; however, state licenses are usually based on the results of the AOTCB Certification Examination.
Practical Nursing

The Licensed Practical Nurse is an integral part of the health care team. The Practical Nursing program is a one-year course of study leading to a Technical Certificate. This accredited program prepares the individual to take the state licensure exam to become a Licensed Practical Nurse (LPN). This program is designed for students to gain knowledge and technical skills necessary to appropriately care for patients in a variety of health care settings, such as hospitals, convalescent centers, and physicians’ offices. Students learn to administer medications and treatments commonly performed by Licensed Practical Nurses.

The Indianapolis program is accredited by the National League of Nursing (NLN) and approved by the Indiana State Board of Nursing. Clinical courses begin in the fall and spring semester of this twelve-month program that requires two semesters and a twelve-week summer session. The PSB Aptitude Test Practical Nursing is required after Skills Advancement courses (reading, writing, and math) are completed or almost completed. The fee for this test is $25.00. Applicants are advised to apply six to nine months in advance of desired admission.

The following facilities serve as clinical sites for practical work experiences required in the program:

American Village, Indianapolis
Beverly Rehab, Indianapolis
Community South and East in Indianapolis
Hancock Memorial Hospital, Greenfield
Riley Hospital for Children
Regency Place—Greenwood
American Healthcare North
Cambridge Healthcare
Carmel Care
Johnson Memorial Hospital, Franklin
Lifelines of Indianapolis
Winona Memorial Hospital
St. Vincent's Hospital and Health Care Center

Greenwood Village South, Greenwood
Hendricks Community Hospital, Danville
Hoosier Village Retirement Center, Indianapolis
Noblesville Healthcare Center, Noblesville
Pine Tree Manor, Indianapolis
Rehabilitation Hospital of Indiana, Indianapolis
Robin Run Village, Indianapolis
St. Francis Hospital Center, Beech Grove
Westminster Village North, Indianapolis
Westview Hospital, Indianapolis
Methodist Hospital of Indianapolis
Wishard Memorial Hospital

The starting salary is $10.00 to $13.00 per hour, which can increase up to 25% because of shift differentials and fringe benefits. Applicants should check with local medical facilities to get current salary information.

### Technical Certificate (TC) / Practical Nursing

<table>
<thead>
<tr>
<th>General Education Courses</th>
<th>(6 Credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM 102 Interpersonal Communication</td>
<td>3</td>
</tr>
<tr>
<td>PSY 101 Intro to Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Technical Core Courses</th>
<th>(46 credits)</th>
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</thead>
<tbody>
<tr>
<td>ANP 101 Anatomy and Physiology I</td>
<td>3</td>
</tr>
<tr>
<td>ANP 102 Anatomy and Physiology II</td>
<td>3</td>
</tr>
<tr>
<td>PNU 114 Nursing Issues and Trends</td>
<td>1</td>
</tr>
<tr>
<td>PNU 121 Introduction to Nursing I</td>
<td>4</td>
</tr>
<tr>
<td>PNU 122 Introduction to Nursing II</td>
<td>6</td>
</tr>
<tr>
<td>PNU 123 Pharmacology</td>
<td>3</td>
</tr>
<tr>
<td>PNU 127 Care of the Adult</td>
<td>5</td>
</tr>
<tr>
<td>PNU 128 Care of the Adult</td>
<td>5</td>
</tr>
</tbody>
</table>

| PNU 129 Care of the Adult         | 5           |
| PNU 130 Nursing Care of the Older Adult | 5   |
| PNU 131 Nursing Care of the Child-Bearing Family | 6   |

Total Technical Certificate Credits 52

### Suggested courses that help develop students for Program Required Courses:

| BSA 007 Spelling                  | 1           |
| BSA 065 Introduction to Life Sciences | 3           |
| BSA 074 Introduction to Computer Literacy | 2           |
| HHS 101 Medical Terminology       | 3           |
| MEA 212 Phlebotomy                | 3           |
| BSA 070 Success Skills for Human Services and Health Technologies | 3   |
Radiologic Technology

The radiologic technologist, specializing in the use of x-rays to create images of the body, is known as a radiographer. A radiologic technologist is a professional who is skilled in the art and science of radiography and patient care related to radiography, and who applies scientific knowledge to solve practical and theoretical problems. Radiologic technologists are in demand in hospitals, medical laboratories, physicians' and dentists' offices and clinics, federal and state health agencies and certain educational institutions.

The program includes courses in the following areas — patient care, radiologic technique, exposure, positioning, protection, radiation physics, radiation biology, and ethics. Clinical practice and supplemental instruction are provided in accredited hospitals. Upon completion of program requirements, graduates are eligible to take the American Registry Examination given by the American Registry of Radiologic Technologists.

During the last four academic periods, 93% of the program graduates passed the American Registry of Radiologic Technologist Examination on their first attempt.

Radiologic Technology is a full-time year-round, two-year program. Students, once accepted, will be at a clinical site three days each week and in the classroom two days each week.

The clinical sites are Bloomington Hospital in Bloomington, Johnson Memorial in Franklin, and Winona Memorial Hospital in Indianapolis.

The starting salary for a Radiologic Technologist is $11.50 to $12.50 per hour. This rate does not include the fringe benefits that could increase the base pay as much as 25%.

The program is accredited by the Joint Review Committee on Education in Radiologic Technology.

The Radiologic Technology Program faculty offers a one-year part-time series of courses called Limited General Radiography. These courses were developed by faculty of the two-year Associate Degree program in Radiologic Technology at the request of the Indiana Department of Health (IDH). This series of nine courses totaling 30 credits in Limited General Radiography is the only group of appropriate courses approved by the IDH in Indiana for individuals who work in non-hospital settings. These courses are open to Registered Nurses, Licensed Practical Nurses, Certified Medical Assistants and Medical Assistants who were trained on the job. Qualified individuals interested in this course series must be employed at a facility that is operating an IDH approved X-ray machine. The starting pay for students who successfully complete the course series ranges from $8.50 to $12.00 per hour.

Associate in Applied Science Degree (AAS) / Radiologic Technology

General Education Requirements (21 Credits)

*ANP 101 Anatomy and Physiology I 3
*ANP 102 Anatomy and Physiology II 3
*CHM 101 Chemistry 3
*COM 101 Fundamentals of Public Speaking 3
*ENG 111 English Composition 3
*MAT 111 Intermediate Algebra 3
*PSY 101 Introduction to Psychology OR
*SOC 101 Introduction to Sociology 3

Technical Core Courses (8 Credits)

*CIS 101 Introduction to Microcomputers 3
*HHS 101 Medical Terminology 3
*HHS 102 Medical Law and Ethics 2

Specialty Core Courses (55 Credits)

RAD 101 Orientation/Nursing X-ray Technology 4
RAD 102 Principles of Radiographic Exposures I 2

RAD 103 Radiographical Positioning I 3
RAD 104 X-Ray Clinical Education 1 4
RAD 105 Radiographical Positioning II 3
RAD 106 X-Ray Clinical Education 2 4
RAD 107 Radiation Physics 3
RAD 109 Imaging Techniques 2
RAD 201 Radiographic Positioning III 2
RAD 202 X-Ray Clinical Education 3 4
RAD 203 X-Ray Clinical Education 4 4
RAD 204 X-Ray Clinical Education 5 4
RAD 205 Pathology for Radiographic Technologists 2
RAD 206 Radiobiology 3
RAD 207 Radiographic Positioning IV 3
RAD 208 Principles of Radiographic Exposures II 2
RAD 288 Pharmacology 3
RAD 299 General Exam Review 3

Total Credits 84

*Courses will be reviewed for GPA by the Admissions Committee before consideration for interview.
Respiratory Care Technology

A respiratory care practitioner is an allied health professional who works under the direction of physicians in the diagnosis, evaluation, treatment, education and care of patients with cardiopulmonary diseases or abnormalities.

A graduate of the Associate of Applied Science program will be eligible to sit for the Entry Level and Advanced Practitioner exams given by the National Board for Respiratory Care (NBRC). Successful exam candidates will be awarded the Registered Respiratory Therapist credential. The program’s pass rates for the national exam are far above the national averages.

The two-year Associate of Applied Science degree requires 79 credits for completion.

The Associate Degree program is offered on both a full-time and part-time track. Both tracks require set courses each semester for the duration of the program. Students are accepted into either the full-time program or the part-time program. The full-time program is five semesters in length (18 credits each semester) and starts in the spring semester of each year. The part-time program is nine semesters in length (9 credit hours per semester) and starts in the fall semester each year. Students may start their General Education courses any semester. Students should contact program personnel for specific curriculum and admission information.

Facilities that have collaborated with the College in this program include: Bloomington Hospital, Columbus Regional Hospital, Community Hospital-East, Hendricks County Hospital, Indiana University Medical Center, Methodist Hospital, Riley Hospital for Children, St. Francis Hospital, St. Vincent Hospital, Veteran’s Administration Hospital, Winona Memorial Hospital and Wishard Hospital.

Associate in Applied Science (AAS) — Respiratory Care

<table>
<thead>
<tr>
<th>Semester I</th>
<th>(18 credits)</th>
<th>Semester II</th>
<th>(18 credits)</th>
<th>Semester III</th>
<th>(10 credits)</th>
<th>Semester IV</th>
<th>(18 credits)</th>
<th>Semester V</th>
<th>(15 credits)</th>
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<tbody>
<tr>
<td>ANP 101 Anatomy and Physiology I</td>
<td>3</td>
<td>ANP 102 Anatomy and Physiology II</td>
<td>3</td>
<td>RES 125 Critical Care I</td>
<td>3</td>
<td>RES 128 Clinical Practicum III</td>
<td>9</td>
<td>RES 224 Clinical Medicine II</td>
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<tr>
<td>CHM 101 Chemistry I</td>
<td>3</td>
<td>RES 121 Introduction to Respiratory Care</td>
<td>6</td>
<td>RES 126 Clinical Medicine</td>
<td>3</td>
<td>RES 221 Cardiopulmonary Diagnostics</td>
<td>3</td>
<td>RES 225 Emergency Management</td>
<td>3</td>
</tr>
<tr>
<td>MAT 111 Intermediate Algebra</td>
<td>3</td>
<td>RES 122 Therapeutic Modalities</td>
<td>3</td>
<td>RES 127 Clinical Practicum II</td>
<td>3</td>
<td>RES 222 Critical Care II</td>
<td>3</td>
<td>RES 226 Continuing Care</td>
<td>3</td>
</tr>
<tr>
<td>BIO 111 General Microbiology</td>
<td>3</td>
<td>RES 123 Cardiopulmonary Physiology</td>
<td>3</td>
<td>RES 223 Pharmacology</td>
<td>3</td>
<td>RES 227 Clinical Practicum IV</td>
<td>3</td>
<td>RES 227 Clinical Practicum IV</td>
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</tr>
<tr>
<td>ENG 111 English Composition: Strategies for Inquiry</td>
<td>3</td>
<td>RES 124 Clinical Practicum I</td>
<td>3</td>
<td>ENG 211 Technical Writing</td>
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<td>TOTAL CREDITS</td>
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<td>TOTAL CREDITS</td>
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Technical Certificate (TC) — Respiratory Care

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<th>Semester II</th>
<th>(18 credits)</th>
<th>Semester III</th>
<th>(9 credits)</th>
<th>Semester IV</th>
<th>(9 credits)</th>
<th>Semester V</th>
<th>(15 credits)</th>
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<tbody>
<tr>
<td>ANP 101 Anatomy and Physiology I</td>
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<td>3</td>
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<td>3</td>
<td>RES 128 Clinical Practicum III</td>
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<td>RES 224 Clinical Medicine II</td>
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</tr>
<tr>
<td>CHM 101 Chemistry I</td>
<td>3</td>
<td>RES 121 Introduction to Respiratory Care</td>
<td>6</td>
<td>RES 126 Clinical Medicine</td>
<td>3</td>
<td>RES 221 Cardiopulmonary Diagnostics</td>
<td>3</td>
<td>RES 225 Emergency Management</td>
<td>3</td>
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<tr>
<td>MAT 111 Intermediate Algebra</td>
<td>3</td>
<td>RES 122 Therapeutic Modalities</td>
<td>3</td>
<td>RES 127 Clinical Practicum II</td>
<td>3</td>
<td>RES 222 Critical Care II</td>
<td>3</td>
<td>RES 226 Continuing Care</td>
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<tr>
<td>BIO 111 General Microbiology</td>
<td>3</td>
<td>RES 123 Cardiopulmonary Physiology</td>
<td>3</td>
<td>RES 223 Pharmacology</td>
<td>3</td>
<td>RES 227 Clinical Practicum IV</td>
<td>3</td>
<td>RES 227 Clinical Practicum IV</td>
<td>3</td>
</tr>
<tr>
<td>ENG 111 English Composition: Strategies for Inquiry</td>
<td>3</td>
<td>RES 124 Clinical Practicum I</td>
<td>3</td>
<td>ENG 211 Technical Writing</td>
<td>3</td>
<td>TOTAL CREDITS</td>
<td>59</td>
<td>TOTAL CREDITS</td>
<td>59</td>
</tr>
</tbody>
</table>
Surgical Technology

The surgical technologist is a highly-skilled member of the surgical team, qualified by didactic and clinical education to provide safe and efficient care to the patient in the operating room. The didactic education consists of courses in Anatomy and Physiology, Microbiology, Pharmacology, Medical Law and Ethics, Surgical Techniques and Surgical Procedures. Closely supervised clinical education is provided in local area hospitals.

The surgical technologist actively participates in surgery by performing scrub and/or circulating duties which include: passing instruments and supplies to the surgical team members, preparing and positioning the patient, operating equipment, assisting the anesthesiologist, and keeping accurate records. Many students complete their General Education courses prior to the clinical. The program is two calendar years in length, requiring 67 credits leading to an Associate in Applied Science Degree.

The program is accredited by the Committee on Allied Health Education and Accreditation with the Joint Review Committee on Education for Surgical Technologists. The full-time program begins in the fall semester each year and includes the spring semester and a twelve-week summer session. The General Education courses can be started any semester. Graduates receive an Associate in Applied Science Degree.

The following facilities have collaborated with the College as clinical sites for practical work experiences required in the program: Indiana University Hospital, Riley Hospital for Children, Community East Hospital, Wishard Memorial Hospital, St. Vincent's Hospital and Health Care Center.

The starting salary is $9.00 to $10.50 per hour, which can increase up to 25% because of shift differentials.

Associate in Applied Science (AAS) — Surgical Technology

| General Education Courses (21 Credits) | | |
|---------------------------------------|-----------------|
| ANP  101 Anatomy & Physiology I | 3 |
| ANP  102 Anatomy & Physiology II | 3 |
| BIO  111 Microbiology | 3 |
| COM  102 Intro to Interpersonal Communication | 3 |
| ENG  111 English Composition | 3 |
| MAT  110 Intermediate Algebra OR | 3 |
| MAT  111 Contemporary College Mathematics | 3 |
| PSY  101 Intro to Psychology OR | 3 |
| SOC  111 Intro to Sociology | 3 |

| Technical Core Courses (38 Credits) | | |
|-------------------------------------|-----------------|
| SUR  101 Surgical Techniques | 3 |
| SUR  102 Surgical Procedures 1 | 3 |
| SUR  103 Fundamentals of Surgical Technology | 6 |
| SUR  104 Surgical Procedures 2 | 6 |
| SUR  105 Clinical Applications 1 | 9 |
| SUR  106 Surgical Procedures 3 | 3 |
| SUR  107 Clinical Applications 2 | 8 |

| Broad Core Courses (8 Credits) | | |
|--------------------------------|-----------------|
| HHS  101 Medical Terminology | 3 |
| HHS  102 Medical Law/Ethics | 2 |
| MEA  113 Pharmacology | 3 |

| Suggested courses that help develop students for required courses. These courses are not required and they do not count toward the program. | | |
|-------------------------------------|-----------------|
| BSA  007 Spelling | 1 |
| BSA  065 Introduction to Life Sciences | 3 |
| BSA  071 Critical Thinking | 3 |
| BSA  074 Introduction to Computer Literacy | 2 |
| MEA  288 Success Skills for Human Services and Health Technologies | 3 |

Total Credits 67
General Education and Support Services

The mission of the General Education and Support Services Division, through a strong General Education Program, is to stimulate the full intellectual, emotional, and social development of each student. General education also undergirds, broadens, and augments the College's technical curriculum. Recognizing its essential value, all Associate degree programs require a minimum of 25% of degree credits in general education. The division also provides a comprehensive skills advancement program, known as ACCESS, which develops basic skills, attitudes and learning processes to assure success in College programs. Additionally, the division provides an integrated system of academic and counseling support services.

General Education

An Associate degree must prepare students to enter the work force and become full participants in the complex, rapidly evolving multiple environments of American society. The General Education Program provides instruction in mathematics, physical science, communication, and social science, as well as a learning support system of counseling and tutoring, and additional support services.

Mathematics and Science

Mathematics is an essential skill in meeting the ever-changing needs of our increasingly complex society. The study of science leads to an understanding of the basic principles of the physical and life processes in our natural world.

The mathematics and sciences program provides program-level mathematics and science courses, including Contemporary Mathematics, Intermediate Algebra, Geometry/Trigonometry, Algebra/Trigonometry, Calculus, Statistics, Finite Math, Physical Science, Technical Physics, Physics, Chemistry, Biology, Microbiology, Anatomy and Physiology, and Advanced Physiology.

Communication and Social Sciences

Recognizing that language is the foundation for all learning, the communications program encourages the use of language as a creative tool to develop and organize an understanding of self and others. Individuals develop proficiency in process-oriented English Composition, Exposition and Persuasion, Technical Writing, Fundamentals of Public Speaking, and Introduction to Interpersonal Communications.

The study of social science explores the commonality and diversity of human experience in a pluralistic society. Courses are offered in psychology, sociology, political science, economics, and the humanities.

Skills Advancement ACCESS Program

Developing basic skills, attitudes and learning processes in order that students may enter and be successful in college programs, the ACCESS program is a comprehensive system of services including initial assessment of skills, specialized counseling services, ongoing course placement and classroom and lab instruction in basic reading, writing, mathematics, science and study skills. Additional learning assistance is provided through small-group and one-on-one tutoring and computer-assisted instruction. The ACCESS program also provides Computer Assisted Instruction (CAI) and Interactive Video Disk (IVI) Lab in Room 252A and Macintosh Lab in Room 252B. These two microcomputer labs help students learn concepts and provide students with adequate drill and practice sessions in such areas as the following: reading, writing, grammar, mathematics and science skills, English as a Second Language and study skills. Also available are GED preparation materials, technical vocabulary for the deaf program, word processing application, and a wide range of instructional software. Hours are Monday through Thursday, 8:00 a.m. to 8:30 p.m.; Friday, 8:00 a.m. to 12:00 noon, and Saturday, 9:30 a.m. to 4:00 p.m.

Also available is a Testing Lab that can be used by the entire College. When a student misses a test for a legitimate reason, the instructor can leave that test in the Testing Lab, and the student can take it when it is convenient. The student must have a permission slip from the instructor.
Special Services

Testing for course placement and admission to Ivy Tech programs is provided free of charge. Included in this session are assessments of reading, writing, science, and mathematics ability. Students who wish to receive credit by testing out of a course should contact the Testing Center for procedures.

Counseling services through the ACCESS program include academic counseling, career assessment and counseling, and personal development counseling. These services are available to students who need supplemental support in order to succeed in their coursework.

The Special Needs Program at Ivy Tech is available to serve any student with a documented disability that may emerge as a barrier to the successful completion of coursework. Academic support and counseling services are provided specifically for students with special needs to enhance their independence and career preparation.

General Technical Studies Certificate

The General Technical Studies program provides a starting point for students who want to refresh their basic skills, are undecided upon what specific course of study to pursue, or are seeking admission into one of the College's selective programs. A one-year program requiring 30 credits leads to a General Technical Studies Certificate in each of the College's two degree-seeking divisions - Business and Technology, and Health and Human Services. Students who earn the Technical Certificate and do not pursue further education could seek employment in areas related to specific courses taken.

See page 67 for General Technical Studies Certificates Information.

BASIC SKILLS ADVANCEMENT COURSES

Skills Advancement

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BSA 007</td>
<td>Spelling</td>
<td>1</td>
</tr>
<tr>
<td>BSA 024</td>
<td>Introduction to College Writing I</td>
<td>3</td>
</tr>
<tr>
<td>BSA 025</td>
<td>Introduction to College Writing II</td>
<td>3</td>
</tr>
<tr>
<td>BSA 031</td>
<td>Reading Strategies for College I</td>
<td>3</td>
</tr>
<tr>
<td>BSA 032</td>
<td>Reading Strategies for College II</td>
<td>3</td>
</tr>
<tr>
<td>BSA 044</td>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>BSA 050</td>
<td>Introductory Algebra</td>
<td>3</td>
</tr>
<tr>
<td>BSA 061</td>
<td>Introduction to Chemistry</td>
<td>3</td>
</tr>
<tr>
<td>BSA 065</td>
<td>Introduction to Life Sciences</td>
<td>3</td>
</tr>
<tr>
<td>BSA 070</td>
<td>College Study Principles</td>
<td>3</td>
</tr>
<tr>
<td>BSA 071</td>
<td>Critical Thinking</td>
<td>3</td>
</tr>
<tr>
<td>BSA 074</td>
<td>Introduction to Computer Literacy</td>
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<tr>
<td>BSA 081</td>
<td>Keyboarding I</td>
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<tr>
<td>BSA 082</td>
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<td>BSA 083</td>
<td>Keyboarding III</td>
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<tr>
<td>BSA 288</td>
<td>ESL Reading V</td>
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<tr>
<td>BSA 288</td>
<td>ESL Listening and Speaking V</td>
<td>3</td>
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<tr>
<td>BSA 288</td>
<td>ESL Grammar V</td>
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<tr>
<td>BSA 288</td>
<td>ESL Reading VI</td>
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<tr>
<td>BSA 288</td>
<td>ESL Listening and Speaking VI</td>
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</tr>
<tr>
<td>BSA 288</td>
<td>ESL Grammar VI</td>
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</table>

Basic Skills Advancement

Course Descriptions

BSA 007  Spelling
1 Credit
Develops spelling skills by thorough practice in spelling with attention to rules and exceptions.

BSA 024  Introduction to English I
3 Credits
Introduces the student to a process approach to writing with emphasis on student generated topics and multiple drafting.

BSA 025  Introduction to English II
3 Credits
Furthers skills gained in BSA 024 with emphasis on preparing students for English 101 by helping students expand their control of the writing process.

BSA 031  Reading I
3 Credits
Emphasizes comprehension, vocabulary, and word attack skills beginning at a basic level.

BSA 032  Reading II
3 Credits
Advances (comprehension, vocabulary, and word attack) skills acquired in BSA 031 and further prepares students for program-level courses.

BSA 044  Mathematics
3 Credits
Introduces the basic concepts of algebra while reviewing computational skills.

BSA 050  Introductory Algebra
3 Credits
Reviews basic equations and graphing, and concentrates on algebraic relationships in preparation for intermediate algebra.

BSA 061  Introduction to Chemistry
3 Credits
Introduces basic principles of chemistry and technical vocabulary.

BSA 065  Introduction to Anatomy and Physiology
3 Credits
Studies the basics of the human body as an integrated unit.

BSA 070  College Study Principles
3 Credits
Orients and motivates students for success in college. Develops the skills of textbook-reading, note-taking, and test-taking.
### General Education Course Descriptions

<table>
<thead>
<tr>
<th>Communications</th>
<th></th>
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<tbody>
<tr>
<td>COM 101</td>
<td>Fundamentals of Public Speaking</td>
<td>3</td>
</tr>
<tr>
<td>COM 102</td>
<td>Introduction to Interpersonal Communications</td>
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<tbody>
<tr>
<td>ENG 111</td>
<td>English Composition: for Inquiry</td>
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<tr>
<td>ENG 112</td>
<td>Exposition and Persuasion</td>
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<td>ENG 211</td>
<td>Technical Writing</td>
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<td>ECN 201</td>
<td>Principles of Macroeconomics</td>
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<tr>
<td>ECN 202</td>
<td>Principles of Microeconomics</td>
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<td>HSY 101</td>
<td>Survey of American History I</td>
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<tr>
<td>HSY 102</td>
<td>Survey of American History II</td>
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<td>POL 101</td>
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<td>PSY 201</td>
<td>Lifespan Development</td>
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<td>ETH 101</td>
<td>Introduction to Ethics</td>
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<td>PHL 101</td>
<td>Introduction to Philosophy</td>
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<tr>
<td>HUM 101</td>
<td>Survey of Humanities</td>
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<td>Contemporary College Mathematics</td>
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<tr>
<td>MAT 111</td>
<td>Intermediate Algebra</td>
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<td>MAT 115</td>
<td>Statistics</td>
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<td>MAT 121</td>
<td>Geometry/Trigonometry</td>
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<td>MAT 131</td>
<td>Algebra/Trigonometry I</td>
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<td>MAT 132</td>
<td>Algebra/Trigonometry II</td>
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<td>MAT 135</td>
<td>Finite Math</td>
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<td>MAT 201</td>
<td>Brief Calculus</td>
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<td>ANP 101</td>
<td>Anatomy &amp; Physiology I</td>
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<td>ANP 102</td>
<td>Anatomy &amp; Physiology II</td>
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<td>ANP 201</td>
<td>Advanced Physiology</td>
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<td>BIO 111</td>
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<tr>
<td>PHY 110</td>
<td>Technical Physics</td>
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<tr>
<td>SCI 111</td>
<td>Physical Science</td>
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</table>
COMMUNICATIONS

COM 101 Fundamentals of Public Speaking
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or completion of BSA coursework in reading and writing.
Fundamental concepts and skills for effective public speaking: preparation and delivery of informative and persuasive presentations. Includes instructions in use of visual aids and critical listening.

COM 102 Introduction to Interpersonal Communication
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or completion of BSA coursework in reading and writing.
Focuses on the process of interpersonal communications as a dynamic and complex system of interactions. The course will stress the importance of understanding and applying interpersonal communication theory in work, family, and social relationships.

COMPOSITION

ENG 111 English Composition: Strategies for Inquiry
3 Credits
Prerequisite: Demonstrated competency in writing skill through appropriate assessment or successful completion of BSA writing coursework.
Provides a foundation in rhetorical principles, communication strategies, and inquiry processes that can be successfully applied in writing situations: personal, academic, or professional. The composing process will be initiated by and integrated with critical reading and thinking.

ENG 112 Exposition and Persuasion
3 Credits
Prerequisite: ENG 111.
Continues the strategies taught in ENG 111 and emphasizes research-based analytic and persuasive writing. Students will complete collaborative and individual projects.

ENG 211 Technical Writing
3 Credits
Prerequisite: ENG 111
Builds on the writing skills taught in ENG 111. Students will demonstrate their ability to prepare technical reports for various purposes using standard research techniques, documentation and formatting as appropriate. Also, a variety of business correspondence will be written. Students will demonstrate both written and oral competencies.

ECONOMICS

ECN 101 Economic Fundamentals
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework.
Provides an introduction to the fundamentals of economics and their application to current economic problems.

ECN 201 Principles of Macroeconomics
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or BS coursework and MAT 111 - Intermediate Algebra.
Develops a conceptual understanding of the forces affecting the level of national income, employment, interest rates, and prices.

ECN 202 Principles of Microeconomics
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework and MAT 111. Develops an understanding of the process by which the market price mechanism allocates resources and influences individual behavior.

HISTORY

HSY 101 Survey of American History
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or completion of BSA coursework in reading and writing.
Covers major themes and events in American history from the discovery era to the Civil War and Reconstruction.

HSY 102 Survey of American History II
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or completion of BSA coursework in reading and writing.
Covers major themes and events in American history from the Civil War and Reconstruction to the present.

POLITICAL SCIENCE

POL 101 Introduction to American Government and Politics
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework.
Introduces the foundations, nature, and dynamics of American government and politics including constitutional foundations, civil liberties and civil rights, Federalism, political parties, public opinion, interest groups, media, nominations, campaigns, elections, the Presidency, the Judiciary, Congress, bureaucracies, and public policy.

PSYCHOLOGY

PSY 101 Introduction to Psychology
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework.
Provides a general survey of the science of psychology. Includes the study of research methodology, emotion, biological foundations, learning and cognition, perception, development, personality, abnormal psychology, and social psychology.

PSY 201 Lifespan Developments
3 Credits
Prerequisite: Completion and grade of C or better in PSY 101 or SOC 111.
Covers human development from conception to death, focusing on self as well as others: discussion about time before adolescence and adult years. In addition, relevant research for each period will be covered.
PSY 205 Abnormal Psychology
3 Credits
Examines theories and research related to mental illness as well as etiology, pathology, and treatment methods. Includes descriptions of various disorders and personality problems.

SOCIOLOGY

SOC 111 Introduction to Psychology
3 Credits
Prerequisite: Demonstrated competency through appropriate assessment or BSA coursework.
Introduces the students to the science of human society, including fundamental concepts, descriptions, and analysis of society, culture, the socialization process, social institutions, and social change.

HUMANITIES

ETH 101 Introduction to Ethics
3 Credits
Prerequisite: Demonstrated competency in writing and reading skills through appropriate assessment or successful completion of BSA program coursework.
Examines some major theories of ethics and their application to moral problems and issues.

PHL 101 Introduction to Philosophy
3 Credits
Prerequisite: ENG 111 and demonstrated competency in reading and writing skills through appropriate assessment or successful completion of BSA program coursework.
Examines some of the fundamental questions of philosophy such as the foundations of morality, skepticism and knowledge, the nature of mind, free will and determinism, and the existence of God.

HUM 101 Survey of Humanities
3 Credits
Prerequisite: Demonstrated competency in reading and writing skills through appropriate assessment or successful completion of BSA program coursework.
Familiarizes students with the interrelated disciplines within the humanities: literature, fine arts, history, music, architecture, and philosophy.

MATHEMATICS

MAT 110 Contemporary Mathematics
3 Credits
Prerequisite: BSA 050 or demonstrated competency.
Provides an introductory study of the fundamental concepts and operations of calculus, including functions, limits, continuity, derivatives, point of inflection, first derivative test, concavity, second derivative test, optimization, antiderivatives, integration by substitution and parts and applications of a definite integral.

MAT 115 Statistics
3 Credits
Prerequisite: MAT 111
Provides study in interpretation and presentation of descriptive and inferential statistics. Includes measures of central tendency, probability, binomial and normal distributions, hypothesis testing of one and two sample populations, confidence intervals, chi-square testing, correlation, data description and graphical representation.

MAT 121 Geometry and Trigonometry
3 Credits
Prerequisite: MAT 111
Provides study in geometry and trigonometry including polygons, similarity, solid geometry, properties of circles, constructions, right triangles, angle measurements in radians and degrees, trigonometric functions and their applications to right triangles, Pythagorean Theorem, laws of sine and cosine, graphing of trigonometric functions, trigonometric identities and coordinate conversions.

MAT 131 Algebra and Trigonometry I
3 Credits
Prerequisite: MAT 111 or demonstrated competency.
Provides study in algebra including functions, exponential rules, linear equations, radicals, vectors, right triangle trigonometry, oblique triangles, graphs of sine and cosine functions and variation.

MAT 132 Algebra and Trigonometry II
3 Credits
Prerequisite: MAT 131
Continues Algebra-Trigonometry I providing study of systems of equations, vectors, graphs of trigonometric functions, trigonometric equations, complex numbers, exponential and logarithmic functions, and conics.

MAT 135 Finite Math
3 Credits
Prerequisite: MAT 111 or demonstrated competency.
Surveys solving and graphing linear equations and inequalities, elementary set theory, matrices and their applications, linear programming and elementary probability.

MAT 201 Brief Calculus
3 Credits
Prerequisite: MAT 132
Provides an introductory study of the fundamental concepts and operations of calculus, including functions, limits, continuity, derivatives, point of inflection, first derivative test, concavity, second derivative test, optimization, antiderivatives, integration by substitution and parts and applications of a definite integral.

LIFE AND PHYSICAL SCIENCES

ANP 101 Anatomy and Physiology I
3 credits (2 lecture, 2 lab)
Prerequisite: Demonstrated competency through assessment or BSA coursework.
Develops a comprehensive understanding of the close interrelationship between anatomy and physiology as seen in the human organism. It begins by introducing the student to the cell which is the basic structural and functional unit of all organisms and covers tissues, integument, skeleton, muscular and nervous systems as an integrated unit.
ANP 102 Anatomy and Physiology II
3 credits (2 lecture, 2 lab)
Prerequisite: ANP 101
Continues the study of the interrelationships of the systems of the body, covering digestion, respiratory, blood, lymphatic articulation, excretion, hormone secretion, and reproduction. A brief overview of human growth and development as well as heredity is presented.

ANP 201 Advanced Physiology
4 credits (3 lecture, 2 lab)
Prerequisite: ANP 102, CHM 101
Studies of human physiology for students entering health oriented fields. Emphasis will be on the study of the function of the nervous, muscular, circulatory, respiratory, urinary, digestive and endocrine systems and their homeostatic mechanisms and system interaction. Laboratory exercises focus on clinically relevant measurement of human function.

BIO 101 Introductory Biology
3 credits (2 lecture, 2 lab)
Prerequisite: Demonstrated competency through assessment or BSA coursework.
Provides an introduction to the basic concepts of life. The course includes discussion of cellular and organismal biology, genetics, evolution, ecology and interaction among all living organisms. Applications of biology to society are addressed.

BIO 111 Microbiology
3 credits (2 lecture, 2 lab)
Prerequisite: Demonstrated competency through assessment or BSA coursework.
Presents an overview of microbiology which includes fundamentals, methods and materials, an introduction to industrial and clinical microbiology and special topics.

BIO 112 Microbiology II
2 credits (2 lecture, 1 lab)
Prerequisite: BIO 111
Presents a study of bacteria, viruses, yeasts and molds, rickettsia and parasites and their roles in diseases.

CHM 101 Chemistry I
3 credits (2 lecture, 2 lab)
Prerequisite: Demonstrated competency through assessment or BSA coursework.
Studies the science of chemistry and measurement, atomic theory and the periodic table, chemical bonding, stoichiometry and gases.

CHM 102 Chemistry II
3 credits (2 lecture, 2 lab)
Prerequisite: CHM 101
Includes liquids and solids, solutions and solution concentrations, acids and bases, equilibrium, nuclear chemistry, organic and biochemistry.

PHY 101 Physics I
4 credits (3 lecture, 2 lab)
Prerequisite: MAT 121 or 131
Studies the basic concepts of mechanics, including force and torque, linear and rotational motion, work, energy and power, simple machines and fluids.

PHY 102 Physics II
4 credits (3 lecture, 2 lab)
Prerequisite: PHY 101
Provides the study of physics of heat, light, periodic and wave motion, electricity and magnetism, and concepts of motion and current physics.

PHY 110 Technical Physics
4 credits (3 lecture, 2 lab)
Prerequisite: MAT 111
Introduces concepts and applications of physics. The organization of this course is nontraditional in that it leads the student to develop an integrated understanding of the theory and application of measuring (or unit) systems, scales, vectors, force, work, rates, energy, momentum, power, force transformers, simple machines, vibrations, waves, and time constants.

SCI 111 Physical Science
3 credits (2 lecture, 2 lab)
Prerequisite: Demonstrated competency through assessment or BSA coursework.
Studies physical concepts and theories pertaining to current applications and trends in physics, chemistry, earth science, and astronomy. Emphasis is on concept and factual knowledge.
General Technical Studies Certificate (TC) — Business

SEMMETER 1 (15 CREDITS)
ENG 111 English Composition 3
BUS 288 College Study Principles for Business students 3
POL 101 Introduction to American Government and Politics OR
SOC 101 Introduction to Sociology 3
** SELECT: Elective 6

** Selectives must be taken from your area of interest.

SEMMETER 2 (15 CREDITS)
MAT 110 Contemporary College Math 3
MAT 111 Intermediate Algebra 3
ECN 101 Economic Fundamentals 3
** SELECT: Elective 9

TOTAL CREDITS 30

* Recommended that students take MEA 101 before ANP 101 and MAT 111 before CHM 101.

General Technical Studies Certificate (TC) — Health and Human Services

SEMMETER 1 (15 CREDITS)
ENG 111 English Composition 3
MAT 110 Contemporary College Math OR
*MAT 111 Intermediate Algebra 3
*MEA 101 Medical Terminology 3
ANP 101 Anatomy and Physiology 3
HST 101 Intro to Human Services 3
** SELECT: Student Elective 3

SEMMETER 2 (15 CREDITS)
COM 101 Fundamentals of Public Speaking OR
ENG 211 Technical Writing 3
SOC 111 Intro to Sociology OR
PSY 101 Intro to Psychology 3
ANP 102 Anatomy and Physiology OR
HST 101 Helping Relationship Techniques 3
** SELECT: Student Elective 3
** SELECT: Student Elective 3

TOTAL CREDITS 30

* Recommended that students take MEA 101 before ANP 101 and MAT 111 before CHM 101.

General Technical Studies Certificate (TC) — Technology

SEMMETER 1 (15 CREDITS)
MAT 111 Intermediate Algebra 3
TEC 102 Technical Graphics 3
TEC 104 Comp. Fundamentals for Technology 3
** SELECT: Technical Elective 3
** SELECT: Technical Elective 3

SEMMETER 2 (15 CREDITS)
ENG OR
COM General Education 3
QSC 101 Quality Control Concepts and Techniques 3
*TEC 113 Basic Electricity 3
** SELECT: Elective 3
** SELECT: Elective 3

TOTAL CREDITS 30

* Students should demonstrate BSA050 math skills by test, prerequisite or co-requisite
** Selectives must be taken from your area of interest.
Course Descriptions

ABR 101 Body Repair Fundamentals
3 Credits
Examines the characteristics of body metals and includes the installation of moldings, ornaments and fasteners with emphasis on sheet metal analysis and safety.

ABR 103 Auto Paint Fundamentals
3 Credits
Introduces auto paint considerations with emphasis on the handling of materials and equipment in modern automotive technologies.

ABR 104 Collision Damage Analysis and Repair
3 Credits
Provides instruction in analyzing extensive body damage and determining the tools and procedures needed to replace panels.

ABR 105 Conventional Frame Diagnosis and Correction
3 Credits
Covers the use of tools, frame machines and equipment for frame and chassis repair. Includes study of terms pertaining to front suspension and rear axle. Describes uses of frame gauges, tram gauges and other measuring devices.

ABR 106 Body Repair Applications
3 Credits
Introduces fundamentals of using hand and power tools in the repair of minor collision damage, with emphasis on safety.

ABR 107 Automotive Painting Technology
3 Credits
Provides instruction in the total refinishing of an automobile with emphasis on advanced and specialty painting techniques.

ABR 108 Unibody Structural Analysis and Repair
3 Credits
Covers unibody repair, identification and analysis of damage, measuring and fixture systems, straightening systems and techniques, mechanical component service and knowledge of suspension and steering systems on front-wheel-drive unibody vehicles.

ABR 120 Fiberglass Plastic Repair
3 Credits
Introduces types of fiberglass and plastic materials used in auto body repair. Covers both interior and exterior applications.

ACC 101 Accounting Principles I
3 Credits
Introduces the fundamental principles, techniques and tools of accounting. Presents the mechanics of the accounting cycle including collecting, recording, summarizing, analyzing and reporting information pertaining to service and mercantile enterprises. Covers internal control, deferred charges, notes and interest, valuation of receivables, payrolls, inventories and plant assets.

ACC 102 Accounting Principles II
3 Credits
Continues the study of accounting to include partnership and corporate accounting systems. Covers preparation and analysis of financial statements including a statement of cash flow, and long-term liabilities and investments. Introduces cost, managerial, branch and departmental accounting techniques.

ACC 105 Income Tax I
3 Credits
Offers an overview of federal and state income tax law for individuals including taxable income, capital gains and losses, adjustments, standard and itemized deductions, tax credits and appropriate tax forms. Introduces tax concepts needed by a sole proprietorship.

ACC 106 Payroll Accounting
3 Credits
Covers payroll calculating and reporting including various federal and state withholding taxes, employer payroll taxes, typical insurance and other arrangements affecting the preparation of payroll registers and employees' earnings records.

ACC 107 Accounting for Recordkeeping
3 Credits
Provides instruction for non-accounting majors, with special emphasis on the trade professions. Covers the cash basis of recordkeeping for materials, payroll, depreciation and financial statements. Introduces the operation of petty cash funds, basic cash budgeting and controlling cash through the use of a checkbook. Covers financial ratios, construction accounting methods and computing customer estimates.

ACC 108 Career Essentials of Accounting
3 Credits
Introduces the basic principles of accounting as utilized in a variety of office settings. Includes the principles of debit and credit, double-entry bookkeeping, use of journals and transaction analysis. Covers uses of ledgers, posting procedures, petty cash, banking procedures, payroll, depreciation, work sheets, balance sheets and income statements.

ACC 109 Personal Finance
3 Credits
Examines the process of setting and achieving financial goals. Emphasizes managing financial resources, budgeting for current expenses, projecting cash flow and managing short- and long-term credit. Includes use of insurance to reduce risks and vehicles for saving and investing.

ACC 111 Accounting Principles Lab I
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an Accounting Principles 1 course. Introduces the touch-method of numeric input on a calculator and includes computerized problems.

ACC 112 Accounting Principles Lab II
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Accounting Principles 2 course. Uses computerized problems.
ACC 113 Income Tax Lab
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Income Tax I course. Uses computerized problems.

ACC 114 Payroll Accounting Lab
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in the Payroll Accounting course. Uses computerized problems.

ACC 118 Financial Concepts for Accounting
3 Credits
Develops math skills needed in the business field and serves as a basis for course work in business. Includes the study of business applications using rational numbers, algebraic equations, time value of money concepts and basic statistics.

ACC 201 Intermediate Accounting I
3 Credits
Studies accounting principles and applications at an intermediate level pertaining to the income statement and balance sheet, cash and short-term investments, receivables, inventories, plant assets and intangible assets. Includes analysis of bad debts, inventory valuation, repairs and maintenance, depreciation of plant assets and present value applications.

ACC 202 Intermediate Accounting II
3 Credits
Continues studies of Intermediate Accounting I and includes long-term investments, current and contingent liabilities, long-term debt, stockholders' equity, special accounting problems and analysis, statement of cash flows and financial statement analysis. Includes capital and treasury stock transactions, dividends, earnings per share, accounting for income taxes, correction of errors and creation of financial statements from incomplete records.

ACC 203 Cost Accounting I
3 Credits
Examines the manufacturing process in relation to the accumulation of specific costs of manufactured products. Studies various cost accounting report forms, material, labor control and allocation of manufacturing costs to jobs and departments.

ACC 204 Cost Accounting II
3 Credits
Continues Cost Accounting I. Studies the master or comprehensive budget, flexible budgeting and capital budgeting. Emphasizes tools for decision making and analysis. Introduces human resource accounting.

ACC 205 Seminar in Accounting
1 Credit
Allows accounting students an opportunity to pursue specific areas of interest at a more advanced level in accounting.

ACC 206 Managerial Accounting
3 Credits
Provides an understanding of accounting records and management decision making, with topics including internal accounting records and quantitative business analysis.

ACC 207 Accounting for Government and Nonprofit
3 Credits
Emphasizes the similarities and differences between government, nonprofit and commercial accounting methods and procedures. Exposes students to the basic fund accounting cycle for the general fund and other special funds.

ACC 208 Income Tax II
3 Credits
Continues Income Tax I. Studies procedures and problems pertaining to federal and state income tax laws for partnerships and corporations. Includes a review and in-depth study of concepts related to proprietorships covered in Income Tax I.

ACC 209 Auditing
3 Credits
Covers public accounting organization and operation including internal control, internal and external auditing, verification and testing of the balance sheet and operating accounts, and the auditor's report of opinion of the financial statements.

ACC 212 Business Finance
3 Credits
Introduces basic tools and techniques of financial analysis and management and sources of financial and economic theory as applied to business finance. Includes conceptual materials related to valuation, capital structure formulation and risk-return consideration.

ACC 213 Electronic Spreadsheets in Business
3 Credits
Provides instruction in the use of all modules of a spreadsheet software package including spreadsheet, graphics and database operations and applying these modules to business problems.

ACC 214 Consumer and Commercial Credit
3 Credits
Provides instruction for retail, service, wholesale, and manufacturing firms extending credit to clients. Explores theory, principles and practice of consumer and commercial credit related to business activity and economic impact. Examines managerial functions of collecting and controlling credit to consumers and businesses. Emphasizes credit plans, credit and sales, short-term and intermediate credit and legal aspects of credit.

ACC 215 Credit Procedures and Collections
3 Credits
Examines credit as a means of extending purchasing power, i.e., increased buying power, immediate use of money, merchandise or services and delayed payment. Covers concepts of credit and principles and methods of credit administration involving individuals and businesses. Includes information on credit policy, credit control, credit decision making and legal remedies.

ACC 216 Credit Management
3 Credits
Examines credit as a means of extending purchasing power, i.e., increased buying power, immediate use of money, merchandise or services and delayed payment. Covers concepts of credit and principles and methods of credit administration involving individuals and businesses. Includes information on credit policy, credit control, credit decision making and legal remedies.
ACC 217  Intermediate Accounting Lab I
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Intermediate Accounting I. Uses computerized problems.

ACC 218  Intermediate Accounting Lab II
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Intermediate Accounting 2. Uses computerized problems.

ACC 219  Cost Accounting Lab
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in Cost Accounting I. Uses computerized problems.

ACC 220  Special Applications Lab I
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an accounting course. Uses computerized problems.

ACC 221  Special Applications Lab II
1 Credit
Presents a series of planned accounting learning problems and activities designed to accompany concepts and theories included in an accounting course. Uses computerized problems.

ACC 222  Accounting Software Applications
3 Credits
Solves accounting problems using software similar to what is currently used in business. Includes installation, operation and analysis of an accounting software package.

ACC 223  Advanced Topics in Accounting
2 Credits
Discusses topics of current interest in accounting. Focuses on special interest projects for students in accounting. Includes trips, guest speakers, audio-visual activities and seminars.

ACC 224  Construction Bidding
3 Credits
Examines bidding procedures, contract documents, contracts, bonds and insurance. Describes materials and installation procedures and how they may affect the bid. Covers the unit of measure of the work, estimating the quantity of materials and the relationship of the specifications.

ACC 225  Integrated Accounting Software
3 Credits
Integrated accounting software package(s) will be used to illustrate computerized accounting practices. The general ledger will be integrated with accounts receivable, accounts payable and other accounting.

ACC 281-293  Special Topics in Accounting Technology
1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact Accounting Program Chairperson for information.

ADP 809  Real Estate Sales
3 Credits
Provides instruction in accordance with the guidelines established by the Indiana Real Estate Commission. Includes property descriptions, marketing real estate, licensing, financing, contract, zoning, closing procedures and property management.

ADP 810  Real Estate Broker
3 Credits
Provides instruction in accordance with the guidelines established by the Indiana Real Estate Commission. Includes property management, appraisal, investment, closing the real estate transaction and other topics.

AFS 101  Fire Technology
3 Credits
Examines the history of firefighting, identifies the types of apparatus and fire protection systems and analyzes the fire problem in general. Provides a basis for the chemical and hazardous properties of combustion and the related by-products.

AFS 102  Fire Apparatus and Equipment
3 Credits
Examines in detail the types of apparatus in use today. Studies pumps, aerials, elevating platforms and special apparatus. Utilizes National Fire Protection Association standards in identifying the proper responses for a given situation. Includes study of apparatus placement on an emergency incident, types of pumps, tests, equipment, drafting, relay, nozzles, fittings and hose lays and maintenance on various types of apparatus.

AFS 103  Firefighting Strategy and Tactics
3 Credits
Prepares the student to make responsible decisions concerning fireground strategies and tactics at the company level. Uses various priority scenarios, including preparing for incident command and commanding the initial response. Emphasizes company operations with basic command decisions.

AFS 104  Building Construction Fire Service
3 Credits
Examines the design principles involved in the protection of a structure from fire involvement. Studies the signs, symptoms and indicators of partial or total building collapse during firefighting operations. Includes the study of legislative codes and laws concerning building design, building fire safety, classification of building construction and blueprint reading.

AFS 105  Fire/Arson Investigation
3 Credits
Focuses on the responsibilities of the firefighter, the investigator and the department in fire scene investigations, fire cause and loss, collection and preservation of evidence, and determination of fire origin. Emphasizes the application and assistance of various scientific aids that assist in the investigation.

AFS 108  Fire Prevention/Inspection
3 Credits
Examines the function of the fire inspector and the organization of the fire prevention unit. Emphasizes identifying codes and regulations utilized by the inspector, with particular use of the Indiana Fire Code. Includes the legal authority of fire prevention principles, application of the fire code and sound management principles as applied to a bureau.
AFS 109 Fire Department Specifications
3 Credits
Surveys specifications of firefighting apparatus, equipment, protective clothing, facilities, and all other sources of materials necessary to a fire department. Study includes the writing of Standard Operating Guides (SOGs) and blueprint readings.

AFS 201 Fire Protection Systems
3 Credits
Provides a general introduction to fire alarm monitoring devices and extinguishing systems. Develops a strong base for fire protection or commercial applications. Covers fire extinguishing agents, portable fire extinguishers, carbon dioxide systems, dry chemical systems, halogenated systems/foam systems, explosive suppression systems, thermal/smoke/flame detection systems and building monitoring systems. Covers standpipe and sprinkler systems.

AFS 202 Fire Service Management
3 Credits
Studies the principles and functions of administrative and management personnel in the fire service. Topics discussed include departmental organizations, administrative and management procedures, personnel selection, line and staff functions, communications, the fire company unit, public relations and current problems in administration.

AFS 204 Fire Service Hydraulics
3 Credits
Studies compressible fluids including fluid properties, principles of fluid statics, flow system principles, pipe friction and head loss, flow measurements, pumps and other appliances and hydraulic devices. Relates applications to fire protection, water supply and foam systems.

AFS 205 Aircraft Firefighting
3 Credits
Examines the hazards associated with aircraft firefighting. Includes lecture and practical use of airport firefighting equipment, extinguishing agents, strategy and tactics, rescue methods and aircraft design and construction.

AFS 206 Shipboard Firefighting
3 Credits
Focuses on firefighting strategy and tactics for land-based fire department personnel and equipment. Includes a survey of equipment, hook-ups, procedures, incident command, use of foam and support systems on ships.

AFS 262 Firefighter 2nd Class
3 Credits
Certifies firefighters for state certification as a second class firefighter.

AFS 263 Firefighter 1st/2nd Class
3 Credits
Completes certification at the second class level and begins first class instruction.

AMT 102 Introduction to Robotics
3 Credits
Introduces students to robotics and automated systems and their operating characteristics. Covers robotics principles of operation and work envelopes. Teaches coordinate systems and how hydraulic, pneumatic and electromechanical systems function together as a system. Covers servo and non-servo controls, system capabilities and limitations and safety. Investigates robot tooling, including welders, grippers, magnetic pickups, vacuum pickups, compliance devices, adhesive applicators and paint sprayers.

AMT 201 Manufacturing Systems Control
3 Credits
Introduces the field of industrial controls. Teaches principles of control systems and how they are applied to a production system to achieve automation. Systems included in the course are stepper motors, programmable logic controllers, microprocessors, computers and feedback systems. Emphasizes programmable logic controllers and the local area network.

AMT 202 Work Cell Design and Integration
3 Credits
Studies principles pertaining to design and implementation of robots in industrial work cells. Emphasizes selection of the best work site and robot system, application of cell sensor, development of cycle times, economic analysis, safety considerations, proposal preparation and human resources development.

AMT 203 Automation Electronics
3 Credits
Demonstrates the operation and application of electronic devices in the automation field. Includes linear integrated circuits, sensors and interfacing systems, actuators and drive controls and process control techniques.

AMT 205 Automated Manufacturing Systems
3 Credits
Provides instruction in selecting equipment, writing specifications, designing fixtures and interconnects, integrating systems, providing interfaces and making the assigned systems operational to produce marketable products.

AMT 240 Introduction to Computer Integrated Manufacturing
3 Credits
Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Includes project planning which will be formally documented and presented by students.

AMT 241 Computer-Integrated Manufacturing Project
3 Credits
Continues the study of the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of the project planned in AMT 240 in a realistic CIM environment.

AMV 100 Introduction to Transportation
3 Credits
Introduces students to the work environment of a transportation repair facility. Presents historical and future trends with emphasis in career/placement requirements. Safety, OSHA, EPA, and environmental standards are presented. Introduction to the eight areas of ASE technician certification and related tools are presented.
AMV 100 Ford Introduction to Transportation
3 Credits
Introduces students to the work environment of a transportation repair facility. Presents historical and future trends with emphasis in career/placement requirements. Safety, OSHA, EPA, and environmental standards are presented. Introduction to the eight areas of ASE technician certification and related tools are presented.

AMV 100 GM Introduction to Transportation
3 Credits
Introduces students to the work environment of a transportation repair facility. Presents historical and future trends with emphasis in career/placement requirements. Safety, OSHA, EPA, and environmental standards are presented. Introduction to the eight areas of ASE technician certification and related tools are presented.

AMV 101 T-Ten Chassis and Suspension
3 Credits
This course is a study of various frame designs and suspension systems used in modern Toyota vehicles. Repair and replacement of steering linkages and chassis components, both front and rear systems are included.

AMV 101 Ford STST Suspension and Steering
3 Credits
This course is a study of various frame designs and suspension systems used in Ford vehicles. Repair and replacement of steering linkages and chassis components, both front and rear are included. Course also includes study of Air Suspension, Active Suspension, Level Ride, Electronic Variable power steering systems and related computers.

AMV 101 GM STG Suspension and Steering
3 Credits
This course is a study of various frame designs and suspension systems used in GM vehicles. Repair and replacement of steering linkages and chassis components, both front and rear are included. Course also includes study of Level Ride, Electronic Variable power steering systems and related computers.

AMV 107 Ford Engine Principles and Design
3 Credits
Examines engine dynamics, theory of engine operation and design characteristics of all engine assemblies and subassemblies. Emphasizes removal, tear down, visual inspection, precision measuring inspection, clean up of components and parts and rebuilding engines according to industry standards.

AMV 107 GM Engine Principles and Design
3 Credits
Examines engine dynamics, theory of engine operation and design characteristics of all engine assemblies and subassemblies. Emphasizes removal, tear down, visual inspection, precision measuring inspection, clean up of components and parts and rebuilding engines according to industry standards.

AMV 113 Basic Electricity STST Certification
3 Credits
Introduction to electrical theory and Ford automotive circuits and components. Electron theory, electrical circuits, electronic circuits, terms and wiring diagrams are emphasized. Students also will be introduced to electrical and electronic circuits and components testing.

AMV 113 GM STG Specialized Electronics Training
3 Credits
The course is an introduction to electrical theory and General Motors automotive circuits and components. Electron theory, electrical circuits, electronic circuits, terms and wiring diagrams are emphasized. Students also will be introduced to electrical and electronic circuits and components testing.

AMV 113 Toyota Electrical Circuits
3 Credits
Introduces fundamentals of electricity and electrical behavior as applied to modern transportation. Includes extensive use of digital multimeters and circuit troubleshooting. Presents an intensive study of the construction, function and principles of operation of starting motors, charging systems and their contra systems with emphasis on diagnosis and bench repair.

AMV 202 Computer Engine Controls
3 Credits
Examines computerized ignition, carburetor, fuel injection and sensors for engine controls on late model passenger cars. Covers theory, diagnostic procedure and repair procedure of the CCC, MCU, EEC-IV, lean burn and other spark control systems.

AMV 202 Ford SST Electronic Engine Controls
3 Credits
This course examines computerized ignition, carburetor, fuel injection and sensors for engine controls on late model passenger cars. Covers theory, diagnostic procedure and repair procedure of the EEC-IV systems.

AMV 202 GM Computer Engine Controls
3 Credits
This course examines computerized ignition, carburetor, fuel injection and sensors for engine controls on late model passenger cars. Covers theory, diagnostic procedure and repair procedure of the General Motors HEI and DIS systems.

AMV 202 Toyota Computer Control System
3 Credits
This course examines computerized ignition, fuel injection, and sensors for engine controls on late model Toyota passenger cars. Content includes theory, diagnostic procedures, and repair of EFI and TCCS.

AOT 103 Information/Word Processing Concepts
3 Credits
Introduces the concept of information/word processing systems. Offers hands-on experience in the operation of word processing systems.

AOT 105 General Office Procedures
3 Credits
Emphasizes procedures and the changing responsibilities for the entry-level secretary/receptionist in today's offices. Identifies the skills and attitudes needed to succeed in the business environment.

AOT 106 Refresher Shorthand
1 Credit
Provides instruction in a lab setting to bring shorthand skills to an employable level.
AOT 107  Refresher Typewriting
1 Credit
Provides instruction in a lab setting to bring typing skills to an employable level. Concentrates on four areas of skill development: speed and accuracy, business letters, tables and tabulations, and reports.

AOT 108  Shorthand/Notetaking I
3 Credits
Emphasizes basic theory, brief forms and speed in reading from notes and the textbook. Focuses on the correct way to write shorthand. Uses dictation with emphasis placed on writing and transcription techniques.

AOT 109  Professional Development
2 Credits
Enables students to analyze and improve themselves in terms of posture, weight control, personal hygiene, grooming, wardrobe, personality, communication and job application skills for success in employment. Includes resume preparation and interviewing skills.

AOT 110  Keyboarding Skill Development
1 Credit
Designed to help experienced typists gain greater speed and accuracy.

AOT 111  Shorthand/Notetaking II
3 Credits
Develops dictation, notereading and transcription skills through drills and tests. Emphasizes speed, accuracy and use of correct English. Reinforces and builds on principles and skills learned in Shorthand/Notetaking I.

AOT 112  Data Entry
3 Credits
Emphasis placed on accuracy and speed.

AOT 113  Office Calculating Machines
1 Credit
Teaches students to use the 10-key electronic printing/display calculator. Develops competence with the desk calculator and familiarity with the types of business problems they commonly solve.

AOT 116  Business Communications
3 Credits
Develops communications skills for use in business and industry. Focuses on writing effective business letters, memos, reports, and reviewing grammar and punctuation rules.

AOT 119  Document Production
3 Credits
Emphasizes increasing speed, improving accuracy, developing and applying formatting skills, applying communication and language arts skills, and learning document production techniques.

AOT 202  Information/Word Processing Applications
3 Credits
Knowledge acquired from Information/Word Processing Concepts will be further enhanced as more sophisticated features of a word processing package are learned and applied.

AOT 206  Shorthand/Notetaking 3
3 Credits
Reviews fundamentals learned in Shorthand/Notetaking 1 and 2.

AOT 207  Office Automation Applications
3 Credits
Provides instruction in the use of computers and computer software. Covers mastery of spreadsheet and database software programs. Explores the integration of these packages with a word processing package. Assists students in applying their knowledge of office automation systems to make decisions, solve problems, and facilitate information in an office support setting.

AOT 212  Micro Word Processing
3 Credits
Deals with business applications of word processing software on microcomputer work stations. Includes practical applications in the use of a microcomputer word processing software.

AOT 214  Desktop Publishing
3 Credits
Provides computer skills in the production of camera-ready materials through electronic publishing.

AOT 215  Legal Term/Practice
3 Credits
Provides basic understanding of the secretarial duties and responsibilities pertinent to the legal profession. Presents ethics of law and professional conduct. Includes laboratory experience.

AOT 216  Practicum/Internship
3 Credits
This "hands on" field experience allows the student to put into practice skills and knowledge obtained in class.

AOT 219  Specialized Formatting/Transcription
3 Credits
Emphasizes production techniques, which include correspondence, business forms, manuscripts, tabulations and secretarial projects. Emphasizes composition skills and the application of communications skills. Includes transcription from machine dictation and an introduction to products, services and terminology encountered in business organizations.

AOT 220  Document Management
3 Credits
Focuses on management and control of documents from creation to disposition, using manual, automated and electronic media. Discusses records management personnel, equipment, and procedures.

AOT 221  Office Management and Procedures
3 Credits
Provides a culminating study of the management of business office systems and procedures. Covers problem-solving techniques, selection of office structures, personal and organizational dynamics, cooperative and teamwork activities, communication abilities and job search skills.

AOT 224  Advanced Desktop Publishing
3 Credits
Provides hands-on experience and familiarizes students with specific advanced design and layout techniques and practical applications of desktop publishing.
AOT 281-293 Special Topics in Administrative Office
1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ART 111 Drawing for Visualization
3 Credits
Introduces students to the tools and methods of drawing. Presents drawing as a catalyst to seeing a way of recording ideas. Gives students the necessary drawing preparation for the study of graphic design.

ART 114 Graphic Design
3 Credits
Analyzes and reviews basic theories of graphic layout and design and their underlying principles and processes. Includes alphabet design and design language, imposition, design steps, rough, thumbnail, comprehensive and final layout and preparation of dummy.

ART 217 Advanced Graphic Design
3 Credits
Provides experience with advanced design projects which communicate a common theme through several different media. Provides opportunity for students to work in a team environment.

ART 218 Digital Productions
3 Credits
This course addresses the issues of preparing camera-ready art electronically. Topics covered are preparing computer files for service bureau output, scanning and printing resolution, color matching and color models, trapping and computer system operations and troubleshooting.

AST 102 Two-/Four-Wheel Alignment
3 Credits
Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AST 102 Ford STST Steering
3 Credits
Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AST 102 GM STG Steering and Alignment
3 Credits
Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AST 102 T-Ten Alignment
3 Credits
Covers the principles of two- and four-wheel alignment and wheel balance. Emphasizes practical work experience in the lab covering all the alignment angles.

AST 104 Start and Charge Systems
3 Credits
Studies construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

AST 104 Ford Start and Charge Systems
3 Credits
Studies construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

AST 104 GM Start and Charge Systems
3 Credits
Studies construction, function and principles of operation of starting motors, charging systems and their control systems with emphasis on diagnosis and bench repair.

AST 104 T-Ten Start and Charge Systems
3 Credits
An intensive study of the Toyota construction, function, and principle of operation of starting motors, charging systems and their control systems, with emphasis on diagnosis and repair. The study will include basic principles and rules that govern the operation of electrical circuits, systems, components and equipment that relate to the subject.

AST 105 Ford Fuel Systems
3 Credits
Studies automotive fuel systems: single, double, and four barrel carburetors, fuel injection systems, and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

AST 105 GM Fuel Systems
3 Credits
Studies automotive fuel systems: single, double, and four barrel carburetors, fuel injection systems and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

AST 105 Toyota Fuel Systems
3 Credits
Studies automotive fuel systems: single, double, and four barrel carburetors, fuel injection systems and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

AST 105 Fuel Systems
3 Credits
Studies automotive fuel systems: single, double and four barrel carburetors, fuel injection systems and emission controls as they apply to the fuel system. Focuses on shop procedures for troubleshooting, servicing, replacing or overhauling fuel system and emission control components.

AST 201 Ford STST Climate Control
3 Credits
Provides an in-depth study of automotive air conditioning and heating. Emphasizes the operation and theory of air conditioning and its components. Includes Electronic temperature control systems, related computers as well as operation of R-134a systems and reclaim/recovery equipment.
AST 201 GM STG Climate Control
3 Credits
Provides in-depth study of automotive air conditioning and heating. Emphasizes the operation and theory of air conditioning and its components. Includes Electronic temperature control systems, related computers as well as operation of R-134a systems and reclaim/recovery equipment.

AST 201 Toyota Climate Control
3 Credits
Provides an in-depth study of automotive air conditioning and heating. Emphasizes the operation and theory of air conditioning and its components. Includes a study of vacuum and electrical control circuits.

AST 203 Ford STST Engine Repair
3 Credits
Covers precision machines, tools and equipment needed for rebuilding today+s modern engine. Includes repair, proper assembly and installation techniques applicable to the modern engine.

AST 203 GM Engine Rebuild
3 Credits
Covers precision machines, tools and equipment needed for rebuilding today+s modern engine. Includes repair, proper assembly and installation techniques applicable to the modern engine.

AST 204 Ford Automatic Transmission/Transaxle
3 Credits
Deals with construction, and functions and principles of operation. Emphasizes practical work experience in the lab where students will overhaul automatic transmissions and transaxle assemblies.

AST 204 GM Automatic Transmission/Transaxle
3 Credits
Deals with construction, and functions and principles of operation. Emphasizes practical work experience in the lab where students will overhaul automatic transmissions and transaxle assemblies.

AST 205 Ford Manual Transmission/Transaxle
3 Credits
Presents theory and overhaul procedures related to the manual transmission/transaxle, including clutches and transfer cases and diagnosis and overhaul of the manual power train.

AST 205 Toyota Manual Transmission/Transaxle
3 Credits
Presents theory and overhaul procedures related to the manual Transmission/ transaxle, including clutches and transfer cases and diagnosis and overhaul of the manual power train.

AST 205 GM Manual Transmission/Transaxle
3 Credits
Presents theory and overhaul procedures related to the manual transmission/transport, including clutches and transfer cases and diagnosis and overhaul of the manual power train.

AST 206 Heating and Air Conditioning Service and Repair
3 Credits
Covers diagnosis, service and repair procedures of the heating/air conditioning system. Includes replacement and overhaul procedures for components related to heating/air conditioning systems.

AST 207 Ford STST Advanced Engine Performance
3 Credits
An advanced course in the theory, diagnosis, and repair of Ford computer controlled ignitions and fuel systems, and emission controls on late model vehicles, using state-of-the-art diagnostic equipment. Emphasis is on recommended manufacturer methods for servicing the computer controlled ignition, fuel, and emission controls.

AST 207 GM STG Drivability
3 Credits
An advanced course in the theory, diagnosis, and repair of GM computer controlled ignitions and fuel systems, and emission controls on late model vehicles, using state-of-the-art diagnostic equipment. Emphasis is on recommended manufacturer methods for servicing the computer controlled ignition, fuel, and emission controls.

AST 207 Toyota Engine Performance
3 Credits
An advanced course in the theory, diagnosis, and repair of Toyota computer controlled ignitions and fuel systems, and emission controls on late model vehicles, using state-of-the-art diagnostic equipment. Emphasis is on recommended manufacturer methods for servicing the computer controlled ignition, fuel, and emission controls.

AST 209 T-Ten Braking Systems
3 Credits
Covers theory, service and repair of automotive braking systems and their components. Emphasizes hydraulic theory and the repair and service of booster units, master cylinder, wheel cylinder, caliper rebuilds and drum and rotor service.

AST 209 Ford Automotive Braking Systems
3 Credits
Covers theory, service and repair of automotive braking systems and their components. Emphasizes hydraulic theory and the repair and service of booster units, master cylinder, wheel cylinder, caliper rebuilds and drum and rotor service. Course includes theory, operation and diagnosis of TEVES and MARK IV Anti-Lock brake systems including operation and use of diagnostic tools and related computer systems.

AST 209 GM STG Braking Systems
3 Credits
Covers theory, service and repair of automotive braking systems and their components. Emphasizes hydraulic theory and the repair and service of booster units, master cylinder, wheel cylinder, caliper rebuilds and drum and rotor service. Course includes theory, operation and diagnosis of RWAL and 4WAL Anti-Lock brake systems including operation and use of diagnostic tools and related computer systems.

AST 220 Ford Transaxle and Driveline Service
3 Credits
This course is a study of differential and driveline theory and overhaul. The study includes overhaul and service procedures applicable to gear sets, bearings and seals. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles are also included.
AST 220  GM STG Transaxle and Driveline Service
3 Credits
A study of differential and driveline theory and overhaul.
Includes overhaul and service procedures applicable to gear sets, bearings and seals. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles is included.

AST 220  Toyota Transmission/Transaxle Service
3 Credits
A study of theory and overhaul procedures of Toyota manual and electronic controlled transfer case assemblies, differential and driveline. Includes overhaul and service procedures to gear sets, bearings, seal and electrical related components. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles is included.

AST 220  Transaxle and Driveline Service
3 Credits
A study of differential and driveline theory and overhaul.
Includes overhaul and service procedures applicable to gear sets, bearings, and seals. Theory and overhaul procedures related to the driveshaft and axle assemblies for front and rear wheel drive vehicles is included.

AST 288.02  FORD STST Electronic and Accessory Systems
3 Credits
This course is an advanced study of on-board vehicle electronic systems, computers and diagnostic equipment. Serial communications, scanners and oscilloscopes are integrated with concentration on schematic reading and problem solving. Course includes operation and diagnosis of various vehicle accessory systems.

AST 288.01  GM STG Electronic and Accessory Systems
3 Credits
This course is an advanced study of on-board vehicle electronic systems, computers and diagnostic equipment. Serial communications, scanners and oscilloscopes are integrated with concentration on schematic reading and problem solving. Course includes operation and diagnosis of various vehicle accessory systems.

AST 288.03  Toyota Electronic and Accessory Systems
3 Credits
This course is an advanced study of on-board vehicle electronic systems, computers and diagnostic equipment. Serial communications, scanners and oscilloscopes are integrated with concentration on schematic reading and problem solving. Course includes operation and diagnosis of various vehicle accessory systems.

AST 288.04  Electronic and Accessory Systems
3 Credits
This course is an advanced study of on-board vehicle electronic systems, computers and diagnostic equipment. Serial communications, scanners and oscilloscopes are integrated with concentration on schematic reading and problem solving. Course includes operation and diagnosis of various vehicle accessory systems.

BKR 102  Plasticized and Sweet Doughs
3 Credits
Prepares students to produce a variety of pastries. Emphasizes proper proofing, baking and finishing. Focuses on sanitation, hygienic work habits and their conformance with health regulations.

BKR 103  Internship
3 Credits
Requires students to produce yeast raised and plasticized/sweet dough products for limited retail sale for a 12-week period. Studies merchandising and marketing, planning, production, controlling scrap, cash recaps and all pertinent phases of retail bake shop operation.

BKR 201  Cakes, Icings, and Fillings
3 Credits
Requires students to produce and finish a variety of cakes. Emphasizes application techniques, color coordination and the flavor and texture of fillings. Practices the techniques of basic cake decorating. Emphasizes sanitation, hygienic work habits and their conformance with health regulations.

BKR 202  Classical Cake Decorating
3 Credits
Presents the six different classical styles of cake decorating, the production of gum paste objects which accompany the styles, the use of royal icings and investigates the similarities and differences between the six styles. Students will be required to produce examples of each style and technique, to include two practical examinations.

BKR 204  Externship
3 Credits
Requires practical work experience in chosen area of specialization. Students work in an approved site for a minimum of 144 hours, complete and submit a detailed log book, and have at least two site evaluations by immediate supervisor, one evaluation by faculty facilitator and a final group conference.

BUS 101  Introduction to Business
3 Credits
Examines the U.S. business system in relation to the nation's economy. Studies business ownership, organization principles and problems, management, control facilities, administration and development practices of American business enterprises.

BUS 102  Business Law
3 Credits
Describes the judicial system and the nature and sources of law affecting business. Studies contracts, sales and negotiable instruments with emphasis on Uniform Commercial Code applications. Includes appropriate remedies for breach of contract and tort liabilities. Examines business structures and agency.

BUS 103  Office Administration
3 Credits
Covers broad areas of administrative office services and management, including office organization, site location, layout and environment, records management, systems controls, office communication services and devices.

BUS 105  Principles of Management
3 Credits
Describes the functions of managers, including the management of activities and personnel. Focuses on application of guidance principles in management.
**BUS 202**  Human Resource Management  
3 Credits  
Focuses on the activities of human resource management, with emphasis on employer-employee relations, job analysis and evaluation, salary administration, work measurement and standards, performance appraisal and legal compliance.

**BUS 203**  Entrepreneurship  
3 Credits  
Explores business operations for the self-employed or managers employed in a small business enterprise.

**BUS 204**  Case Problems in Management  
3 Credits  
Applies business concepts and principles to specific case studies or problems.

**BUS 208**  Organizational Behavior  
3 Credits  
Studies human behavior in organizations at the individual and group level, including the effect of organizational structure on behavior. Focuses on using organizational behavior concepts for developing and improving interpersonal skills.

**BUS 210**  Managerial Finance  
3 Credits  
Improves decision making skills related to the financial resources of a firm. Includes techniques of financial analysis, time value of money, capital budgeting and risk.

**BUS 280**  Co-op/Internship  
1-6 Credits  
Gives students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

**CHD 121**  Introduction to Early Childhood Profession  
3 Credits  
Introduces the philosophy of early childhood education. Includes theories of discipline, parent involvement, self-concept and an overview of various early childhood settings. Includes lectures, field trips and observations.

**CHD 122**  Child Growth and Development  
3 Credits  
Studies the physical, social, emotional and cognitive development of children from conception to age eight, as well as their quality care and education. Includes lectures and observations.

**CHD 123**  Health, Safety, and Nutrition  
3 Credits  
Analyzes basic safety, health, and nutrition needs. Emphasizes applications related to early childhood programs.

**CHD 124**  Developmental and Cultural Awareness  
3 Credits  
Provides a basic understanding of the anti-bias/multi-cultural emphasis in the field of early childhood. Analyzes developmentally appropriate practices, theory and implementation for various early childhood settings. Includes lectures, field trips, review of current literature and observations.

**CHD 125**  Curriculum in the Creative Arts  
3 Credits  
Examines materials, methods and teaching of creative arts to young children. Offers appropriate music, movement, art and drama experiences for use in early childhood settings. Reviews theories of development of the young child.

**CHD 128**  Practicum I  
2 Credits  
Focuses on observation skills and an introduction to site practices.

**CHD 129**  Practicum II  
2 Credits  
Provides opportunity for practical experience through observation and supervised participation in child care settings. Requires successful completion of the practicum to advance to Practicum III.

**CHD 131**  Seminar in Guidance Techniques  
2 Credits  
Surveys positive guidance techniques and skills that are effective with young children. Provides student with the opportunity to observe children and attempt to understand their needs.

**CHD 206**  Early Child Administration  
3 Credits  
Introduces principles of managing a child care program. Emphasizes the manager's role including personnel and program administration and fiscal management. Explores client-community relations.

**CHD 209**  Families in Transition  
3 Credits  
Examines the stages of the family life cycle and interpersonal relationships among family members.

**CHD 211**  School-Age Programming  
3 Credits  

**CHD 212**  Adolescent Child Growth and Development  
3 Credits  
Studies in a lecture/laboratory setting the physical, social, emotional and cognitive development of children 8-15 years old.

**CHD 213**  Infant/Toddler Care Programming  
3 Credits  
Studies the physical, social, emotional and cognitive development of children 0-36 months old in a lecture/laboratory setting.

**CHD 216**  The Exceptional Child  
3 Credits  
Provides an introduction to caring for the exceptional child. Includes theories and practices for producing optimal developmental growth. Develops teaching techniques. Explores public policy, mainstreaming, early intervention and IEPs. Explores the types of exceptional children and how to help them.

**CHD 217**  Skills for Parenting  
3 Credits  
Focuses on skill development to increase parental effectiveness in understanding young children, building their self-esteem, communicating with them, setting appropriate boundaries and nurturing children's emotional and social development.
CHD 218  Introduction to In-Home Care
3 Credits
Reviews child care offered in a home-like setting. Includes providing safe, healthy learning environments in the home setting, parent-provider relationships and recommendations for developing a professional support system.

CHD 221  Emerging Literacy in Young Children
3 Credits
Provides understanding of the development and acquisition of language. Explores and evaluates literature for young children. Introduces audio-visual material, methods, techniques and various types of equipment which are utilized in early childhood programs.

CHD 223  Cognitive Curriculum
3 Credits
Reviews cognitive theories to develop appropriate problem solving, math, science and social studies skills in early childhood settings. Reviews multi-cultural education.

CHD 230  Child Development Practicum III
4 Credits
Provides opportunity for practical experience through observation and supervised participation in child care settings.

CHD 231  Seminar II - Issues in Early Childhood Education
2 Credits
Companion course to CHD 230. Focuses on the integration of knowledge and practices in the field of early childhood and explores issues in early childhood.

CHD 240  Child Development Associate Preparation
3 Credits
Meets requirements of the Council for Early Childhood Professional Recognition for academic preparation for the Child Development Associate credential. Provides students with the theoretical knowledge to support competent performance in a child care setting. Provides review of CDA competencies.

CHD 242  Curriculum Planning for Early Childhood Administrators
3 Credits
Presents an overview of cognitive and creative curriculum from a developmentally appropriate prospective. Emphasizes planning and evaluating curriculum to meet comprehensive needs of the young child.

CHD 281-293  Special Topics in Child Development
1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CIS 101  Introduction to Microcomputers
3 Credits
Introduces the physical components and operations of microcomputers. Focuses on computer literacy and provides hands-on training in three areas of microcomputer application software: word processing, electronic spreadsheets and database management.

CIS 102  Data Processing Fundamentals
3 Credits
Introduces data processing and programming with emphasis on hands-on computer experience. Examines the role of data processing in an organization, including data processing applications, computer hardware and software, internal data representation, stored program concepts, systems and programming design, flowcharting and data communications. Reviews the history of computers, related computer careers, the social impact of computers and computer security.

CIS 104  Introduction to COBOL Programming
3 Credits
Provides an introduction to COBOL (Common Business Oriented Language) with major emphasis on developing structured programming skills. Develops proficiency in applying the programming development cycle to elementary business problems.

CIS 105  Operating Systems
3 Credits
Studies computer operating systems, purposes, structure and various functions. Provides general understanding of how comprehensive sets of language translators and service programs, operating under supervisory coordination of an integrated control program, form the total operating systems of a computer.

CIS 106  Microcomputer Operating System
3 Credits
Introduces the organization, structure and functions of an operating system for a microcomputer. Presents the student with operating system concepts such as commands, error messages, interrupts, function calls, device drivers, structure, files and organization. Incorporates concepts into practical applications.

CIS 107  Microcomputer Programming
3 Credits
Introduces a structured microcomputer language. Concepts in input/output commands, arithmetic expressions, conditional control, iteration techniques and subroutines will be stressed. Concepts will be incorporated into the application of solving business problems.

CIS 109  UNIX Operating System
3 Credits
Studies the UNIX V Operating System and its use as a time-sharing operating system. Includes basic UNIX commands, use of the visual editor, the UNIX directory structure and file management with SHELL commands. Offers opportunities to apply skills and knowledge in a laboratory environment.

CIS 110  Basic Programming Language
3 Credits
Introduces concepts of program design and programming using the BASIC programming language, a popular language for use with microcomputers. Includes overview of basic arithmetic operations, accumulating and printing totals, comparing, array processing and interactive programming. Offers students an opportunity to apply skills in a laboratory environment.
CIS 113 Logic, Design and Programming
3 Credits
Introduces the structured techniques necessary for efficient solution of business-related computer programming logic and coding solutions into a high-level programming using a microcomputer. Reviews algorithm development, flowcharting, input/output techniques, looping, modules, selection structures, and control breaks. Offers students an opportunity to apply programming skills in a laboratory environment using the QBASIC language, a popular language for use with microcomputers.

CIS 115 Electronic Spreadsheets in Business
3 Credits
Provides conceptual and hands-on instruction in the use of spreadsheet software including worksheet, graphics and database operations with applications to the solution of business problems.

CIS 201 Database Design & Management
3 Credits
Introduces program applications in a database environment and includes discussion of data structures; indexed and direct file organizations; data models, including hierarchical, network, and relational; storage devices, data administration and analysis; design and implementation. Allows students to use database software in creating, modifying, retrieving and reporting from databases. Develops business application using a database language.

CIS 202 Data Communications
3 Credits
Introduces concepts of data communications for computer programming students to build a foundation of knowledge upon which to add new technologies.

CIS 203 Systems Analysis and Design
3 Credits
Provides instruction for creating or modifying a system by gathering details, analyzing data, designing systems to provide solutions and implementing and maintaining the systems.

CIS 204 Advanced COBOL Programming
3 Credits
Continues topics introduced in Introduction to COBOL with more logically complex business problems. Develops a higher level of COBOL proficiency, as well as greater familiarity with debugging techniques. Uses the structured approach through class instruction and laboratory experience.

CIS 205 Database Design
3 Credits
Introduces program applications in a database environment with emphasis on loading, modifying and querying the database by means of a host language (COBOL). Discusses data structures, indexed and direct file organizations, models of data, including hierarchical, network and relational, storage devices, data administration and analysis, design and implementation.

CIS 206 Systems Development with High-Level Tools
3 Credits
Analyzes established and evolving methodologies for the development of business-oriented computer information systems. Develops competencies in techniques that apply modern software tools to generate applications directly, without requiring detailed and highly technical program writing efforts.

CIS 207 Microcomputer Database Management Systems
3 Credits
Presents an overview of relational, hierarchical and network database models with emphasis on microcomputer relational database management systems (DBMS). Provides practical experience in using database software to create, modify, retrieve and report. Develops business applications using the database language.

CIS 208 Electronic Spreadsheets
3 Credits
Presents an in-depth study of an electronic spreadsheet. Focuses on business applications using menu commands, formulas, functions, macro commands, graphs, printing, database and file operations.

CIS 209 Computer Business Applications
3 Credits
Requires students to apply business, microcomputer and communication skills within business applications. Emphasizes application of several forms of computerized information processing including data processing, word processing, spreadsheets, graphics and communications. Analyzes the effects of automation on the office worker, management and the work environment and requires written and oral presentations.

CIS 210 COBOL III
3 Credits
Emphasizes file handling techniques on tape and direct access devices and the use of libraries via the COBOL CALL and COPY verbs. Introduces variant forms of the structured approach and unstructured concepts such as the GO TO verb. Helps students develop good programming practices and an entry-level COBOL competency.

CIS 211 RPG Programming Fundamentals
3 Credits
Provides a general introduction to the RPG programming language with emphasis on hands-on programming experience. Presents the most important features of the RPG language from input/output processing to applications requiring handling. Introduces language concepts in class lecture. Includes programming lab assignments.

CIS 212 “C” Programming
3 Credits
Provides a basic understanding of the fundamental concepts involved when using a low development language. Emphasizes one logical program design using a modular approach involving task-oriented program functions. Discusses the role of data types, storage classes and addressable memory locations.

CIS 213 Assembler Language Program
3 Credits
Gives students a basic understanding of the assembler process using IBM mainframe computers. Stresses the importance of byte-wise manipulation of data fields when using low-level languages. Emphasizes the actual workings of a computer during the execution of a computer program. Discusses the role of data types, EBCIDIC format of data storage and addressable memory locations.
CIS 214  Pascal Programming  3 Credits  Provides a basic understanding of the structured programming process necessary for successful Pascal programming. Emphasizes top down program design and modularity, using Pascal procedures, functions and independent subprograms. Discusses simple and advanced data types and program control aids, algorithm development and program debugging. Provides students with a fundamental understanding of good programming technique and a basic knowledge of Pascal syntax and structure.

CIS 215  Field Study  4 Credits  Provides opportunity for a field project or research case study within the computer technology field. Includes collection and analysis of data and/or actual work experience in business or industry.

CIS 216  Advanced RPG Programming  3 Credits  Offers advanced study in the use of the RPG compiler language in solving business problems. Focuses on file processing methods and a working knowledge of advanced features and techniques through laboratory experience.

CIS 220  Shell Commands Language  3 Credits  Teaches students how to write, test and debug shell procedures on a computer utilizing a UNIX operating system. Presents the shell and how it works, shell processes, variables, keyword and positional parameters, control constructs, special substitutions, pipelines, debugging aids, error/interrupt processing and shell command line. Offers students the opportunity to apply skills in a laboratory environment.

CIS 211  Advanced C+ Programming  3 Credits  Continues those topics introduced in C+ Language Programming with emphasis on array processing, file processing and advanced debugging techniques. Provides the opportunity to apply skills in a laboratory environment.

CIS 222  Office Automation  3 Credits  Presents a perspective on the needs, potentials and urgencies of systems to support modern office functions. Concentrates on structured analysis and design of hardware/software systems for creating, maintaining, printing and communicating data files utilizing text processing systems. Covers methodologies for creating procedures to produce letters and reports from data files. Incorporates concepts and techniques into practical applications.

CIS 223  Integrated Business Software  3 Credits  Presents knowledge of integrated microcomputer software concepts. Students design a complete business system utilizing all parts of an integrated microcomputer software package which can share the same data and manipulate it. Includes use of word processing, electronic spreadsheets, graphics, databases and command language.

CIS 224  Hardware and Software Troubleshooting  3 Credits  Presents an in-depth analysis of the components of a computer system and their relationship to each other. Includes concepts of parallel and serial connectivity, installation and maintenance of software, peripheral devices, interface cards and device drivers. Analyzes realistic hardware/software problems encountered in the workplace and techniques and procedures used to implement solutions.

CIS 225  Advanced Database Management Systems  3 Credits  Continues CIS 207 Microcomputer Database Management Systems. Emphasizes the development of advanced applications in database management.

CIS 226  Advanced Electronic Spreadsheets  3 Credits  Continues CIS 208 Electronic Spreadsheets. Emphasizes the advanced application of electronic spreadsheets.

CIS 227  Topics in Information Management  3 Credits  Discusses topics of current interest in information management. Focuses on special interest projects. Utilizes field trips, guest speakers, audio-visual activities and seminars.

CIS 228  Cooperative Education  1-9 Credits  Provides students with the opportunity to apply concepts learned in the classroom to actual work situations. Requires program advisor approval.

CIS 229  Seminar I  1 Credit  Discusses topics of current interest in computerized information management with an emphasis on the application of information management skills during lab time. Various seminar topics may be identified and offered each term under this course number.

CIS 230  Seminar II  2 Credits  Discusses topics of current interest in computerized information management with emphasis on application of information management skills during lab time. Identifies and offers various seminar topics each term under this course number.

CIS 232  Visual Basic Programming  3 Credits  Provides a basic understanding of fundamental concepts involved when using a member of a Windows programming development language. Emphasizes logical program design using a modular approach involving task-oriented program functions. Allows the design of a Windows user interface constructed in an erector-set-like fashion. Builds an application by selecting forms and controls, assigning properties and writing code.

CIS 233  Graphic User Interfaces: Windows  3 Credits  Provides a foundation of fundamental concepts in the use of Windows-type software. Explores the Windows operating system, accessories and various applications. Develops a proficiency with Windows operations including customizing the environment, integrating applications and managing files.
CIS 234  XBase Programming Language
3 Credits
Provides a basic understanding of the fundamental concepts involved when using a high-level development database language. Emphasizes logical program design using a modular approach. Provides a sound foundation of fundamental concepts, such as the XBase functions.

CIS 235  Local Area Networks
3 Credits
Studies local area networks, their topologies and functions. Provides a general understanding of the basic LAN protocols. Covers utilization of application software using a local area network to share resources among network members, transferring files between users, set-up and administration of a network, identification of hardware and software needs and LAN to mainframe connectivity.

CIS 240  Introduction to Computer Integrated Manufacturing
3 Credits
Includes the study of all major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Includes the planning of a project which will be formally documented and presented by the students and implemented in CIS 241.

CIS 241  Computer-Integrated Manufacturing Project
3 Credits
Covers the major components of computer-integrated manufacturing (business, engineering and shop floor) as an integrated whole. Covers advanced CIM applications and includes the implementation of a project in a realistic CIM environment.

CIS 280  Co-op/Internship
1-6 Credits
Provides students with the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

CIS 281-293  Special Topics in Computer Information Systems
1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

CTR 114  Institutional Catering
3 Credits
The fundamentals of catering: the business of supplying food, goods, and organized service for public and private functions. Includes staffing, equipment, transportation, contracting, special arrangements, beverage service, and menu planning. Also covers cold food preparation and presentation techniques.

CTR 214  Catering Administration
3 Credits
This course teaches the correct procedures in event bookings, contracts, recordkeeping and event follow-up. In addition, fringe services, human resource issues and cost control concepts.

CUL 105  Institutional Food Service
2 Credits
Introduces students to the variety of institutional food service facilities. Includes converting recipes for quantity food production, calculating per portion cost and determining profitable selling price.

CUL 110  Meat Cutting
2 Credits
Purchasing, receiving, aging and proper storage procedures will be identified. Emphasis will be placed on primal cuts and sub-primal cuts, federal inspection, grading, yields, and the classifications of meats, poultry, and game.

CUL 202  Specialized Cuisine
3 Credits
Introduces students to foods from various cultures. Provides a background in the history of foods from various countries and develops food preparation skills. Covers table service and table side food preparation.

CUL 204  Classical Pastries
3 Credits
Familiarizes students with Classic French, Italian and European desserts. Discusses names and terminology of desserts. Includes the preparation of goods such as puff pastry, specialty cookies, ganache, parlimosa creams and fillings and specialty sauces. Emphasizes size, consistency, presentation, eye appeal and taste of pastries.

CUL 205  Fish and Seafood
2 Credits
Familiarizes students with professional techniques in identifying, purchasing, handling, storing, marketing, and preparing fish and seafood.

CUL 206  Externship
3 Credits
Provides students with practical work experience in chosen areas of specialization.

CUL 211  Classical Cuisine
3 Credits
Presents advanced and sophisticated classical culinary methods following the principles and techniques of Escoffier. Studies cooking techniques, timing, presentation, history and terms pertaining to classical foods and menus, with emphasis on French cuisines. Provides practical experience in table service operation, kitchen coordination and timing.

CUL 212  Fish and Seafood
2 Credits
Discusses the importance of fish and seafood in today's market. Includes types and categories of American and imported fish and shell fish, and proper buying, storage, preparation and merchandising of fish and seafood. Provides experience in boning, cutting and cooking methods appropriate for seafood.

CUL 288  Special Topics in Culinary Arts Technology
1-5 Credits

DCT 104  Product Drafting
3 Credits
Introduces the set concept of working drawings both in detailing and assembly. Presents fastening devices, thread symbols and nomenclature, surface texture symbols, classes of fits, and the use of parts lists, titles and revision blocks. Introduces the basics of product design and the design process.
DCT 105  Facilities Design and Layout  
3 Credits  
Focuses on the architectural drawings of commercial or industrial buildings. Covers problems of space planning, design, materials, HVAC systems and construction methods. Develops working drawings and presentation drawings. Requires oral presentations and discussions. Requires students to complete research on a limited number of construction materials and methods.

DCT 109  Construction Materials and Specifications  
3 Credits  
Introduces various construction materials, composition and application. Studies specifications of materials, construction contracts and applications required in the building industry.

DCT 113  Intermediate CAD  
3 Credits  
Continues study of CAD fundamentals. Focuses on advanced CAD features and various methods of customizing CAD systems.

DCT 201  Schematic Drafting  
3 Credits  
Presents the systematic layout of various types of schematic drawing done by a draftsperson. Requires students to prepare finished drawings for manufacture or installation of plumbing, heating, electrical, electronic and fluid-power type drawing.

DCT 202  CAD Programming Language  
3 Credits  
Covers use of AutoLISP programming language to customize Autocad programs and and menus. Students will learn to execute macros and simple LISP programs.

DCT 204  Architectural CAD  
3 Credits  
Presents advanced computer-aided design topics, including architectural design. Includes all necessary drawings needed for the construction process.

DCT 206  Mechanical and Electrical Equipment  
3 Credits  
Focuses on mechanical and electrical requirements for a structure. Studies electrical load calculations, wire sizing and circuits. Calculates plumbing requirements, fixture units and pipe sizing. Includes heating systems, duct layout and sizing.

DCT 208  Structural Detailing  
3 Credits  
Focuses on detailing commercial structural members, their connections, materials and methods of construction. Concentrates on traditional materials, such as reinforced concrete, masonry, steel and timber.

DCT 210  Surveying I  
3 Credits  
Introduces surveying equipment, procedures for performing measurements, turning angles, determining grades and other field applications. Covers surveying techniques and computations using the level, chain and transit in calculating areas, lines and grades.

DCT 213  CAD Mapping  
3 Credits  
Covers the concepts of map making with computer-aided drafting and typical drafting media found in the industry. Studies civil engineering applications of mapping procedures including profiles, topography and site plans.

DCT 216  Jig and Fixture Design  
3 Credits  
Introduces the processes of drafting and design as applied to tooling. Emphasizes tooling, locators, supports, holding devices, clearances and design as it pertains to jig and fixtures.

DCT 217  Product Design  
3 Credits  
Provides the student an opportunity to apply all previously acquired knowledge in product drafting to the design of a new or existing consumer product. Considers the function, esthetics, cost economics and marketability of the product. Requires a research paper and product illustration.

DCT 228  Civil I  
3 Credits  
Explores the engineering field. Presents an overview of infrastructure design, including the study of roadways and drainage systems. Emphasizes site development and highway planning.

DCT 229  Civil II  
3 Credits  
Presents construction management techniques, including scheduling and contracts. Studies soil properties and paving methods. Examines practical construction considerations.

DCT 230  Fundamentals of Computer Animation  
3 Credits  
Covers the fundamentals involved in the creation of computer renderings and animation utilizing 3 dimensional software. 3D Studio™ will be studied and implemented to create quality images and animations from 3 dimensional geometry. Topics covered include an introduction to the 3D Studio™ interface and its 5 modules, color and motion theory, and animation concepts through and on exercises.

DSN 221  Statics  
3 Credits  
Studies applied mechanics dealing with bodies at rest. Covers units, vectors, forces, equilibrium, moments and couples, planar force systems, distributed forces, analysis of structures (trusses and frames) and friction.

DSN 222  Strength of Materials  
3 Credits  
Studies internal stresses and physical deformations caused by externally applied loads to structural members. Covers stress and strain, shear stress, properties of areas, shear force and bending moment, deformation of beams, columns and combined stresses. Teaches various materials physical and mechanical properties.

ELT 100  Circuits I  
4 Credits  
This course is the study of electrical principles and laws pertaining to DC circuits. The relationship of passive components when used in simple and complex circuits are analyzed. Ohm's Law, Kirchhoff's laws, ammeters, voltmeters, ohmmeters, capacitance, and power are discussed. Magnetism, magnetic induction, inductance and AC principles are introduced. Hands-on laboratory experience in understanding electrical principles is stressed. Soldering and fabrication techniques are discussed and practiced, culminating with a project fabricated and tested by the student. Pre-requisite MAT 111, pre or co-requisite MAT 131.
ELT 101 Circuits II
4 Credits
This course is the study of electrical principles and laws pertaining to alternating current and voltage. DC and AC network theorems, j operator, phasors, reactances, impedances, phase relationships, power, resonance, transformers, polyphase and filter circuits are studied. Pre-requisite ELT 100, pre or co-requisite MAT 132 is recommended, but not required.

ELT 103 Digital Principles
3 Credits
Introduces digital electronics, including logic gates and combinational logic circuits. Studies binary arithmetic, Boolean algebra, mapping techniques, digital encoders and decoders, multiplexers and demultiplexers and arithmetic circuits. Uses SSI and MSI digital integrated circuits. Pre-requisite BSA 032, pre or co-requisite BSA 025, MAT 111.

ELT 105 Solid State I
4 Credits
Studies characteristics and applications of semiconductor devices and circuits. Covers signal and rectifying diodes, bipolar transistors, rectification, single and multistage amplifiers, AC/DC load lines, biasing techniques, equivalent circuits and power amplifiers. Pre or co-requisite ELT 101.

ELT 106 Digital Applications
4 Credits
Offers advanced study of digital systems, including memory and D/A and A/D conversion. Covers construction of specified timing circuits, design driver/display systems, selected register design, counters and arithmetic circuits and validation of operation. Studies hardware and general microprocessor system organization. Pre or co-requisite ELT 101 and ELT 105; Pre-requisite ELT 103

ELT 201 Solid State II
4 Credits
Studies applications of special-purpose diodes, thyristors and unipolar transistors. Discusses frequency effects and response of amplifiers. Includes discrete SCR/Js, UFTs, FETS, oscillators, linear regulated power supplies, switching regulators and power amplifiers. Introduces op-amps. Pre-requisite ELT 105, co-requisite ELT 288.01.

ELT 202 Microprocessors
4 Credits
Introduces microprocessor system organization, operation, design, troubleshooting and programming. Investigates and analyzes a microprocessor instruction set for its operation. Includes programming and interfacing a microprocessor. Pre-requisites ELT 105 and TEC 104.

ELT 203 Introduction to Industrial Controls
3 Credits
An overview of electronics as applied in the industrial setting. Introduction to various applications of industrial systems and how electronics is applied to these systems. Introduces power electronics, ladder logic, digital control, DC power supplies, SCRIs and other thyristors. Variable speed control for DC and AC motors will be covered. standby power supplies will be introduced. Pre-requisite ELT 106 and 223, pre or co-requisite ELT 201 and 288.01

ELT 214 Industrial Instrumentation
3 Credits
This is a hands-on, intensive lecture/lab course which emphasizes precision measurement via temperature, pressure, strain, pH, force, flow and level gauges. Instruction will cover the related probes, sensors, transducers, computer interfaces, computer hardware and peripherals, and computer software necessary for the acquisition, summarization, analysis and presentation of data. Process control for temperature, pressure, flow and level will be introduced. Pre-requisite or co-requisite ELT 201 and ELT 288.01.

ELT 223 Electrical Machines
3 Credits
Provides an overview of electrical machines and how they relate to industrial electronics. Gives industrial electronics technicians insight into electrical power generation, polyphase system, transformers, all types of electrical motors, power factor and power factor correction, back-up power and electrical power monitoring. Pre-requisite ELT 101.

ELT 227 Peripherals
3 Credits
Studies peripherals and their interfacing with computers and microcomputers. Includes a study of data communications hardware and techniques. Studies the design of circuits to interface microprocessors with industrial equipment. Includes microcomputer systems interfacing with input and output transducers for control systems. Studies techniques for logical troubleshooting of microcomputer systems. Pre-requisite TEC 104, ELT 105 and 106, pre or co-requisite ELT 202.

ELT 228 Communications Electronics
3 Credits
Analyzes communication circuits with emphasis on AM, FM, SSB and stereo transmitter and receiver systems. Includes noise, modulation and demodulation principles, phase-locked loop, RF amplifiers, automatic gain control, detectors, limiters and discriminators. Offers hands-on lab exposure to analog circuits utilizing analysis and troubleshooting techniques. Pre-requisite ELT 105, pre or co-requisite ELT 201 and 288.01.

ELT 229 Telecommunications
3 Credits
Examines various methods in transmitting digital data from one location to another. Covers time and frequency division multiplexing. Includes pulse-code and delta modulation, telemetry, error detection and correction and simple networks. Covers techniques for logical troubleshooting of telephonic systems. Pre-requisite TEC 104, ELT 105 and 106, pre or co-requisite ELT 202.

ELT 230 Advanced Communications Electronics
3 Credits
Introduces antenna principles and wave propagation and an in-depth study of matching techniques for transmission lines. Measures radiation patterns with different antenna arrays. Includes the Smith Chart and a thorough study of television operation. Practices digital and analog troubleshooting and signal tracing techniques on a color TV set. Pre-requisite ELT 228.

ELT 231 Microwave Communications
3 Credits
This course will include an overview of microwave transmission lines, waveguide components and systems. To include satellite earth stations, microwave relay systems and radar. Optic fibers and lasers as they relate to microwave, will also be covered. Pre-requisite ELT 228.
ELT 280  Co-op/Internship  1-6 Credits
Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

ELT 281-293  Special Topics in Electronics Technology  1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area.

ELT 288.01  Special Topics in Solid State  1 Credit
Introduction to Operational Amplifiers (Op Amps), characteristics and operations. Covers inverting and noninverting amplifiers, differential amplifiers, waveform generation, linear regulators, switching regulators and voltage comparators. Pre-requisite ELT 105; co-requisite ELT 201

ENV 104  Plant Operations-Sanitary  3 Credits
Provides the basic principles of aerobic and anaerobic biological treatment processes, including activated sludge, trickling filters, lagoons, sludge handling and disinfection. Reviews state and federal regulations related to wastewater plants.

ENV 208  Plant Operations-Industrial  3 Credits
Covers wastewater treatment processes including coagulation, sedimentation, activated sludge, neutralization, equalization, cyanide and chromate removal. Presents instrumentation, maintenance and troubleshooting. Includes operations, laboratory testing and associated mathematics.

FST 104  Food Production, Methods, and Procedures  3 Credits
Provides study of and application of food production methods and procedures with an emphasis on soups, sauces and gravies.

FST 105  Quality Service Standards  3 Credits
Provides students with techniques of serving, bussing and cashiering in dining operations.

FST 106  Application of Food Service Production I  3 Credits
Provides the knowledge and applications of the principles of pantry production, baking, vegetable and fruit preparation, pastries and breakfast cookery.

FST 108  Application of Food Service Production II  3 Credits
Provides knowledge and application of production methods and procedures for meat, seafood, poultry, dairy products and hot desserts.

FST 109  Computer Food Service Spreadsheets  3 Credits
Introduces microcomputers and specific food service applications. Covers basic procedures for food service spreadsheet applications involving analysis and reporting using Lotus 1-2-3 or compatible software.

GRA 202  Science of Color  3 Credits
Presents physical properties of light, and color and psychological aspects of color perception and relationships through creative exercises. Examines color theories of Itten, Munsell, Goethe, Chevreul and Albers.

HEA 101  Heating Fundamentals  3 Credits
Introduces fundamentals applicable to the heating phase of air conditioning. Includes types of units, parts, basic controls, functions and applications. Emphasizes practices, tools and meter uses, temperature measurement, heat flow, and tubing installation and connecting practices.

HEA 103  Refrigeration I  3 Credits
Introduces compression systems used in mechanical refrigeration, including the refrigeration cycle. Introduces safety procedures and proper uses of tools used to install and service refrigeration equipment.

HEA 104  Heating Service  3 Credits
Covers procedures used to analyze mechanical and electrical problems encountered when servicing heating systems, including gas, oil, electric and hydronic heating equipment. Considers electrical schematic and diagrams, combustion testing, venting and combustion air requirements, installation and service procedures.

HEA 106  Refrigeration II  3 Credits
Continues Refrigeration I with further study of basic system components and an introduction to troubleshooting procedures. Includes clean-up procedures following compressor burn-out and analysis of how a single problem affects the rest of the system.

HEA 107  Duct Fabrication & Installation  3 Credits
Emphasizes reading blueprints common to the sheet metal trade, floor plans, elevations, section, detail and mechanical plans. Requires students to develop a layout of an air conditioning system, layout of duct work and fittings and fabrication of these parts, including proper use of hand-tools and shop equipment used to fabricate duct work and fittings.

HEA 201  Cooling Service  3 Credits
Covers procedures used to diagnose electrical control problems found in residential air conditioning and refrigeration systems, including 24-volt and line voltage controls such as defrost timers, defrost heaters, relays and cold controls with emphasis on schematic and pictorial diagrams.

HEA 202  Electrical Circuits & Controls  3 Credits
Studies various kinds of heating, air conditioning and refrigeration controls. Includes gas, oil, cooling and electric heat controls, thermostats and other kinds of variable controls such as humidists, aquastats and electronic thermostats and temperature controls. Covers operation of controls and how they are integrated into complex systems by using schematic and pictorial diagrams. Presents component troubleshooting and testing.
HEA 204 Commercial Refrigeration
3 Credits
Examines air conditioning and refrigeration systems for commercial use, including medium- and low-temperature applications. Includes refrigeration accessories, metering devices and advance control arrangements.

HEA 205 Heat Pump Systems
3 Credits
Provides an understanding of the different types of heat pumps available for use today. Familiarizes students with the refrigeration cycle as it applies to the heat pump systems. Provides students with the opportunity to draw, trace and follow an electrical schematic of a heat pump with refrigerant. Includes selecting the proper heat pump, recording heat loss and gain calculations for the space available. Provides instruction in mechanical components and in troubleshooting a non-functioning heat pump.

HEA 206 Advanced Cooling Service
3 Credits
Considers methods of troubleshooting electrical and mechanical components of commercial and industrial air conditioning including chillers used in high and low pressure systems.

HEA 212 Advanced HVAC Controls
3 Credits
Covers control systems beyond ordinary residential and single zone commercial applications. Includes solid state controls, zoning controls, modulating controls, low ambient controls, heat recovery and energy management controls, economizer controls and pneumatic controls.

HEA 213 Sales and Service Management
3 Credits
Encompasses the use of blueprints, specifications, A1A documents, application data sheets, bid forms and contracts in estimating materials and labor in the HVAC business. Includes advertising, direct labor, indirect labor, overhead, warranty overages, taxes, permits, subcontracts, margins, mark-ups and profit. Provides students with the opportunity to estimate service contracts and study service organization, service procedures, record keeping, parts inventory control and insurance liability.

HEA 220 Distribution Systems
3 Credits
Covers methods used in calculating building envelope heat loss and gain in sizing units for residential and light commercial application. Studies the relationship of air properties to temperature and the design of systems for residential and light commercial structures. Includes the sizing and configurations of air delivery duct systems.

HEA 221 Heat Pumps and Cooling Service
3 Credits
Covers procedures used to diagnose electrical control problems found in residential air-to-air, geothermal heat pump and cooling systems, including 24 volt and line voltage controls. Familiarizes students with the refrigeration cycle as it applies to the heat pump. Covers correct charging procedures and sizing of heat pumps. Includes trouble-shooting of heat pumps and cooling systems such as defrost timers, defrost heaters, relays and cold controls with emphasis on schematic and pictorial diagrams.

HHS 101 Medical Terminology
3 Credits
Addresses basic terminology required of the allied health professional. Presents Greek and Latin prefixes, as well as suffixes, word roots and combining forms. Emphasizes forming a solid foundation for a medical vocabulary including meaning, spelling and pronunciation. Includes medical abbreviations, signs and symbols.

HHS 102 Medical Law and Ethics
2 Credits
Presents ethics of medicine and medical practice, as well as legal requirements and implications for allied health professions.

HHS 103 Dosage Calculation
1 Credit
Introduces the mathematical concepts required of the allied health professional to accurately administer medications.

HHS 104 CPR and Basic Health Awareness
1 Credit
Provides students with information necessary to recognize the need for one and two person cardiopulmonary resuscitation (CPR) as it relates to adults, children and infants. Requires students to safely perform CPR.

HMS 101 Introduction to Human Services
3 Credits
Examines the helping process in terms of skills, helping stages and issues involved in a helping relationship. Introduces major theories of helping.

HMS 102 Helping Relationship Techniques
3 Credits
Examines the helping process in terms of skills, helping stages and issues involved in a helping relationship. Introduces major theories of helping.

HMS 103 Interviewing and Assessment
3 Credits
Develops skills in interviewing and provides a base for students to build personal styles. Introduces a variety of assessment approaches and treatment planning. Utilizes case studies and recording exercises.

HMS 104 Crisis Intervention
3 Credits
Provides beginning training for individuals presently working with people in crisis situations or planning to do so.

HMS 105 Criminal Justice Systems
3 Credits
Introduces the study of crime and criminals and how society is affected.

HMS 106 Physiology of Aging
3 Credits
Focuses on the physical changes and common pathologies associated with the aging process. Includes the psychological and social implications of changes for human behavior. Focuses on health promotion and disease prevention.
L.T.C. Practices which participation to social dependence. Provides HMS developmentals Studies various Examines provides to HMS therapeutic Explores HMS societal needs, and demographic exploration of the nature of the socialization process and socioeconomic, cultural and ethnic factors that nurture or inhibit the family's capacity to function.

HMS 111 L.T.C. Activity Director 3 Credits Explores the philosophy and investigates the development of therapeutic activity programs for residents living in nursing homes. Focuses on offering activities which meet an individual's physical, social and emotional needs.

HMS 112 Recreation for Special Populations 3 Credits Studies the nature and etiology of impairments including developmental disabilities, mental illness, physical disabilities and geriatrics and their potential impact upon an individual's ability to participate in recreational activities. Explores techniques needed to conduct a recreation program which allows successful participation by an individual with a disability.

HMS 113 Problems of Substance Abuse in Society 3 Credits Provides basic information about alcohol and drugs and the laws which pertain to their abuse. Explores current attitudes and practices which pertain to alcohol and drug use, misuses and dependence.

HMS 114 Social Services in Long-Term Care 3 Credits Provides practical and useful information about aging and institutionalization. Focuses on the role of social services within the long-term care facility.

HMS 120 Health and Aging 3 Credits Provides holistic overview of the physical, psychological and social needs of individuals who live in extended care facilities. Examines effective treatment modalities to meet the resident's various needs.

HMS 122 Introduction to Residential Treatment 3 Credits Introduces information, skills and attitudes necessary to become an effective worker in residential treatment. Explores basic developmental needs, planning and use of activities, and issues related to the team approach. Discusses and demonstrates observation and recording of behavior.

HMS 130 Social Aspects of Aging 3 Credits Covers major theories and patterns of aging in American society.

Covers social institutions and cultural factors that affect the aging process.

HMS 140 Loss and Grief 3 Credits Provides practical and useful information for anyone who has experienced a loss. Addresses the problems of loss and grief and how to develop coping skills.

HMS 150 Special Population Needs and Activities 3 Credits Recognizes and utilizes social activities and recreation as a viable form of therapeutic intervention based on the client's limitations or special needs.

HMS 201 Internship I 4 Credits Provides field work experience in an approved social, educational, law enforcement, corrections or other community service organization. Requires 12 to 14 hours of work experience each week.

HMS 202 Internship II 4 Credits Continues Internship I. Requires 12 to 14 hours of work experience each week.

HMS 203 Internship Seminar I 3 Credits Permits small group discussion and analysis of the human services practicum experience. Includes special learning objectives related to the kind of work students do after completing the program.

HMS 204 Internship Seminar II 3 Credits Continues Internship Seminar I with different learning objectives. Relates objectives to the work the student will do after completion of the program.

HMS 205 Behavioral/Reality Techniques 3 Credits Focuses on theories of behavioral and reality approaches. Develops understanding of terms and practical applications of the behavioral and reality approaches used in working with people.

HMS 206 Group Process and Skills 3 Credits Studies group dynamics, issues and behavior. Includes group functioning and leadership, guidelines on working effectively with a co-leader and practical ways of evaluating the group process.

HMS 207 Program Planning/Policy 3 Credits Deals with the components of administration of human service agencies. Addresses practitioner skills needed by administrators or supervisors. Discusses social policy issues and impact on human services.

HMS 208 Treatment Models of Substance Abuse 3 Credits Describes the various treatment models used with chemically dependent clients. Discusses intervention and treatment models for chemical dependency and their role in the recovery process.
HMS 209 Counseling Issues
3 Credits
Explores practice strategies for counselors of chemically dependent clients.

HMS 210 Co-dependency
3 Credits
Presents definitions of co-dependency and issues related to it. Teaches skills and techniques to confront co-dependent behavior.

HMS 215 Juvenile Delinquency
3 Credits
Provides an overview of the concepts, definitions and measurements of juvenile delinquency. Explores various theories which attempt to explain causes of delinquency. Looks at the role of environmental influences (peers, gangs, school, drugs, etc.) contributing to delinquency. Discusses history and philosophy of the juvenile justice system as well as ways to control and treat juvenile delinquents.

HMS 220 Legal Aspects
3 Credits
Provides an overview of the legal and ethical aspects in the field of human services with implications for the human services worker. Includes liability, confidentiality and privilege, records and rights of clients, due process and equal protection in terms of staff and client, discrimination and witnessing.

HMS 240 Rehabilitation Process: Probation and Parole
3 Credits
Provides an understanding of probation and parole as an integral part of the criminal justice system with special emphasis on current and future trends in this area. Explores the role of community corrections and its impact on the role of probation and parole in society in view of the increase in the number of offenders.

HMS 281-293 Special Topics in Human Services
1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

HMT 100 Occupational Safety and Health Administration (OSHA) Regulations
3 Credits
Provides a study of the U.S. Occupational Safety and Health Administration’s (OSHA) regulations which protect workers from exposure to occupational hazards. Concentrates on researching, interpreting, summarizing and applying the OSHA regulations for workers who handle hazardous materials.

HMT 104 Hazardous Materials Health Effects
3 Credits
Reviews research conducted to determine the systematic health effects of exposures to chemicals. Includes determination of risk factors, routes of entry of hazardous materials and their effects on target organs, acute and chronic effects and control measures.

HMT 120 Hazard Communication Standard
3 Credits
Provides instruction concerning the development and implementation of a hazard communication program for employees. Provides experience in conducting a chemical inventory, interpreting Material Safety Data Sheets (MSDs), developing a written hazard communication program that complies with 29CFR 1910.1200 and conducting an effective hazard communication training program.

HMT 200 Environmental Protection Agency (EPA) Regulations
3 Credits
Provides a detailed study of the U.S. Environmental Protection Agency (EPA) regulations pertaining to hazardous waste management, with an emphasis on the requirements of the Resource Conservation and Recovery Act (RCRA), the Comprehensive Environmental Response, Compensation, Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA).

HMT 201 Contingency Planning
3 Credits
Teaches students to develop an emergency response contingency plan for a facility or community. Includes analyzing the hazards, writing and implementing the contingency plans, training employees for an emergency and evaluating the effectiveness of the contingency plan.

HMT 203 Sampling Procedures
3 Credits
Introduces students to a variety of sampling procedures used in industrial settings and for emergency response. Includes sampling and monitoring devices, industrial hygiene monitoring, water and waste stream monitoring, outside air sampling, soil sampling and radiation. Emphasizes collecting and preserving representative samples, interpreting laboratory results and complying with relevant federal regulations.

HMT 205 Department of Transportation (DOT) Regulations
3 Credits
Provides a detailed study of the U.S. Department of Transportation (DOT) regulations. Introduces certain Nuclear Regulatory Commission and Environmental Protection Agency regulations pertinent to hazardous materials transportation. Includes problems and case studies in which students identify and interpret applicable DOT regulations and recommend compliance strategies. Provides practical understanding of DOT issues through interviews with local professionals in hazardous materials handling.

HMT 220 Hazardous Materials Recovery, Incineration and Disposal
3 Credits
Explains methods of recovery, incineration and/or disposal of hazardous waste. Includes contracting with qualified disposal organizations, obtaining permits and ensuring regulatory compliance of hazardous waste.

HOS 101 Sanitation and First Aid
3 Credits
Students develop an understanding of the basic principles of sanitation, safety and first aid (CPR) and are able to apply them in the hospitality operation. This course will also reinforce personal hygiene habits and food handling practices that protect the health of the consumer.

HOS 102 Basic Foods Theory and Skills
3 Credits
To develop skills in knife, tool and equipment handling and apply principles of food preparation to produce a variety of food products. To apply knowledge of laws and regulations relating to safety and sanitation in the kitchen.
HOS 103  Soups, Stocks, and Sauces  
3 Credits  
This course will enable the student to identify and prepare soups, stocks, sauces and thickening agents.

HOS 104  Nutrition  
3 Credits  
Introduces the characteristics, functions, and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will apply the principles of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation.

HOS 105  Introduction to Baking  
3 Credits  
Introduces the characteristics, functions, and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will apply the principles of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation.

HOS 106  Pantry and Breakfast  
3 Credits  
Covers the techniques and skills needed in breakfast cookery, as well as insight to the pantry department. Various methods of preparation of eggs, pancakes, waffles and cereals will be discussed. Students will receive instruction in salad preparation, salad dressings, hot and cold sandwich preparation, garnishes and appetizers.

HOS 107  Hospitality Computer Systems  
3 Credits  
Provides an overview of the information needs of lodging properties and food service establishments; addresses essential aspects of computer systems and computer-based property management systems for both front office and back functions. Focuses on computer-based restaurant management systems for both service-oriented and management-oriented functions.

HOS 108  Table Service  
3 Credits  
Provides students with practical knowledge and skills of restaurant operations. Knowledge and appreciation of the relationship between “front” and “back” of the house is emphasized through operation of an actual food service environment. Quality of service is emphasized through management of the guest experience. Additional course work in tableside cookery, the study of beverages and wines is also taught.

HOS 109  Hospitality Purchasing  
2 Credits  
Studies the overall concept of purchasing and receiving practices in quality hospitality operations, knowledge of quality standards and regulations governing food products to the purchasing function, and proper storage of non-food items.

HOS 114  Hospitality Organization & Administration  
3 Credits  
Focuses management’s functions and responsibilities in such areas as administration, organization, communications, accounting, marketing, and human relations.

HOS 201  Hospitality Organization and Human Resources Management  
3 Credits  
Focuses management’s functions and responsibilities in such areas as administration, organization, communications, accounting, marketing, and human relations.

HOS 202  Garde Manger  
3 Credits  
Introduces students to the preparation of cold food products and helps develop skills to prepare items appropriate for buffet presentations, including decorative pieces.

HOS 203  Menu, Design and Layout  
2 Credits  
Emphasizes sanitation, hygienic work habits and conformity with health regulations.

HOS 204  Food and Beverage Cost Control  
2 Credits  
Introduces the characteristics, functions, and food sources of the major nutrient groups and how to maximize nutrient retention in food preparation and storage. Students will apply the principles of nutrient needs throughout the life cycle and to apply those principles to menu planning and food preparation.

HOS 205  Food and Beverage Cost Controls  
2 Credits  
Covers the techniques and skills needed in breakfast cookery, as well as insight to the pantry department. Various methods of preparation of eggs, pancakes, waffles and cereals will be discussed. Students will receive instruction in salad preparation, salad dressings, hot and cold sandwich preparation, garnishes and appetizers.

HOS 206  Fundamentals of the Catering Business  
3 Credits  
Introduces the fundamentals of owning and operating a small catering business including personal, legal and operational requirements.

HOS 207  Classical Pastries and Chocolates  
3 Credits  
Covers the principles and procedures involved in an effective system of room, food, beverage, labor and sales income. Emphasizes the development and use of standards in the calculation of cost.

HOS 214  Hospitality Law and Security  
3 Credits  
Provides an overview of the information needs of lodging properties and food service establishments; addresses essential aspects of computer systems and computer-based property management systems for both front office and back functions. Focuses on computer-based restaurant management systems for both service-oriented and management-oriented functions.

HOS 216  Hospitality Marketing and Sales  
3 Credits  
Provides an awareness of the rights and responsibilities that the law grants to or imposes upon a hotel keeper. Illustrates the possible consequences of failure to satisfy legal obligations.
HRM 221 Catering
3 Credits
Provides instruction in the fundamentals of catering, including the business of supplying food, goods, and organized service for public and private functions. Includes staffing, equipment, transportation, contracting, special arrangements, beverage service and menu planning. Demonstrates techniques of setting up banquets and buffets. Requires students to plan, budget, cost, test recipes and formats, plan decor, service and entertainment for catered events.

HRM 280 Co-op/Internship
1-6 Credits
Requires students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

HRM 281-293 Special Topics in Hospitality Administration
1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

HRM 107 Organization and Human Resources Development
3 Credits
This course presents the student with opportunities to demonstrate problem solving abilities and techniques in common business and industry settings. Case histories and in-basket situations are used to train, demonstrate, and evaluate decisions common to management positions.

HRM 203 Practicum
3 Credits
Offers practical work experience in a commercial food service or hotel establishment in order to build specialized skills. Practicum will look at technical and management skills. An agreement must be completed by the student, the establishment and the practice coordinator prior to the start of the course. Students should have a site in mind prior to registering for this course (coordinator will assist).

HRM 204 Food and Beverage Management
3 Credits
Presents principles and practices of food and beverage production and service. Discusses management philosophies regarding sanitation, menu planning, cost and labor control, employee training, purchasing and merchandising of food and beverage.

HRM 205 Front Office
3 Credits
A systematic approach to front office procedures, detailing the flow of business through a hotel beginning with the reservation process and ending with billing and collection procedures within the context of the overall operation of a hotel. Examines front office management, the process of handling complaints, and concerns regarding hotel safety and security.

HRM 206 Supervisory Housekeeping
3 Credits
Introduces the fundamentals of housekeeping management. Emphasis is placed on employee training, record-keeping, health and safety cost control, and overall responsibilities.

HRM 211 Financial Management
3 Credits
Applies accounting principles to the hospitality industry.

includes business principles pertaining to food and lodging, methods of recordkeeping for creditors, owners, and government and payroll control. Emphasizes tax laws specific to the industry, expense control and techniques of profitable management.

IDS 102 Introduction to Print Reading
3 Credits
Provides an introduction to reading and interpreting machine shop symbols, welding blueprints and working drawings used in trades and crafts. Focuses on dimension, shape, fabrication and assembly. Applies basic mathematics to the solution of print and performance problems.

IDS 103 Motors and Motor Controls
3 Credits
Provides a complete understanding of all types of electric motors, extending from the small shaded pole fan motors to the large three-phase motors. Includes motor theory magnetism and how it affects motor rotation. Provides in-depth study of motor starting components and protective devices for motor circuits. Includes heat dissipation from a motor, motor slippage, how motors are wired to obtain different speeds, and capacitors and how they affect a motor circuit.

IDS 104 Fluid Power Basics
3 Credits
Introduces the student to fluid power principles and components. Teaches basic circuit design, symbols and schematic diagrams to build a foundation for career work in fluid power technology.

IDS 114 Introductory Welding
3 Credits
Provides basic skills and fundamental knowledge in oxyacetylene and shielded metal welding for maintenance welders, auto service and body technicians, and individuals in the mining industry. Emphasizes industry welding practices and detailed study of techniques used in welding positions. Covers brazing and flame cutting and electrode selection and uses. Emphasizes safe practices in welding, cutting and shielded metal arc.

IDS 281-293 Special Topics in Industrial Technology
1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

ILT 101 Industrial Laboratory Techniques
3 Credits
Deals with basic skills needed in the industrial laboratory such as safety, identification, care and operation of basic laboratory equipment including pH meters, spectrophotometers, glassware and definition and preparation of reagents. Includes laboratory exercises in the use of selected equipment.

ILT 288.01 Advanced Municipal Wastewater Treatment
3 Credits
The basics of municipal wastewater treatment are briefly reviewed and then study continues on the special processes of advanced wastewater treatment. Emphasis is placed on ammonia and phosphorus removal, process control, filtration, disinfection, and coagulation. This course is excellent preparation for any student desiring to take Indiana's wastewater treatment certification test at the 2, 3, or 4 level. The state usually offers the test in May and November of each year.
IMT 105 Heating and Air Conditioning Basics
3 Credits
Presents fundamentals of heating and compression systems used in mechanical refrigeration and air conditioning. Includes combustion process, heat flow, temperature measurement, gas laws, heating and refrigeration cycles and components used in systems. Introduces basic mechanical service procedures used in industry.

IMT 106 Millwright I
3 Credits
Introduces the proper use of hand and power tools and measuring instruments in carpentry, blacksmithing, rigging and equipment, machinist and general shop. Includes structural steel and fabricating terms.

IMT 107 Preventive Maintenance
3 Credits
Focuses on detecting and correcting potential trouble spots and scheduling routine inspections with check lists. Studies five essential forms of preventive maintenance: equipment record, checklist, inspection schedule, inspection report and equipment cost record.

IMT 108 Measurements and Calibration
3 Credits
An introduction to the field on industrial motor controls. Develops knowledge of the symbols and diagrams used in various methods of control. Emphasizes line diagrams, ladder logic, and development of troubleshooting skills.

IMT 122 Electrical Wiring Fundamentals
3 Credits
Covers National Electrical Code and its relationship to residential and commercial wiring. Includes mechanical installation of hardware, metering equipment, lights, switches and design. Discusses tool use and materials selection.

IMT 201 Fluid Power Systems
3 Credits
Introduces the student to more complex fluid power circuits. Requires students to design, analyze and troubleshoot complex circuits using schematic diagrams. Studies detailed construction of typical industrial fluid power components. Teaches students to disassemble and evaluate fluid power components in the lab.

IMT 203 Machine Maintenance/Installation
3 Credits
Examines procedures for the removal, repair and installation of machine components. Analyzes methods of installation, lubrication practices and maintenance procedures for industrial machinery. Presents techniques for calibration and repair of electro-mechanical devices and practice in computations pertaining to industrial machinery.

IMT 206 Programmable Controllers II
3 Credits
Provides an in-depth study of programmable controllers. Emphasizes program language installation, maintenance and applications.

IMT 207 Electrical Circuits
3 Credits
Provides fundamentals of single- and three-phase alternating current, including parallel circuits, resistance, inductance, capacitance, switching, fusing, current requirements, transformer applications and motors and motor controls. Covers the basics of mechanical and electrical installations, emphasizes tool use and material selection, and electrical troubleshooting diagnosis and repair.

IMT 210 Pumps
3 Credits
Covers the construction and operation of centrifugal, reciprocating and rotary pumps and compressors and their components. Includes procedures of troubleshooting, installation and maintenance.

LEG 101 Introduction to Paralegal Studies
3 Credits
Introduces the beginning student to the general concepts of the legal and paralegal fields. Topics include the American legal system, legal analysis and research, legal ethics and professional responsibility and a survey of the major procedural and substantive areas of the law such as trial process, appellate courts, crimes, torts, contracts, and property law.

LEG 102 Research and Writing
3 Credits
The study and use of legal research tools such as digests, loose leaf services, reporters, statutory compilations and form books. Legal writing format and methodology are presented through practical application in drafting memoranda and correspondence. Shepardizing and proper case citation skills are included.

LEG 103 Civil Procedures
3 Credits
A study of Indiana Trial Rules and miscellaneous local rules. Filing requirements, computation of time and form drafting are emphasized.

LEG 104 Torts
3 Credits
A survey of intentional torts, negligence and strict liability. Emphasizes the elements of tort causes of action and the rules of damages.

LEG 105 Business Associations
3 Credits
The study of various business structures and the rights, duties, liabilities and formalities attendant to such structures. A survey of partnership, agency and corporation law is included.

LEG 106 Claims Investigation
3 Credits
The study of witness interview techniques, preservation of evidence, organizational skills and alternative methods of gathering facts. Client intake procedure and communication skills are emphasized.

LEG 107 Contracts and Commercial Law
3 Credits
A survey of contract law and the Uniform Commercial Code. Special statutes regarding state unfair practices, consumer deception and consumer rights are also presented.

LEG 108 Property Law
3 Credits
A survey of the law of real estate and personal property. Provides practical exposure to title searches, loan documentation, zoning requirements, financing statements, leases and deeds.
LEG 109 Family Law
3 Credits
A survey of the law of marriage, dissolution of marriage, custody, child support and visitation, and adoption. Financial declaration forms, client intake skills, Child Support Guidelines and available social services are presented.

LEG 110 Wills, Trusts, and Probate
3 Credits
Survey of the law of estates, wills, probate and guardianship, as well as intestate succession. Preparation of probate and administration forms, asset inventories and valuation, certain tax forms and accounting are included.

LEG 111 Criminal Law and Procedures
3 Credits
Survey of Indiana criminal statutes and selected federal criminal laws. Investigative and administrative skills are emphasized.

LEG 112 Bankruptcy Law
3 Credits
Bankruptcy Law includes a survey of the Federal Bankruptcy Act. Emphasizes skills needed to accumulate person financial information, compile initial schedules, collect and organize data for first meeting of creditors, complete proofs of claim and pursue creditor's rights.

LEG 202 Litigation
3 Credits
Litigation includes the study of the Indiana Rules pertaining to actual trial. The discovery process and its tools are reviewed. Skills such as document organization and retrieval, witness statement and deposition summarizing, indexing and scheduling are presented. Trial notebook preparation is utilized for practical experience.

LEG 203 Law Office Management and Technology
3 Credits
Designed to acquaint the student with various law office management applications used in the practice of law, including word processing, spreadsheets, database management, timekeeping and billing, docket control, litigation support and a computer-assisted legal research service. Hands-on training is included using Westlaw on-line, computer-assisted legal research service.

LEG 204 Advanced Legal Writing
3 Credits
Develops and enhances legal writing abilities with a focus on the relationship of legal writing to the legal process and the basics of technical writing with emphasis on the theoretical and practical applications of legal communications.

LEG 280 Co-op/Internship
1-6 Credits
Allows students to work at a job site that is specifically related to their career objectives. Provides on-the-job experience while earning credit toward an associate degree.

LEG 281-293 Special Topics in Paralegal Studies
1-5 Credits
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

LEG 101 Introduction to Materials Management
3 Credits

LEG 102 Manufacturing
3 Credits
Introductory manufacturing course. Focuses on basic principles, practices and functions of manufacturing management. Includes applications in the service industries, such as utilities, hospitals and government.

LEG 103 Marketing
3 Credits
Introductory marketing course. Focus is on basic marketing strategy for targeting markets and developing a marketing mix of product, price, distribution and promotion.

LEG 201 Transportation Systems
3 Credits
Provides in-depth knowledge of transportation systems and their inter-relationships with our economic, social, political and environmental systems.

LEG 202 Physical Distribution
3 Credits
Focuses on the major concepts and rationale for utilizing warehouse inventories to lower costs of transportation, improve customer service, avoid stockouts, improve purchasing economics and seasonal variability.

LEG 203 Sales Service
3 Credits
Designed to develop the art of selling. Sales knowledge and sales skills are applied to choices of products. Selling principles and the order processing cycle are emphasized.

LEG 204 Case Studies
3 Credits
Uses the case study method to apply the knowledge, principles and skills acquired in student programs.

LEG 208 Distribution Center Management
3 Credits
Studies warehousing from a depositor and operator viewpoint. Includes warehousing functions, location and specific site criteria, labor productivity, cost controls, equipment and packaging and customer service.

LEG 209 Export/Import I
3 Credits
Studies the practical application of export and import techniques and concepts, government regulations, documentation, and financial and transportation considerations of the movement of commerce from and to the United States.

LEG 210 Export/Import II
3 Credits
Familiarizes students with import practices, governmental regulations and carrier rate-making practices. Requires students to complete practical exercises, solve importing problems and work with the tariff schedule of the United States.
LOG 211  Transportation Pricing  3 Credits  Provides students with skills and techniques related to transportation pricing. Includes introduction, training and practice in freight management, freight classification, tariff interpretation and selection, zip code pricing and contract and negotiations.

LOG 212  Freight Loss and Damage Claims  3 Credits  Covers appropriate methods for claims management, damage claims prevention, legal remedies for disputed claims and transportation regulations.

MEA 102  First Aid and CPR  2 Credits  Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid, including CPR.

MEA 113  Pharmacology  3 Credits  Discusses the most common medications in current use with emphasis on classifications, uses, routes of administration, dosages, interactions, incompatibilities and side effects. Emphasizes the 50 most commonly prescribed drugs listed in Pharmacy Times. Addresses special precautions, legal aspects, patient education and preparation and administration of medications.

MEA 114  Medical Assisting Laboratory Techniques  3 Credits  Prepares student to perform various basic laboratory procedures, including preparation of patients, collecting and preparing appropriate specimens and expected norms of laboratory test results. Includes current safety and quality control standards.

MEA 115  Medical Insurance  2 Credits  Provides an overview of medical insurance programs and skills developed in handling insurance forms, CPT and ICD-9-CM Coding and reports as applied to the medical office.

MEA 120  Medical Assisting Clinical Externship  3 Credits  Provides the opportunity to discuss and perform clinical procedures under supervision, with learning experiences obtained in selected physicians' offices, clinics or hospitals.

MEA 121  Medical Assisting Administrative Externship  3 Credits  Provides opportunities to observe, perform and discuss various administrative competencies under supervision, with learning experiences obtained in selected physicians' offices, clinics or hospitals.

MEA 130  Medical Office Administration  2 Credits  Provides an understanding of the administrative duties and responsibilities pertinent to medical offices. Develops communications skills specifically directed toward a medical office and the role of the professional medical assistant as a member of the health care team. Includes instruction in medical correspondence and records, case histories of patients, filing, telephone procedures, appointment scheduling, receptionist duties and processing mail. Includes development of desirable personality traits, inter-personal relationships and attitudes within the medical office.

MEA 131  Medical Financial Management  3 Credits  Provides instruction in medical office financial administration, bookkeeping and materials management.

MEA 132  Computer Concepts in Medical Office  2 Credits  Familiarizes students with computer applications in the health care setting. Provides students with basics of operations and applications of computer usages within the health care provider office. Includes simulated data entry for patient records, procedures and diagnostic codes, insurance processing and electronic transmission of claims and scheduling day-sheet transactions in accordance with the AAMA DACUM guidelines.

MEA 133  Medical Assisting Clinical Theory  3 Credits  Presents theory related to clinical aspects of the medical office. Includes theory related to vital signs, asepsis, sterilization, medication administration, EKG's, X-ray, nutrition, physical therapy, sterile technique phlebotomy and other skills needed to assist the physician in the clinical setting.

MEA 134  Medical Assisting - Clinical Skills Lab  2 Credits  Allows students to become familiar with clinical duties and gain the skills needed to perform them. Includes vital signs, asepsis, sterilization, medications, EKGs, X-ray, nutrition, physical therapy, phlebotomy, sterile technique and other technical skills needed to assist the physician.

MEA 135  Medical Typing and Transcription  3 Credits  Develops skills and knowledge of medical dictation, machine transcription, and use of word processors and typewriters. Includes typing and transcription of medical reports, terminology and correspondence.

MEA 151  Pharmacy Technician I  3 Credits  Introduces basic skills and information needed to qualify as a Pharmacy Technician.

MEA 152  Pharmacy Technician II  3 Credits  Theory is applied through performance of competency levels of the technical pharmacy task including: properly preparing, documenting and processing prescriptions according to pharmacy policy and regulations; preparing intravenous and special solutions; properly preparing and maintaining records appropriate to the pharmacy, including quality control records, controlled substances (narcotic drug distribution), prescription data and records; applying basic principles of microbiology using aseptic techniques and operating and maintaining the laminar hood. The student will employ proper communication skills (both written and verbal). Identification and adherence to check points will be emphasized. Current national and Indiana Law and administrative rules as they relate to the practice of the pharmacy technician will be presented. The importance of adherence to universal precautions will be discussed.
ME 153  Administrative Aspects of Pharmacy Technology  
2 Credits  
Addresses the administrative aspect of pharmacy technology, including professional development, professional communication, time management, record keeping, computer applications, third party payment processing, operation of business machines and utilization of reference material.

ME 154  Pharmacy Externship  
2 Credits  
Provides the opportunity to discuss and perform clinical procedures under supervision, with unpaid clinical experiences obtained in selected retail pharmacies and/or hospitals.

ME 203  Disease Conditions  
3 Credits  
Presents the basic concepts of diseases, their courses and functional disturbances as they relate to body systems. Includes the precipitating risk factors and appropriate methods of patient education regarding various disease processes.

ME 209  Electrocardiograph - Basic Technique  
1 Credit  
Presents the basic reasons for prescribing an electrocardiograph and the theory involved. The physiological principles involved are the basis for proper techniques that will be practiced by the students until they demonstrate competency with both the theory and required skills in doing a prescribed electrocardiograph.

ME 210  Introduction to EKG Interpretation  
2 Credits  
Includes anatomy and physiology of the cardiovascular system and recognition of basic arrhythmias. Measurement of the EKG complex will be taught with the emphasis placed upon determining heart rates and rhythms.

ME 211  Advanced Electrocardiograph Interpretation  
3 Credits  
Includes anatomy and physiology of the cardiovascular system, interpretation of rhythm strips and 12 lead EKG's and the cardiovascular drugs associated with arrhythmias.

ME 212  Phlebotomy  
3 Credits  
Presents the principles and practices of laboratory specimen collection and processing. Also covers medical terminology, infection control, patient identification, anatomy and physiology, anticoagulants, blood collection, specimen processing and interpersonal skills.

ME 213  Advanced Insurance Coding  
3 Credits  
Expands on basic insurance knowledge providing in-depth information on coding techniques necessary to bill insurance claims and provides experience in coding claim forms using the correct combination of codes to maximize reimbursement by linking of codes.

ME 214  Advanced First Aid and CPR (First Responder)  
3 Credits  
Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Handling of victims of hazardous materials accidents will be addressed. Covers CPR, including one and two rescuer. Teaches adult, infant, and child resuscitation.

ME 216  Nutrition  
2 Credits  
Presents the importance of a balanced diet; methods of evaluating a diet; the basic four food groups; the functions, requirements and food sources of fats, proteins, carbohydrates, vitamins, and minerals, and the deficiency diseases. Introduces meal planning, nutrition for various age groups, religious and nationality food habits, and diet therapy. Explains special diets for diabetes, diseases of the GI tract, urinary tract, blood, cardiovascular system, obesity, cancer, allergy and pregnancy.

ME 217  Gerontology  
3 Credits  
Presents a multidisciplinary study of the sociological, psychological and physiological aspects of aging. Included will be patient education and the impact that all facets of aging have on the total person.

ME 221  Seminar I  
1 Credit  
Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the Medical Assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

ME 222  Seminar II  
2 Credits  
Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the Medical Assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

ME 223  Seminar III  
3 Credits  
Discusses topics of current interest in the medical assisting profession. Attention is given to special interest projects for students in the Medical Assistant program. Field trips, guest speakers, audio-visual activities and seminars may be utilized.

ME 224  Hospital Coding  
3 Credits  
Designed to build on the comprehensive coding skills acquired through prerequisite course MEA 213. Introduces additional instruction in diagnostic related groups (DRGs) and medical record extraction. Provides discussion, observation and performance opportunities in related insurance coding competencies. Both classroom and clinical sites are utilized to provide realistic experiences under supervision. External sites include physicians' offices, clinics and hospitals.

ME 225  Insurance Coding Externship  
3 Credits  
Provides opportunities to observe, perform and discuss various insurance related competencies under supervision, with learning experience obtained in selected physicians' offices, clinics or hospitals.

ME 234  Phlebotomy Externship  
3 Credits  
Provides the opportunity to discuss and perform phlebotomy procedures under supervision with learning experiences obtained in selected laboratories, physicians' offices, clinics or hospitals.
MKT 299  CMA Comprehensive Review  
3 Credits  
Reviews the entire medical assisting program in preparation for the CMA registry examination. Administration, clinical and general information is covered. Testing procedures are addressed. Emphasis will be placed on job readiness and placement. The course will give continuing education units for graduate CMAs in order to fulfill their certification renewal requirements.

MKT 101  Principles of Marketing  
3 Credits  
Introduces the marketing role in society and how it affects the marketing strategy. Emphasizes the marketing mix, product planning and the effects of the demographic dimension on the consumer market.

MKT 102  Principles of Selling  
3 Credits  
Provides an overview of the selling process. Includes the psychology of selling and develops skills through a series of selling situations.

MKT 104  Advertising  
3 Credits  
Focuses on advertising as the key element in the promotion of goods and services in the marketplace. Includes advertising media and media selection, advertising copy strategy, advertising regulations and organization of advertising functions.

MKT 201  Introduction to Market Research  
3 Credits  
Presents basic research methods entailing procedures, questionnaire design, data analysis and effectively communicating research results.

MKT 202  Logistics/Purchasing Control  
3 Credits  
Introduces students to the framework of logistics, the logistics environment, customer services and materials management. Introduces material resources planning (MRP) and just-in-time (JIT) principles.

MKT 204  Marketing Management  
3 Credits  
Focuses on the analysis, implementation and control of marketing strategy. Emphasizes the major decisions management faces in its effort to harmonize the objectives and resources of the organization with the needs and opportunities of the marketplace.

MKT 205  Principles of Insurance  
3 Credits  
Introduces the risks faced by business firms, including property, liability and personal losses, and how they are handled. Presents insurance contracts and their uses. Includes an overview of life insurance, health and pension insurance, public policy, government regulations and social insurance.

MKT 219  Field Study/Cooperative Education  
3 Credits  
Provides students the opportunity to work at a job site that is specifically related to their career objectives. Provides field experience within the framework of actual work experience in marketing.

MLT 101  Fundamentals of Laboratory Technician  
3 Credits  
Introduces elementary skills required in the medical laboratory. Covers laboratory math, quality control, pipetting skills, veinipuncture techniques and microscope skills.

MLT 102  Routine Analysis Techniques  
3 Credits  
Studies principles, practices and clinical laboratory techniques associated with routine analysis of urine and other body fluids.

MLT 196  Introduction to Patient Care and Phlebotomy  
3 Credits  
Introduces the health care delivery system. Provides instruction in specimen collection techniques, infection control and safety, and teaches applications of communications concepts and stress management.

MLT 197  Clinical Phlebotomy Experience  
3 Credits  
Covers the practice and demonstration of clinical applications of phlebotomy in the clinical setting.

MLT 198  Clinical Phlebotomy Discussion  
1 Credit  
Develops the professional socialization process necessary to function in a health care setting and reviews routine and special phlebotomy procedures in light of phlebotomist-patient interaction.

MLT 201  Immunology Techniques  
3 Credits  
Provides students with an understanding of principles of the human immunologic system and experience in routine testing.

MLT 202  Immunohematology Techniques  
3 Credits  
Instructs students in practice and procedures used in blood banking in the clinical laboratory.

MLT 203  Instrumentation  
2 Credits  
Includes instrumentation theory and practice as applied to electronic equipment and automated systems in the medical laboratory.

MLT 204  Microbiology Techniques  
4 Credits  
Instructs students in principles of bacteriology including gram negative and positive bacilli and cocci, fastidious organisms and an overview of anaerobic and acid-fast bacteria. Includes instruction in the basic laboratory techniques in clinical bacteriology.

MLT 205  Hematology Techniques I  
3 Credits  
Presents theory of blood formation and function and routine hematologic procedures with emphasis on differentiation of normal from commonly encountered abnormal blood cells. Includes basic theory of hemostasis and associated routine coagulation procedures. Presents clinicopathologic correlations.
MLT 206    Hematology Techniques II
            3 Credits
Continues the study of principles and procedures in hematology and
hemostasis. Introduces procedures beyond those routinely
performed. Continues cell differentiation with emphasis on early and
less commonly encountered abnormal cells and associated
special stains. Includes clinicopathologic correlations.

MLT 207    Chemistry Techniques I
            3 Credits
Presents principles, procedures and clinicopathologic correlations
in routine chemical analysis of the blood and other body fluids.
Provides laboratory experiences in basic methods selected to
develop routine analytical abilities and to promote the ability to
recognize sources of error.

MLT 208    Chemistry Techniques II
            3 Credits
Continues the study of principles, procedures and
clinicopathologic correlations in the chemical analysis of blood
and other body fluids. Introduces procedures beyond those
routinely performed in the clinical chemistry laboratory, including
clinicopathologic correlations.

MLT 209    Routine Analysis Applications
            1 Credit
Studies clinical applications of routine urine analysis in the
hospital laboratory including physical, chemical and microscopic
examination of urine.

MLT 210    Hematology Application
            1 Credit
Studies and practices the principles and techniques of hematology
in the hospital laboratory.

MLT 211    Microbiology Applications
            4 Credits
Studies applications and clinical practices of microbiology found
in the hospital laboratory.

MLT 212    Immunology Applications
            1 Credit
Studies and practices the clinical application of serology in the
hospital laboratory.

MLT 213    Immunohematology Applications
            3 Credits
Studies and practices the principles and procedures used in blood
banking in the hospital laboratory.

MLT 214    Chemistry Application
            4 Credits
Studies and practices the analytical aspects of clinical chemistry
in the hospital laboratory.

MLT 215    Parasitology and Mycology
            1 Credit
Provides study in the isolation, identification, life cycles and
disease processes of pathogenic fungi and parasites.

MLT 216    Elementary Organic and Biochemistry
            3 Credits
Studies the chemistry of carbon-containing compounds and the
biochemistry of lipids, carbohydrates, proteins, nucleic and
enzymes. Includes related laboratory procedures.

MLT 217    Advanced Chemistry Technology
            1 Credit
Presents principles and techniques of chemistry procedures
beyond routine clinical chemistry testing, such as toxicology,
endocrinology and inborn errors of metabolism.

MLT 218    Clinical Pathology
            3 Credits
Examines various disease conditions, diagnosis, etiologies,
clinical symptoms and related laboratory findings.

MLT 280    Co-op/Internship
            1-6 Credits
Provides students with the opportunity to work at a job site that
is specifically related to their career objectives. Provides on-the-
job experience while earning credit toward an associate degree.

MTT 102    Turning Processes I
            3 Credits
Instructs students in shop safety and industrial terminology and
provides laboratory experience towards project completion on the
conventional lathe.

MTT 103    Milling Processes I
            3 Credits
Instructs students in shop safety and industrial terminology and
provides laboratory experience towards project completion on the
vertical and/or horizontal milling machine.

MTT 104    Machinery Handbook
            3 Credits
Explores the intent and use of the machinery handbook. Applies
principles and concepts in the machinery handbook to projects in
the industry.

MTT 106    Advanced Print Interpretation
            3 Credits
Applies mathematics in solving engineering and design-related
problems in the areas of die design, fabrication, assembly, special
machinery, die casting and molds. Emphasizes GDT tolerancing.

MTT 204    Abrasive Processes I
            3 Credits
Provides shop safety, industrial terminology and laboratory
experiences on abrasive processing machines. Includes
superabrasives technology processes.

MTT 208    CNC Programming I
            3 Credits
Introduces two and three axis CNC machining. Develops the
theory of programming in the classroom with application of the
program accomplished on industry type machines. Studies
terminology of coordinates, cutter paths, angle cutting, and linear
and circular interpolation.

MTT 209    CNC Programming II
            3 Credits
Expands on MTT 208, providing further study in computer-aided
numerical control programming. Focuses on canned cycles,
loops, macros, thread cycles, drilling and pocket milling cycles.
MTT 210  Interactive CNC
3 Credits
Continues CNC Programming II. Introduces advanced applications of computer-assisted part programming and simulation, language codes set-up and operation, troubleshooting and problem solving in a CNC turning center and CNC matching center. Includes related mathematical skills.

MTT 220  CAD/CAM I
3 Credits
Covers the development of various machine routines. Introduces computer-assisted machining as it relates to automated milling and machining centers. Emphasizes proper programming techniques, control familiarity, file data and machining functions.

NUR 107  Transition to Associate Degree Nursing Practicum
3 Credits
Provides campus and clinical laboratory experience to function as associate degree nursing students in providing care to clients from the child-bearing process through adolescence. Uses the nursing process to provide quality nursing care.

NUR 150  Nursing and Universal Needs
4 Credits
Identifies the components of the ASN program philosophy. Introduces the role of the Associate Degree Nurse and the facts, concepts, and principles underlying the nursing process. Assists the student in identification of universal needs and appropriate nursing responses to meet those needs.

NUR 151  Nursing and Universal Needs Practicum
4 Credits
Provides an opportunity in the practice laboratory and clinical setting to utilize the role of the Associate Degree Nurse in employing the nursing process. Simulated and actual patient care will provide an opportunity to develop assessment skills and to initiate a beginning level of analyzing, planning, implementing, and evaluating therapeutic measures in meeting universal needs.

NUR 152  Nursing Related to Health Deviation I
5 Credits
Examines the role of the Associate Degree Nurse in assisting clients experiencing health deviations related to nutrition/exclusion, rest/activity, safety, and regulation. The nursing process is utilized for assessment, analysis, planning, implementation, and evaluation of therapeutic measures that promote, maintain, and/or restore health or support death with dignity in the adult client.

NUR 153  Nursing Related to Health Deviation I Pract.
5 Credits
Provides clinical experiences that allows the student to implement the role of the Associate Degree Nurse in providing care to clients experiencing health deviations related to nutrition/exclusion, rest/activity, safety, and regulation. The nursing process guides the application of scientific facts, concepts and principles in the delivery of nursing care. Decision making and appropriate therapeutic communication are emphasized.

NUR 154  Pharmacotherapeutics
2 Credits
Introduces the student to the fundamental principles of drug action, the classification of drugs and the appropriate nursing actions to achieve the desired outcomes of therapy. The nursing process as a framework for learning is integrated throughout the course. Major drugs are classified either by clinical use of body system affected.

NUR 249  Transition to ASN Nursing
3 Credits
Examines the role of the Associate Degree Nurse. Identifies components of the ASN program philosophy. Reviews the facts, concepts, and principles underlying the nursing process in meeting universal needs. Campus laboratory experience is provided to review basic nursing skills. Assists the student to indentify appropriate nursing responses to meet universal health deviation needs.

EFFECTIVE 1996/1997 SCHOLASTIC YEAR:

NUR 250  Nursing Related to Health Deviation II
5 Credits
Examines the role of the Associate Degree Nurse in assisting clients experiencing health deviations related to safety, oxygenation, regulation and social interaction/solitude. The nursing process with emphasis on planning, implementation and evaluation if utilized to promote, maintain, and/or restore health or support death with dignity in the adult client.

NUR 251  Nursing Related to Health Deviation II Pract.
5 Credits
Provides clinical experiences that allows the student to implement the role of the Associate Degree Nurse in providing care to clients experiencing health deviations related to safety, oxygenation, regulation and social interaction/solitude. The nursing process guides the application of scientific facts, concepts, and principles in the delivery of nursing care. Decision making and appropriate therapeutic communication are emphasized.

NUR 252  Nursing Related to Developmental Needs
4 Credits
Identifies the role of the Associate Degree Nurse in assisting clients to meet their developmental needs which includes maintenance of conditions to support life processes and maturation. Utilizes the nursing process with emphasis on planning, implementation and evaluation to evaluate therapeutic measures that promote, maintain or restore health and support death with dignity.

NUR 253  Nursing Related to Developmental Needs Pract.
4 Credits
Provides clinical experiences that allows the student to implement the role of the Associate Degree Nurse in providing care to clients to meet their developmental needs which includes the maintenance of conditions to support life processes and maturation. The nursing process guides the application of the scientific facts, concepts and principles in the delivery of nursing care. Decision making and appropriate therapeutic communication are emphasized.

NUR 254  Professional Nursing Issues
2 Credits
Examines issues and nursing's responsibility to meet changing needs of persons in their environment. Historical aspects, current developments, future trends, improvement of nursing practice, legal/ethical considerations, and personal/professional growth are integrated into the examination of the role of the Associate Degree Nurse.
OTA 101 Foundations of Occupational Therapy  
3 Credits  
Establishes a philosophical base for subsequent course work by introducing and examining concepts basic to the study of Occupational Therapy Assistant.

OTA 102 Kinesiology  
2 Credits  
Analyzes human motion with emphasis on the range of motion and muscle strength related to occupational performance.

OTA 103 Medical Conditions in Occupational Therapy  
3 Credits  
Provides an interdisciplinary approach to the study of physical conditions commonly seen by Occupational Therapists. Includes a survey of the medical or surgical management of these conditions.

OTA 201 Field Work I-A  
1 Credit  
Provides clinical observation and practice of the occupational skills and processes presented in previous and current courses in the curriculum. Attendance at weekly seminar is required.

OTA 202 Therapeutic Activities  
3 Credits  
Provides supervised learning experiences in fiber crafts, ceramics, woodworking, art, design and minor crafts as therapeutic modalities.

OTA 203 Therapeutic Group Activities  
3 Credits  
Provides experimental learning in the analysis and therapeutic use of a variety of group activities used in Occupational Therapy.

OTA 204 Psychiatric Conditions in Occupational Therapy  
3 Credits  
Reviews psychiatric disorders including medical management and treatment, clinical team approach, legal issues, nomenclature, clinical descriptions, and etiology.

OTA 205 COTA in Physical Health  
3 Credits  
Presents assistant -level techniques for management of clinical physical dysfunction cases referred to occupational therapy. Includes initial screening, evaluation, treatment planning and implementation of program for patients /clients.

OTA 206 Assistive Technology and Adaptive Equipment  
2 Credits  
Provides supervised learning experience in the application of technology in Occupational Therapy including orthotics, prosthetics, and assistive/adaptive equipment.

OTA 207 Daily Living Skills  
3 Credits  
Provides supervised learning experiences in maximizing occupational performance that includes independent living skills, work, and plan/leisure skills.

OTA 208 COTA and Interactive Model  
3 Credits  
Presents the COTA’s role in directing activities in a non-medical setting. Includes appropriate techniques for a variety of populations in settings such as schools, nursing homes, and sheltered workshops.

OTA 209 Field Work I-B  
1 Credit  
Provides for clinical observation and practice of the occupational skills and processes presented in previous and current courses in the curriculum.

OTA 210 COTA in Mental Health  
3 Credits  
Presents the psychiatric Occupational Therapy process and the role of the Occupational Therapy Assistant in appropriate methods and techniques.

OTA 211 Clinical Transition and Management  
4 Credits  
Presents basic theory, techniques and skills necessary for the transition into the clinical setting and for the management of an activities program. Management information as it relates to the role of the COTA is provided along with examining the qualities necessary for success in the clinical setting.

OTA 212 Field Work II-A  
2 Credits  
Provides supervised clinical experience. All field work must be completed within 18 months of completion of academics.

OTA 213 Fieldwork Level II-B  
2 Credits  
Provides supervised clinical experience. All field work must be completed within 18 months of completion of academics.

PNU 101 Foundations of Nursing  
4 Credits  
Presents the goals and the role of the licensed practical nurse on the health care team. Covers concept of the nursing process as practiced within the wellness/illness continuum. Includes basic nursing care, and data collection and recording.

PNU 102 Therapeutic Measures  
3 Credits  
Focuses on preventive, therapeutic and rehabilitative nursing interventions requiring advanced skills and knowledge. Integrates the nursing process and the role of the practical nurse.

PNU 103 Holistic Approach to Health  
2 Credits  
Introduces the holistic approach to practical nursing. Includes holistic aspects of care, the wellness/illness continuum and therapeutic relationships.

PNU 104 Nutrition  
2 Credits  
Covers basic principles of nutrition and diet therapy in wellness and illness for various age groups. Considers socio-economic, ethnic and religious factors related to diet. Emphasizes the role of the practical nurse in assisting patients in meeting nutrition needs.

PNU 105 Introduction to Clinical Nursing  
3 Credits  
Provides students with opportunities to implement basic nursing skills in the clinical setting. Emphasizes the hygienic and comfort needs of the adult patient and focuses on developing basic assessment skills utilizing the nursing process. Stresses concise, accurate documentation of assessment and care.
PNU 107  Cardiopulmonary Nursing
3 Credits
Utilizes the nursing process in understanding the pathophysiology and nursing care of patients with cardiovascular/ ventilation needs. Emphasizes developing the nurse as a communicator and care giver with a holistic approach.

PNU 108  Endocrine/Genitourinary Nursing
3 Credits
Utilizes the nursing process in understanding the pathophysiology of hormonal imbalances and urinary elimination needs. Emphasizes developing the nurse as a communicator and care giver with a holistic approach, identifying community supports for patients and developing patient awareness of healthy lifestyles.

PNU 109  Gastrointestinal/Sensorimotor Nursing
3 Credits
Utilizes the nursing process in understanding the pathophysiology of digestion, elimination, mobility and sensorimotor needs. Develops the nurse as a communicator and care giver with a holistic approach. Covers patient psychosocial needs and opportunities for support through community agencies.

PNU 110  Introduction to Pharmacology for Practical Nursing
2 Credits
Introduces the concept of meeting biopsychosocial needs through drug administration within the preventive, therapeutic and rehabilitative environment. Defines practical nurse responsibilities in medication administration. Assesses patient wellness/illness status.

PNU 111  Pharmacology for Practical Nurses
2 Credits
Surveys common pharmacologic agents. Develops drug therapy as one aspect of preventive, therapeutic and rehabilitative care of patients.

PNU 112  Medical/Surgical Clinical Nursing I
3 Credits
Correlates medical surgical content and nursing practice. Includes decision making within the practical nurse role. Emphasizes the holistic aspects of individuals along the wellness/illness continuum.

PNU 113  Medical Surgical Clinical Nursing II
2 Credits
Correlated theory to the holistic care of the adult. Implements the nursing process in preventative, rehabilitative and therapeutic care. Identifies the role of the Practical Nurse providing care within the environment at an advanced level.

PNU 114  Nursing Issues & Trends
1 Credit
Covers organizational patterns and the role of the licensed practical nurse in the healthcare delivery system. Emphasizes continuing education as a means for maintaining competencies. Includes ethical, legal and historical aspects to develop awareness of privileges, obligations and responsibilities of the practical nurse.

PNU 115  Gerontology
3 Credits
Focuses on the normal aging process along the wellness/illness continuum in later life. Surveys trends in preventive, rehabilitative and therapeutic care.

PNU 116  Geriatric Clinical Nursing
3 Credits
Correlates gerontologic content with holistic care of the older adult. Implements nursing process within the role of the practical nurse to prevent illness or to maintain, promote and restore health.

PNU 117  Maternal/Child Nursing
3 Credits
Examines conditions and selected interventions based on the nursing process in providing preventive, rehabilitative and therapeutic care for the mother and child. Identifies the role of the licensed practical nurse in providing holistic care within a dynamic environment.

PNU 118  Maternal/Child Clinical Nursing
3 Credits
Correlates maternal/child content with holistic care of the mother and child. Emphasizes the normal maternity cycle and normal growth and development of the child within the wellness/illness continuum.

PST 120  First Responder
4 Credits
Provides students with information necessary to recognize emergency situations, know the proper course of action with different types of emergencies and apply appropriate first aid. Addresses handling of victims of hazardous materials accidents. Covers CPR, including one and two rescuer, and adult, infant and child resuscitation.

PST 121  Industrial Safety and Loss Prevention
3 Credits
Introduces occupational safety and health standards and codes with emphasis on applications of codes to typical work situations and MSDS requirements. Includes emergency first aid, safety protection, eye protection and chemicals handling. Covers employer and employee rights as well as violations, citations, penalties, variances, appeals and record keeping.

PST 220  Incident Management Systems
3 Credits
Emphasizes the command and control of major department operations at an advanced level, linking operations and safety. Areas of study include incident management systems, pre-incident, size-up, command systems, sectoring functions, staging, safety officer, command post, communications, news media, and computer-aided resources. Utilizes simulated incidents requiring the applications of appropriate solutions.

PST 221  Design and Planning for Prevention and Protection
3 Credits
Focuses on the needs and uses of the computer in public safety. Includes computer-aided dispatch, advanced levels of cameo, I-Chiefs, computer-aided design of equipment, generation of incident reports, application of computers for the budgetary process, computer-aided resource and materials, maintenance, test records of vehicles and the GIS program.
Provides students with the opportunity to experience seminars, workshops and other instructional activities on topics of interest that reinforce the concepts presented in their program area. Contact chief academic officer for more information.

PSY 205  Abnormal Psychology  
3 Credits  
Introduces abnormal psychology to acquire skill in understanding personality, attitude and emotional disorders which require intervention.

QSC 101  Quality Control Concepts and Techniques I  
3 Credits  
Quality is the single most important force leading to organizational success and company growth in national and international markets in both the service and manufacturing industries. A company with a strong total quality control program has the opportunity to increase market penetration, improve productivity, lower the cost of quality, and strengthen leadership. This course demonstrates the development and implementation of a total quality control program.

QSC 102  Statistical Process Control  
3 Credits  
Studies the fundamental tools of statistical process control which are used in industry to reduce costs and increase productivity at a predictable quality level. Emphasizes principles and techniques of statistical process control to ensure that prevention instead of detection of problems is practiced. Includes basic statistical and probability theory, sampling techniques, process control charts, the nature of variation, histograms and attribute and variable charts.

QSC 201  Advanced Statistical Process Control  
3 Credits  
Builds on the basic principles of QSC 102 with advanced techniques by industry to ensure economic production of goods based on defect prevention rather than defect detection. Covers the various decisions to modify, change or adjust processes based on statistical evidence. Stresses interpretation of statistical data and distinguishing between common and special causes of problems. Emphasizes appropriate use of control charts, trend analysis, assessing process and machine capability, evaluating the measurement process, using computers, and automated data collection systems and implementation techniques.

QSC 202  Quality Control Concepts and Techniques II  
3 Credits  
Continues QSC 101. Acquaints students with quality control systems. Emphasizes the systems approach to quality establishing the quality system and applying total quality control in the company.

QSC 203  Metrology  
3 Credits  
Covers techniques of linear and angular measurement and applications for industrial processes and quality control.

QSC 204  Total Quality Management  
3 Credits  
Teaches the philosophy of total quality management. Focuses on improving processes and reducing variation in systems. Covers management's role in improving aspects of manufacturing and service organizations to achieve quality improvement.

RAD 101  Orientation and Nursing in Radiologic Technology  
4 Credits  
Covers seven units. Introduces radiology and prepares students for entry into a clinical setting.

RAD 102  Principles of Radiographic Exposure  
2 Credits  
Presents individual and group characteristics needed to produce the ideal radiograph. Includes knowledge of interchangeability of mAs, kVp, film/screen combinations, distance and grids. Covers factors and considerations needed for pediatric techniques, calibration, heat unit calculation and technique chart construction.

RAD 103  Radiographic Positioning I  
3 Credits  
Correlates positioning, terminology, techniques and film critique with the examinations of chest, abdomen, upper extremity, upper/lower GI tracts and urinary tract.

RAD 104  X-Ray Clinical Education I  
4 Credits  
Follows category 2 of the competency lab model, which tests proficiency of skills from categories 1 and 2. Includes supervised clinical experience.

RAD 105  Radiographic Positioning II  
3 Credits  
Correlates all previous material related to anatomy and positioning, covers the areas of lower extremities, spine and thorax, and advances knowledge in ethics and quality assurance.

RAD 106  X-Ray Clinical Education II  
4 Credits  
Includes supervised clinical experience, utilizes category 2 of the competency model, tests proficiency of skills from categories 1 and 2.

RAD 107  Radiation Physics  
3 Credits  
Introduces physics as utilized in the production of X-rays. Includes laws of physics pertaining to atomic structure, chemical properties and reactions and electrical circuitry. Covers equipment and methods of generation and measurement of electricity.

RAD 109  Imaging Techniques  
2 Credits  
Covers theories, principles and demonstrations of current imaging modalities.

RAD 201  Radiographic Positioning III  
2 Credits  
This course correlates positioning terminology and techniques, film critique, with exams of Category 2 of the competency model, testing skills from Category I and II.

RAD 202  X-Ray Clinical Education III  
4 Credits  
Introduces Category 3 of the Competency Model, proficiency testing over Categories 1 and 2 and testing over Category 3.
RAD 203  X-Ray Clinical Education IV
4 Credits
Introduces Category 4 of the Competency Model in lab proficiency testing of skills from Categories 1, 2, 3 and proficiency in Category 4.

RAD 204  X-Ray Clinical Education V
4 Credits
Includes final competency testing for students who have not completed clinicals 1-4. Continues maintenance over all categories. Includes experienced clinical.

RAD 205  Pathology for Radiologic Technology
2 Credits
Examines basic concepts concerning disease, its causes and the resulting changes as viewed radiographically. Emphasizes needed technical changes to produce optimal radiographs from correlations to patient symptoms.

RAD 206  Radiobiology and Radiation Protection
3 Credits
Covers theories and principles of the effects of ionizing radiation upon living tissues. Includes dosages, measurements, DNA structure and function and cellular radio sensitivity.

RAD 207  Radiographic Positioning IV
3 Credits
Covers all positions involving radiographic examinations.

RAD 208  Principles of Radiographic Exposure II and Quality Assurance
2 Credits

RAD 209  Radiographic Positioning V
3 Credits
Covers all positions involving radiographic examinations.

RAD 288  Pharmacology and Routes of Administration for Radiologic Technologists
3 Credits
Surveys common pharmacologic agents, including emergency drugs, contrast media, measurements, dosages, actions, contraindications, allergic reactions and routes of administration.

RAD 299  General Exam Review
3 Credits
Reviews content of program, emphasizing anatomy, physics, exposure principles, positioning and radiation safety. Simulated Registry exams prepare the student for the American Registry of Radiologic Technologist Examination.

RES 121  Introduction to Respiratory Care
6 Credits
Presents an introduction into Respiratory Care including a brief history of the profession; equipment cleaning and sterilization techniques; patient assessment techniques; isolation techniques. Also includes medical records documentation, gas analyzers, introduction and application of therapeutic modalities including oxygen therapy, aerosol and humidity therapy, airway maintenance and hyperinflation therapy, and an overview of ethical practice and safety.

RES 122  Therapeutic Modalities
3 Credits
Presents medicinal aerosol therapy and respiratory pharmacology; hyperinflation therapies; introduction to pulmonary rehabilitation and home care. Introduces basic bedside pulmonary function testing and development of respiratory care plans. Selected aspects of ethical and legal respiratory practice are presented.

RES 123  Cardiopulmonary Physiology
3 Credits
Presents the cardiopulmonary system including ventilation, perfusion, and gas exchange; introduces interpretation and application of arterial blood gases, acid-base regulation, and physiologic monitoring.

RES 124  Clinical Practicum I
3 Credits
Introduces the student to the hospital environment. The student will be exposed to various hospitals and respiratory care departments, patient charts, patient identification and communication within the hospital. Provides supervised experience in oxygen therapy, hyperinflation therapy, humidity/aerosol therapy and charting.

RES 125  Critical Care I
3 Credits
Introduction to the respiratory care of the critically ill patient. Presents arterial blood gas collection; analysis and interpretation; and basic medical laboratory data. Introduces concepts and techniques of critical respiratory care of adults and pediatrics; to include establishment and maintenance of artificial airways. Application of adult and pediatric mechanical ventilators and related cardiopulmonary monitoring equipment.

RES 126  Clinical Medicine I
3 Credits
Introduces etiology, symptomatology, diagnosis, therapeutics, and prognosis of selected pulmonary diseases.

RES 127  Clinical Practicum II
3 Credits
Provides supervised experience in selected therapeutic modalities. An introduction to chest physiotherapy, medicinal aerosol therapy, intermittent positive pressure breathing, and ultrasonic therapy will be included. Continuing certification in CPR is required.

RES 128  Clinical Practicum III
9 Credits
Provides additional supervised experience in selected therapeutic modalities. Also includes advanced patient assessment, arterial blood gas analysis, and airway care. Clinical experience in adult critical care with mechanical ventilation. An introduction to basic cardiopulmonary testing is included. Continued certification in CPR is required.

RES 221  Cardiopulmonary Diagnostics
3 Credits
Presents in-depth approaches to the respiratory care management of critically ill neonatal, pediatric, and adult patients. Special emphasis is placed on techniques of patient evaluation, cardiopulmonary monitoring, transportation, and management. Also included are advanced techniques of patient assessment through pulmonary function testing and other selected assessment techniques.
RES 222 Critical Care II
3 Credits
Presents advanced techniques of mechanical ventilation of neonatal, pediatric and adult patients; includes fetal development and assessment; neonatal and pediatric assessment, equipment, procedures and therapeutic techniques; introduces related aspects of the NICU environment.

RES 224 Clinical Medicine II
3 Credits
Presents etiology, symptomatology, diagnosis, therapeutics and prognosis of disease conditions related to respiratory care; focuses on the interrelation of all physiologic systems. Emphasis on treatment protocols; includes preparation for clinical simulation component of national credentialing examination.

RES 225 Emergency Management
1 Credit
Application of advanced cardiopulmonary life support efforts in an emergency setting.

RES 226 Continuing Care
2 Credits
Presents a brief history of home care patients in relation to respiratory care modalities. Provides an overview of respiratory care roles in the alternative care sites.

RES 227 Clinical Practicum IV
6 Credits
Provides additional supervised experience in selected therapeutic modalities. Also includes advanced cardiopulmonary diagnostic techniques, application of invasive and non-invasive monitoring of the cardiopulmonary system, and experience in respiratory care departmental management and quality assurance roles. Also includes advanced clinical experience in adult, pediatric and neonatal critical care. Exposure to home care settings, alternative care sites and pulmonary rehabilitation programs is expected. Continuing certification in CPR is required.

RES 228 Information Systems for Health Care
1 Credit
Presents an introduction to computer technology and its uses in the health care setting.

SPC 103 Employee Participation Techniques & Quality Improvements
3 Credits
Provides an overview of the development of an employee involvement program such as circle, team, group and other concepts. Includes problem-solving techniques of brainstorming, cause and effect diagrams, data gathering, check sheets, Pareto analysis, central location, frequency distribution and histograms. Covers the role of management and employees in the process and their relationship to participative management.

SPC 104 Introduction to Non-Destructive Testing
2 Credits
Acquaints students with the principles and various types of non-destructive examination methods, their advantages, limitations and applications.

SPC 105 Non-Destructive Testing Applications I
2 Credits
Presents an overview of the relationship of non-destructive testing to the total quality function. Includes advantages and limitations of various test methods.

SPC 106 Non-Destructive Testing Applications II
2 Credits
Covers theoretical and practical aspects of non-destructive testing in radiography, eddy current testing, acoustic emission and leak testing.

SPC 108 Quality Control Engineering Principles and Technologies
3 Credits
Presents principles and techniques of modern quality control engineering with attention to management, engineering, economic and production factors. Emphasizes the assurance of quality at the hardware, processing and system levels.

SPC 109 Engineering Materials
2 Credits
Includes the basic principles of metallurgy and the properties of materials in the section of parts and manufacturing processes. Explores the ways in which the strength and hardness of metals can be altered by heating and cooling. Examines ceramics, composites, polymers and other exotic metals.

SPC 110 Quality Control Engineering Theory and Application
3 Credits
Presents current theory and applications of quality engineering for assurance and verification of product quality at the hardware, processing and system levels. Emphasizes statistical analysis, laboratory experiments, and tests and case problem-solving applications.

SPC 111 Reliability Objectives
3 Credits
Introduces the development and principles of reliability engineering. Establishes the mathematical and physical bases of reliability and applies the basic elements of reliability data analysis. Surveys concepts basic to modern reliability requirements with emphasis on practical applications in manufacturing processes and production operations.

SPC 112 Reliability Techniques
3 Credits
Studies reliability techniques and applications designed to obtain or improve reliability analysis.

SPC 201 Analysis of Metallurgical Failure
3 Credits
Study of the factors responsible for the failure of components or structures, which may be motivated by either sound engineering practice or by legal considerations. Covers the proper application of failure analysis techniques to provide valuable feedback to design problems and materials limitations.

SPC 202 Process Control Gauging and Measurements
3 Credits
Deals with the science of measurement for obtaining accurate and reliable data using computerized statistical process control and mechanical metrology. Includes selection of various instruments for specific applications.

SPC 203 Codes, Specifications and Procedures Interpretations
3 Credits
Explores the different types of codes, specifications and procedures used in modern industry and provides opportunity for use and interpretation. Blueprint reading is included.
SPC 205  Nondestructive Testing
3 Credits
Presents an overview of the relationship of nondestructive testing to the total quality function. Attention is given to the advantages and limitations of various test methods.

SPC 206  Mechanical Metrology
3 Credits
Provides instruction and laboratory experiments in the use of mechanical testing and measurement equipment for quality control.

SPC 207  Electrical Metrology
3 Credits
Offers instruction and laboratory experiment in the use of electrical testing and measurement equipment for quality control.

SUP 104  Techniques of Supervision II
3 Credits
Develops skills for effective supervision of employees by utilizing analysis of cases, group discussion, in-basket exercises and role-playing.

SUP 203  Reliability Objectives
3 Credits
Introduces development and principles of reliability engineering. Establishes mathematical and physical bases of reliability and applies basic elements of reliability data analysis. Surveys concepts basic to modern reliability requirements with emphasis on practical applications in manufacturing processes and production operations.

SUP 204  Mechanical Metrology
3 Credits
Provides instruction and laboratory experiments in the use of mechanical equipment for quality control.

SUP 224  Operations Management
3 Credits
Studies the efficient production of goods and services that will satisfy the wants and needs of identified customer groups. Focuses on the acquisition of the factors of production, efficient use of those factors and distribution of the output of the production process. Includes discussion of the need for quality and its measurement.

SUR 101  Surgical Techniques
3 Credits
Introduces principles of sterile techniques and the operative care of the surgical patient. Includes the roles of scrubbing and circulating duties.

SUR 202  Surgical Procedures I
3 Credits
Provides orientation to the role of a surgical technologist. Introduces the surgical facility, aseptic technique and basic surgical procedures with review of total patient care, including pre-operative care, diagnostic test and immediate post-operative care.

SUR 103  Fundamentals of Surgical Technology
6 Credits
Demonstrates and supervises practice of general surgical procedures. Correlates theory to clinical by requiring students to actively participate as members of the surgical team. Includes laboratory and clinical experiences.

SUR 104  Surgical Procedures II
6 Credits
Studies advanced surgical procedures in relation to the total physiological aspects of surgical intervention. Includes a knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure and a review of total patient care.

SUR 105  Clinical Applications I
9 Credits
Correlates basic principles and theories of advanced surgical procedures to clinical performance in affiliating hospitals. Includes knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

SUR 106  Surgical Procedures III
3 Credits
Studies specialized surgical procedures. Includes a knowledge of the involved anatomy, existing pathology, surgical hazards encountered, the surgical procedure and a review of total patient care.

SUR 107  Clinical Applications II
8 Credits
Correlates principles and theories of specialized surgical procedures to the clinical performance in affiliating hospitals. Includes the knowledge, skills and attitudes necessary for successful implementation of safe patient care in an operating room.

TEC 101  Manufacturing Processes
3 Credits
Provides a basic survey of manufacturing processes, tools and equipment used by modern industry to convert bars, forgings, castings, plates and sheet materials into finished products. Includes basic mechanics of materials removal and forming, metrology, quality control and safety of operations. Introduces non-traditional manufacturing techniques.

TEC 106  Hazardous Materials and Control
3 Credits
Introduces hazardous materials, managing hazardous material incidents, explosive and gas emergencies, shipping containers, cylinder safety devices, responding to flammable and combustible liquids, oxidizers, poisons and corrosive and radioactive emergencies. Emphasizes chemical identification, marking, storage, shipping and handling hazardous substances. Uses basic monitoring instruments for hazardous areas to protect workers and first responders. Covers protective clothing and equipment. Emphasizes safety.

TEC 113  Basic Electricity
3 Credits
Studies electrical laws and principles pertaining to DC and AC circuits. Includes current, voltage, resistance, power, inductance, capacitance and transformers. Stresses the use of standard electrical tests, electrical equipment and troubleshooting procedures. Emphasizes safety procedures and practices. Prerequisite or co-requisite BSA 050.

VIS 101  Fundamentals of Design
3 Credits
This course investigates design theory and color dynamics as applied to organizing the field. Products provide experiences in analyzing design theory.
VIS 115 Computer Graphics
3 Credits
Introduces students to the computers used in graphic design. Focus on basic computer terminology and use, mastering fundamental skills and developing efficient working styles. Develops skills by creating publications with page layout software.

WLD 108 Shielded Metal Arc Welding I
3 Credits
The student is provided with a thorough technical understanding of arc welding fundamentals, welding safety, electric power sources, electrode classifications and selection. The course also includes training to develop the manual skill necessary to make high quality shielded metal-arc welds in three positions on mild steel.

WLD 109 Oxy-Acetylene Gas Welding and Cutting
3 Credits
In this course the student is provided with a thorough technical understanding of oxy-acetylene welding, flame cutting, brazing fundamental, and welding safety. Training to develop the manual skills necessary to produce high quality welding and cutting techniques is included.

WLD 110 Welding Fabrication
3 Credits
Basic fabrication covers interpreting blueprints and welding symbols, principles of layout and measurement used in fabrication of metal products including tolerances, fits, and allowances.

WLD 120 Metallurgy Fundamentals
3 Credits
Introduces the properties and uses of ferrous and nonferrous metals and alloys: the production of iron and steel; composition and properties of plain carbon steel and alloying elements; selection of tool and case hardening steels; and destructive and nondestructive testing. Also included are the fundamentals of heat treatment and reactions that occur in metals subjected to various heat treatment methods and techniques.

WLD 201 Special Welding Processes
3 Credits
Welding practice with various welding processes and techniques using advanced welding methods, machines and equipment. Presents advanced arc welding with emphasis on use and orientation of submerged arc welding equipment.

WLD 203 Pipe Welding I
3 Credits
This course extends the student's welding skills as necessary to make high quality welds on open root mild steel pipe in 5G, 2G and 6G positions using the SMAW process.

WLD 206 Shielded Metal Arc Welding II
3 Credits
Training to develop the manual skills necessary to produce quality multipass fillet and groove welds with the backing in all positions is provided. This course is designed to use the E6010 and 7018 electrodes on thick carbon steel plates similar to many structural applications.

WLD 207 Gas Metal Arc (MIG) Welding
3 Credits
This course is designed to provide the students with a thorough technical understanding of welding safety, gas metal arc fundamentals, gas metal arc equipment adjustment, metal transfer and shielding gases. It also provides training to develop the manual skill necessary to make quality gas metal arc welds in all positions on mild steel.

WLD 208 Gas Tungsten Arc (TIG) Welding
3 Credits
The student is provided with thorough technical understanding of the gas tungsten arc welding fundamentals, arc characteristics, and welding safety. Training to develop the manual skill necessary to make quality gas tungsten arc welds in all positions on mild steel, stainless steel, and aluminum is included.

WLD 209 Welding Certification
3 Credits
This course is designed for the student who has advanced shielded metal-arc welding skills. The course will concentrate on preparing the student for A.W.S. Certification Tests. The lecture will cover certification procedures and qualification, destructive and nondestructive testing methods.

WLD 210 Welding Fabrication II
3 Credits
This course provides for practice in hands-on fabrication and the use of related equipment will be taught.
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Rex Ward, Director of Business and Industrial Training

Full-Time Faculty

Division of Business and Technology

Duane Alfrey
Senior Instructor (Welding Technology). Certification: American Welding Society, Certified Senior Industrial Technologist - NAIT.

Susan Parker-Altman
Instructor (Chairperson, Paralegal Technology). J.D., University of Louisville School of Law; M.A., Eastern Kentucky University; B.A., Eastern Kentucky University.

Margaret Baumer
Instructor (Administrative Office Technology). M.S., Indiana University; B.S., University of Cincinnati.

Jimmie Beeler
Master Instructor (Business/Management). M.S., Butler University; A.B., Indiana University.

Gregory A. Bernhard
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Tom Bolinger
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Huey Calvain
Senior Instructor (Welding Technology). Certification NOTCI (National Occupational Testing Competency Institute), American Welding Society and Certified Senior Industrial Technologist - NAIT.

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Instructor (Chairperson, Transportation Service Technology). B.S., Indiana University; ASE - Master Certified Technician; and Certified Senior Industrial Technologist - NAIT.

William T. Flanigan
Instructor (Chairperson, Industrial Technologies). M.S., Indiana Wesleyan University; B.S., Tri-State University, and Certified Senior Industrial Technologist - NAIT.

Harry E. Gray
Instructor (Accounting Technology). B.S., Butler University; Indiana CPA License.

William L. Greathouse
Senior Instructor (Chairperson, Hospitality Administration-Hotel/Restaurant Management). M.S.M., Indiana Wesleyan University; B.S., Purdue University; A.A.S., Purdue University; Certification Rooms Division Executive, Food and Beverage Executive, and Hotel Administration.

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Joanna Head
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Michael P. O'Haver
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Dr. Eugene Spiess
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Master Instructor (Divisional Chairperson, Business and Technology Division). M.S., Butler University; B.S., University of Indianapolis.

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Instructor (Design Technology). B.S., Purdue University; AutoDesk Certified Instructor.

David Woolums
Instructor (Culinary Arts). A.S., Vincennes University; A.O.S., Culinary Institute of American; Certified Co-Chair of Jr. Chapter of American Culinary Federation.

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Instructor (Heating, Air Conditioning, and Refrigeration Technology). B.A., Marian College.

Kenton D. Wright
Instructor (Program Coordinator, Graphics Training Center). B.S.M.E., Purdue University

Robert Wurtz
Instructor (Design Technology). B.S., Purdue University.

Division of Health and Human Services

Diana Bennett
Senior Instructor (Assistant Division Chair, Health and Human Services Technology). M.A., DePauw University; B.S.N., DePauw University.

Carol Bodie
Instructor (Practical Nursing). B.S., St. Mary - of - the - Woods; Diploma in Nursing from St. Anthony's School of Nursing.

Kandie Belote
Instructor (Practical Nursing). BSN, Grand Valley State College.

Denise Busch
Instructor (Associate of Science in Nursing). M.S.N., Indiana University; B.S.N., University of Louisville; A.D.N., Moorehead State University; LPN, Jefferson County School of Practical Nursing.

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Instructor (Practical Nursing). B.S.N., Michigan State University.

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Master Instructor (Practical Nursing). M.S., Indiana University; B.S., Oklahoma State University; A.S.N., University of Indianapolis.

Anne Realey
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Mary Ann Reklau
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Willie Whitfield
Instructor (Human Services). M.S., Alabama A & M University; B.A., Alabama A & M University.

Miles Wyatt
Instructor (Chairperson, Radiologic Technology). B.S., Indiana University; A.S., Indiana University, R.T., R, ARRT.

\[ \text{Division of General Education and Support Services} \]

Dr. Mogens Bizuneh
Instructor (Anatomy/Physiology). Ph.D., Anatomy, Indiana University; M.S., Biology, Cornell University; B.S. Public Health, Haile Sallasi University.

Connie Bolinger
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