

2012-2014  
Academic  
**CATALOG**



You can get **Anywhere** from here!



# **Academic Catalog**

**2012-2014**



## MAILING ADDRESS

Midlands Technical College  
P.O. Box 2408  
Columbia, SC 29202

## STREET ADDRESSES AND PHONE NUMBERS

Airport Campus  
1260 Lexington Drive  
West Columbia, SC 29170  
(803) 738-1400

Beltline Campus  
316 S. Beltline Boulevard  
Columbia, SC 29205  
(803) 738-1400

Harbison Campus  
7300 College Street  
Irmo, SC 29063  
(803) 732-0432

Fort Jackson Center  
Army Continuing Education Center  
Imboden Street  
Fort Jackson, SC 29207  
(803) 782-3213

Batesburg-Leesville Campus  
423 College Street  
Batesburg-Leesville, SC 29070  
(803) 604-1601

Fairfield Campus  
1674 Highway 321 North Business  
Winnsboro, SC 29180  
(803) 815-6650

Northeast Campus  
151 Powell Road  
Columbia, SC 29203  
(803) 738-1400

## GENERAL INFORMATION

For general information, you may write, fax, email or call:

Midlands Technical College  
Institutional Support Division  
P.O. Box 2408  
Columbia, SC 29202

TTY (803) 822-3401  
Fax (803) 738-7784  
Email [MTCINFO@midlandstech.edu](mailto:MTCINFO@midlandstech.edu)  
Call (803) 738-8324

## MIDLANDS TECHNICAL COLLEGE WEBSITE:

[midlandstech.edu](http://midlandstech.edu)

## STATEMENT OF NONDISCRIMINATION

Midlands Technical College does not discriminate in admissions or employment on the basis of race, sex, national origin or ethnic group, color, age, religion, disability, genetic information, military service, or pregnancy. In compliance with Title VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1992, and the Genetic Information Nondiscrimination Act of 2008 (GINA), Midlands Technical College offers access and equal opportunity in its admissions policies, academic programs and services, and employment of disabled individuals in that no otherwise qualified person will be denied these provisions on the basis of a disability. Dr. Ronald L Rhames has been designated to coordinate compliance with the nondiscrimination requirements contained in Section 35.107 of the Department of Justice regulations, Sections 503 and 504 of the Rehabilitation Act of 1973, and Title VII and Title IX regulations. Information concerning the provisions of the American with Disabilities Act and the rights and privileges thereunder are available from Dr. Rhames in his position as the Senior Vice President for Business Affairs and Compliance Officer for Affirmative Action, Equal Opportunity, Sexual Harassment and Disability Action. He can be reached at Midlands Technical College, P.O. Box 2408, Columbia, SC 29202, (803) 822-3261.

## GAINFUL EMPLOYMENT PROGRAMS STATEMENT

For information about MTC graduation rates, the median debt of students who completed their programs, and other information, please visit our website at [midlandstech.edu/gep](http://midlandstech.edu/gep).

## POLICY AND PROCEDURAL EXCEPTIONS

Exceptions to the policies and requirements in this catalog are rarely granted. Students are cautioned that the policies and procedures of Midlands Technical College clearly identify personnel who have authority to make exceptions to policy. Students seeking any deviation from requirements in this catalog should be certain they have received appropriate approval.

## ACADEMIC LIMITATIONS

To ensure the highest quality education, Midlands Technical College sets certain limitations on its academic procedures. Please read the section below for current limitations.

### Placement Test Scores

A student's scores on appropriate tests for placement in courses will be acceptable for three years from the date the test is taken.

### Transfer Course Work Applied Toward Graduation

Applicability and time limitations on transfer course work will be determined by the appropriate program's department chair or designee.

### Grade Changes

Normally, a student's grade in a course may not be changed later than one term following the award of the grade.

The grade may be changed only by the course instructor or the department chair.

Exceptions to these policies may be made only by the appropriate vice president.

### Catalog Rights

Students admitted to the college are granted the right to complete programs as stated in the college's *Academic Catalog* at the time of initial matriculation to the program.

As long as the student is eligible to re-enroll, the student maintains these catalog rights. The college reserves the right to change courses as long as the total number of credits required for completion of the program is not increased. A student who must reapply for admission comes into the college under the catalog in effect at the time of readmission.

### Course Cancellation

Courses without adequate enrollment are subject to cancellation.

### Photographing Employees, Students and Related Activities

Midlands Technical College often photographs its students, faculty and staff for college publications and public relations. Anyone who doesn't want his or her photograph used for these purposes should file a written request with the MTC Public Affairs Office (803-822-3233).

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## Welcome

At Midlands Technical College, preparing students for success in the global economic community is at the heart of everything we do. As an MTC student, you will benefit from the college's targeted career training programs, modern facilities, dedicated faculty and personalized services. The college community also cares about your personal growth and development, offering practical assistance in setting goals, gaining self-knowledge and developing a career plan.

This catalog is one of the many valuable tools provided by Midlands Technical College to facilitate your success. Within this publication you will find:

- MTC's academic guidelines and requirements
- Descriptions of MTC's career paths, including arts and sciences; business and information systems technology; industrial and engineering technologies and engineering transfer; and nursing and health sciences
- Complete curricula for more than 100 degree, diploma and certificate programs of study
- Descriptions of all the courses offered at Midlands Technical College
- Background information about the college's faculty members

I urge you to review the catalog when you first begin your studies and as needed throughout your academic career. The information in this publication, when combined with the personal attention of faculty members and advisors, will help you avoid uncertainty about the college's procedures and will assist you in focusing your academic efforts.

Whether you are just beginning your college studies or returning for expanded career opportunities, Midlands Technical College has the high-quality education and career preparation you seek. Again, welcome to Midlands Technical College. Remember, you can get anywhere from here.

Sincerely,

A handwritten signature in black ink that reads "Marshall White Jr." The signature is written in a cursive, flowing style.

Marshall (Sonny) White, Jr.  
President

## COLLEGE ACCREDITATION

Midlands Technical College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate degrees, diplomas and certificates. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Midlands Technical College.

## PROGRAM APPROVAL AND ACCREDITATIONS

Specific programs are accredited and/or approved by the:

- American Bar Association
- American Society of Health-System Pharmacists
- Association of Collegiate Business Schools and Programs
- Commission on Dental Accreditation of the American Dental Association
- Commission on Accreditation for Health Informatics and Information Management Education Programs in Association with the American Health Information Management Association
- Commission on Accreditation in Physical Therapy Education
- Council on Accreditation of Allied Health Education Programs
  - Committee on Accreditation for Respiratory Care
  - Accreditation Review Committee on Education in Surgical Technology
  - American Association of Medical Assistants
- Council for Standards in Human Services Education
- Joint Review Committee on Educational Programs in Nuclear Medicine Technology
- Joint Review Committee on Education in Radiologic Technology
- National Accrediting Agency for Clinical Laboratory Sciences
- National Automotive Technicians Education Foundation
- National Association for the Education of Young Children
- National League for Nursing Accrediting Commission
- Printing Industries of America
- South Carolina Board of Nursing
- Technology Accreditation Commission of the Accreditation Board for Engineering and Technology

## SOUTH CAROLINA TECHNICAL EDUCATION SYSTEM

In addition to these accrediting bodies, Midlands Technical College is part of a system of technical colleges operated under the auspices of the State Board for Technical and Comprehensive Education. The State Board establishes policies that apply to the entire state system and approves all of the college's associate degree, diploma and certificate programs. All associate degree programs are reviewed and approved by the South Carolina Commission on Higher Education.

# 2012-2013 COLLEGE CALENDAR

(NOTE: THE COLLEGE CALENDAR IS SUBJECT TO CHANGE)

## Fall Semester, 2012

Fall Late Registration.....	August 22
Fall Classes, Fall I, FJ I & Fast Track I Classes Begin.....	August 27
Weekend Classes Begin.....	August 31
Labor Day Holiday College Closed.....	September 3
Fast Track II Classes Begin.....	September 4
Fast Track I & II Classes End.....	September 20
Fast Track Exams.....	September 20
10 Week Classes Begin.....	September 25
Fall I, FJ I Classes End.....	October 12
Student Holidays.....	October 15, 16
Fall I, FJ I Exams.....	October 17, 18
Fall II, FJ II Classes Begin.....	October 22
Election Day College Closed.....	November 6
Student Holidays.....	November 21-24
Thanksgiving Holidays College Closed.....	November 22-24
Weekend Classes End.....	December 7
Fall Classes, 10 Week, Fall II & FJ II Classes End.....	December 11
Fall, 10 Week, Fall II & FJ II Exams.....	December 12, 13, 17, 18
Holidays College Closed.....	December 24, 2012 - January 4, 2013

## Spring Semester, 2013

Spring Late Registration.....	January 9
Spring, Spring I, FJ I & Fast Track I Classes Begin.....	January 14
Weekend Classes Begin.....	January 18
Dr. Martin Luther King, Jr. Holiday College Closed.....	January 21
Fast Track II Classes Begin.....	January 22
Fast Track I & II Classes End.....	February 7
Fast Track Exams.....	February 7
10 Week Classes Begin.....	February 12
Spring I, FJ I Classes End.....	February 28
Spring I, FJ I Exams.....	March 4, 5
Spring II, FJ II Classes Begin.....	March 7
Student Holidays.....	March 11-16
Weekend Classes End.....	April 26
Spring Classes & 10 Week Classes End.....	April 29
Spring II & FJ II Classes End.....	April 30
Spring, 10 Week, Spring II & FJ II Exams.....	May 1, 2, 6, 7
Weekend Classes Exams.....	May 3, 4
Graduation.....	May 9

## Summer Semester, 2013

Summer Late Registration.....	May 15
Summer, Summer I & FJ Classes Begin.....	May 22
Weekend Summer Classes Begin.....	May 24
7 Week Classes Begin.....	June 13
Summer I Classes End.....	June 25
Summer I Exams.....	June 26, 27
Summer II Classes Begin.....	July 1
Independence Day Holiday College Closed.....	July 4
Fast Track Classes Begin.....	July 8
FJ Classes End.....	July 11
FJ Exams.....	July 15, 16
Weekend Classes End.....	July 26
7 Week & Fast Track Classes End.....	August 1
Summer, Summer II Classes End.....	August 2
Weekend Classes Exams.....	August 2, 3
Summer, 7 Week, Summer II & Fast Track Exams.....	August 5, 6, 7, 8

## 2013-2014 COLLEGE CALENDAR

**(NOTE: THE COLLEGE CALENDAR IS SUBJECT TO CHANGE)**

### Fall Semester, 2013

Fall Late Registration.....	August 21
Fall Classes, Fall I, FJ I & Fast Track I Classes Begin.....	August 26
Weekend Classes Begin.....	August 30
Labor Day Holiday College Closed.....	September 2
Fast Track II Classes Begin.....	September 3
Fast Track I & II Classes End.....	September 19
Fast Track Exams.....	September 19
10 Week Classes Begin.....	September 24
Fall I, FJ I Classes End.....	October 11
Student Holidays.....	October 14, 15
Fall I, FJ I Exams.....	October 16, 17
Fall II, FJ II Classes Begin.....	October 21
Student Holidays.....	November 27-29
Thanksgiving Holidays College Closed.....	November 28-29
Weekend Classes End.....	December 7
Fall Classes, 10 Week Classes End.....	December 9
Fall II, FJ II Classes End.....	December 10
Weekend Classes Exams.....	December 13, 14
Fall, 10 Week, Fall II & FJ II Exams.....	December 11, 12, 16, 17
Holidays College Closed.....	December 23, 2013 - January 3, 2014

### Spring Semester, 2014

Spring Late Registration .....	January 8
Spring, Spring I, FJ I & Fast Track I Classes Begin.....	January 13
Weekend Classes Begin.....	January 17
Dr. Martin Luther King, Jr. Holiday College Closed.....	January 20
Fast Track II Classes Begin.....	January 21
Fast Track I & II Classes End.....	February 6
Fast Track Exams.....	February 6
10 Week Classes Begin .....	February 11
Spring I, FJ I Classes End .....	February 28
Spring I, FJ I Exams .....	March 3, 4
Spring II, FJ II Classes Begin .....	March 6
Student Holidays.....	March 10-14
Weekend Classes End.....	April 25
Spring Classes & 10 Week Classes End .....	April 28
Spring II & FJ II Classes End.....	April 29
Spring, 10 Week, Spring II & FJ II Exams.....	April 30, May 1, 5, 6
Weekend Classes Exams.....	May 2, 3
Graduation.....	May 8

### Summer Semester, 2014

Summer Late Registration.....	May 14
Summer, Summer I & FJ Classes Begin.....	May 19
Weekend Summer Classes Begin.....	May 23
7 Week Classes Begin.....	June 9
Summer I Classes End.....	June 20
Summer I Exams .....	June 23, 24
Summer II Classes Begin.....	June 25
Fast Track Classes Begin.....	June 30
FJ Classes End .....	July 11
Independence Day Holiday College Closed.....	July 4
FJ Exams .....	July 15, 16
Weekend Classes End.....	July 26
7 Week & Fast Track Classes End .....	August 1
Summer, Summer II Classes End.....	August 2
Weekend Classes Exams .....	August 2, 3
Summer, 7 Week, Summer II & Fast Track Exams .....	August 5, 6, 7, 8

## **STATEMENT OF MISSION**

Midlands Technical College is a comprehensive, multi-campus, two-year public college serving the primary region of Richland, Lexington and Fairfield counties of South Carolina. College programs and services provide accessible, affordable, quality education that prepares a diverse student population to enter the job market, transfer to senior colleges and universities, and achieve their professional and personal goals. Through its programs and services, the college equitably provides higher education opportunities and strengthens the economic and social vitality of the community.

## **STATEMENT OF VISION**

Midlands Technical College is an innovative leader that creates effective learning environments, enhances individual success, promotes economic vitality and provides opportunities for lifelong education.

## **STATEMENT OF ROLE AND SCOPE**

The college implements its mission through a clearly defined set of programs, services and partnerships that include:

### **College-Level Credit Programs.**

The college serves approximately 16,000 credit students annually through courses leading to associate degrees, diplomas and/or certificates in Arts and Sciences, Business, Engineering Technology, Health Sciences, Industrial Technology, Information Systems Technology, Nursing and Public Service.

### **Corporate and Continuing Education Programs.**

The college provides professional and career training and development through open enrollment and customized courses to approximately 30,000 individuals from the community, and from businesses, industries, and governmental and health agencies. The college also offers self-supporting, noncredit activities for personal enrichment.

### **Student Development Programs and Services.**

The college offers programs and services to enrolled and prospective students and alumni to increase their success and enhance their potential for personal, educational and professional growth. The college increases student access to higher education through recruitment, developmental education, financial services, counseling and career services, and evaluation and support services.

### **Economic Development Programs.**

The college promotes the economic vitality of the region by providing a sustainable workforce for new and expanding industries and technology transfer to developing companies. The college proactively seeks to promote business growth and regional prosperity.

## STATEMENT OF VALUES

Midlands Technical College contributes to the community by helping individuals reach their full potential through affirmation of the following values:

### **Commitment to Students.**

Belief in providing a learner-centered environment offering quality instruction, resources and services and presenting challenging opportunities for the continued growth and development of its students. The college assists students in clarifying their lifelong goals, fostering entrepreneurship, developing interpersonal skills and maximizing their potential.

### **Commitment to Excellence in Education.**

Belief in offering the highest quality academic programs and support services through a variety of delivery methods that reflect the relevant education required for future success. The college builds a community of learners and prepares students for the work environment or further education.

### **Commitment to Integrity.**

Belief in ethical behavior by all members of the college community. The college fosters and promotes integrity, honesty, fairness and mutual respect among faculty, staff, students and all others associated with the college.

### **Commitment to Economic Vitality and Quality of Life.**

Belief in preparing students for successful careers by providing a seamless curricula bridging secondary education, higher education and lifelong learning. The college partners with business, education and government to enhance the growth and prosperity of the community.

### **Commitment to Access and Diversity.**

Belief in providing access to programs and services to students who comprise the cultural, economic and demographic diversity of the community.

### **Commitment to Faculty and Staff.**

Belief in the importance of attracting and retaining an excellent and diverse faculty and staff who collectively create a positive learning environment. The college provides professional development opportunities and demonstrates its commitment to the college community by providing resources to carry out the mission of the college.

### **Commitment to a Quality Campus Environment.**

Belief in the importance of creating an inviting and secure environment for the college community. The college values clear communications, open exchange of ideas, involvement in decision-making, and respect for all individuals.

### **Commitment to the Management and Diversification of Resources.**

Belief in the effective use of college resources to provide quality education and services for the students and community and in being accountable to constituents. The college seeks to diversify its financial support through the pursuit of new and innovative resources.

### **Commitment to Innovation and Renewal.**

Belief in the spirit of creativity and discovery in all college endeavors. The college is open to innovation, adaptation and positive change for the benefit of all its constituencies.

## MIDLANDS TECHNICAL COLLEGE COMMISSION

The governing board of Midlands Technical College is the Midlands Technical College Commission. These 12 leading citizens are appointed by the governor, upon the recommendation of their respective legislative delegations, to serve as trustees for the college.

Members of the commission include: Christopher M. Joye, chair; Randall Jackson, vice chair; Robert P. Wilkins, Jr., secretary; George P. Powers, treasurer; Katie M. Bolden; Ronald H. Burkett; Thomas E. Elliott; Pamela S. Harrison; Robert C. Lentz; L. Todd Sease; Peter E. Sercer; and Diane E. Sumpter.



**Christopher M. Joye**  
Chair



**Randall Jackson**  
Vice Chair



**Robert P. Wilkins, Jr.**  
Secretary



**George P. Powers**  
Treasurer



**Katie M. Bolden**



**Ronald H. Burkett**



**Thomas E. Elliott**



**Pamela S. Harrison**



**Robert C. Lentz**



**L. Todd Sease**



**Peter E. Sercer**



**Diane E. Sumpter**



**Marshall (Sonny) White, Jr.  
Ex-Officio Member  
President  
Midlands Technical College**

## MIDLANDS TECHNICAL COLLEGE FOUNDATION

The Midlands Technical College Foundation provides a structure for individuals, corporations and other private sector interests to demonstrate support for the programs and services offered by Midlands Technical College.

The MTC Foundation is an active partner in advancing the college's community development mission and seeks financial and other support for the college. In carrying out this role, the Foundation's Board of Directors ensures that excellence is achieved and maintained as private sector resources are a critical complement to limited public funding.

The Board of Directors for the Foundation is composed of individuals who are leaders in the community's business and civic affairs.

### Midlands Technical College Foundation Board

*(as of May 1, 2012)*

**Mary H. (Mze) Wilkins, Chair**

**Barbara D. Willm, Vice-Chair**

**Charles A. (Chip) James, Jr, Secretary**

**Marion A. (Lex) Knox, Jr., Treasurer**

Scott R. Adams

Melissa D. Albergotti

William C. (Bill) Barker

Charles D. (Chuck) Beaman, Jr.

Barbara W. Blau

R. David Brown

Sharon W. Bryant

George J. Bullwinkel, Jr.

J. Holt Chetwood

John T. (Ted) Creech

Judith M. (Judy) Davis

Marvin W. Davis

William C. (Billy) Derrick

Robert D. (Bob) Drake

Donald C. Goldbach, Jr.

Donald E. (Don) Herriott

John H. Hudgens, III

Lisa M. Ingram

Boyd B. Jones

R. Scott McClelland

Joseph P. (Joe) McClintock

Ted O. McGee, Jr.

Donald G. (Ike) McLeese

G. Scott Middleton

Thomas E. (Tom) Persons

James D. (Jim) Reynolds

Mark G. Simmons

R. Michael (Mike) Sisk

James E. (Rick) Wheeler

G. Larry Wilson

George A. Zara

Ex-Officio Members: Chair of MTC Commission, MTC President, MTC Senior Vice President for Business Affairs and MTC Associate Vice President for Development

# Academic Policies and Requirements



# ACADEMIC POLICIES AND REQUIREMENTS

## ADMISSION TO THE COLLEGE

### Admission Policy

All applicants must possess a high school diploma or its equivalent or must be at least 18 years old to be considered for admission into curriculum programs and courses offered by the college. Graduates of South Carolina high schools who have received a “certificate,” not a diploma, are strongly urged to return to their high school district to complete the diploma or GED. Certificate recipients who meet minimum scores on the college’s placement exam will be admitted to the college. Eligible high school students who desire to enroll in one or more college courses concurrently with their high school classes may do so with the written authorization of their parent(s) and high school principal.

All applicants are required to participate in placement testing (assessment) prior to being accepted by the college unless exempted by criteria stated in college procedures on assessment, admission and placement. Specific requirements have been established for individual program entrance. For applicants who require additional preparation for college-level work, the college offers individual programs to develop strong basic skills in the areas of English, mathematics, reading, science and computer literacy.

### Admission Procedures

The first step for persons seeking enrollment in curriculum courses is to submit an application for admission, including a \$35 non-refundable application fee. The preferred method to apply is electronically at [midlandstech.edu](http://midlandstech.edu) or at one of our convenient Online Services Centers located in the Enrollment Services office at either Airport or Beltline campus. Applications (and information packets) will also be mailed to you upon request by contacting the Student Information Center at (803) 738-8324 or by accessing the Ask MTC function on the college website.

The next step is to verify your citizenship status or lawful immigration status. Midlands Technical College is in full compliance with the SC Illegal Immigration Reform Act (section 59-101-430 of the South Carolina Code of Laws, As Amended).

It is the policy of MTC to review the citizenship status or lawful immigration status of each person currently enrolled or seeking admissions.

Students who are eligible and who complete the Free Application for Federal Student Aid (FAFSA) have their citizenship checked by the U.S. government.

If a student is not eligible to complete the FAFSA, the student is responsible for completing the MTC U.S. Citizenship Status Verification Form or the MTC Status Verification for Non-U.S. Citizens. Forms must be submitted in person along with the original document(s) being provided.

A transient or transfer student from another South Carolina state-supported college or university who has already verified can document by having their registrar complete the MTC Transfer-Transient Verification form.

Citizens of the United States will only need to be verified once during their enrollment at MTC. Non-U.S. citizens will be verified each year, or when their United States Citizenship and Immigration Services documents expire, whichever comes first.

### Transcript Requirements:

All applicants are asked to submit a copy of their high school transcripts. These transcripts are used for financial aid, scholarships, academic advisement and other purposes. The transcript is required for admission purposes only if the applicant:

- a. Is less than 18 years old.
- b. Is applying for a Health Sciences program.
- c. Wishes to use the high school transcript to provide evidence of SAT or ACT scores (taken within three years of the application date to MTC) in order to qualify for Nursing or one of the other Health technologies.
- d. Wants to be considered for a LIFE Scholarship or other types of financial programs that may require it.
- e. Has been specifically requested to submit it to the Admissions Office.

Transcripts should be sent to:

Midlands Technical College  
Admissions Office  
Post Office Box 2408  
Columbia, SC 29202

Applicants possessing a high school equivalency certificate (GED) or a diploma from an adult basic education program must provide the Admissions Office with documentation of successful GED completion.

Transfer students — applicants who have attended a regionally accredited college or university — must request that all colleges previously attended send official transcripts directly to the Midlands Technical College Admissions Office. These transcripts will be reviewed to determine if the placement testing requirement will be waived. These transcripts are also used to determine advanced placement credit and whether transfer students are eligible for LIFE Scholarships. Applicants requesting transfer credit consideration of post-secondary course(s) from foreign institutions must obtain, at the applicant's expense, a course-by-course evaluation of the foreign course work from a National Association of Credential Evaluation Services (NACES) member evaluation service. Applications to obtain the evaluation are available from the Admissions Office. American Council on Education (ACE) guidelines may also be used to evaluate prior course work. Applicability and time limitations on transfer course work will be determined by the appropriate program's department chair or designee. The following criteria are used to determine acceptability of prior college coursework for advanced standing:

1. the final grade for the course(s) must be a "C" or better;
2. the course(s) must have been taken at a regionally accredited institution; if from a non-regionally accredited foreign post-secondary institution, the courses must have been recommended by a NACES-member external evaluation service;
3. the course(s) must be applicable to the program in which the student plans to enroll in order for the course to be considered for graduation;
4. the course(s) must be college-level; no course which is remedial/developmental in nature will be accepted; and
5. credit will be granted only once for a given course.

To ensure the admission application will be processed in time for registration, applications, transcripts and both college admission and placement test scores must be received in the Admissions Office at least three weeks prior to the published application deadline for the term in which the student plans to enroll. Advanced standing cannot be awarded until official transcripts are received and evaluated.

## STUDENT ASSESSMENT

Midlands Technical College faculty and staff value quality in programs and services and continually strive to improve all aspects of the college community. Assessing student learning, development, satisfaction and outcomes is essential to assessing the effectiveness of the college and is therefore part of the educational program.

From application through graduation and beyond, students will participate in a series of tests, surveys and competency demonstrations designed to:

1. assess students' background and academic skills for accurate advisement and course placement at entry;
2. obtain information about student satisfaction with college processes, programs and services; and
3. measure competencies students have achieved academically and personally while in college.

## ADMISSION TESTING

Applicants are admitted to Midlands Technical College based on successful previous college coursework, SAT scores, ACT scores or Midlands Technical College Placement Test (COMPASS or ASSET) reading score. Other admission tests and criteria may be required for admission to specific academic programs. These special requirements are outlined in the Academic Program section of the catalog.

## PLACEMENT TESTING

Applicants for curriculum programs must be tested for course placement unless exempted. Exemptions are granted if one of the following criteria is met:

1. the applicant has earned a grade of "C" or better in appropriate college-level English and mathematics courses taken at a regionally accredited college or university;
2. the applicant has earned advanced placement credit for English and mathematics on CLEP and/or AP exams that are recognized by the college;
3. the applicant has taken the Midlands Technical College Placement Test (COMPASS, ASSET or equivalent) within the previous three years;
4. the applicant plans to enter certain certificate programs that do not require placement testing;
5. the applicant has earned a two-year degree or higher from a regionally accredited college or university (this exemption may not apply to some academic programs); or
6. the applicant is not pursuing an academic award and desires to be admitted to take a specific course(s) under the Career Development status. The applicant must have met course prerequisites. English and mathematics courses, or courses with English and mathematics prerequisites, require demonstrated proficiency in English and mathematics skills and may require testing if acceptable prerequisite courses have not been completed. Students not pursuing degrees, diplomas or certificates are limited to 18 semester hours in Career Development status, unless this limit is waived by the academic department chair.

Students with documented disabilities may request special placement testing accommodations to ensure optimum performance on assessment. To arrange special placement testing, students should contact the Disability Resource Center.

The Midlands Technical College Placement Test (COMPASS, ASSET or equivalent) consists of

questions that address the applicant's career goals and commitment to program choice. The main emphasis of the placement test, however, focuses on helping students make sound educational decisions. Unless exempted, applicants are required to take a reading comprehension test and a basic mathematics and algebra skills test and to write a sample essay for evaluation. Depending on the applicant's ability level as indicated by placement test scores, the applicant will be:

1. placed in entry-level courses in the chosen program of study;
2. placed in Developmental Studies (DVS courses);
3. placed concurrently in DVS courses and a program of study; or
4. referred to an outside agency for assistance.

Reading scores will determine whether applicants will be admitted into the college and into which courses they will be placed. The writing and reading scores will determine placement into levels of English. Mathematics scores determine placement into sequential levels of DVS and curriculum mathematics courses. Applicants who do not meet minimum program entrance criteria in one or more of the basic skill areas will be required to satisfactorily complete the respective Developmental Studies course(s) before taking related courses in their chosen program.

### **Placement Testing for Foreign Languages**

Students planning to enroll in foreign language courses should complete a questionnaire to determine if they must complete a placement exam for the appropriate course level of enrollment. This placement exam is also used to validate language proficiency for students planning to transfer to the University of South Carolina. Applicants may obtain a copy of the Foreign language assessment questionnaire online, from the Humanities Department, or from the Student Assessment Center and then contact the Student Assessment Center to schedule a foreign language placement exam, if required.

### **Placement Testing for Financial Aid Eligibility**

Students who do not possess a high school diploma or GED must satisfy "Ability to Benefit" (ATB) criteria established by the U.S. Department of Education in order to qualify for federal and state financial assistance. Students should contact the Office of Student Assessment for specific testing criteria and to arrange for ATB assessment.

## **SPECIAL ADMISSION PROCEDURES**

### **Readmission**

Students who have previously attended Midlands Technical College and have not been enrolled for three terms, including summer term, are considered readmit students. Readmitting students must apply for readmission to the college by submitting an admission application and meeting current criteria for admission to the curriculum program desired, including testing and course placement requirements.

The college reserves the right to refuse readmission to any applicant who has an unacceptable academic or conduct record. Individuals with financial obligations to the college must resolve these obligations before they will be allowed to register for classes.

### **Readmission for Students on Academic Suspension**

Students suspended for academic reasons must reapply for admission and complete a Petition for Readmission Following Suspension form with a college counselor. Students must meet with a college counselor to complete paperwork for readmission by the following deadlines; July 1

for Fall Semester, November 1 for Spring Semester, and April 1 for Summer Semester. Additional testing may be required. More specific information concerning readmission of suspended students is available from Counseling and Career Services offices on the Airport and Beltline campuses. Suspended students may not re-enroll until the suspension term is completed.

### **Nursing and Health Sciences Programs**

The Nursing and Health Sciences programs have specific requirements that applicants must meet to be admitted to individual majors. Special admission requirements are outlined in the Nursing and Health Sciences section of this catalog and also on the college website at [midlandstech.edu/healthsciences](http://midlandstech.edu/healthsciences) and [midlandstech.edu/nursing/default.html](http://midlandstech.edu/nursing/default.html).

### **International Students**

In addition to meeting the regular college and program admission requirements, international applicants must also meet the following requirements if an Immigration and Naturalization form I-20 or I-20P from the United States Citizenship and Immigration Services is required:

1. Be 18 years old or present evidence of successful completion of a secondary level program. This evidence must be in the form of a transcript or other traditional document from the institution. The document(s) must be accompanied by a certified English translation, if not in English.
2. Score a minimum of 500 on the paper version or 61 on the Internet version of the Test of English as a Foreign Language (TOEFL).
3. Provide evidence of financial support.
4. Deposit two semesters' advance tuition in an escrow account.
5. Placement Testing is required unless appropriate exemption criteria are met. See the "Placement Testing Section."

Additional information about international admissions can be obtained from the college's Admissions Office.

### **Physical Examination**

A statement of good physical health is required for some programs. If a physical examination is required, the applicant will be notified.

## **ACADEMIC FRESH START**

Students who withdraw or are suspended from Midlands Technical College frequently return to school at a later date to resume their education. Unfortunately, poor academic performance during their first period of enrollment often presents a major obstacle to returning students' overall success.

Individuals in this category who want an opportunity for a fresh undergraduate start at Midlands Technical College, without the handicap of their prior academic record, may apply for admission under Academic Fresh Start, subject to strict conditions set forth by the college. For information about this process, contact the Counseling and Career Services Office at 822-3505 (Airport Campus) or 738-7636 (Beltline Campus).

## **ADVANCED STANDING**

Midlands Technical College has established policies and procedures that may allow students to enter certain curriculum programs with advanced standing. In many cases, credit may be awarded through transfer of credit from other post-secondary institutions, AP exams, chal-

lenge examinations, the College Level Examination Program (CLEP), military experience or prior experiential learning. New students applying for advanced standing should submit documentation to the Admissions Office by the application deadline. Applicability and time limitations on transfer course work will be determined by the appropriate program's department chair or designee.

## ORIENTATION

Orientation is required of all first-time-to-college students. It prepares first-time college students – recent high school graduates, adults, retirees, as well as those with special needs such as international students and students with disabilities – for the use of services offered by the college. F-1 visa students have a separate mandatory orientation to review and understand immigration and college policies that may impact their visa status. Orientation reviews information on college services, clubs and organizations, financial services, and success strategies. Orientation is the best forum for new students to connect with the college – meet fellow students, faculty and staff plus review their program major. Students in most programs complete their advisement at Orientation and understand their next steps for enrollment. Several academic programs have additional mandatory orientation and advisement before the enrollment process can be completed; for more information call 822-6755.

To meet the diverse needs and convenience of students, Orientation is offered on numerous dates and time formats – morning, afternoon, evening and some Saturdays. Date information is available online [midlandstech.edu/new](http://midlandstech.edu/new). Students unable to participate on campus use their MyMTC Email account to request access to the online orientation; a follow-up appointment for program advisement is required. Additionally, the college offers The Freshman Seminar, COL 105, an academic course designed to connect students to success strategies, learning resources, and college activities throughout their first semester. Ask for more information about The Freshman Seminar at your Orientation; or for more information, call 822-6755.

After enrollment at MTC, new students in select courses participate in extended orientation activities through new student learning communities. Faculty for these courses reinforce student skills with college online services and MyMTC Email, plus they connect students to a wide array of campus support services. New student learning communities support the orientation process as part of MTC's *New Student Experience*.

## ACADEMIC ADVISING

Advisors in the Advisement Center assist new students with their academic plans and provide information on college resources. Students are advised for courses appropriate to their major as determined by placement test results. New students with previous coursework from another college are expected to bring a copy of their college transcript(s) to their advisement session with their Program Advisor. Students are provided information on their academic program that lists the courses required for their major. Information on a student's academic program is also available via their MyMTC account (under Academic Profile, select "Program Evaluation").

Academic advisors are available to assist students regarding courses appropriate to their academic program and career plans, and provide general guidance on their progress towards their program of study. Final course selection, scheduling and registration are responsibilities of the student, not the Advisor.

Student's responsibilities include:

1. Completing the Pre-Advisement Module prior to their first advisement session
2. Learning how to use the college's online services and required MyMTC Email account

3. Taking care to avoid enrolling in courses for which prerequisites have not been met
4. Frequently checking the college's student MyMTC Email account for important updates
5. Planning for successful enrollment – some courses are not offered every semester
6. Completing graduation requirements and courses required for their academic program
7. Meeting requirements of any scholarship programs for which they may be eligible
8. Exploring transferability of courses; enrolling in courses that meet their desired transfer institution's academic program requirements.

Midlands Technical College's online Advisement Manual ([midlandstech.edu/advisement](http://midlandstech.edu/advisement)) has many academic program planning tools for students and Advisors.

## REGISTRATION FOR CLASSES

Registration begins approximately one week after midterm of the preceding term and is designed to establish student/advisor rapport in a relaxed environment and to allow students to complete the registration process in a nonstressful time frame. After acceptance to the college, new and readmitting students are notified by the Admissions Office to meet with their advisors to discuss academic progress and select courses. For online information about registration, go to [midlandstech.edu/records](http://midlandstech.edu/records).

Students who have been given program plans by their advisors may self-schedule in the college's Online Services centers, or via the Internet, if they have been approved by their advisor for online registration. After advisement, students should register for courses. Registering early in the registration period provides students a better choice of class schedule options.

To secure seats in selected classes, students must pay fees by the fee payment deadline stated in the Registration Guide. Students enrolling in Midlands Technical College for the first time must pay a one-time enrollment fee of \$25. Students who have not paid tuition and fees or have not had their financial aid processed by the published deadline dates will have their schedules deleted and must reschedule courses during Late/Extended Registration.

Extended Registration is held just before the beginning of each semester. Students are assessed a late fee and should be aware that many courses will no longer be available. The college strongly encourages students to register and pay tuition and fees before the end of the regular registration period.

Enrolled students may change their class schedules during the published schedule change dates. Students are responsible for work covered from the first day of classes, and any classes missed are counted as absences.

The Registration Guide provides more detailed information about registration including deadlines and fees. The Registration Guide is available from the Student Information Center at (803) 738-8324. Go to [midlandstech.edu](http://midlandstech.edu) to view current course listings.

## REGISTRATION FOR COLLEGE EMPLOYEES AND SENIOR CITIZENS

Full-time college employees in permanent positions and senior citizens ages 60 or above may take course(s) on a space-available basis and receive a waiver of tuition for all or a portion of their tuition, provided academic eligibility and citizenship/legal presence requirements are met. Midlands Technical College is in full compliance with the SC Illegal Immigration Reform Act (section 59-101-430 of the South Carolina Code of Laws, As Amended).

Admission, placement testing and other college requirements apply. First-time enrollment and student fees also apply to senior citizens. First-time enrollment fees are required for college em-

ployees. Course dates and times are published on the college's website. Information on registration processes may be obtained from the Student Information Center at (803) 738-8324.

## **REGISTRATION FOR COURSE AUDITS**

Students wanting to audit a course may do so on a space available basis two days after late registration. Course tuition and applicable fees apply. Students do not receive grades for audited classes.

## **STANDARDS FOR ACADEMIC PROGRESS**

(Standards of progress for financial aid are online and under the section on Student Financial Services.)

To remain in good standing, students pursuing a degree, diploma or certificate who are enrolled in regular curriculum classes must maintain a minimum credit hour grade point average (GPA) of 2.0.

Students who fail to earn a GPA of 2.0 will be placed on probation during the next term in which they enroll in the college. Some programs require higher GPAs each term to remain in good standing. Students on probationary status who do not earn a GPA of 2.0 will be suspended from the college the term following probation. Those who earn a GPA of 2.0 will be removed from probationary status. Students on probation or warning are advised to discuss their academic situation with their advisor, seek additional supportive resources such as the Academic Success Centers and Counseling Services as needed, and take reduced course loads until performance improves. It is also recommended that the student enroll in College Skills (COL 103) or Personal and Career Assessment (IDS 102) unless the student has already successfully completed both courses. Students who are returning from academic suspension must enroll in College Orientation (COL 101). COL 101 may also be required for students who have not met standards of academic progress for financial assistance.

Students on probationary status who do not earn the required GPA will be suspended from the college for the term following probation. Students on academic suspension are ineligible to enroll for college credit courses for one semester. Students returning from suspension will continue on probation and all probationary procedures will apply during this term. Those who earn the required GPA will be removed from probationary status.

Students who achieve a GPA of at least 2.0 for the probationary term but whose cumulative GPA remains below 2.0 will remain on probation for one additional term. By the end of the second probationary term, students who achieve a GPA of at least 2.0 for the term but whose cumulative GPA remains below 2.0 will stay on probation for one additional term. By the end of the third probationary term, the cumulative GPA must reach at least 2.0 or the student will be suspended, unless the term GPA is 2.5 or higher.

Students on probation may not serve in college-wide elective offices or be appointed to any administrative or social committees during the probationary period.

Students enrolled in Developmental Studies (DVS) or enrolled in both DVS and curriculum courses must meet standards of academic progress as defined below. Additional standards of progress are required of financial aid applicants based on the type of aid received. Please contact the Student Financial Services Office or refer to the Student Financial Aid website at [midlandstech.edu](http://midlandstech.edu) for a copy of satisfactory academic progress standards for financial aid.

## **Developmental Studies Standards of Progress**

Students enrolled in zero-level courses only must receive grades of A, B or C in at least half of their courses to remain in good standing.

DVS students who do not meet this requirement will be placed on probation during the next term in which they enroll in the college.

Students enrolled in zero-level courses only who are on probation and who do not earn grades of A, B or C in at least half of their courses will be suspended from the college the term following probation. Those who do earn grades of A, B or C in at least half of their DVS courses will be removed from probationary status.

Students taking both zero-level and curriculum courses must earn a GPA of at least 2.0 as outlined above and pass at least half of their courses.

Students who do not meet both of these requirements will be placed on probation during the next term in which they enroll in the college. All probationary guidelines as outlined in the Standards for Academic Progress will apply.

Students on probation who do not earn a GPA of at least 2.0 or who do not earn grades of A, B or C in at least half of their DVS courses will be suspended from the college during the term following probation. Those who earn a GPA of at least 2.0 and earn grades of A, B or C in at least half of their DVS courses will be removed from probationary status.

Special advisement/counseling sessions will be available to students on probation.

## **CLASS ATTENDANCE**

Midlands Technical College expects students to attend all scheduled instructional activities. At a minimum, students in all curriculum and Developmental Studies courses must be present for at least 75 percent of their scheduled classes and laboratory meetings to receive credit.

With the approval of the academic vice president, individual departments may set attendance requirements that are more stringent than those stated above.

The specific requirements of a course will be published in course syllabi. Faculty of the college may grant exceptions to the class attendance policy on an individual case basis when students face extenuating circumstances beyond their personal control, such as extended illness, family illness or death, or other personal crisis.

Students must meet all academic requirements to receive a passing grade, regardless of any exceptions made to the attendance policy.

Students may appeal a faculty member's decision on absences to the Department Chair, or as outlined under the Student Grievance Procedure. (See "Students Grievance Procedure" in the *Student Handbook*.)

## **CLASSIFICATION OF STUDENTS**

*Full-Time* - A student scheduled for a minimum of 12 credit hours or 360 clock hours.

*Part-Time* - A student scheduled for less than 12 credit hours or less than 360 clock hours.

*Freshman* - A student has earned up to 29.99 credit hours.

*Sophomore* - A student who has earned 30 or more credit hours.

## **CHANGE OF ACADEMIC MAJOR**

Students who are uncertain about their future program of study are encouraged to set up an appointment with a counselor in Counseling and Career Services to discuss relevant program

options. MTC students who need to change their “major” or program of study, or students who need to add an additional “major” (sometimes referred to as a “minor”) may do so by logging in to their MyMTC account.

### **Exceptions to the Change of Major Process**

1. International students with an F-1 status should complete the Change of Major/Minor form and meet with the International Student Admissions Coordinator. This advisor will check the student’s eligibility for the new major, review other pertinent information and discuss implications the requested change may have with relation to the student’s visa status. The International Student Admissions Coordinators will approve or disapprove the request and send it to Counseling Services to be archived. Approved requests will be changed in the college database and in the Student and Exchange Visitor Program database (SEVIS).
2. Nursing and Health Sciences (NHS) students who have their final interview eligibility waived by the program director, who meet the required NHS program admission criteria at the level required for interview eligibility, or who have an approved interview results form submitted by the Health Sciences program coordinator of the program for which they are applying, will have their change of Major/Minor automatically completed by the Admissions Coordinator for Health Sciences or Nursing and forwarded to the Student Records office.
3. Students seeking a specialized Associate in Occupational Technology (AOT) degree should complete an AOT contract with their advisor. The advisor will forward the original copy of the contract to the Registrar’s office, where the students’ major will be officially changed.

Students should be aware that program changes may significantly affect educational and career goals, and credits earned under one major may not necessarily apply to the new major. The cumulative GPA will reflect all courses taken.

Students who are receiving benefits under a student assistance program (student financial aid, veteran’s benefits or Workforce Investment Act (WIA)) and international students should contact the appropriate office to determine how this change will affect them since these programs have specific guidelines and restrictions concerning changes of academic major.

## **EXAMINATION POLICY**

Students are expected to take final examinations, which are held during a designated period at the close of fall, spring and summer terms. Faculty will administer examinations of individual courses within the published schedule. Any makeup of final examinations will be at the discretion of individual faculty.

## **GRADING POLICIES**

Students may go online at [midlandstech.edu](http://midlandstech.edu) to view their grades through MyMTC (click on transcript). If an official paper copy is required, students may go to the Student Records Office on either campus and present an I.D. Students may also go to [midlandstech.edu/records](http://midlandstech.edu/records), download the Grade Mailer Request Form and fax the completed form to (803) 738-7880.

If an error is suspected in the reported grades, students must notify the faculty member involved within one calendar term after the term in which the grade was issued. Failure to initiate and complete processing within the specified time will disqualify students from further consideration of a grade change.

The Midlands Technical College grading system is as follows:

- A Superior – 4 quality points
- B Above Average – 3 quality points
- C Average – 2 quality points
- D Below Average – 1 quality point
- F Failure – computed in grade point average as zero (0) quality points
- W Withdrew
- WF Withdrew, Failing After Midterm – computed in grade point average as zero (0) quality points
- I Incomplete – must be made up within one term
- AU Audit – no credit
- E Exempted from the Course
- TR Transfer – earns credit hours, generates no grade points
- NC No Credit – for students in designated courses

Grades for zero-level courses (e.g., ENG 035) are NOT calculated into students' overall GPAs. Continuing Education grades also are not calculated into students' overall GPAs.

## **WITHDRAWAL FROM THE COLLEGE OR COLLEGE COURSES**

Students must officially withdraw in order to obtain a refund and not be held responsible for coursework. Payment is required if a student registers for a course and does not officially withdraw, even if the student does not attend classes. Students are billed for all registered classes and the debt will be processed through the college's collection procedures if payment is not received. Students needing to withdraw from a course or courses must complete a Drop/Add/Withdrawal form and submit it to the Student Records Office. This form is available from the Student Records Office or online at [midlandstech.edu/records](http://midlandstech.edu/records). You may fax the completed form to (803) 738-7880. The date received in the Student Records Office is the effective date for the form. Web-enabled students withdrawing online during the published schedule change period do not need to complete the Drop/Add form. After the published schedule change period, all student withdrawals must be processed through the Student Records Office. Withdrawal through the fifth day of Fall and Spring semesters and the third day for the Summer term is considered a "drop" and will not show on the official transcript. Withdrawal from the sixth day of the term for Fall or Spring or from the fourth day of a Summer term through midterm will result in a grade of "W." Students who withdraw after midterm will receive a grade of "W" if passing the course at the time of withdrawal or a grade of "WF" if failing the course on the date last attended. The grade of "W" or "WF" will be assigned by the course instructor at the end of the term. Students should discuss their withdrawal plans and the grade they will receive with their instructor(s) prior to withdrawal. Counselors are also available to assist with personal concerns.

Students may be administratively withdrawn by the faculty member if they have exceeded the number of allowed absences from the class. These students are not eligible for refunds because the students have not submitted a Drop/Add/Withdrawal form. Administrative withdrawal for disciplinary purposes or extenuating circumstances may be initiated by the Vice President for Student Development Services or the Vice President's designee.

International students in visa category F-1 must consult the international admissions coordinator before dropping any classes.

It is important that students who anticipate withdrawing from a course or courses investigate the impact of this withdrawal with the appropriate college office. Changes in course loads

can affect financial aid, veteran's benefits, Workforce Investment Act (WIA) and other enrollment-related financial situations. In addition, courses in some academic programs are sequenced and scheduled at specific times during the year. Withdrawal from these courses often lengthens the time required for students to complete an academic program of study. Students are strongly encouraged to discuss the impact of the withdrawal on program time with an academic advisor.

## HONORS POLICY

### Graduation Honors

*Associate Degree with High Honors* – This honor is awarded to associate degree recipients who have a cumulative grade point average of 3.8-4.0.

*Associate Degree with Honors* – The honor is awarded to associate degree recipients who have earned a cumulative grade point average of 3.5-3.79.

*Certificate/Diploma with Honors* – This honor is awarded only to certificate and diploma recipients who have earned a cumulative grade point average of 3.5 or above in at least two semesters of work at the college.

### Academic Honors

To be eligible for Academic Honors, students must be pursuing a degree, diploma or certificate and receive no grades of "I", "NC" or "WF" during the term. Grades for zero-level courses (MAT 032 and 010, ENG 035 and 010 and RDG 010) are not included in the calculation of GPA or the required credit hours for academic honors.

*President's List* – Each semester, students who earn a 4.0 grade point average in at least 12 credit hours (excluding zero-level courses) attempted at Midlands Technical College will be placed on the President's List for that term and given appropriate recognition.

*Scholars' List* – Each semester, students who earn a 3.5-3.99 grade point average in at least 12 credit hours (excluding zero-level courses) attempted will be placed on the Scholars' List for that term and given appropriate recognition.

*Part-Time Student Honor Roll* – Each semester, students who earn a 3.8 grade point average or above in at least three credit hours but no more than 11 credit hours (excluding zero-level courses) will be placed on the Part-Time Student Honor Roll and given appropriate recognition.

At the end of each term, the Student Records Office will identify students eligible for the President's List, the Scholar's List and the Part-Time Student Honor Roll and will mail certificates by the fifth week of the following term.

## HONORS SOCIETY

Midlands Technical College seeks to challenge all students to achieve their fullest potential and to provide continued extracurricular stimulation for those who are exceptional achievers.

*Phi Theta Kappa* is an international honor society for community college students. Students in associate degree programs who have earned 12 credit hours of college level work, who have cumulative GPAs of 3.5 or higher and who are nominated by their faculty will be eligible to join Phi Theta Kappa. Midlands Technical College sponsors the Alpha Eta Kappa chapter of Phi Theta Kappa. More information is available on the Midlands Technical College Phi Theta Kappa website at [midlandstech.edu/ptk](http://midlandstech.edu/ptk).

*MTC Ambassador Assembly* is an honor/volunteer organization of outstanding students selected to represent MTC at college and community events. Members are selected on the basis of academic performance and extracurricular activities. Detailed information can be obtained on the MTC Ambassador Assembly website at [midlandstech.edu/ambassadors](http://midlandstech.edu/ambassadors).

*National Technical Honor Society* - Midlands Technical College recognizes outstanding students enrolled in Career Programs majors through membership in the National Technical Honor Society (NTHS). After completing 12 semester hours in college-level coursework with a 3.0 GPA, students are eligible to seek faculty recommendations for induction into the NTHS. Specific information is available on the NTHS website at [midlandstech.edu/nths](http://midlandstech.edu/nths).

## REPEAT GRADE POLICY

When a course is repeated, all grades will be entered on the student's permanent academic record. For 100- and 200-level courses, the higher of the two grades will be included in the grade point average. If the repeated course has a different prefix and/or number, the student must complete a Repeat Course form, which is available from the Student Records Office under GPA recalculation for repeated courses or online at [midlandstech.edu/records/addinfo4.html](http://midlandstech.edu/records/addinfo4.html).

Certain departmental requirements may limit the number of times a course may be repeated.

Students who plan to transfer must realize the receiving college may recalculate grade point averages, including repeat grades, according to that college's policies.

Students receiving financial aid should know that all coursework attempted will be calculated in assessment of academic progress standards for student financial aid purposes.

## SEMESTER CREDIT HOUR REQUIREMENTS

Midlands Technical College offers courses on a semester calendar. All requirements in this catalog are based on semester credit hours. Students who attended Midlands Technical College prior to the summer 1992 term must carefully check with their advisors to match the previous quarter hour requirements with new semester hour requirements.

## GRADUATION REQUIREMENTS

All students who expect to receive a degree, diploma or certificate from Midlands Technical College must complete all of the following requirements. Specific course requirements for each major are defined later in this catalog.

### General Requirements

Regardless of the level of award, all students must meet the following requirements:

1. Satisfactory completion of all general education requirements and all academic major requirements specified for the award.
2. Completion of all program credit hours.
3. Completion of all academic course credit with a minimum of a cumulative 2.0 grade point average (GPA). In addition, certain programs may require higher GPAs in selected courses.
4. Fulfillment of all financial obligations to the college.
5. All proper applications for graduation must be completed by currently enrolled students during the term they plan to complete their academic requirements. The application due date is published online at the Midlands Technical College website, [midlandstech.edu/records](http://midlandstech.edu/records), in the *Student Activities Calendar*, and the *Registration Guide*. The college may certify a student as a graduate if the student has met all graduation requirements.

## Associate Degree Requirements

1. General education core requirements are spelled out by each degree program (major). Programs may use different courses to meet general education core requirements. All of these courses are designed to prepare associate degree recipients to demonstrate the following knowledge, skills and expertise:

*Communication Skills* – Graduates should be able to generate and comprehend written and oral communication that is appropriate for a variety of audiences, purposes and subjects.

*Mathematics* – Graduates should be able to understand and apply computational skills, quantitative reasoning and symbolic reasoning to evaluate and solve problems systematically.

*Scientific Reasoning* – Graduates should understand and be able to use scientific methodologies and principles.

*Individual and Social Behavior* – Graduates should understand factors that influence behavior. They should recognize the complex and dynamic nature of human actions and experience.

*Computer Literacy Skills* – Graduates should possess the computer skills to locate, retrieve and synthesize data so as to create a document or presentation appropriate to the area of study.

*Information Literacy* – Graduates should be able to recognize a need for information, access the information effectively and efficiently using various mediums, critically select and evaluate information and incorporate it into their knowledge base, and present information in an appropriate format.

*Humanities* – Graduates should understand the diversity of our cultural heritage and the effects of artistic or philosophical influences.

A minimum of 15 credit hours must be taken in general education courses.

In addition to these education core competencies, the faculty and staff of Midlands Technical College believe in the worth and dignity of each individual and seek to support student development in the following areas:

*Ethics* – the understanding through study and example that ethics and ethical behavior are an essential part of the process of higher education and professionalism in the workplace.

*Problem solving and critical thinking* – the ability to use logic, creativity, and reasoning to solve problems, to make decisions, and to evaluate their implications.

*Teamwork* – understanding the rights and responsibilities of participation in a collective activity, the social processes that shape the individual and society in a global context, and the social behaviors associated with effective relationships.

*Technology literacy appropriate to the area of study* – the ability to select from a variety of common technological applications and adapt them to challenging new situations.

*Global awareness* – the ability to understand the history, culture, and arts of a non-Western civilization

*Environmental awareness* – be environmentally literate with an awareness and understanding of how to be ecologically responsible citizens.

2. Earn a minimum of 25 percent of the program course work in residence at Midlands Technical College and be in attendance the term the award is conferred, unless an exception is approved by the department chair.
3. Complete all other degree requirements.

## Diploma Requirements

1. Complete at least eight semester hours in approved general education courses. These courses are specified by the program.
2. Earn a minimum of 25 percent of the program course work in residence at Midlands Technical College and be in attendance the term the award is conferred, unless an exception is approved by the department chair.
3. Complete all other diploma requirements.

## Certificate Requirements

1. Each program contains specific requirements for graduation. Students should consult their certificate program advisor.
2. Earn a minimum of 25 percent of the program course work in residence at Midlands Technical College.

## TRANSFER: STATE POLICIES AND PROCEDURES

The Commission on Higher Education for the State of South Carolina coordinates post-secondary education in publicly supported institutions, including policies and procedures for students and their course credits transferring among these institutions. The Commission has established transfer policies and procedures that all public institutions must follow. These procedures are published below.

### Procedures

The chief transfer officers at Midlands Technical College are located in RO 101 on Airport Campus (803-822-3344; fax 803-822-3422) and in WM 403C on Beltline Campus (803-738-7748; fax 803-738-7857). These officers administer the transfer degree programs of Associate in Arts and Associate in Science, and coordinate the advising of transfer students. All students may consult the College Transfer Credit Guide in these offices.

A student enrolled in a program other than the Associate in Arts (AA) or Associate in Science (AS) should consult the department chair of his/her program of study or the chair's designee for questions concerning transfer of courses into that program's curriculum.

For further information regarding transfer, students may access the Commission on Higher Education's website at [che400.state.sc.us](http://che400.state.sc.us) or Midlands Technical College's website, [midlandtech.edu](http://midlandtech.edu).

1. The Statewide Articulation Agreement of 86 courses already approved by the South Carolina Commission on Higher Education for transfer from two- to four-year public institutions shall be applicable to all public institutions, including two-year institutions and institutions within the same system. In instances where an institution does not have synonymous courses to ones on this list, it will identify comparable courses or course categories for acceptance of general education courses on the statewide list.

### Admissions Criteria, Course Grades, GPAs, Validations

2. All four-year public institutions will issue annually in August a transfer guide covering at least the following items:
  - A. The definition of a transfer student and requirements for admission both to the institution and, if more selective, requirements for admission to particular programs.
  - B. Limitations established by the institution or its programs for acceptance of standardized examinations (e.g., SAT, ACT) taken more than a given time ago, for academic coursework taken elsewhere, for coursework repeated due to failure, for

coursework taken at another institution while the student is academically suspended at his/her home institution, and so forth.

- C. Institutional and, if more selective, programmatic maximums of course credits allowable in transfer.
  - D. Institutional procedures used to calculate student applicants' GPAs for transfer admission. Such procedures will describe how nonstandard grades (withdrawal, withdrawal failing, repeated course, etc.) are evaluated; and they will also describe whether all coursework taken prior to transfer or just coursework deemed appropriate to the student's intended four-year program of study is calculated for purposes of admission to the institution and/or programmatic major.
  - E. Lists of all courses accepted from each technical college (including the 86 courses in the Statewide Articulation Agreement) and the course equivalences (including "free elective" category) at the home institution for the courses accepted.
  - F. Lists of all articulation agreements with any public South Carolina two-year or other institution of higher education, together with information about how interested parties can access these agreements.
  - G. Lists of the institution's transfer officer(s) and personnel, together with telephone and fax numbers, office address, and email address.
  - H. Institutional policies related to "academic bankruptcy" (i.e., removing an entire transcript or parts thereof from a failed or underachieving record after a period of years has passed) so that re-entry into the four-year institution with course credit earned in the interim elsewhere is done without regard to the student's earlier record.
  - I. "Residency requirements" for the minimum number of hours required to be earned at the institution for the degree.
3. Coursework (individual courses, transfer blocks, statewide agreements) covered within these procedures shall be transferable if the student has completed the coursework with a "C" grade (2.0 on a 4.0 scale) or above, but transfer of grades does not relieve the student of the obligation to meet any GPA requirements or other admission requirements of the institution or program to which application has been made.
    - A. Any four-year institution that has institutional or programmatic admissions requirements for transfer students with cumulative grade point averages (GPAs) higher than 2.0 on a 4.0 scale will apply such entrance requirements equally to transfer students from regionally accredited South Carolina public institutions regardless of whether students are transferring from a four-year or two-year institution.
    - B. Any multicampus institution or system shall certify by letter to the Commission that all coursework at all of its campuses applicable to a particular degree program of study is fully acceptable in transfer to meet degree requirements in the same degree program at any other of its campuses.
  4. Any coursework (individual courses, transfer blocks, statewide agreements) covered within these procedures shall be transferable to any public institution without any additional fee and without any further encumbrance such as a "validation examination," "placement examination/instrument," "verification instrument," or any other stricture, notwithstanding any institutional or system policy, procedure or regulation to the contrary.

### **Transfer Blocks, Statewide Agreements, Completion of the AA/AS Degree**

5. The following transfer blocks/statewide agreements taken at any two-year public institution in South Carolina shall be accepted in their totality toward meeting baccalaureate de-

gree requirements at all four-year public institutions in relevant four-year degree programs, as follows:

- Arts, Humanities and Social Sciences: Established curriculum block of 46-48 semester hours
  - Business Administration: Established curriculum block of 46-51 semester hours
  - Engineering: Established curriculum block of 33 semester hours
  - Science and Mathematics: Established curriculum block of 51-53 semester hours
  - Teacher Education: Established curriculum block of 38-39 semester hours for Early Childhood, Elementary and Special Education students only. Secondary Education majors and students seeking certification who are not majoring in teacher education should consult the Arts/Humanities/Social Sciences or the Math and Science transfer blocks, as relevant, to assure transferability of coursework.
  - Nursing: By statewide agreement, at least 60 semester hours will be accepted by any public four-year institution toward the baccalaureate completion program (BSN) from graduates of any South Carolina public associate degree program in nursing (ADN), provided that the program is accredited by the National League of Nursing and that the graduate has successfully passed the National Licensure Examination (NCLEX) and is a currently licensed registered nurse.
6. Any “unique” academic program not specifically or by extension covered by one of the statewide transfer blocks/agreements listed in #4 above must either create its own transfer block of 35 or more credit hours with the approval of CHE staff or will adopt either the Arts, Humanities and Social Sciences or the Science and Mathematics block. The institution at which such program is located will inform the staff of the CHE and every institutional president and vice president for academic affairs about this decision.
7. Any student who has completed an AA or AS degree program at any public two-year South Carolina institution that contains within it the total coursework found in either the Arts, Humanities and Social Sciences transfer block or the Science and Mathematics transfer block will automatically be entitled to junior-level status or its equivalent at any public senior institution to which the student might have been admitted.

### **Related Reports and Statewide Documents**

8. All applicable recommendations found in the Commission’s report to the General Assembly on the School-to-Work Act (approved by the Commission and transmitted to the General Assembly on July 6, 1995) are hereby incorporated into the procedures for transfer of coursework among two- and four-year institutions.
9. The policy paper entitled State Policy on Transfer and Articulation, as amended to reflect changes in the numbers of transfer blocks and other Commission action since July 6, 1995, is hereby adopted as the statewide policy for institutional good practice in the sending and receiving of all course credits to be transferred.

### **Assurance of Quality**

10. All claims from any public two- or four-year institution challenging the effective preparation of any other public institution’s coursework for transfer purposes shall be evaluated and appropriate measures shall be taken to re-ensure that the quality of the coursework has been reviewed and approved on a timely basis by sending and receiving institutions alike. This process of formal review shall occur every four years through the staff of the Commission on Higher Education, beginning with the approval of these procedures.

## Statewide Publication and Distribution of Information on Transfer

11. The staff of the Commission of Higher Education shall print and distribute copies of these Procedures upon their acceptance by the Commission. The staff will also place this document and the Appendices on the Commission's website under the title "Transfer Policies."
12. By September 1 of each year, all public four-year institutions will place the following material on their website:
  - A. a copy of this entire document.
  - B. a copy of the institution's transfer guide.
13. By September 1 of each year, the staff of the State Board for Technical and Comprehensive Education will:
  - A. Place a copy of this entire document on its website.
  - B. Provide to the Commission staff, in format suitable for placing on the Commission's website a list of all articulation agreements that each of the 16 technical college's has with public and other four-year institutions of higher education, together with information about how interested parties can access those agreements.
14. Each two-year and four-year public institutional catalog shall contain a section entitled "Transfer: State Policies and Procedures." Such sections at a minimum will:
  - A. Publish these procedures in their entirety.
  - B. Designate a chief transfer officer at the institution who will:
    - provide information and other appropriate support for students considering transfer and recent transfers
    - serve as a clearinghouse for information on issues of transfer in the State of South Carolina
    - provide definitive institutional rulings on transfer questions for the institution's students under these procedures
    - work closely with feeder institutions to ensure ease in transfer for their students
  - C. Designate other programmatic transfer officer(s) as the size of the institution and the variety of its programs might warrant.
  - D. Refer interested parties to the institutional Transfer Guide.
  - E. Refer interested parties to the institutional and Commission on Higher Education's websites for further information regarding transfer.
15. In recognition of its widespread acceptance and use throughout the United States, SPEEDE/EXPRESS should be adopted by all public institutions and systems as the standard for electronic transmission of all student transfer data.
16. In collaboration with the colleges and universities, MTC is part of a statewide Transfer Equivalency Database. As an electronic counseling guide, this computerized, online instrument will allow students and advisors to access all degree requirements for every major at every public four-year institution in South Carolina. The database will also allow students to obtain a better understanding of institutional programs and program requirements and select their transfer courses accordingly, especially when the student knows the institution and the major to which he/she is transferring. The database is located at [sctrac.org](http://sctrac.org).

## Development of Common Course System

17. Adopt a common statewide course numbering system for common freshman and sophomore courses of the technical colleges, two-year regional campuses of the University of South Carolina, and the senior institutions.
18. Adopt common course titles and descriptions for common freshman and sophomore courses of the technical colleges, two-year regional campuses of the University of South Carolina, and the senior institutions. The Commission will convene statewide disciplinary groups to engage in formal dialogue for these purposes.

(A common course numbering system and common course titles and descriptions for lower-division coursework at all public institutions in the state can help reduce confusion among students about the equivalency of their two-year coursework with lower-division coursework at the four-year level. A common system will leave no doubt about the comparability of content, credit and purpose among the lower-division courses at all public colleges and universities in South Carolina. It would also help eliminate institutional disagreement over the transferability of much lower-division coursework, thus clearing a path for easier movement between the technical colleges and senior institutions.)

## ARTICULATION AND TRANSFER

Midlands Technical College is committed to working closely with public and private high schools to ensure students have the preparation they need to enter Midlands Technical College and to succeed in the programs of their choice. The college also works with other institutions of higher education to facilitate students' transfer of credits both into Midlands Technical College and from Midlands Technical College to other colleges.

Students wishing to transfer from Midlands Technical College to another college should contact that college for information about transferability of credits. Because the transfer of credits is always the decision of the receiving institution, Midlands Technical College cannot guarantee transfer of its courses, but articulation agreements are generally accurate guidelines for students.

Applicability and time limitations on transfer coursework will be determined at the receiving institution by the appropriate program's department chair or designee.

Students wishing to transfer to Midlands Technical College from another college should request that all previous colleges attended submit official transcripts to the Admissions Office. Midlands Technical College is capable of sending and receiving transcripts electronically. Students should request transcripts in electronic form, if available.

Although the Associate in Arts and the Associate in Science programs are the designated programs for students planning to transfer to other colleges and universities, there are articulation agreements through other majors including Criminal Justice, Early Care and Education, Human Services, Engineering, Nursing and Health Sciences. Students should check with their program advisor about these agreements.

### MTC Bridge Programs

Midlands Technical College Bridge Programs provide opportunities for students to successfully transfer to selected four-year colleges and universities. Students planning to pursue a baccalaureate degree at a college with which Midlands Technical College has a Bridge Program agreement may participate in activities and special events at the partner college in addition to receiving information on admissions, financial aid, scholarships, and support programs.

Students may either complete the Associate in Arts or Associate in Science degree before transferring to the bridge partner college or complete a minimum of 30 semester hours of curricu-

lum-level coursework at MTC prior to transferring. In any case, students must meet the minimum GPA requirement for the academic program to which they are transferring.

Current Bridge partners include Benedict College, Claflin University, Columbia College, Lander University, Newberry College and the University of South Carolina. For more information regarding Midlands Technical College's Bridge partners, visit [midlandstech.edu/bridge](http://midlandstech.edu/bridge).

## **RELEASE OF STUDENT INFORMATION**

The Family Educational Rights and Privacy Act of 1974, as amended, prescribes the conditions under which information about students can be released. It is the policy of Midlands Technical College to follow those guidelines to protect the privacy of students. The following student rights are covered by the Act and afforded to all eligible students of the college:

1. The right to inspect and review information in the student's educational records.
2. The right to request amendment of the contents of the student's educational records if believed to be inaccurate, misleading or otherwise in violation of the student's privacy or other rights.
3. The right to prevent disclosure without consent, with certain exceptions, of personally identifiable information from the student's informational records.
4. The right to secure a copy of the college's policy.
5. The right to file complaints with the US Department of Education concerning alleged failures by the college to comply with the provisions of the Act.

Each of these rights, with any limitations or exceptions, is explained in the college's policy statement, which may be received from the Registrar's Office.

The college may provide directory information in accordance with the provisions of the Act without written consent of an eligible student, unless that student requests in writing that such information not be disclosed. The following items are designed as directory information and may be released on any student for any purpose at the discretion of the college unless a written request for nondisclosure is on file: name, address, telephone listing, date and place of birth, enrollment, dates of attendance, participation in officially recognized activities and sports, weight and height of members of sports teams, the most recent previous institution attended, major field of study, and degrees and awards received.

Students who wish to request nondisclosure of the above items may complete a Nondisclosure Form available from the Student Records Office on either campus.

## **CAMPUS ENVIRONMENT**

Midlands Technical College intends to provide a campus environment conducive to learning and to the successful attainment of student goals. Respect for the rights of others, openness to new and different ideas, acceptance of individuals from diverse backgrounds and cultures, and belief in the worth and dignity of all people are encouraged. The Midlands Technical College Student Code reinforces this concept and outlines the rights and responsibilities of students.

### **Consumer Information**

Midlands Technical College complies with the Clery Act and Student Right to Know requirements. A copy of the college's Annual Security Report is available from the college's Student Information Centers and on the college website. The report is also published in the online student newspaper and sent to student email accounts. Information on the college's graduation

rates are available from the Office of Assessment, Research and Planning, posted on the college's website and sent to student and student applicant email accounts on an annual basis.

### **Drug-Free Campus Policy**

In accordance with the Drug Free Schools and Communities Act Amendments of 1989, Midlands Technical College has implemented a program to prevent the use of illicit drugs and the abuse of alcohol by students and employees.

College standards of conduct clearly prohibit the unlawful possession, use or distribution of illicit drugs and alcohol on college property or as part of any college activity. Sanctions up to and including expulsion, termination of college employment and referral for prosecution will be imposed for the violation of these standards. A complete description of the applicable legal sanctions, the associated health risks of alcohol and drug abuse, and the counseling, treatment and rehabilitation programs available to students is provided in the Midlands Technical College *Student Handbook*, which may be received from the Student Life Office or viewed online at the college's website.

### **Parking**

Students are not required to register their vehicles to park on campus property. All students may park in areas not reserved for permit only (faculty and staff), visitors, handicapped, loading zones, etc.

More specific information on traffic regulations is published online and in the *Student Handbook*.

### **Safety and Security**

Midlands Technical College complies with guidelines of the Environmental Protection Agency (EPA) and the Federal Occupational Safety and Health Act (OSHA) to ensure a safe environment. When necessary, personnel are required to wear protective equipment to prevent injury. The cost of equipment is listed under the specific curriculum in this catalog, or can be obtained from the bookstore. For the safety and security of the campus environment, MTC uses video surveillance on all of its campuses. In addition, Midlands Technical College adheres to the guidelines of the Campus Security Act. Campus Security information is available to all students and applicants at the Student Information Centers on Airport and Beltline campuses. In addition, campus security and crime information is available on the college's website, is published annually in the online student newspaper, online student newsletters and is sent to the college email addresses of all enrolled students.

### **Smoking and Tobacco Use**

In the interest of a healthier environment, the college prohibits smoking and tobacco use on its property, except in designated areas only. Wooden gazebos are available on all campuses for use by individuals who choose to smoke or use tobacco on campus.

### **Student Complaints**

As members of the academic community, students are entitled to all rights and responsibilities accorded them by the laws of this community. The process by which students may file grievances concerning harassment, discrimination and other matters or appeal academic decisions is outlined in the Midlands Technical College *Student Handbook*, which may be obtained from the Student Life Office or the college's website at [midlandstech.edu/studentlife](http://midlandstech.edu/studentlife).

### **Surveillance**

Midlands Technical College uses video surveillance on all of its campuses for safety and security purposes.

## **Disability Issues**

Midlands Technical College provides accommodations, as appropriate, to individuals who have documented disabilities. Students interested in receiving information about accommodations and services should contact a counselor in the Counseling and Career Services office. To ensure the quality and availability of services, the college requests students with disabilities notify Counseling Services of any special accommodation needs at least 10 working days prior to the first day of class. Information concerning registering to receive disability accommodations can be found on the Counseling and Career Services website at [midlandstech.edu/counseling](http://midlandstech.edu/counseling).

Students who are dissatisfied with services or accommodations for their disability should first seek to resolve the concern through the Disability Services Coordinator in the Counseling and Career Services Office. Appeal may then be made to the Director of Counseling and Career Services concerning unresolved issues. If the issue is still not resolved, the student may follow the student grievance procedure outlined in the Midlands Technical College *Student Handbook*.

## **English Fluency of Faculty Members**

When a student files a written complaint with the department chair regarding the English fluency of an instructor, the department chair will immediately alert the Vice President for Academic Affairs who shall refer the instructor within 10 working days to the English Fluency Evaluation Committee for a proficiency evaluation.

An instructor who is judged proficient by the committee will continue teaching assignments without any further action. If student complaints continue, however, or the supervisor determines a continuing fluency or communication problem exists, appropriate action can be initiated.

A permanent instructor judged deficient by the committee will be given one academic term to develop sufficient English fluency to be judged proficient by the committee. If, during the term, the instructor has not shown evidence of satisfactory progress in overcoming the deficiency, disciplinary action may be taken, up to and including termination.

An adjunct instructor judged deficient by the committee may be immediately terminated.

## **Student Conduct**

The college reserves the right to maintain a safe and orderly educational environment in keeping with the policy on campus environment. When in the judgment of officials a student's conduct disrupts or threatens to disrupt the college community, appropriate disciplinary action will be taken to restore and protect the well-being of the community. The purpose of the Student Code (complete policy and procedures are in the Student Handbook) is not to restrict student rights but to protect the rights of individuals in their academic pursuits.

## **MTC Honor Code**

Midlands Technical College is committed to the value of integrity. In support of this value and the development of student academic competence, the college has adopted the following honor code:

As a member of the Midlands Technical College community, I will adhere to the College's Student Code. I will act honorably, responsibly, and with academic integrity and honesty. I will be responsible for my own academic work and will neither give nor receive unauthorized or unacknowledged aid. I will behave courteously to all members of the MTC community and its guests and will respect college property and the property of others.

# General Information



# GENERAL INFORMATION

## CAMPUSES AND CENTERS

Midlands Technical College is a multicampus college serving Richland, Lexington and Fairfield county residents in South Carolina. The college operates six campuses: Airport Campus (West Columbia, in Lexington County), Batesburg-Leesville Campus (in Lexington County), Beltline Campus (Columbia, in Richland County), Harbison Campus (Irmo, in Lexington County) and Northeast Campus (Columbia, in Richland County). The college also operates the Fort Jackson Center located at the Army Continuing Education Center, Fort Jackson.

### **Airport Campus**

The Airport Campus is located on 65 acres on Lexington Drive in West Columbia. It was originally the training site for (Gen. Jimmy) “Doolittle’s Raiders” during World War II. Later it housed the South Carolina Area Trade School—Columbia Campus and the Columbia Technical Education Center. The campus now consists of 363,791 square feet of classroom, workshop, library, laboratory and support space. A 45,000-square-foot Student Center, which houses all of the student service functions plus the bookstore, cafeteria, and Student Commons, was completed in 1996. Construction was completed on a 56,000-square-foot Health Sciences and Nursing facility adjacent to the Student Center in 2001.

### **Batesburg-Leesville Campus**

In fall 2007, the college opened the Batesburg-Leesville Campus in western Lexington County. The campus, located on College Street in Batesburg-Leesville, is home to an 8,025-square-foot education facility that contains classrooms and labs, faculty and staff offices and student support space. Educational offerings at the campus include general education courses, and career, developmental and continuing education programs.

### **Beltline Campus**

The Beltline Campus, located at 316 South Beltline Boulevard in Southeast Columbia, was originally established in 1963 as the Richland Technical Education Center. The campus includes 11 facilities with 364,062 square feet on 22 landscaped acres. The 25,000-square-foot Student Center was completed in the fall of 1998 and a parking garage/automotive training facility of 117,000 square feet was completed in fall of 1999. In fall 2005, the Student Center was expanded, and a Precision Manufacturing facility was added.

### **Fairfield Campus**

The Fairfield Campus, located at 1674 Hwy 321 North Business in Winnsboro, SC, is a 10,600-square-foot facility with several classrooms and industrial bays. Programs offered at the site include MTC QuickJobs programs in areas such as healthcare, computer technology, office administration, and industrial technologies. Also offered are college preparation courses in English, math and other areas; as well as General Educational Development (GED®) courses and other workforce readiness programs.

### **Harbison Campus**

Harbison Campus, located on College Street in Irmo, opened its doors to students in September 1980. The 19 wooded acres and six buildings, consisting of 30,300 square feet, were generously donated by the Harbison Development Corporation. The campus was originally the site of Harbison Junior College, which closed in 1958. Today the campus offers credit courses, short courses, seminars, workshops and conferences to upgrade job skills and enhance pro-

fessional development. There are also a variety of noncredit programs for people who want to take courses for personal interest.

### **Northeast Campus**

In 1989, Midlands Technical College recognized that current and projected trends in enrollment growth would require a significant expansion of facilities. Studies initiated that year resulted in the eventual purchase, in December 1991, of 150 acres in the northeast sector of Richland County to serve a regional campus. The site is located adjacent to the Carolina Research Park at 151 Powell Road. The original Master Plan developed in 1992 utilized the entire 150-acre site to house 11 buildings comprised of 387,000 square feet. The college recognized that a more efficient layout of the Northeast Campus was possible. In 1999, the college developed a Master Plan that utilizes only 50 acres but still provides seven buildings with a total of at least 400,000 square feet. In 2003, the Northeast Campus was established with the construction of the 50,000-square-foot Center of Excellence for Technology. The facility specializes in information technology and advanced manufacturing training. This campus will likely expand with new initiatives centered on partnerships with business and industry.

### **Off-Campus Locations**

The Army Continuing Education Center at Fort Jackson offers credit programs.

Courses for dual credit are offered on-site at several local high schools in the college service area.

All off-campus instruction is delivered through the regular full-time faculty of the college and qualified part-time faculty. Staff, resources and facilities are carefully coordinated to provide off-campus students the best possible service.

## **COLLEGE HISTORY**

The present-day Midlands Technical College is the product of a rich and unique history. Never before had a public trade school, a public technical education center and a private junior college merged to form a comprehensive two-year technical/community college in South Carolina.

In 1947, the South Carolina Area Trade Schools (SCATS) Act established the South Carolina Area Trade School–Columbia Campus to provide skilled and educated workers to meet the expanding labor needs of the community. In 1969, the name was changed to Columbia Technical Education Center (TEC) and it became part of the State Committee for Technical Education, which was responsible for guiding the technical programs in the state. The site of the Columbia Technical Education Center is now the Airport Campus of Midlands Technical College.

Richland Technical Education Center (Richland TEC) was established in 1963 to address the need for specialized training for industrial growth, and the first students were enrolled in the fall of 1963. By 1969, the school's enrollment expanded to 1,200 students and Lexington County officials joined forces with Richland County to form the Richland-Lexington Counties Commission for Technical Education. With this partnership, the name of the school was changed to Midlands Technical Education Center (TEC).

Approximately 15,500 students were enrolled in Midlands Technical Education Center between the years 1969-1974. Major programs of study were offered in industrial and engineering technologies, business and allied health. The site of the Midlands Technical Education Center is now the Beltline Campus of Midlands Technical College.

Palmer College in Columbia, a private business college, joined with the State Board for Technical and Comprehensive Education in 1973. At that time, Palmer College annually enrolled 1,000 students in 16 associate degree and diploma programs. On March 21, 1973, the Colum-

bia Technical Education Center, Midlands Technical Education Center and Palmer College in Columbia merged to form a single, multicampus college. This new college operated as three separate entities governed by one local commission through June 1974. On July 1 of that year, the three separate institutions merged to form Midlands Technical College under the guidance of the Richland-Lexington Counties Commission for Technical Education.

Accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS), Midlands Technical College provides a variety of educational opportunities that support its mission of human resource development in support of economic development.

More than 100 associate degree, diploma and certificate programs of study are offered. A strong college transfer program has evolved to allow students the opportunity to take the first two years of a baccalaureate degree and transfer to one of the state's four-year institutions. Midlands Technical College is currently the largest feeder college to Columbia College and the University of South Carolina.

Midlands Technical College provides continuing education opportunities to more than 30,000 individuals annually and is the largest provider of noncredit professional upgrade training of any two-year college in the state. Off-campus sites provide college education classes to many residents.

More than 80 percent of MTC graduates who do not continue their education after graduation are employed in jobs related to their field of study. State-of-the-art equipment, a well-qualified faculty and staff, and hands-on experience give Midlands Technical College's students the high-quality education and training they need to successfully compete in the marketplace.

MTC's students are all ages — the average being 28 years old — and there are slightly more females (62%) than males. The college employs more than 570 people full-time, and most faculty (80%) have a master's degree or higher.

This 2012-2014 catalog attests to the Midlands Technical College tradition. The college's solid foundation in the past, together with the vision for excellence in the future, ensure citizens and students alike will be proud to call Midlands Technical College their college.

## PROGRAMS OFFERED

Midlands Technical College offers more than 120 different credit programs leading to associate degrees, diplomas and certificates. The table below summarizes these programs and indicates the campus (AC for Airport Campus, BC for Beltline Campus, HC for Harbison Campus, and OC for Off-Campus) where programs are offered.

All courses required for a program award are not guaranteed at all sites or in all time blocks. The college reserves the right to cancel courses when there is insufficient enrollment.

<u>PROGRAM</u>	<u>CAMPUS</u>
<b>Associate Degree Programs</b>	
Accounting	AC, BC
Administrative Office Technology	AC, BC
Architectural Engineering Technology	BC
Associate in Arts	AC, BC
Associate in Science	AC, BC
Automotive Technology	BC
Building Construction Technology	AC
Civil Engineering Technology	BC
Commercial Graphics	AC
Computer Technology	AC, BC

Criminal Justice Technology	AC, BC, OC (Fort Jackson)
Dental Hygiene	AC
Early Care and Education	AC, BC
Electronics Engineering Technology	BC
Engineering Transfer:	BC
Chemical Engineering	
Civil and Environmental Engineering	
Electrical Engineering	
Mechanical Engineering	
Computer Engineering	
Computer Science	
Computer Information Systems	
General Technology	AC, BC
Health Information Management	AC
Heating, Ventilation, Air Conditioning Technology	AC
Human Services	AC, BC
Machine Tool Technology	BC
Management	AC, BC, OC (Fort Jackson)
Marketing	AC, BC, OC (Fort Jackson)
Mechanical Engineering Technology	BC
Medical Laboratory Technology	AC
Network Systems Management	BC
Nursing (ADN)	AC
Paralegal	AC, BC
Physical Therapist Assistant	AC
Radiologic Technology	AC
Respiratory Care	AC
Telecommunications Systems Management	BC

### **Diploma Programs**

Air Conditioning/Refrigeration Mechanics	AC
Expanded Duty Dental Assisting	AC
Industrial Electricity/Electronics	BC
Machine Tool	BC
Pharmacy Technician	AC
Practical Nursing (PN)	AC
Surgical Technology	AC

### **Certificate Programs**

Advanced Computer Systems	BC
Advanced Manufacturing Automation	BC
Alternative Energy Technology Principles	BC
American Sign Language	HC
Applications Programming	AC, BC
Architectural Computer Graphics	BC
Architectural Design Technology	BC
Architectural Systems and Codes	BC
Automotive:	BC
Automotive Heating and Air Conditioning Repair	
Brake, Suspension and Steering Repair	
Drive Train Repair	
Electrical System Repair	

Engine Performance	
Engine Repair	
Basic Computer Maintenance	BC
Basic Electrical Wiring	BC
Basic Electronics	BC
Carpentry - Quality Framer	AC
Chemical Technology	BC
Child Care	AC, BC
Commercial Graphics:	AC
Electronic Publishing	
Offset Pre-Press Techniques	
Community Pharmacy Technician	AC
Computer-Aided Design	BC
Computer Systems Infrastructure	BC
Construction Engineering Technology	BC
Criminal Justice	AC, BC
Customer Service	AC, BC
Database Development	AC, BC
Digital Systems	BC
Early Childhood Development	AC, BC
Engineering Science	BC
English As a Second Language	BC
Enterprise	AC, BC
Entrepreneurship	AC, BC
Environmental and Economic Design	BC
Environmental Systems Technology	BC
Fundamentals of Robotics	BC
General Radiography	AC
Geographic Information Systems Technology	AC
Geomatics	BC
Gerontology	AC, BC
Heating/Ventilation/Air Conditioning/Refrigeration	AC
Help Desk	BC
Infant/Toddler	AC, BC
Information Systems Networking	BC
LAN Networking Systems	BC
Legal Administrative Assistant	AC, BC
Low Impact Land Development	BC
Machining	BC
Machine Tool:	BC
Bench Work/Lathe Operations	
Mechanical Process Technology	BC
Mechanical Systems Dynamics	BC
Mechanical Technology Fundamentals	BC
Medical Assisting	AC
Medical Office Administrative Assistant	AC
Medical Record Coder	AC
Networking Specialist	BC
Network Systems Technology	BC
Nuclear Medicine Technology	AC
Nuclear Systems Technology	BC
Office Support Specialist	AC, BC
Paralegal	AC, BC

Pre-Dental Hygiene	AC
Pre-Health Information Management	AC, BC
Pre-Health Care	AC, BC
Pre-Medical Laboratory Technology	AC, BC
Pre-Nursing	AC
Pre-Occupational Therapy Assistant	AC, BC
Pre-Physical Therapy Assistant	AC, BC
Pre-Respiratory Care	AC, BC
Routing and Network Configuration	BC
Special Needs	AC, BC
Structural Technology	BC
Telecommunications Electronics	BC
Telecommunications Infrastructure Servicing	BC
Web Design and Maintenance	AC
Welding Technologies I	AC

### **Cooperative Programs**

Biotechnology Laboratory Technician with Greenville Technical College	AC, BC
Dental Hygiene	AC
Medical Record Coder	AC
Pharmacy Technician	AC
Pre-Occupational Therapy Assistant (with Greenville and Trident Technical Colleges)	AC, BC

## **DISTANCE LEARNING**

Distance learning technology brings together students and instructors who are not in the same location. Midlands Technical College offers several different approaches to distance learning. The first approach is called computer-based courses. Students who are enrolled in a computer-based course use instructional CDs and a computer to view lectures. Students are required to read their course information online and follow orientation requirements and course guidelines. Textbooks and CDs for computer-based courses are available at the campus bookstores.

Broadcast classes are transmitted from a studio by satellite or compressed video to other classroom locations where students view the course on television. These courses allow for live conversation between the instructor and students, as well as interactions among students.

Midlands Technical College also offers courses taught through the Internet. Students who take these classes must have access to a personal computer and to the Internet. These classes are most appropriate for disciplined students who work independently and complete coursework on time. Students enrolled in an Internet course may be required to come to campus for an orientation session with their instructor. Textbooks for Internet courses are available at the bookstore on the campus where the orientation for the course is held.

Students with full schedules may find greater scheduling flexibility with courses distributed by different distance-learning delivery systems. Although courses taught through these delivery systems are challenging, students may consider them an attractive option.

## **TUITION**

Midlands Technical College offers one of the most economical opportunities for post-secondary education in South Carolina. Tuition and fees are set by the Midlands Technical College Commission within guidelines established by the South Carolina State Board for Technical and

Comprehensive Education. Tuition and fees are subject to change, by board action, without notice. In some instances, fees may be charged in addition to tuition.

Tuition is set on a sliding scale based upon the student's legal residence as defined in the Code of Laws of South Carolina, guidelines promulgated by the South Carolina Commission on Higher Education and the Midlands Technical College Commission. Those students who live in Richland and Lexington counties pay the lowest fees because part of their tax dollars funds the college. Other students from South Carolina pay a lower fee than out-of-state students because the college derives part of its support from state revenues. The college sets special tuition rates for military members and their dependents and for students from Fairfield County, depending on location and current county funding. Senior citizens may be eligible for tuition exemption provided they meet eligibility guidelines and courses are taken on a space-available basis.

### **Student Course Fees/Tuition (Per Term)**

An application fee is charged to all students applying to the college.

An enrollment fee is charged to all first-time students enrolling in the college. A student fee is assessed each semester to each student. A late registration fee is assessed to students who register after the end of fee payment deadline for each designated term. Fees are nonrefundable.

Tuition and fees are subject to change. Reference the MTC webpage on "Tuition and Fees" for the current amounts.

Tuition varies according to level of county funding.

Those students who fail to pay their fees during regular registration periods and are processed after this period will be assessed a *nonrefundable* fee for late registration.

Students are expected to meet all financial obligations when due. Accounts in excess of 90 days past due will be processed through the college's collection procedures. Should these collection efforts fail, the balance due will then be submitted to the SC Department of Revenue for the tax refund Debt setoff and GEAR process. Collection cost and charges, along with all attorneys' fees necessary for the collection of any debt to the college, may be charged to and paid by the debtor.

### **International Student Escrow Deposit**

International students accepted for admission will be required to deposit with the college's Finance Office a sum equal to two semesters' tuition and fees before being issued an I-20P.

International student course fees/tuition assessed at registration may be applied against the student's account.

Refunds from the escrow accounts of international students will not be made without the advance approval of the international admissions coordinator or the director of admissions.

Should an international student transfer to another college under approved Immigration and Naturalization Service procedures or return to his home country with no intention of returning to the college, the balance of the escrow account may be refunded to the student upon written request by the student and approval by the international admissions coordinator or the director of admissions.

### **Method of Payment**

Tuition and fees can be paid by cash, check, money order, MasterCard, VISA, Discover and American Express. A \$30 handling fee will be charged for dishonored checks. When a check is returned to the college the second time for insufficient funds, account closed, or stop payment, collection procedures will be implemented. Any or all of the above may re-

sult in the student being placed on a cash-only status, meaning checks will no longer be accepted as payment.

A student choosing to pay by any means other than cash must show positive identification.

Payments may be made online at [midlandstech.edu](http://midlandstech.edu), by mail, or in person, at any Cashier's Office.

Students may utilize the tuition management plan offered through Nelnet. Details may be obtained by selecting the make a payment, and Nelnet payment plan options online at [midlandstech.edu](http://midlandstech.edu).

## **Sponsorships**

An employer or other organization may have a sponsorship program to pay directly to Midlands Technical College a portion or all of student tuition, fees and/or books.

To ensure that classes are not deleted, submission of proper documentation to the Accounts Receivable Department, Reed Hall, Airport Campus, or the nearest cashier's office must be at least five business days before the end of fee payment deadline for each semester/term.

Bookstore charge allowances will be processed within three business days from receipt of documentation.

## **Books**

The cost of books varies among courses. The college bookstore staff will provide assistance in identifying the books needed and the price for those books. Textbook course and price information can also be accessed on the college course search website: [midlandstech.edu](http://midlandstech.edu).

## **Additional Costs**

There are additional costs for equipment for some programs such as tool kits for Automotive students, calculators for Engineering Technology students and uniforms and supplies for students in Nursing, Health Sciences and Industrial Technology programs. Information on additional costs for these programs and others may be received through the Student Information Center, an admissions counselor, the appropriate department or the college bookstore.

In most cases, these items are available in the campus bookstores. Some of these costs are described in the sections of this catalog dealing with curriculum programs.

# **REFUND PROCEDURE**

## *I. Institutional Refund Procedures*

All students must officially withdraw from classes in order to receive a full or partial refund. To officially withdraw, a student must complete a Drop/Add/Withdrawal Form and turn it in to the Student Records Office located on the Airport or Beltline campus. The Drop/Add/Withdrawal Forms may be obtained at the Student Information Centers and the Student Records Office on each campus.

Web-enabled students may officially withdraw via the web through the published schedule change period. After the published schedule change period, all student withdrawals must be processed through the Student Records Office.

Payment will be required if a student does not attend class(es) (no show) and does not officially withdraw. If payment is not received, students will be billed for classes and the debt will be processed through the college's collection procedures.

Refunds will take approximately 3-4 weeks to process. The amount of the refund will be based on the date the completed form is received by the Student Records Office, according to the Institutional Refund Schedule below. All fees are nonrefundable.

Withdrawal or Net Reduction of Credit Hours	Percent of Refund
1st - 5th instructional day of the term	100%
6th - 10th instructional day of the term	50%
11th - 15th instructional day of the term	25%
After 15th instructional day of the term	0%

Refunds for terms that vary in length from the semester term will be in proportion to the semester term refund schedule. Specific dates and percentages for each term are listed in the Registration Guide and on the Midlands Technical College website.

## II. *Refund for Cancelled Courses*

If the college cancels a course for any reason, enrolled students will automatically receive the appropriate refund, if due. No forms need to be completed by the student. Refunds may be expected after the end of the schedule change period.

## III. *Refund for Student-Initiated Course Change or Withdrawal*

Students wishing to drop/add/withdraw from a course or from the college should obtain and complete a Drop/Add/Withdrawal form. Through the published Schedule Change period, course drops may also be completed online by students who have been web-enabled. After this date, withdrawals must be processed through the Student Records Office. These forms are available from the Student Records Office. NOTE: International students on F-1 visas should contact the Student Records Office and the International Admissions Coordinator prior to dropping courses or withdrawing from classes.

Refunds due to a student as a result of withdrawal or dropping courses will be automatically calculated and mailed to the student's last known address or to the agency paying the fees within approximately three to four weeks from the date of the drop or withdrawal with the following exceptions:

## IV. *Federal Financial Aid Recipients*

Students who do not attend class(es) (no show) will need to officially withdraw within the appropriate refund period.

Students who receive federal financial aid will earn the entire award after 60 percent of the term has been completed.

### Partial Withdrawals

A credit balance for tuition refunds to federal financial aid recipients will not be issued until the student completes 60 percent of the term.

### Complete Withdrawals

Any student who completely withdraws prior to 60 percent of the term will owe a portion of tuition and fees to the college based on the length of time the student was enrolled. Immediate repayment may be required.

A student may also owe the federal government a portion of the federal funds disbursed. Immediate repayment may be required.

# Student Services and Activities



# STUDENT SERVICES AND ACTIVITIES

## BOOKSTORES

Bookstores are located at both the Airport and Beltline campuses. The bookstore can also be accessed on the Internet at [mtcbook.com](http://mtcbook.com). The bookstores stock required and recommended (new and used) textbooks for academic and continuing education courses. The bookstores sell reference books and a broad selection of school supplies including electronic items, art supplies, and computer, drafting, and graphics equipment. Medical supplies and kits, which are needed for all Nursing and Health Sciences programs, are available at the Airport Campus Bookstore. The bookstores also sell snack foods and beverages. Academic-priced computer software is available to all current students. A large selection of Nursing and Health Sciences reference books and Health Sciences apparel is available at the Airport Campus Bookstore. Class rings may be purchased on the bookstore website or at specified dates and times at either the Airport or Beltline campus.

## CAREERS

*(College Activities Reap Educational Experiences Resulting in Success)*

*CAREERS* is federally funded through a Perkins grant and is designed to help adults who lack job or educational experience but who demonstrate the ability and commitment to enter promising career fields. *CAREERS* offers both financial assistance with books or childcare and services to eligible participants. These services are for economically disadvantaged men and women in career and technical education credit programs. Special populations served by the grant include single parents, displaced homemakers, students with limited English proficiency, disabled students and students enrolled in nontraditional technologies (for example, females enrolled in engineering or males enrolled in nursing).

Activities are designed to enhance personal, professional and academic development, in an effort to assist adults in managing the multiple roles of student, family member and worker. Activities include: program orientation sessions, job shadowing, educator field studies/industry tours, and workshops.

Eligibility is determined by the following:

1. Students must have completed a Free Application for Federal Student Aid (FAFSA) and be receiving financial assistance through Student Financial Services (SFS). Financial need is used to determine eligibility.
2. Students must be enrolled in MTC credit programs leading to associate degrees, certificates or diplomas. Exceptions include: Associate in Arts, Associate in Science, and any certificates that begin with "Pre-," such as Pre-Health Care or Pre-Nursing.
3. Students must have at least a 2.50 cumulative GPA; and
4. Students must have exited Math, English and/or Reading DVS (lower than 100) courses.

## CHILD-CARE REFERRAL

According to Midlands Technical College policy, faculty, staff and students shall not bring children to class, lab work, or other designated programming facilities, nor leave children unattended on campus. In addition, children should not be brought to sponsored events unless it is noted as an event designed for the entire family. This policy is designed to support a class-

room and college environment conducive to learning and to avoid unsafe conditions for minors. The college assumes no responsibility for the supervision of faculty members', staff members' or students' children. Midlands Technical College's childcare referral service can help students identify a child-care provider to meet their needs. Child care referral information is available online at [midlandstech.edu/studentlife/stureferral.html](http://midlandstech.edu/studentlife/stureferral.html).

## **COUNSELING AND CAREER SERVICES**

A staff of professional counselors is available to all enrolled and prospective students to help them achieve life and career goals. Before individuals can intelligently make career decisions, they should evaluate their abilities, interests, needs and potential. They then should explore the world of work to determine what occupations best satisfy their own interests, personalities and objectives. Counselors provide individual and group career counseling opportunities for students. Various interest inventories and other career planning instruments, including computerized career guidance and occupational information systems, are available to assist individuals and groups in the career planning process.

Personal issues and concerns can sometimes impede students' progress toward meeting their goals. Counselors are available to discuss these concerns and will make referrals to community providers when appropriate.

The counselors also assist students in such academically related areas as probation counseling, change of academic major, academic fresh start and students with undecided majors. Workshops include test taking, study skills, time management, stress reduction, values clarification, career planning and test-anxiety management.

A full array of services are available to enrolled and prospective students as well as to alumni. Interested individuals should make appointments in advance to see a counselor. Every effort is made to accommodate walk-ins. For more information about the services offered by Counseling and Career Services, visit [midlandstech.edu/counseling](http://midlandstech.edu/counseling).

## **SERVICES TO STUDENTS WITH DISABILITIES**

The college provides services to students with disabilities to help them gain access to academic opportunities at the college. Counselors support and assist students in meeting their personal, educational and career goals. Services include academic and career planning, career assessment services, special orientation sessions, faculty/staff/student liaisons, assistive technology, readers, writers and interpreters. Assistive technology including closed circuit televisions are available in the college libraries, Student Academic Success Centers, and in the Counseling and Career Services Offices to assist students.

The college requests students notify Counseling Services of any special accommodation needs at least 10 working days before the first day of class. This notification will help ensure the quality and availability of services needed. The following procedures should be followed by students with disabilities desiring instructional, testing and administrative accommodations: Submit documentation and intake forms to the Counseling and Career Services counselor in order to verify the disability and to aid individual educational planning.

Intake forms and standards for acceptable documentation are available in the Counseling and Career Services Offices or at [midlandstech.edu/counseling/csds.html](http://midlandstech.edu/counseling/csds.html). Please note that standardized documentation forms for ADD/ADHD, learning disabilities, physical/motor disabilities, psychological disabilities, and TBI (traumatic brain injuries) are available in the Counseling and Career Services Office as well as the Disability Services web page ([midlandstech.edu/counseling/csds.html](http://midlandstech.edu/counseling/csds.html)). There is also a link to this site available through the Counseling Services

web page. These forms can be taken directly to a service provider to be completed.

After the information relating to the disability is received, the student must sign a release of information to implement the necessary accommodation(s) and/or to release information to involved college personnel. The following procedures will then be followed:

- A committee of counselors will review the documentation and, if approved, will recommend reasonable accommodations.
- The counselor will meet with the student concerning reasonable accommodation(s).
- Appropriate strategies and suggestions for classroom and testing accommodations will be discussed and a Faculty Notification form listing needed accommodations will be given to the student to be taken to their individual faculty members.

For assistance, contact the Counseling and Career Services Office on either the Airport or Belt-line campus. Special placement testing accommodations will be coordinated by the Student Assessment Office once documentation has been reviewed and approved by the Counseling staff.

The submission of documentation does not necessarily guarantee accommodations. Documentation will be reviewed and accommodations will be determined based on the guidelines provided by the Association of Higher Education and Disabilities (AHEAD).

## **EDUCATIONAL OPPORTUNITY CENTER**

Educational Opportunity Center (EOC), a federally funded TRIO program of the U.S. Department of Education, provides counseling and information to qualified individuals who want to begin or continue their secondary/post-secondary education. EOC provides in-depth financial aid information and assistance completing the Free Application for Federal Student Aid (FAFSA) and college applications.

Eligible participants must be 19 years of age or older, a first-generation college student, and must have a limited income as determined by the U.S. Department of Education. In addition, individuals under the age of 19 enrolled in an adult education or an alternative education program may eligible to receive EOC services. EOC services are offered at local agencies in Fairfield and Lexington counties. For more information, please call (803) 822-3749 or 1-800-922-8038 for those outside the calling area. Visit the EOC website at [midlandstech.edu/eoc](http://midlandstech.edu/eoc).

## **EDUCATIONAL TALENT SEARCH**

Educational Talent Search (ETS) is a federally funded TRIO program of the US Department of Education designed to assist middle and high school students to reach their academic potential and to enroll in post-secondary education. Services include career counseling, college major selection, college admissions information, tutoring, college and university site visits, and financial aid application assistance. Most participants are enrolled at selected schools in Lexington and Fairfield counties.

The program assists individuals who meet federal income guidelines and those who are the first in their families to go to college. Participants receive assistance in applying to any college, university, or other qualified institution of post-secondary education; they need not attend Midlands Technical College. For more information, or to request an application for the Educational Talent Search program, please call (803) 822-3628 or visit the ETS website at [midlandstech.edu/ets](http://midlandstech.edu/ets).

## EMAIL

All Midlands Technical College students are assigned an email account upon admission to the college. The student email account is the official form of notification regarding important college information such as registration notices, course cancellations, financial aid transactions, academic probation/suspension notices, student code and grievance notices, communications from faculty, and other important information. Students are responsible for checking their college email account on a daily basis and for maintaining the account. It is the responsibility of each student opting to have their email forwarded to an external account to verify this process is set up correctly to ensure all college emails are sent to the external account designated by the student.

Students who do not have a personal computer or Internet access at home may use computers in the Online Services Center or Academic Success Centers.

## EMPLOYMENT SERVICES FOR STUDENTS

Student Employment Services are available to all students and alumni of Midlands Technical College. Employment opportunities in area businesses and industries are listed by major, title and company on the Student Employment Services' website. In addition, many opportunities are listed through job boards, and company and career sites. These resources and others can be found at [midlandstech.edu/ses](http://midlandstech.edu/ses).

Through workshops, seminars and individual instruction, the Student Employment Services staff critiques resumes, teaches interviewing skills and equips students with job search tools necessary for today's workforce.

Other student employment services include:

- On-campus recruiting
- Cooperative Education
- Internships
- Special events (career days, college transfer days)
- Career Resource Library

These services can assist students in their efforts to define employment objectives, explore labor-market trends and research an employer before submitting a resume or participating in an interview. For more information, students should visit the Student Employment Services Office on either campus or check out the Student Employment Services website at [midlandstech.edu/ses](http://midlandstech.edu/ses).

### Cooperative Education

Cooperative Education is an integration of academic study and career-related work experience. It allows the student an opportunity to test career choices, gain work experience and even earn money as part of a college degree. Cooperative educational experiences are available in approved degree programs. Curriculum credit students must meet departmental criteria and enroll in a cooperative work experience course. For more information, students should contact Student Employment Services, or visit the Student Employment Services website at [midlandstech.edu/ses](http://midlandstech.edu/ses).

### Internships

An internship is a partnership between the students and local employers. This is a wonderful benefit for the employer and the student. The student can gain real world experience in

their field of study while utilizing classroom knowledge. The employer can supplement their workforce with good employees and evaluate potential full-time hires at the same time. All internships should be paid and provide meaningful work experiences. Local employers often list internships with the college. SES has developed many tools to assist students in their search for internships. These include internship search engines, listings of companies with internship programs and tips for success. For more information, contact Student Employment Services at [midlandstech.edu/ses](http://midlandstech.edu/ses).

## STUDENT FINANCIAL SERVICES

### Mission

The staff of the Student Financial Services Office at Midlands Technical College is committed to providing high-quality service to students, the college and the community. Staff members are dedicated to assisting students with their educational financial needs and serving the community in which the college is located.

### Financial Assistance at MTC

Financial assistance at MTC is designed to help students and their families bridge the gap between their own resources and the cost of obtaining a high-quality education. Financial assistance is provided by federal and state governments, the MTC Foundation and private scholarships.

All correspondence from Student Financial Services will be sent to students through their official college email accounts. It is the responsibility of each student to check his or her email account regularly for important information impacting their financial aid awards.

### Applying for Financial Assistance

The first step in applying for financial assistance is completing the Free Application for Federal Student Aid (FAFSA). Students should complete the FAFSA online at [fafsa.gov](http://fafsa.gov). Additional information is available on the Student Financial Services website at [midlandstech.edu/SFS](http://midlandstech.edu/SFS).

The FAFSA provides important information necessary to determine a student's eligibility status, award amount and the EFC. The Expected Family Contribution (EFC) is the dollar amount that the student and/or the student's family are expected to contribute towards paying for the student's education, based on federal methodology. The amount of need-based financial aid a student can receive is the difference between the Cost of Attendance (COA) minus the EFC and any other source of aid such as scholarships.

$$\text{Cost of Attendance (COA)} - (\text{EFC and other aid}) = \text{Financial Need}$$

The cost of attendance for MTC can be found on the Student Financial Services website, [midlandstech.edu/sfs/cost.html](http://midlandstech.edu/sfs/cost.html). The cost of attendance includes tuition, fees, books, supplies, room, board, transportation and personal expenses as determined by the Office of Student Financial Services. Individual student costs depend on factors such as residency, enrollment status, housing arrangements and program of study.

Because some financial aid funds are limited, it is not always possible to meet a student's full financial need. Therefore, all students are encouraged to apply early each year to make sure they are awarded the best possible financial aid package they are eligible to receive. The priority processing deadline for completed applications for the fall semester is April 15 each year and November 15 for the spring semester. Check the Student Financial Services website for more information regarding priority processing deadlines.

No financial aid award can be made until the college's financial aid application process is completed. A completed application is defined as one that has been received, reviewed, found free from errors and does not require additional verification information.

When completing the FAFSA, please use the MTC school code 003993. Applicants should save all records and other materials used in applying for aid, including income tax documents. These documents may be needed later if the applicant is selected for a process called "verification."

### **Financial Aid Awards**

Once the file is complete, the applicant will be notified by email regarding his or her financial aid award status. Students may also check their award status online, [mymtc.midlandstech.edu](http://mymtc.midlandstech.edu). The award notification will list the type(s) and estimated amount(s) of assistance the student is eligible for based on enrollment information at the time of the award. All financial aid awards are subject to change if the information upon which they were based changes or federal or state regulations require a change. Awards will be based on the cost to attend MTC and the results of the FAFSA. Students should become familiar with the terms and conditions brochure, which is available online, [midlandstech.edu/sfs/terms.html](http://midlandstech.edu/sfs/terms.html). Students should check the Student Financial Services website frequently for important information such as application deadlines. They should also check [mymtc.midlandstech.edu](http://mymtc.midlandstech.edu) to review their award status and balance due prior to the fee payment deadline to ensure classes are not dropped for non-payment.

### **Title IV Repayment**

If a student completely withdraws or is administratively withdrawn from all courses prior to completing 60 percent of the semester, the total federal aid disbursed (excluding Federal Work-Study earnings) will be subject to a return of Title IV funds calculation as specified in Section 484B of the Higher Education Act. Based on this calculation, the student may be required to repay to the institution and/or the Department of Education, a portion of the funds received. Failure to repay this debt will result in a loss of financial aid eligibility. Students with an unpaid debt to the institution will not be allowed to register until the debt has been satisfactorily resolved.

### **Financial Aid Disbursements**

Aid listed on the award notice, with certain exceptions such as Federal Work-Study, will be credited to the student's account. Refunds will be issued for any remaining funds after tuition, fees, bookstore charges and any other authorized charges are deducted from the student's award. Students should check the Student Financial Services website for disbursement dates. Refunds will be issued to students on MTC debit cards through Higher One. Debit cards will be mailed to the student's mailing address on file. It is the student's responsibility to ensure mailing address accuracy with the Student Records Office and to make a refund selection preference at [mtcdebitcard.com](http://mtcdebitcard.com).

## **FINANCIAL AID PROGRAMS**

### **Federal Pell Grants**

Undergraduate students who have not received a bachelor's or professional degree may be considered for the Federal Pell Grant program. The amount of the grant received depends on the student's Expected Family Contribution (EFC) as determined by the U.S. Department of Education through the Free Application for Federal Student Aid (FAFSA) and the student's enrollment status. A FAFSA must be completed for each new academic year.

## **Federal Supplemental Educational Opportunity Grants**

Federal Supplemental Educational Opportunity Grants (FSEOG) are available to students who have not completed a bachelor's or professional degree. FSEOG's are awarded to exceptionally needy students. Priority is given to students with the lowest EFC and to students who receive the Federal Pell Grant. An FSEOG is a federal grant and does not have to be repaid. There is no guarantee every eligible student will receive an FSEOG award. Funding for this program is limited.

## **Federal Work-Study**

The Federal Work-Study (FWS) program provides part-time employment for students to help meet their educational expenses. The program encourages community service work and work related to a student's course of study. Students who are currently enrolled in a degree-seeking program or eligible certificate or diploma program may work an average of 15 to 20 hours per week. The number of hours assigned per week to a student is based on the amount of the total FWS award, the student's class schedule and the student's academic progress. FWS positions may be on or off campus.

The total Federal Work-Study award depends on the time of application, the level of financial need and the availability of funds. Students will be paid by the hour. Hourly rates vary according to the position held. Federal Work-Study checks are mailed once a month to the student's local address on file in the Student Records Office. Addresses must be kept current for earnings to be received on a timely basis.

## **Federal Educational Loans**

*Stafford Loans* - Stafford Loans are the Federal government's major form of self-help aid. These loans are available through the William D. Ford Federal Direct Loan program. Stafford loans can be either subsidized or unsubsidized. Please reference the Student Financial Services web page for information regarding student loan limits and application procedures.

A Subsidized Stafford Loan is awarded on the basis of financial need. No interest accrues and no payments are required during an eligible period of deferment. The federal government "subsidizes" the loan during these periods by paying the interest for the student.

Unsubsidized Stafford Loans accrue interest from the time the loan is disbursed until it is paid in full.

*Parent Loans for Undergraduate Student (PLUS)* provides loans to parents for the purpose of paying the educational expenses of their dependent student.

## **LIFE Scholarship**

LIFE Scholarships are merit-based South Carolina awards recognizing high school and college academic performance. Students who are SC residents and graduate from a South Carolina high school with a 3.0 GPA on a 4.0 standard scale may be eligible for a LIFE Scholarship provided the student enrolls in at least 12.0 credit hours of college-level work in courses at the 101-level or higher. To be LIFE eligible as a continuing college student, the student must earn a minimum of 30 semester hours in college coursework at the 101 course-level or higher per year and maintain a 3.0 GPA. The LIFE Scholarship does not pay for coursework taken during the summer semester. An eligible student may receive a LIFE Scholarship for up to two academic years (four semesters) for an associate degree program and one academic year (two semesters) for a diploma or certificate program.

Transfer students must have earned a minimum 3.0 LIFE GPA on a 4.0 grading scale to receive the LIFE scholarship at MTC. Coursework from all institutions attended are considered in calculating the LIFE GPA. Please visit [midlandstech.edu/life/](http://midlandstech.edu/life/) for more information.

## **Lottery Tuition Assistance**

Information on the S.C. Education Lottery Act is provided on the S.C. Technical College System's website: [sctechsystem.com](http://sctechsystem.com).

Award amounts depend on the proceeds generated by the Lottery and the final laws, rules and regulations issued by appropriate state and college officials. Please visit the MTC web site for updated information at [midlandstech.edu/sfs](http://midlandstech.edu/sfs).

Lottery-funded tuition assistance is not based on financial need. Any South Carolina student who qualified for in-state tuition rates at a public two-year college may be eligible to receive Lottery Tuition Assistance if the student's tuition costs are not paid by federal or other state gift aid.

## **South Carolina Need-Based Grants**

South Carolina Need-Based Grants (SCNBG) are available to a limited number of students with high financial need, as determined by the student's EFC. Students must be South Carolina residents to qualify. Funding for this program is limited.

## **MTC Scholarships**

MTC academic scholarships are awarded each year to both entering and continuing students. The application deadline is mid-April each year for the upcoming fall/spring term.

The criteria for scholarships vary, but may include academic achievement, community participation and financial need. Application materials and eligibility information are available on the Student Financial Services website and on the MTC Foundation website ([midlandstech.edu/scholarships](http://midlandstech.edu/scholarships)) and in the Student Financial Services Office.

## **Other Scholarships Assistance**

Students can find a variety of college scholarship resources on the Student Financial Services website ([midlandstech.edu/sfs](http://midlandstech.edu/sfs)).

# **FINANCIAL AID - SATISFACTORY ACADEMIC PROGRESS**

## **I. Introduction**

All students receiving federal and state student financial aid must adhere to the college's Student Financial Services Office policy on standards of Satisfactory Academic Progress (SAP). The intent of this policy is to ensure that students who are receiving federal and/or state financial aid are making measurable progress toward completion of a degree or certificate program in a reasonable period of time.

## **II. Scope**

This policy applies to those students applying for or receiving federal and/or state funds. To reasonably measure a student's satisfactory academic progress toward completion of the degree, certificate or diploma in which the student is enrolled. The student's total academic record will be evaluated. This includes all academic work attempted at MTC and any transfer hours from other schools attended that are accepted at MTC. As recipients of federal or state financial assistance, students have certain rights and responsibilities. Students' failure to fulfill their responsibilities to make satisfactory academic progress as described may result in the cancellation of their awards, and any funds already received may have to be repaid.

## **III. Monitoring Procedures**

At the end of each semester, the Student Financial Services office will monitor satisfactory academic progress for all students receiving federal or state financial aid to ensure that they are

making satisfactory progress toward program completion. The standards defining satisfactory progress are outlined below.

**Fresh Start:** Be advised that federal regulations require that all courses attempted must be included in evaluating a student's satisfactory academic progress for financial aid purposes.

**Course Withdrawals, Incompletes, Repetitions, Remedial or Developmental:** Students who receive federal or state financial aid must be aware that repeated courses, noncredit remedial courses and grades of W, WF, I and NC will be considered in assessing progress toward completion. Students who do not satisfactorily complete at least seventy (70) percent of attempted hours will be placed on warning status. Students who have not attained 70 percent satisfactory completion by the next semester of enrollment following the warning period will no longer be eligible for federal or state assistance.

**Developmental Studies and Remedial Coursework Standards of Progress:** Financial aid recipients may take a maximum of 30 credit hours in Developmental Studies (DVS) and remedial course work.

**Transfer Students:** All transfer students will be evaluated to determine if they are making satisfactory academic progress prior to being packaged for financial assistance. The evaluation process is based on all hours attempted at MTC and all transfer hours accepted by MTC.

**Change of Major(s):** Students who change their majors are still responsible for maintaining satisfactory academic progress in accordance with the procedure as outlined. A review of satisfactory academic progress will be based on the student's current program of study at the end of each term enrolled. If the student has changed majors prior to the end of the semester, eligibility will be assessed against the new program of study.

A student changing from an associate program into a diploma or certificate program of study may lose federal and state eligibility immediately upon making the change if the attempted hours are equal to or in excess of 150 percent of the hours required for the certificate or diploma program.

## **IV. Standards**

### *Length of Eligibility*

The Office of Student Financial Services monitors the satisfactory academic progress of all students receiving federal and state aid. Financial aid recipients are eligible for assistance until they have attempted up to one and a half (150 percent) times the number of semester hours required for the program of study currently enrolled in. Financial assistance will be limited to a maximum of 180 hours attempted.

### *Cumulative Grade Point Average*

Students who fail to earn the required cumulative college GPA of 2.0 will be placed on warning during the next semester they enroll in the college. Students in all programs of study who are placed on probation will be reviewed at the end of the semester. Students who fail to attain a cumulative GPA of 2.0 or greater will lose federal and state aid eligibility. Developmental coursework grades will not be calculated in the cumulative GPA requirement.

## **V. Notification**

Following a review, a student who has failed to meet satisfactory academic progress will be notified by letter or email of the resulting ineligibility for federal or state funds. Future awards will be canceled upon becoming ineligible. To receive consideration for reinstatement of federal or state assistance, a student will need to submit a Satisfactory Academic Progress (SAP) appeal to the Office of Student Financial Services.

## **VI. Re-Establishing Eligibility for Financial Aid**

Students will be reinstated for financial aid eligibility when they have successfully completed 70 percent of attempted hours and have a 2.0 cumulative grade point average as set forth in this policy.

## **VII. Appeal of Financial Aid Ineligibility**

- A. An ineligible student may appeal by submitting a Satisfactory Academic Progress Appeal form to the Student Financial Services Office indicating reasons why minimum academic standards were not achieved and what actions have been taken or what changes have occurred to resolve the problem. Each appeal will be considered on its own merit. Individual cases will not be considered as precedent. Examples of extenuating circumstances may include but are not limited to the following:
- Death in the student's immediate family that has been documented.
  - Personal illness requiring a loss of the equivalent of more than five consecutive class days that can be supported by a letter from a physician.
  - Serious illness in the student's immediate family that can be supported by a letter of documentation from the family member's attending physician.
  - Change in job schedule/responsibilities required by the employer and documented by the employer.
  - Circumstances regarding approval of Academic Fresh Start, if applicable.
- B. The appeal or the reinstatement of financial aid will be reviewed and a determination made. The student will be advised in writing of the decision and all stipulations by email to the student's official college email account.
- C. If the appeal is approved, the student must complete all courses attempted. Students must continue to meet all stipulations each semester until they have achieved a cumulative 2.0 GPA and a 70% completion rate. Students in violation of the 150% rule must continue to meet all stipulations to receive financial assistance at the college. Should the student fail to meet these stipulations, the student's future awards will be cancelled.
- D. Decisions on appeals are final and cannot be appealed at any other college or federal level.

## **FOOD SERVICE**

Fast food service is available in the cafeterias located on the Airport and Beltline campuses. Vending machine service is also available in buildings throughout the college.

## **HEALTH SERVICES**

Midlands Technical College provides health awareness and wellness activities for students, faculty and staff. As a nonresidential college, Midlands Technical College expects students will normally secure medical services through a private physician or medical facility. It is the policy of the college, however, to provide all students with accidental injury, accidental death and dismemberment insurance (see Student Insurance). Any student requiring immediate medical treatment at an emergency center, hospital or physician's office should, if possible, contact the Security Office on any campus. Medical claims must be submitted to the office of the Vice President for Student Development Services for processing.

## HOUSING

Midlands Technical College is a nonresidential institution and does not maintain residential facilities. Therefore, students are expected to provide their own off-campus housing. The Student Life Office keeps copies of the *Apartment Finders Magazine* and the *Apartment Guide* available for all students and posts notices for anyone interested in listing an apartment for rent or looking for a roommate. This information is available in the Student Life Office or online at [midlandstech.edu/studentlife](http://midlandstech.edu/studentlife).

## JOB LOCATION AND DEVELOPMENT

The Job Location and Development (JLD) program assists students in locating part-time and summer employment. Attempts are made to provide program-related employment opportunities whenever possible. Jobs obtained through JLD allow students an opportunity to gain valuable work experience and future employment contacts. All students enrolled in the college, regardless of their financial needs, are eligible to participate. This program is designed to help students with educational expenses. A complete listing of available jobs can be found on the Beltline and Airport campuses in the Employment Services section of the college's website or from the Student Financial Services office.

## ACADEMIC SUCCESS CENTER

The Airport, Beltline, Batesburg-Leesville, and Harbison campuses have Academic Success Centers open to all Midlands Technical College students. The use of computers and tutoring in the centers is free to all enrolled students, and includes the following resources:

### Computer Access:

All students have access to computer resources for the purposes of academic computing. The availability of software packages is determined by the courses taught at the college and by those programs supported by the college. Available resources include various productivity and development software in both microcomputer and mainframe environments, email, the Internet, Microsoft Office products, and a wide variety of interactive educational software. Since available resources differ by campus, feel free to call before coming to be sure we have what you need - Airport 822-3545, Beltline 738-7871, Batesburg-Leesville 604-1639, or Harbison 407-5005.

### Tutoring Services:

Tutoring is available to assist students who experience difficulties in selected courses, usually general education courses or introductory courses in a program of study. Mathematics, writing, and reading are the major areas for tutoring, but tutoring is also offered for ESL, foreign languages and selected computer, accounting, and science courses.

### Additional Resources:

In addition to computer access and tutoring, the Academic Success Center provides a variety of supplemental materials to assist students in becoming independent learners. These materials include video tapes, CDs, DVDs, science models and microscopes with slides.

## LIBRARY

The library provides a wide range of information services to assist students, faculty and staff with study and research. The library is also open to the public.

The library collection totals more than 111,000 print and electronic volumes that support the curriculum of the college, including business, medical, legal, scientific, technical, humanities and reference publications. The library subscribes to over 450 journals and provides access to numerous full text journals through its electronic databases. The library web page offers access to the online catalog, databases and other library resources.

Information technologies of all types complement the library's print collection, including online databases and wireless Internet access.

Introductory and advanced library instruction, assistance to distance learners, and interlibrary loan are available to students, faculty and staff.

## STUDENT LIFE

### Clubs and Organizations

Many clubs and organizations are active on campus. Through participation in these clubs and organizations, students may explore and extend their interests and further develop their skills and abilities by working with fellow students. Membership is open to all students who meet the qualifications of the respective club. This information is available in the Student Life office or online at [midlandstech.edu/studentlife](http://midlandstech.edu/studentlife). Information on procedures for chartering a new student organization is also available.

### Honor Organizations

Student honor organizations include the Midlands Technical College Ambassador Assembly, Alpha Eta Kappa chapter of the Phi Theta Kappa Society and the National Technical Honor Society. The Ambassador Assembly is an honor/volunteer organization of outstanding students selected to represent Midlands Technical College at college and community events. Phi Theta Kappa is an international honor society for community colleges. The National Technical Honor Society recognizes outstanding students enrolled in Career Programs majors.

### Cultural and Cocurricular Programming

A major goal of the Student Life Office is to augment students' academic experience through cocurricular programming. Lectures, seminars and workshops on a variety of subjects are offered as well as performances by local artists, films and special interest programs.

### Identification Cards

In support of campus safety and security, all students are required to obtain and carry in their possession a current MTC Student Identification (ID) Card. Please be advised that a current MTC Student ID Card must be presented upon request when utilizing MTC facilities and/or when on the campuses. A current Student ID Card is one having a sticker on the back, denoting the current enrollment period. Student ID Cards are processed according to the following schedule:

- Airport Campus Student Center Commons, Room 126, (803) 822-3650  
Wednesdays, 9 a.m - 1 p.m.; Thursdays, 1-5:30 p.m.
- Beltline Campus Student Center, Room 201, (803) 738-7860  
Wednesdays, 9 a.m - 1 p.m.; Thursdays, 1-5:30 p.m.

PLEASE BRING:

A. Paid Fee Receipt. Misplaced it? Obtain another copy from the Cashier in Reed Hall (AC) or the Beltline Student Center (BC). If you receive financial aid, obtain a statement from the Office of Student Financial Services.

## B. Picture ID.

Student ID Cards are obtained through the Student Life Office on the aforementioned days and times. Student ID Cards are not processed when classes are not in session.

The initial ID Card is free. All replacement ID Cards are \$5.00.

## Publications

The English Department publishes an annual student literary magazine, *Stylus*, which is on-line at [midlandstech.edu](http://midlandstech.edu). Student Life publications, such as the online student newspaper, *The Pony Express*; a Child Care Referral database; and the *MTC Student Handbook*; all can be found on the Student Life webpage: [midlandstech.edu/studentlife](http://midlandstech.edu/studentlife).

## Social and Sports Activities

The Student Life Office seeks to foster interaction among the entire student body, faculty and staff by offering social and recreational activities. This interaction can improve students' concepts of self-worth and increase the opportunities for success in college.

## Student Advisory Board

Students have the opportunity to participate in student government through the Student Advisory Board (SAB). This governing board provides students a voice in college governance, campus concerns and student affairs. The Student Advisory Board is also the umbrella structure for all MTC student clubs and organizations. Representatives of each student organization sit on the SAB as voting members. Any student may attend Advisory Board meetings and voice concerns as a nonvoting member. The Student Advisory Board charters new student organizations, sponsors community services projects and supports Student Life programming. The Student Advisory Board President attends the MTC Commission meetings and serves as an advisor on student issues to the Vice President for Student Development Services. The Student Advisory Board also appoints students to college standing and ad hoc committees.

All Midlands Technical College students are automatically members-at-large of the SAB and are encouraged to participate. The executive officers are elected in the spring. Contact the Student Life Office on either the Beltline or Airport campus for further information.

## STUDENT INSURANCE

Student accident insurance covers all credit and non-credit students on the premises while the college is in session and during activities sponsored and supervised by the college, including intramural athletics. Benefits provided under the accident insurance cover medical claims submitted within 30 days of the date of the accident. Medical claim forms are available in the Security Office and the office of the Vice President for Student Development Services. Claim forms should be submitted to the office of the Vice President for Student Development Services for processing. Accident medical expense benefits are only payable for covered expenses incurred within 365 days after the date of the covered accident.

Group student health insurance is not provided directly by Midlands Technical College, however, the college makes available to students individual and group insurance plans offered by various providers. For example, the American Association of Community Colleges (AACC) offers a student injury and sickness plan designed especially for students attending two-year colleges. This plan, which has been endorsed by the American Association of Community College Trustees, provides limited health coverage to international students and students enrolled in four or more credit hours. Students interested in obtaining group health insurance can obtain information on health insurance providers from the Student Life Offices on both campuses.

## STUDENT RECORDS OFFICE

Personnel in the Student Records Office assist currently and previously enrolled students in the following ways:

*Academic Honors* – At the end of each term, Student Records will identify students eligible for the President’s List, Scholars’ List and Part-time Honor Roll and will mail certificates by the fifth week of the following term.

*Confidentiality of Records* – The Student Records Office is the office authorized to release student information. This office adheres to the Family Educational Rights and Privacy Act (FERPA) regarding release of student information. Students who do not want directory information to be released should contact the Student Records Office and complete a form for nonrelease of directory information. See Release of Student Information.

*Drop/Add/Withdrawal* – Students must complete a Drop/Add/Withdrawal form to allow the Student Records Office to change class schedules or withdraw students from classes. Web-enabled students may make their own changes online during the published schedule change period.

*Enrollment Certifications* – Students desiring to have their enrollment certified for previous loans, Department of Social Services requirements or other purposes can have this done at the Student Records Office.

*GPA Recalculations for Repeated Courses* – Students who repeat 100- or 200-level courses will have the lower grade removed automatically from GPA calculations if both courses have the same course prefix and number. If the repeated course was first taken under a different course prefix and/or course number, the GPA may be manually recalculated if the course is equivalent. In this case, the student must complete a repeat course request with the Student Records Office. Both courses and grades will remain on the transcript, but the repeated course grade will no longer be calculated into the GPA at Midlands Technical College. Students planning to transfer should be aware that other institutions may recalculate their GPAs using all courses completed.

*Graduation* – Students planning to graduate should obtain a graduation application from the Student Records Office and submit the completed form according to the due dates listed in the college calendar.

*MTC Transcripts* – MTC transcripts are ordered online through the national Student Clearinghouse. The Clearinghouse provides online ordering 24/7. In addition to the convenience of credit card payment, this service provides email notifications as orders are received and processed. Students are assessed a fee of \$7.25 for the processing and mailing. Students who need help or have questions about the service should contact the national Student Clearinghouse via email at [transcripts@studentclearinghouse.org](mailto:transcripts@studentclearinghouse.org) or by phone at (703) 742-7791 (Mon-Fri, 9 a.m.-7 p.m., Eastern Standard Time-EST).

*Address Changes* – Official changes to addresses are made to a student’s record only through a student’s written permission to the Student Records Office. Currently enrolled students may change their address online through their MyMTC Account. Address accuracy is essential for student receipt of registration information and other college information, including refund checks. Mail returned to the college may result in a registration hold being placed on the student’s record until the corrected address information is received by the Student Records Office. Address changes do not constitute a change in residency. Requests for residency changes for tuition purposes are made through the Admissions Office.

*Name Changes* – Official name changes are made through the Student Records Office. To change a student name, one of the following valid legal documents should be attached to the form: birth certificate, court decree, marriage license (last name only) or military identification card.

*Probation/Suspension* – The Student Records Office notifies students placed on academic probation or suspension by email sent the next business day after the due date for grades. These communications are sent at the end of each semester, rather than at the end of each mini semester.

*Routing a Previous College's Transcripts* – The Admissions Office will route official previous college transcripts to the Student Records Office for official evaluation. Official transcripts are transcripts sent directly from one college to another. Electronic transcript formats are preferred but not required. Students are encouraged to request previous colleges to send official transcripts electronically whenever possible, to expedite transcript evaluation. Unofficial transcripts are used only for admission purposes and are not routed to the Student Records Office for evaluation. Official transcripts received after enrollment will be routed by the Student Records Office. Approved and non-approved credit is available for viewing at MyMTC Account.

*Verification of Grades/GPA* – Students needing to verify grades/GPA for auto insurance, company reimbursement of tuition and other purposes should contact the Student Records Office.

## **STUDENT SUPPORT SERVICES**

Student Support Services (SSS) is a valuable resource for Midlands Technical College (MTC) students enrolled in an associate degree program. Eligible applicants must be a first-generation college student and/or meet US Department of Education income levels, or be registered for disability services with MTC's Counseling and Career Center. With limited enrollment, SSS has an application process.

Funded through the US Department of Education, SSS has offices at the Airport and Beltline campuses (Airport Student Center 201 and Wade Martin 236). Services include academic advisement, academic mentoring, academic and transfer counseling, four-year campus visits, financial aid counseling, assistance completing the federal financial aid form (FAFSA) for MTC and/or four-year transfer institutions, workshops, and cultural enrichment activities. For more information, please call (803) 822-3032 or visit the Student Support Services website at [midlandstech.edu/sss](http://midlandstech.edu/sss).

## **UPWARD BOUND**

The Upward Bound (UB) program assists low-income potential first-generation college students prepare for higher education by providing instruction in literature, composition, math, science and foreign language on college campuses. This instruction is offered on Saturdays and during the summer.

The program provides services at target high schools in Fairfield and Lexington counties. For more information, please call (803) 822-3384 or visit the UB website at [midlandstech.edu/ub](http://midlandstech.edu/ub).

## **VETERANS ASSISTANCE**

Midlands Technical College is approved for veterans educational assistance and maintains a full-time VA Office to assist veterans already enrolled and those seeking admission.

For more detailed information on the Veterans Educational Assistance program, students should consult the Student Handbook or contact the VA Office on the Beltline or Airport campuses.

## **WIA YOUTH PROGRAM**

Midlands Technical College, in collaboration with the Workforce Investment Act (WIA), can help young adults (ages 17-21) facing special barriers get the training and skills needed to begin a promising career.

The WIA Youth Program is a federally funded program designed to assist and support individuals seeking academic upgrading and occupational skills demanded in today's competitive job market.

This program is housed on the Airport Campus in Lexington Hall, and on the Beltline Campus in Wade Martin Hall to provide easy access to services for its participants.

The WIA Youth Program offers comprehensive one-to-one services to each of its participants by providing the support necessary to be successful in pursuing personal, academic and career goals. Special emphasis is placed on short-term training.

The following services are available:

- Academic counseling
- Basic skills education
- Career guidance and planning
- Gas assistance
- Job placement assistance
- Training sponsorship

For more information, contact the WIA Youth Coordinator or the TRIO and Community Support Program Assistant at (803) 738-7630 or (803) 822-6701 or visit the WIA Youth website at [midlandstech.edu/wia](http://midlandstech.edu/wia).

# **Corporate and Continuing Education and Economic Development**



# CORPORATE AND CONTINUING EDUCATION AND ECONOMIC DEVELOPMENT

Corporate and Continuing Education and Economic Development at Midlands Technical College offers diverse programs to promote and support individual, community and economic development.

The program offerings include short courses, seminars, workshops, conferences, apprenticeships, certification and certificate programs as well as many online courses designed to help individuals get a job or move up to a better job.

## **Business and Industry**

Corporate and Continuing Education also works with business customers on job and career enhancement programs. These owners and employers often see MTC as a go-to resource when they encounter either operational or human resource problems. Connecting business with MTC's expert consultants, facilitators and trainers who can help fix their problems is our focus.

## **Personal Enrichment**

Corporate and Continuing Education offers a variety of personal enrichment courses designed for those who want to pursue a hobby, enhance skills, or just learn about something new culturally or practically.

## **Small Classes, Experienced Instructors**

Classes are small in Corporate and Continuing Education, and individuals get maximum attention. Faculty are chosen for their subject-matter expertise and for their real-life experiences – bringing relevance to the classroom along with valuable information and skills. Instructors also understand the adult learner and apply principles that encourage interactive learning.

## **Shorter Classroom Time**

Midlands Technical College Corporate and Continuing Education offers many classes that can be completed in shorter time frames than more traditional classes.

## **QuickJobs**

The QuickJobs program at Midlands Technical College helps individuals start careers or move up to better ones in as little as three months. Career opportunities exist in exciting fields such as Business, Computer Technology, Construction and Trades, Healthcare, Manufacturing and other Special Programs. QuickJobs programs offer a wide variety of courses with skill-specific and job preparatory training. Students can quickly build their skill sets and compete in a growing economy to improve their overall quality of life.

## **Course Categories**

A large variety of *Job and Career Enhancement* and *Personal Enrichment* courses are offered both on campus as well as online. Visit the Corporate and Continuing Education website at [mcttraining.com](http://mcttraining.com) to learn more.

# **PROGRAMS OF STUDY**

# Arts and Sciences



# ARTS AND SCIENCES

Arts and Sciences offers two associate degree programs, one certificate program and two special programs.

## Associate Degree Programs

Associate in Arts

Associate in Science

## Special Programs

Developmental Studies

Undecided

## Certificate Programs

English as a Second Language

The Associate in Arts and the Associate in Science programs are offered for students who are planning to transfer to a four-year college.

The primary function of Arts and Sciences at Midlands Technical College is to broaden students' understanding of themselves, their cultural heritage and their universe, thus providing a strong foundation upon which they may build throughout their lives. Specific courses are offered in mathematics, physical sciences, natural sciences, social sciences, communications, fine arts, humanities, foreign languages, history, government, composition and literature. Studies in Arts and Sciences can lead to four-year degrees in teaching, allied health, business, science, journalism, psychology and other professional fields.

Arts and Sciences also has the crucial role of offering developmental studies to students who wish to pursue college-level work but who need to build their basic skills in reading, writing and mathematics before entering a specific program.

Some courses in Arts and Sciences that are designed for students planning a career in education may require students to submit a SLED background check.

# ASSOCIATE IN ARTS

The Associate in Arts program serves students who wish to take courses to transfer into a four-year senior college in such majors as business, humanities, social sciences or others that require more intensive course work in the humanities and/or social sciences than in mathematics and science. A student may take a few courses before transferring or complete a two-year degree program that is essentially equivalent to the first two years of the degree requirements for the chosen major at the student's senior college.

## TRANSFER TO OTHER COLLEGES

Entrance requirements for transfer students vary widely among senior colleges and universities. Transfer of credits is a privilege granted by the institution to which the student transfers, and all applicants and requests for transfer of credit are considered individually. Students must complete their courses at Midlands Technical College with grades acceptable to the college to which they request admission and transfer of credit. It is strongly recommended that early in a student's academic career at Midlands Technical College he or she discuss transferring to a four-year institution with the appropriate representatives of that institution.

While it is the responsibility of each student to plan a program of study to meet the requirements of the college to which the student expects to transfer, informed academic advisors are available to assist students in their course selections.

**MAJOR: ASSOCIATE IN ARTS (62 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN ARTS**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (44 CREDIT HOURS)

#### 1. COMMUNICATIONS (9 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101	3.0
ENG 102	3.0
SPC 205	<u>3.0</u>
Subtotal	9.0

#### 2. HUMANITIES (12 CREDIT HOURS)

	<u>Credit Hours</u>
Literature - 3 credit hours must be selected from the following: ENG 203, ENG 205, ENG 206, ENG 207, ENG 208, ENG 209, ENG 210, ENG 211, ENG 212, ENG 214, ENG 218, ENG 222, ENG 230, ENG 234, ENG 236	3.0
Fine Arts - 3 credit hours must be selected from the following: ART 101, ART 105, ART 107, ART 108, MUS 105, THE 101	3.0
History - 6 credit hours must be selected from the following: HIS 101, HIS 102, HIS 106, HIS 108, HIS 109, HIS 201, HIS 202	<u>6.0</u>
Subtotal	12.0

3.	ANALYTICAL REASONING/SCIENCE (14 CREDIT HOURS)	<b><u>Credit Hours</u></b>
	Analytical Reasoning - 6 credit hours must be selected from the following: MAT 110, MAT 111, MAT 120, MAT 122, MAT 130, MAT 140, MAT 141, MAT 240, MAT 242, MAT 250, MAT 251, PHI 105, PHI 106	6.0
	Science - 8 credit hours must be selected from the following: AST 101, AST 102, BIO 101, BIO 102, BIO 112, BIO 205/BIO 206, BIO 210, BIO 211, BIO 225, CHM 105, CHM 110, CHM 111, CHM 211, CHM 212, PHY 201, PHY 202, PHY 221, PHY 222	<u>8.0</u>
	Subtotal	14.0
	Students who wish to take BIO 205 must take BIO 206 in the same semester.	
4.	SOCIAL/BEHAVIORAL SCIENCE (6 CREDIT HOURS)	<b><u>Credit Hours</u></b>
	Social/Behavioral Science - 2 courses representing two different disciplines selected from the following: ANT 202, ECO 210, GEO 102, PSC 201, PSC 205, PSC 220, PSY 201, SOC 101, SOC 205, SOC 220	<u>6.0</u>
	Subtotal	6.0
5.	COMPUTER TECHNOLOGY (3 CREDIT HOURS)	<b><u>Credit Hours</u></b>
	CPT 101 or a higher-level computer course	<u>3.0</u>
	Subtotal	3.0
	Total General Education Credits:	44.0

<b>B.</b>	<b>ASSOCIATE IN ARTS ELECTIVES (9 CREDIT HOURS)</b>	<b><u>Credit Hours</u></b>
	9 credit hours must be selected from the following: ANT 202, ANT 203, ART 101, ART 105, ART 107 ART 108, ART 111, ART 112, ART 211, ART 212, ECO 201, ECO 210, ECO 211, ENG 203, ENG 205, ENG 206, ENG 207, ENG 208, ENG 209, ENG 210, ENG 211, ENG 212, ENG 214, ENG 218, ENG 222, ENG 230, ENG 234, ENG 236, ENG 238, FRE 101, FRE 102, GEO 102, GER 101, GER 102, HIS 101, HIS 102, HIS 106, HIS 107, HIS 108, HIS 109, HIS 130, HIS 131, HIS 201, HIS 202, HIS 220,	

HIS 221, HIS 230, HIS 235, MUS 105, MUS 110, PHI 101, PHI 115, PSC 201, PSC 205, PSC 206, PSC 220, PSY 201, REL 101, REL 102, REL 103, SOC 101, SOC 205, SOC 220, SPA 101, SPA 102, SPA 122, THE 101, THE 105, THE 125	9.0
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Total Humanities Credits: 9.0

### C. ADDITIONAL COURSE REQUIREMENTS (9 CREDIT HOURS)

#### Credit Hours

Electives depend on students' educational goals and may show wide variety. Students should consult their advisors for appropriate elective courses. Credits may be selected from curriculum courses numbered 101 and above, excluding MAT 101, MAT 102, RDG 101, IDS 102, AOT 105, and COL 103.

9.0

Total Elective Credits: 9.0

Total Credit Hours: 62.0

## ASSOCIATE IN SCIENCE

The Associate in Science program serves students who wish to take courses to transfer into a four-year senior college in such majors as computer science, engineering, health sciences, mathematics, science or others that require more intensive course work in mathematics and science than in the humanities and/or social sciences. A student may take a few courses before transferring or complete a two-year degree program that is essentially equivalent to the first two years of the degree requirements for the chosen major at the student's senior college.

### TRANSFER TO OTHER COLLEGES

Entrance requirements for transfer students vary widely among senior colleges and universities. Transfer of credits is a privilege granted by the institution to which the student transfers, and all applicants and requests for transfer of credit are considered individually. Students must complete their courses at Midlands Technical College with grades acceptable to the college which they request admission and transfer of credit. It is strongly recommended that early in a student's academic career at Midlands Technical College he or she discuss transferring to a four-year institution with the appropriate representatives of that institution.

While it is the responsibility of each student to plan a program of study to meet the requirements of the college to which the student expects to transfer, informed academic advisors are available to assist students in their course selections.

**MAJOR: ASSOCIATE IN SCIENCE (62 CREDIT HOURS)**  
**DEGREE: ASSOCIATE IN SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (44 CREDIT HOURS)**

1. COMMUNICATIONS (9 CREDIT HOURS)

	<u>Credit Hours</u>
ENG101	3.0
ENG102	3.0
SPC 205	
OR	
SPC 209	<u>3.0</u>
Subtotal	9.0

2. HUMANITIES (12 CREDIT HOURS)

	<u>Credit Hours</u>
Literature - 3 credit hours must be selected from the following: ENG 203, ENG 205, ENG 206, ENG 207, ENG 208, ENG 209, ENG 210, ENG 211, ENG 212, ENG 214, ENG 218, ENG 222, ENG 230, ENG 234, ENG 236	3.0
Fine Arts - 3 credit hours must be selected from the following: ART 101, ART 105, ART 107, ART 108, MUS 105, THE 101	3.0
History - 3 credit hours must be selected from the following: HIS 101, HIS 102, HIS 106, HIS 108, HIS 109, HIS 201, HIS 202	3.0
Associate in Science Electives - 3 credit hours must be selected from the following: ANT 202, ANT 203, ART 101, ART 105, ART 107, ART 108, ART 111, ART 112, ART 211, ART 212, ART 292, ECO 201, ECO 210, ECO 211, ENG 203, ENG 205, ENG 206, ENG 207, ENG 208, ENG 209, ENG 210, ENG 211, ENG 212, ENG 214, ENG 218, ENG 222, ENG 230, ENG 234, ENG 236, ENG 238, FRE 101, FRE 102, GER 101, GER 102, HIS 101, HIS 102, HIS 106, HIS 107, HIS 108, HIS 109, HIS 130, HIS 131, HIS 201, HIS 202, HIS 220, HIS 221, HIS 230, HIS 235, MUS 105, PHI 101, PHI 115, REL 101, REL 102, REL 103, SPA 101, SPA 102, SPA 122, THE 101	<u>3.0</u>
Subtotal	12.0

3. MATHEMATICS/SCIENCE (14 CREDIT HOURS)	<b><u>Credit Hours</u></b>
Mathematics - 6 credit hours must be selected from the following: MAT 110, MAT 111, MAT 120, MAT 122, MAT 130, MAT 140, MAT 141, MAT 240, MAT 242	6.0
Science - 8 credit hours must be selected from the following: AST 101, AST 102, BIO 101, BIO 102, BIO 205/BIO 206, BIO 210, BIO 211, BIO 225, CHM 110, CHM 111, CHM 211, PHY 201, PHY 202, PHY 221, PHY 222	<u>8.0</u>
Subtotal	14.0
Students who wish to take BIO 205 must take BIO 206 in the same semester.	
4. SOCIAL/BEHAVIORAL SCIENCE (6 CREDIT HOURS)	<b><u>Credit Hours</u></b>
Social/Behavioral Science - 2 courses representing two different disciplines selected from the following: ANT 202, ECO 210, GEO 102, PSC 201, PSC 205, PSC 220, PSY 201, SOC 101, SOC 205, SOC 220	<u>6.0</u>
Subtotal	6.0
5. COMPUTER TECHNOLOGY (3 CREDIT HOURS)	<b><u>Credit Hours</u></b>
CPT 101, EGR 270 or a higher-level computer course	<u>3.0</u>
Subtotal	3.0
Total General Education Credits:	44.0

## **B. MATHEMATICS/SCIENCE CONCENTRATION COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<b><u>Credit Hours</u></b>
15 credit hours must be selected from the following: AST 101, AST 102, BIO 101, BIO 102, BIO 112, BIO 115, BIO 205/206, BIO 210, BIO 211, BIO 225 CHM 101, CHM 105, CHM 110, CHM 111, CHM 112, CHM 211, MAT 110, MAT 111, MAT 120, MAT 122, MAT 130, MAT 140, MAT 141, MAT 240, MAT 242, MAT 250, MAT 251, PHY 201, PHY 202, PHY 221 PHY 222	
Total Mathematics/Science Concentration Credits:	15.0

**C. ADDITIONAL COURSE REQUIREMENTS (3 CREDIT HOURS)****Credit Hours**

College-wide electives: Electives depend on students' educational goals and may show wide variety.

Students should consult their advisors for appropriate elective courses. Credits may be selected from curriculum courses numbered 101 and above, excluding MAT 101, MAT 102, RDG 101, IDS 102, AOT 105 and COL 103.

	3.0
Total Elective Credits:	3.0
Total Credit Hours:	62.0

## SPECIAL PROGRAM

# DEVELOPMENTAL STUDIES

Midlands Technical College wants all students to achieve the goals they have set for themselves. The Developmental Studies (DVS) department of the college is the first step toward a successful college experience for many students.

DVS offers academic and support services as part of the college's comprehensive program to help students succeed in their chosen programs of study. Courses in the department meet a variety of student needs.

New or readmitted students whose test scores on the college's placement tests identify academic needs will enroll in DVS courses in math, reading and/or writing before entering the courses required for their degrees. Students who are attending college for the first time should enroll in COL 105 to help them succeed in college. Students who have been out of school for a while or who did not plan to go to college while in high school should enroll in COL 103 to improve personal study habits and skills. Students who want to investigate career options or who are unsure of their career field can enroll in IDS 102. Students who would like to expand their cultural foundation can enroll in HSS 100.

## DEVELOPMENTAL STUDIES COURSES

	<b><u>Credit Hours</u></b>
COL 102 Introduction to College	2.0
COL 103 College Skills	3.0
COL 104 Basic Vocabulary	1.0
COL 105 Freshman Seminar	3.0
COL 106 Skills for College Success	1.0
COL 109 Advanced Academic Study Skills	1.0
ENG 012 Developmental English Workshop	1.0
ENG 032 Developmental English	3.0
HSS 100 Cultural Contexts	3.0
IDS 102 Personal/Career Assessment	3.0
IDS 201 Leadership Development	3.0

MAT 032	Developmental Mathematics	3.0
MAT 100	Introductory College Mathematics	5.0
RDG 013	Developmental Reading Compressed	1.0
RDG 032	Developmental Reading	3.0
RDG 100	Critical Reading	3.0
RDG 101	College Reading	3.0

## ENGLISH AS A SECOND LANGUAGE CERTIFICATE

The Certificate in English as a Second Language serves students who are speakers of other languages and wish to improve their skills in listening, speaking, reading, and writing English in college, at work, and in the community.

Courses in the Certificate in English as a Second Language provide advanced instruction in English skills and American culture. Electives ensure proficiency in application of English communication skills. All courses in the certificate also serve as either required courses in other programs or prerequisites for those courses, so that a student who completes the Certificate in English as a Second Language also has completed part of another degree, diploma, or certificate.

Preparatory courses in ESL (English as a Second Language) are provided for students who are not ready for the advanced courses in the certificate. All ESL courses are open also to students in other programs.

### CERTIFICATE: ENGLISH AS A SECOND LANGUAGE (18 CREDIT HOURS)

	<u>Credit Hours</u>
ESL 103 Spoken American English	3.0
ESL 110 Introduction to Composition for English As a Second Language	3.0
COL 105 Freshman Seminar OR	
ESL 105 American College Culture OR	
HSS 100 Cultural Contexts	3.0
ENG 101 English Composition I OR	
ESL 150 ESL Communication for Business and Community OR	
SPC 205 Public Speaking OR	
SPC 209 Interpersonal Communication Approved Elective	3.0 <u>6.0</u>
Total Credit Hours:	18.0

**Approved Electives:**

	<u>Credit Hours</u>
CPT 101 Introduction to Computers	3.0
CPT 170 Microcomputer Applications	3.0
GEO 102 World Geography	3.0
AOT 105 Keyboarding	3.0
PHI 115 Contemporary Moral Issues	3.0
SOC 101 Introduction to Sociology	3.0

## SPECIAL PROGRAM UNDECIDED

Students in the Undecided program have as their primary objective graduation from one of the programs offered at Midlands Technical College. To help students determine which college track to enter, IDS 102, which stresses personal and career assessment, is recommended. Students who know they want a degree but are undecided about what their four-year major will be should enroll in the Associate in Arts program.

Students entering the Undecided program are advised by Counseling and Career Services. The counselors provide seminars, individual counseling, various interest inventories and other methods to help undecided students determine which programs at Midlands Technical College best suit their interests and objectives. Counselors continue to advise each undecided student until the student selects a major, which must be done upon the completion of 12 curriculum semester hours.

Courses frequently recommended to undecided students include those designed to improve study skills, those required by most degree majors and/or those that introduce students to fields in which they show interest. Students may select from the following courses if they are not required to take any Developmental Studies (DVS) courses or after they have completed needed prerequisite DVS courses.

**COURSES REQUIRED BY MOST MAJORS:**

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
PSY 201 General Psychology	3.0

**COURSES THAT IMPROVE STUDENTS' ACADEMIC SURVIVAL SKILLS:**

	<u>Credit Hours</u>
COL 103 College Skills	3.0
COL 104 Study Skills	1.0
COL 105 Freshman Seminar	3.0
COL 109 Advanced Academic Skills	1.0
HSS 100 Cultural Contexts	3.0
IDS 102 Personal/Career Assessment	3.0

**COURSES THAT INTRODUCE STUDENTS TO MAJORS:**

	<u>Credit Hours</u>
ACC 101 Accounting Principles I	3.0
AHS 119 Health Careers	3.0
BAF 101 Personal Finance	3.0
BUS 101 Introduction to Business	3.0
CGC 101 Introduction to Graphics Techniques	3.0
CPT 101 Introduction to Computers	3.0
CRJ 101 Introduction to Criminal Justice	3.0
ECD 101 Introduction to Early Childhood	3.0
EET 101 Basic Electronics	2.0
HUS 101 Introduction to Human Services	3.0
MGT 101 Principles of Management	3.0
MKT 101 Marketing	3.0
MTT 101 Introduction to Machine Tool	2.0
AOT 105 Keyboarding	3.0

**APPROVED HUMANITIES COURSES**

The following courses satisfy the humanities requirement of the general education core at Midlands Technical College, and any may be selected as an “approved humanities course” in degree programs:

ART 101 Art History and Appreciation
ART 105 Film as Art
ART 107 History of Early Western Art
ART 108 History of Western Art
ENG 203 American Literature Survey
ENG 205 English Literature I
ENG 206 English Literature II
ENG 207 Literature for Children
ENG 208 World Literature I
ENG 209 World Literature II
ENG 210 Asian Literature
ENG 211 Introduction to African Literature
ENG 212 Latin American Literature
ENG 214 Fiction
ENG 218 Drama
ENG 222 Poetry
ENG 230 Women in Literature
ENG 234 Survey in Minority Literature
ENG 236 African-American Literature
HIS 101 Western Civilization to 1689
HIS 102 Western Civilization post 1689
HIS 104 World History I
HIS 105 World History II
HIS 106 Introduction to African History
HIS 107 Introduction to Middle East
HIS 108 Introduction to East Asian Civilization

- HIS 109 Introduction to Latin American Civilization
- HIS 113 Native American History
- HIS 131 Afro American History since 1877
- HIS 201 American History: Discovery to 1877
- HIS 202 American History: 1877 to Present
- HIS 220 American Studies I
- HIS 221 American Studies II
- HIS 230 The American Civil War
- HIS 235 American Military History
- MUS 105 Music Appreciation
- PHI 101 Introduction to Philosophy
- PHI 115 Contemporary Moral Issues
- REL 101 Introduction to Religion
- REL 102 Introduction to Biblical Studies
- REL 103 Comparative Religion
- THE 101 Introduction to Theatre

## **APPROVED SOCIAL AND BEHAVIORAL SCIENCE COURSES**

The following courses may be used to fulfill the requirement for an “approved social and behavioral science course” in any degree program at Midlands Technical College:

- ANT 202 Cultural Anthropology
- ECO 210 Macroeconomics
- GEO 102 World Geography
- PSC 201 American Government
- PSC 205 Politics and Government
- PSC 220 Introduction to International Relations
- PSY 201 General Psychology
- SOC 101 Introduction to Sociology
- SOC 205 Social Problems
- SOC 220 Sociology of the Family

# Business and Public Service



# BUSINESS AND PUBLIC SERVICE

Business Technology offers a variety of educational programs designed to prepare students for careers in business fields such as accounting, systems management, management and marketing. The Columbia area has seen rapid expansion in small entrepreneurial companies during the past several years and the number of new jobs is increasing each year.

The public service fields are among the Midlands strongest growth areas in terms of available jobs. The public service area is one that appeals to many people because of the sense of reward derived from assisting others. The area has diverse offerings. Included are Criminal Justice, Early Childhood Development, Human Services and Paralegal. These prepare students for becoming a police officer, corrections officer, or specialist in the forensics lab; working in the field of early childhood education; providing help with everything from substance abuse to mental health; and working in small to large law firms and in corporate or government legal offices. Ask your advisor about these agreements.

Students must earn a grade of "C" or better in all of the courses offered within the Business, Information Systems Technology and Public Service Departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, BAF, BUS, CPT, CRJ, ECD, HUS, LEG, MGT, and MKT.

## **Associate Degree Programs**

Accounting  
Criminal Justice Technology  
Early Care and Education  
Human Services  
Management  
Marketing  
Paralegal

## **Certificate Programs**

American Sign Language  
Child Care  
Criminal Justice  
Early Childhood Development  
Entrepreneurship  
Gerontology  
Infant/Toddler  
Paralegal  
Special Needs

# ACCOUNTING

Midlands Technical College's Business and Public Service Department provides an innovative, up-to-date learning environment that enables individuals to achieve their personal, professional and educational goals for the purpose of contributing to the economic growth of the community.

In business, managers at all levels must have updated financial information in order to make decisions that ensure the success of their firms. Accountants and auditors prepare, analyze and verify financial reports and data that furnish this essential information to their companies.

The Accounting program is designed to help develop the skills necessary for the highly technical and rapidly changing business environment.

This program is accredited by the Association of Collegiate Business Schools and Programs.

Students must earn a grade of "C" or better in all of the courses offered within the Business and Public Service Department for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, BAF, BUS, MGT, and MKT.

**MAJOR: ACCOUNTING (69 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

## A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ECO 210 Macroeconomics	3.0
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0
MAT 102 Intermediate Algebra	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	15.0

## B. MAJOR COURSE REQUIREMENTS (18 CREDIT HOURS)

	<u>Credit Hours</u>
ACC 102 Accounting Principles II	3.0
ACC 111 Accounting Concepts	3.0
ACC 112 Organizational Accounting	3.0
ACC 201 Intermediate Accounting I	3.0
ACC 202 Intermediate Accounting II	3.0
ACC 203 Intermediate Accounting III	3.0
ACC 224 Business Taxation	3.0
ACC 245 Accounting Applications	3.0
ACC 246 Integrated Accounting Software	<u>3.0</u>
Subtotal	27.0

## C. ADDITIONAL COURSE REQUIREMENTS (33 CREDIT HOURS)

	<u>Credit Hours</u>
BAF 201 Principles of Finance	3.0
BUS 121 Business Law I	3.0

BUS 130	Business Communications	3.0
CPT 170	Microcomputer Applications	3.0
MGT 101	Principles of Management	3.0
	Approved Accounting Electives (3 courses)	9.0
	Approved Business Electives (1 course)	<u>3.0</u>
	Subtotal	27.0
	Total Credit Hours:	69.0

**ACCOUNTING ELECTIVES:**

		<u>Credit Hours</u>
ACC 124	Individual Tax Procedures	3.0
ACC 150	Payroll Accounting	3.0
ACC 240	Computerized Accounting	3.0
ACC 230	Cost Accounting I	3.0
ACC 260	Auditing	3.0
ACC 265	Not-for-Profit Accounting	3.0

**BUSINESS ELECTIVES:**

		<u>Credit Hours</u>
BAF 101	Personal Finance	3.0
BUS 240	Business Statistics	3.0
BUS 250	Introduction to International Business	3.0
MGT 120	Small Business Management	3.0
MGT 150	Fundamentals of Supervision	3.0

## AMERICAN SIGN LANGUAGE CERTIFICATE

The American Sign Language (ASL) certificate is designed to prepare students for careers in the growing field of ASL Interpretation. The program also provides valuable language skills for a wide array of career areas including education, business, legal, health care and human services/social work. Please note that this is not to be confused with certification. However, completion of the certificate program may enable students to transfer to an interpreting program in preparation for certification.

### CERTIFICATE: AMERICAN SIGN LANGUAGE (22 CREDIT HOURS)

		<u>Credit Hours</u>
ASL 101	American Sign Language I	4.0
ASL 102	American Sign Language II	4.0
ASL 110	Careers in American Sign Language	2.0
ASL 201	American Sign Language III	3.0
ASL 202	American Sign Language IV	3.0
ITP 106	Linguistics of American Sign Language	
	OR	
SPC 208	Intercultural Communication	3.0
ITP 201	Deaf History and Culture	3.0
	Total Credit Hours:	22.0

# CRIMINAL JUSTICE TECHNOLOGY

The Criminal Justice program is designed to prepare students for employment in the areas of law enforcement, correctional services, the courts, private security and juvenile services. The program covers a broad spectrum of criminal justice concepts and theories including police administration, criminal law, criminal evidence and procedures, correctional systems and criminology, as well as appropriate general education courses. The structure of the program is designed for those currently serving in the various professions related to the Criminal Justice field as well as those interested in pursuing a career in these fields. The Criminal Justice program is also offered for students who are planning to transfer to a four-year college.

## SPECIAL REQUIREMENTS

In order to complete the Criminal Justice Technology program, students must obtain a “C” or better in 18 hours of required courses in the major. Also, 24 hours are required in general education courses and 24 hours of additional course requirements must be completed. This includes 15 hours of elective credits, of which 9 hours are to be selected from the list of approved electives found in the Criminal Justice Student Handbook. These electives allow students, along with their advisors, to tailor the program to particular needs.

NOTE: Criminal Justice Technology students cannot be certified as law enforcement officers until they reach the age of 21.

**MAJOR: CRIMINAL JUSTICE TECHNOLOGY  
(66 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (24 CREDIT HOURS)

	<u>Credit Hours</u>
CPT 101 Introduction to Computers	3.0
PHI 101 Introduction to Philosophy	
OR	
PHI 115 Contemporary Moral Issues	3.0
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0
MAT 155 Contemporary Mathematics	3.0
PSY 201 General Psychology	3.0
SPC 205 Public Speaking	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	24.0

*Major courses meeting other college general education core requirements are starred (\*) below*

### B. MAJOR COURSE REQUIREMENTS (18 CREDIT HOURS)

	<u>Credit Hours</u>
CRJ 101 Introduction to Criminal Justice	3.0
CRJ 115 Criminal Law I	3.0
CRJ 125 Criminology	3.0
CRJ 130 Police Administration	3.0
CRJ 242 Correctional Systems	3.0

CRJ 220 The Judicial Process

OR

CRJ 236 Criminal Evidence

	<u>3.0</u>
Subtotal	18.0

**C. ADDITIONAL COURSE REQUIREMENTS (24 CREDIT HOURS)**

	<u>Credit Hours</u>
PSC 201 American Government	3.0
PSC 215 State and Local Government	3.0
SOC 101 Introduction to Sociology*	3.0
Approved Electives	9.0
General Electives	<u>6.0</u>
Subtotal	24.0
Total Credit Hours:	66.0

## CRIMINAL JUSTICE CERTIFICATE

This program is designed for practitioners employed by criminal justice agencies or for students wishing to diversify their major course of study. The purpose of the certificate program is to provide students with an academic post-secondary education in criminal justice. Courses taken will provide a theoretical and systems approach to the entire field of criminal justice. Courses completed satisfactorily may be used toward the Associate in Applied Science Degree in Criminal Justice Technology.

Areas of instruction focus on concepts, theories and processes pertaining to all areas of the criminal justice system, including police work and organization, criminal law, causes of criminal behavior, rules of evidence and criminal procedures, and correctional services and systems.

### CERTIFICATE: CRIMINAL JUSTICE (21 CREDIT HOURS)

	<u>Credit Hours</u>
CRJ 101 Introduction to Criminal Justice	3.0
CRJ 115 Criminal Law I	3.0
CRJ 125 Criminology	3.0
CRJ 130 Police Administration	3.0
CRJ 220 The Judicial Process	
CRJ 236 Criminal Evidence	3.0
CRJ 242 Correctional Systems	<u>3.0</u>
Total Credit Hours:	21.0

## EARLY CHILDHOOD DEVELOPMENT

The Early Childhood Development (ECD) Program is designed for individuals entering the field of early childhood education as well as for those already employed in the field who want to improve their job skills. Early childhood professionals work in a variety of settings with children ages birth through eight years, including child care centers, Head Start centers, family child care homes, licensed group homes, morning preschool programs, after-school programs,

programs for children with special needs, summer camp programs, and parenting programs. The ECD program includes interactive classroom experiences as well as off-site experiences in a variety of nationally accredited child care and early education environments.

This program is accredited by the National Association for the Education of Young Children.

## **SPECIAL REQUIREMENTS**

Students must earn a grade of "C" or better in all of the courses offered for each of the following programs for the grade to be counted toward graduation. With the exception of ECD 101, Introduction to Early Childhood, all ECD students must take the placement test and complete (or test out of) ENG 100 and RDG 100. Students enrolled in lab classes must complete a SLED background check, physical, and TB test before attending lab sites. Please see your advisor about lab site forms and requirements.

ECD programs are not designed for students who wish to transfer to a four-year institution. For students who are planning on obtaining a four-year degree to teach in the public school system, the most appropriate program is the Associate of Arts degree, although they could also enroll in ECD classes as college-wide electives. They would also need to talk with their advisor about which ECD classes transfer to various four-year institutions. For more information, please visit [midlandstech.edu/futureteachers](http://midlandstech.edu/futureteachers).

## **TRANSFER AGREEMENTS**

### **University of South Carolina - Early Childhood Education**

The College of Education at the University of South Carolina has agreed that university-approved courses in the lower division of the Early Childhood Education curriculum may be taught at Midlands Technical College. Students accepted by the university for enrollment in the College of Education can receive transfer credit for specific courses taken at Midlands Technical College in accordance with the university's transfer policies. Since there are several options for this area, please see an ECD or education advisor for more information about these agreements.

### **South Carolina State University - Family and Consumer Sciences**

South Carolina State University has agreed to accept credits from approved courses in Midlands Technical College's Early Care and Education degree toward the bachelor's degree in Family and Consumer Sciences. Please see an ECD advisor for more information about this agreement.

### **Columbia College - Early Childhood Education and Child and Family Studies**

Columbia College has agreed to accept credits from approved courses in Midlands Technical College's Early Care and Education degree toward a bachelor's degree in Early Childhood Education and Child and Family Studies. Please see an ECD advisor for more information about this agreement.

### **Newberry College - Early Childhood Education**

Newberry College has agreed to accept credits from approved courses in Midlands Technical College's Early Care and Education degree toward a bachelor's degree in Early Childhood Education. Please see an ECD advisor for more information about this agreement.

## CHILD CARE CERTIFICATE

Students completing the 18 hour Child Care Certificate may find employment as an assistant or lead teacher in a child care center, family child care home, morning preschool program, after-school program, or summer camp program. Courses completed satisfactorily may be used toward the Early Childhood Development Certificate or the Associate in Applied Science Degree in Early Care and Education.

### CERTIFICATE: CHILD CARE (18 CREDIT HOURS)

	<u>Credit Hours</u>
ECD 101 Introduction to Early Childhood	3.0
ECD 102 Growth and Development I	3.0
ECD 105 Guidance and Classroom Management	3.0
ECD 107 Exceptional Children	3.0
ECD 135 Health, Safety, and Nutrition	3.0
ECD 203 Growth and Development II	<u>3.0</u>
Total Credit Hours:	18.0

## EARLY CARE AND EDUCATION

The Associate Degree in Early Care and Education is based on best practices and current research in the field of early childhood education. This degree provides students with the knowledge and skills necessary to promote optimal child development for all children, regardless of background or ability. In addition to focusing on competencies in child growth and development, health and safety, curriculum, family engagement, guidance, and hands-on experience in a variety nationally accredited child care and early education settings, the program is well grounded in ethics, advocacy, and leadership skills. Students may choose from the business track if they are interested in owning or operating a child care program, or the instructional track if they are interested in working in the classroom with the children. In addition to working in child care, the Associate Degree in Early Care and Education may also qualify students as instructional assistants in public school early childhood programs.

**MAJOR: EARLY CARE AND EDUCATION (66 CREDIT HOURS)**  
**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (21 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
ENG 102 English Composition II	
OR	
ENG 165 Professional Communication	3.0
PSY 201 General Psychology	3.0
SPC 205 Public Speaking	3.0
CPT 101 Introduction to Computers	

OR		
CPT 170	Micro Computer Applications	3.0
MAT 102	Intermediate Algebra	
OR		
MAT 155	Contemporary Mathematics	3.0
	Humanities Elective	<u>3.0</u>
	Subtotal:	21.0

**B. MAJOR COURSE REQUIREMENTS (36 HOURS)**

	<u>Credit Hours</u>	
ECD 101	Introduction to Early Childhood Development	3.0
ECD 102	Growth and Development I	3.0
ECD 105	Guidance and Classroom Management	3.0
ECD 107	Exceptional Child	3.0
ECD 108	Family and Community Relations	3.0
ECD 131	Language Arts	3.0
ECD 132	Creative Experiences	3.0
ECD 133	Science and Math Concepts	3.0
ECD 135	Health, Safety and Nutrition	3.0
ECD 203	Growth and Development II	3.0
ECD 237	Methods and Materials	3.0
ECD 243	Supervised Field Experience	3.0
OR		
ECD 251	Supervised Field Placement in Infant/Toddlers Environment	3.0
OR		
ECD 257	Field Experience for Special Needs	<u>3.0</u>
	Subtotal:	36.0

**C. ADDITIONAL COURSE REQUIREMENTS (18 HOURS)****BUSINESS TRACK:**

	<u>Credit Hours</u>	
ACC 111	Accounting Concepts	3.0
ECD 109	Administration and Supervision	3.0
MGT 120	Small Business Management	<u>3.0</u>
	Subtotal:	9.0

**INSTRUCTIONAL TRACK:**

	<u>Credit Hours</u>	
ECD 201	Principles of Ethics and Leadership in Early Childhood	3.0
	Approved Electives	<u>6.0</u>
	Total Credit Hours:	66.0

**ECD ELECTIVES:**

ECD 138	Movement and Music for Children
ECD 200	Curriculum Issues in Infant/Toddler Development
ECD 205	Socialization and Group Care of Infants and Toddlers
ECD 207	Inclusive Care of Infants and Toddlers
ECD 210	Early Childhood Intervention
ECD 259	Behavior Management for Special Needs

- ECD 260 Methods of Teaching Special Needs Students  
 SAC 101 Best Practices in School-Age and Youth Care  
 OR  
 Other approved electives as available

## EARLY CHILDHOOD DEVELOPMENT CERTIFICATE

The student in the 27 hour Early Childhood Development Certificate program will receive the tools and resources necessary to provide language and literacy rich environments, appropriate math and science skills, an inquiry based approach to learning about the world, and safe, healthy environments which promote the emotional and social well-being of all children. An emphasis will be placed on a variety of learning styles and inclusive environments to meet the needs of all children. Students will have experiences with a variety of ages and curriculum models through off-site labs in a nationally accredited child care facility or public school child development program. This program is designed to meet the equivalency of a Child Development Associate (CDA) Credential. Courses completed satisfactorily may be used toward the Early Childhood Development Certificate or the Associate in Applied Science Degree in Early Care and Education.

### CERTIFICATE: EARLY CHILDHOOD DEVELOPMENT (27 CREDIT HOURS)

	<u>Credit Hours</u>
ECD 101 Introduction to Early Childhood	3.0
ECD 102 Growth and Development I	3.0
ECD 105 Guidance and Classroom Management	3.0
ECD 107 Exceptional Children	3.0
ECD 131 Language Arts	3.0
ECD 132 Creative Experiences	3.0
ECD 133 Science and Math Concepts	3.0
ECD 135 Health, Safety and Nutrition	3.0
ECD 203 Growth and Development II	<u>3.0</u>
Total Credit Hours:	27.0

## INFANT/TODDLER CERTIFICATE

The 18 hour Infant/Toddler Certificate is geared for the child care professional who works with or is interested in working with children from birth through two years of age. Settings could include family child care, group homes, child care centers, early intervention, or parenting programs.

### CERTIFICATE: INFANT/TODDLER (18 CREDIT HOURS)

	<u>Credit Hours</u>
ECD 101 Introduction to Early Childhood	3.0
ECD 102 Growth and Development I	3.0

ECD 200	Infant/Toddler Curriculum	3.0
ECD 205	Socialization and Group Care of Infants and Toddlers	3.0
ECD 207	Inclusive Care of Infants and Toddlers	3.0
ECD 251	Field Placement for Infants and Toddlers	<u>3.0</u>
Total Credit Hours:		18.0

## SPECIAL NEEDS CERTIFICATE

Students in the 27 hour Special Needs Certificate will receive the skills and resources to work with children with special needs from birth through age eight in either an inclusive classroom setting or an exclusive special needs classroom. Students may add this certificate to their Early Care and Education Associate Degree or take this as a stand-alone certificate. This certificate program is appropriate for students interested in working with children with special needs or those who are currently employed in an early childhood setting and would like to enhance their skills and resources.

### CERTIFICATE: SPECIAL NEEDS (27 CREDIT HOURS)

	<u>Credit Hours</u>	
ECD 101	Introduction to Early Childhood	3.0
ECD 102	Growth and Development I	3.0
ECD 107	Exceptional Children	3.0
ECD 203	Growth and Development II	3.0
ECD 207	Inclusive Care of Infants and Toddlers	3.0
ECD 210	Early Childhood Intervention	3.0
ECD 257	Supervised Field Experience in Early Childhood Special Education	3.0
ECD 259	Behavior Management for Special Needs	3.0
ECD 260	Methods of Teaching Special Needs Students	<u>3.0</u>
Total Credit Hours:		27.0

## ENTREPRENEURSHIP CERTIFICATE

The Entrepreneurship Certificate program requires a student to complete 18 semester hours of appropriate subject matter relating to the establishment and operation of a small business. All students in this program must take the placement test and complete (or test out of) ACC-110, ENG-100, MAT-100 and RDG-100.

### CERTIFICATE: ENTREPRENEURSHIP (18 CREDIT HOURS)

	<u>Credit Hours</u>	
ACC 111	Accounting Concepts	3.0
BUS 110	Entrepreneurship	3.0
BUS 121	Business Law I	3.0
CPT 170	Microcomputer Application	3.0

MGT 150 Fundamentals of Supervision	3.0
MKT 101 Marketing	<u>3.0</u>
Total Credit Hours:	18.0

## HUMAN SERVICES

Students completing the Human Services program are qualified to work in a variety of fields that require a basic understanding of the causes, nature and consequences of human behavior. Students will develop an understanding of how to assist others in managing their behavior in order to achieve their full potential in educational, social, therapeutic and vocational settings.

Career opportunities exist in youth services, disabilities and special needs, substance abuse, geriatric services, child development programs, child and family services and mental health units. There are also opportunities in the area of general social services. The background in behavioral science can be applied in a wide variety of areas. The choice of electives and field placements enable students to prepare for specific interests in the areas that they feel best suited to work.

The electives chosen by students to prepare them for certain specialties must be selected from the list of department electives found in the Human Services Student Handbook. However, students may also select electives designed to transfer to a senior institution of their choice.

NOTE: This program is offered on the Airport Campus (day only) and Beltline Campus (evening only).

### SPECIAL REQUIREMENTS

In order to complete the Human Services program, students must obtain a "C" or better all courses. A 20 hour practicum is required as part of HUS 101, Introduction to Human Services. Additionally, two supervised field placements of 200 hours each are required. The program director is responsible for approving students for field placement based upon documented readiness. SLED or background checks may be required of student interns by some agencies. Students are responsible for their transportation to and from practicum and field placement sites.

### ARTICULATION AGREEMENTS

The Human Services Program has developed agreements with the following colleges and universities in order for graduates to seamlessly continue their education. These are:

Columbia College	Human Services and Social Work
Limestone College	Social Work
Southern Wesleyan University	Human Services
Springfield College School of Human Services	Human Services
University of South Carolina, Beaufort	Human Services
University of South Carolina, Columbia	Social Work

**MAJOR: HUMAN SERVICES (68 CREDIT HOURS)**  
**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (24 CREDIT HOURS)**

	<u>Credit Hours</u>
SPC 205 Public Speaking	3.0
BIO 101 Biological Science I	
OR	
Higher	3.0
CPT 101 Introduction to Computers	
OR	
CPT 170 Microcomputer Applications	3.0
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0
MAT 110 College Algebra	
OR	
MAT 155 Contemporary Mathematics	3.0
PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	24.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

**B. MAJOR COURSE REQUIREMENTS (35 CREDIT HOURS)**

	<u>Credit Hours</u>
HUS 101 Introduction to Human Services	3.0
HUS 102 Personal and Professional Development in Helping Professions	3.0
HUS 209 Case Management	3.0
HUS 221 Professional Ethics in Human Services	3.0
HUS 230 Interviewing Techniques*	3.0
HUS 235 Group Dynamics	3.0
HUS 237 Crisis Intervention	3.0
HUS 250 Supervised Field Placement I	4.0
HUS 251 Supervised Field Placement II	4.0
PSY 203 Human Growth and Development	3.0
SOC 101 Introduction to Sociology*	<u>3.0</u>
Subtotal	35.0

**C. ADDITIONAL COURSE REQUIREMENTS (6 CREDIT HOURS)**

	<u>Credit Hours</u>
Approved Electives	<u>9.0</u>
Subtotal	9.0
Total Credit Hours:	68.0

# GERONTOLOGY CERTIFICATE

The Certificate in Gerontology is designed to provide new students as well as working professionals in the health and human services with specialized knowledge of aging issues that will help them to better understand and serve older adults. Please note that this certificate is designed for students who have a degree or are pursuing a degree and wish to add the certificate as minor.

## CERTIFICATE: GERONTOLOGY (27 CREDIT HOURS)

	<u>Credit Hours</u>
AHS 153 Concepts of Geriatric Care	4.0
HUS 112 Services for the Elderly	2.0
HUS 134 Activity Therapy	3.0
HUS 150 Supervised Field Placement I	3.0
HUS 201 Family System Dynamics	3.0
HUS 205 Gerontology	3.0
HUS 206 Death and Dying	3.0
HUS 209 Case Management	3.0
HUS 260 Human Services Special Topics	<u>3.0</u>
Total Credit Hours:	27.0

# MANAGEMENT

Midlands Technical College's Business and Public Service Department provides an innovative, up-to-date learning environment that enables individuals to achieve their personal, professional and educational goals for the purpose of contributing to the economic growth of the community.

Success in the business world requires knowledge of business technology and the techniques of management. To meet this need, the Management curriculum requires courses in problem solving, human relations and critical thinking.

Graduates will be prepared for positions in marketing, finance, accounting, fire service, human resource management, banking and small business administration.

This program is accredited by the Association of Collegiate Business Schools and Programs.

Students must earn a grade of "C" or better in all of the courses offered within the Business and Public Service Department for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, BAF, BUS, MGT, and MKT.

## MAJOR: MANAGEMENT (66 CREDIT HOURS)

## DEGREE: ASSOCIATE IN APPLIED SCIENCE

### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ECO 210 Macroeconomics	3.0
ENG 101 English Composition I	3.0

ENG 102	English Composition II	3.0
MAT 155	Contemporary Mathematics	3.0
	Approved Humanities Course	<u>3.0</u>
	Subtotal	15.0

**B. MAJOR COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<u>Credit Hours</u>	
ACC 111	Accounting Concepts	3.0
BUS 121	Business Law I	3.0
CPT 170	Microcomputer Applications	3.0
MGT 101	Principles of Management	3.0
MKT 101	Marketing	<u>3.0</u>
	Subtotal	15.0

**C. ADDITIONAL COURSE REQUIREMENTS (39 CREDIT HOURS)**

	<u>Credit Hours</u>	
ACC 102	Accounting Principles II	3.0
BAF 201	Principles of Finance	3.0
BUS 101	Introduction to Business	3.0
BUS 130	Business Communications	3.0
BUS 240	Business Statistics	3.0
BUS 250	International Business	3.0
MGT 240	Management Decision Making	3.0
	Approved Business Electives- (5 courses from one specialty group)	<u>15.0</u>
	Subtotal	36.0
	Total Credit Hours:	66.0

**Specialty Groups****Group A - BUSINESS ADMINISTRATION**

- BUS 110 Entrepreneurship
- BUS 210 Introduction to e-Commerce in Business
- BUS 260 Insurance Principles
- MGT 120 Small Business Management
- MGT 150 Fundamentals of Supervision
- MGT 201 Human Resource Management
- MGT 255 Organizational Behavior
- MKT 120 Sales Principles
- MKT 270 Internet Research and Marketing

**Group B - FINANCE ADMINISTRATION**

- ACC 112 Organizational Accounting
- ACC 124 Individual Tax Procedures
- ACC 150 Payroll Accounting
- ACC 245 Accounting Applications
- BAF 101 Personal Finance
- BUS 110 Entrepreneurship
- BUS 260 Insurance Principles

**Group C - ENTREPRENEURSHIP**

- ACC 111 Accounting Concepts
- ACC 102 Accounting Principles II
- BUS 110 Entrepreneurship
- BUS 210 Introduction to e-Commerce in Business
- MGT 120 Small Business Management
- MGT 150 Fundamentals of Supervision
- MKT 270 Internet Research and Marketing

**Group D -FIRE SERVICE ADMINISTRATION\*\***

- National Fire Academy (ACE recommendations)
  - Political and Legal Foundations of Fire Protection
  - The Community and Fire Threat
  - Incendiary Fire Analysis and Investigation
  - Fire Protection Organization and Management
  - Advanced Fire Administration
  - Other NFA-OLFSP Transfer Courses from Other Approved Colleges
- \*\* Fire Service Administration courses are not available at Midlands Technical College

## MARKETING

Midlands Technical College's Business and Public Service Department provides an innovative, up-to-date learning environment that enables individuals to achieve their personal, professional and educational goals for the purpose of contributing to the economic growth of the community.

Marketing is concerned with the distribution of goods and services from the producer to the consumer. The field of marketing has emerged as a dominant factor in the economy of the country.

Marketing graduates develop skills in sales, advertising, marketing research and techniques for acquiring marketing information. Graduates may be eligible for positions in product planning, merchandising, advertising, sales, sales promotion and marketing.

This program is accredited by the Association of Collegiate Business Schools and Programs.

Students must earn a grade of "C" or better in all of the courses offered within the Business and Public Service Department for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, BAF, BUS, MGT, and MKT.

**MAJOR:            MARKETING (60 CREDIT HOURS)**

**DEGREE:        ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<u>Credit Hours</u>
ECO 210 Macroeconomics	3.0
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0

MAT 155 Contemporary Mathematics	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	15.0

## B. MAJOR COURSE REQUIREMENTS (15 CREDIT HOURS)

### Credit Hours

ACC 111 Accounting Concepts	3.0
BUS 121 Business Law I	3.0
CPT 170 Microcomputer Applications	3.0
MGT 101 Principles of Management	3.0
MKT 101 Marketing	<u>3.0</u>
Subtotal	15.0

## C. ADDITIONAL COURSE REQUIREMENTS (30 CREDIT HOURS)

### Credit Hours

ACC 102 Accounting Principles II	3.0
BAF 201 Principles of Finance	3.0
BUS 130 Business Communications	3.0
BUS 240 Business Statistics	3.0
MKT 110 Retailing	3.0
MKT 120 Sales Principles	3.0
MKT 240 Advertising	3.0
MKT 260 Marketing Management	3.0
MKT 270 Internet Research and Marketing	3.0
General Elective	<u>3.0</u>
Subtotal	30.0

Total Credit Hours: 60.0

# PARALEGAL

The Paralegal program prepares students to assist lawyers in carrying out their professional responsibilities. Working under the direct supervision of the attorney, paralegals must be mindful of prohibitions against lay persons practicing law. The paralegal does research, prepares documents and interviews clients. Employment opportunities are also available in such diverse areas as insurance, real estate, mortgage companies, government agencies, courts and banks.

This program is approved by the American Bar Association.

## SPECIAL REQUIREMENTS

Basic typing skills are required for successful completion of the program.

Students must earn a grade of "C" or better in all of the courses offered within the Business and Public Services Department as well as the Information Systems Technology Department for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, BAF, BUS, CPT, CRP, IST, LEG, MGT, MKT and AOT.

**MAJOR:            PARALEGAL (60 CREDIT HOURS)**  
**DEGREE:        ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (18 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0
MAT 155 Contemporary Mathematics	3.0
PSY 201 General Psychology	3.0
SPC 205 Public Speaking	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	18.0

*Major courses meeting other college general education course requirements are starred (\*) below.*

**B. MAJOR COURSE REQUIREMENTS (30 CREDIT HOURS)**

	<u>Credit Hours</u>
LEG 120 Torts	3.0
LEG 121 Business Law I	3.0
LEG 122 Business Law II	3.0
LEG 132 Legal Bibliography	3.0
LEG 135 Introduction to Law and Ethics	3.0
LEG 201 Civil Litigation I	3.0
LEG 213 Family Law	3.0
LEG 214 Property Law	3.0
LEG 233 Wills, Trusts and Probate	3.0
LEG 242 Law Practice Workshop	<u>3.0</u>
Subtotal	30.0

**C. ADDITIONAL COURSE REQUIREMENTS (12 CREDIT HOURS)**

	<u>Credit Hours</u>
CPT 179 Microcomputer Word Processing	3.0
CPT 101 Introduction to Computers*	3.0
Approved LEG Electives	<u>6.0</u>
Subtotal	12.0
Total Credit Hours:	60.0

Approved LEG electives include the following:

- LEG 212 Workers' Compensation
- LEG 215 Bankruptcy Law
- LEG 220 Intellectual Property Law
- LEG 230 Legal Writing
- LEG 231 Criminal Law
- LEG 232 Law Office Management
- LEG 234 Title Examination Procedures I
- LEG 244 Special Projects for Paralegals

# PARALEGAL CERTIFICATE

The Paralegal program prepares students to assist lawyers in carrying out their professional responsibilities. Working under the direct supervision of the attorney, paralegals must be mindful of prohibitions against lay persons practicing law. The paralegal does research, prepares documents and interviews clients. Employment opportunities are also available in such diverse areas as insurance, real estate, mortgage companies, government agencies, courts and banks.

This program is approved by the American Bar Association.

## SPECIAL REQUIREMENTS

To enter the program, students must have earned a bachelor's degree from an accredited college or university. To be successful in this field, students should possess strong communication and computer/word processing skills.

Students must earn a grade of "C" or better in all of the courses offered within the Business and Public Service and Information Systems Technology Departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, BAF, BUS, CPT, CRP, IST, LEG, MGT, MKT and AOT.

## CERTIFICATE: PARALEGAL (24 CREDIT HOURS)

	<u>Credit Hours</u>
LEG 120 Torts	3.0
LEG 121 Business Law I	3.0
LEG 132 Legal Bibliography	3.0
LEG 135 Introduction to Law and Ethics	3.0
LEG 201 Civil Litigation I	3.0
LEG 213 Family Law	3.0
LEG 214 Property Law	3.0
LEG 233 Wills, Trusts and Probate	<u>3.0</u>
Total Credit Hours:	24.0

# **Engineering Technologies and Engineering Transfer**



# ENGINEERING TECHNOLOGIES AND ENGINEERING TRANSFER

Programs offered within Engineering Technologies and Engineering Transfer are designed to provide a highly skilled and competent workforce to support the economic development of the Greater Midlands.

Engineering Technology degree programs include Architectural Engineering Technology, Civil Engineering Technology Electronics Engineering Technology and Mechanical Engineering Technology. The Mechanical Engineering Technology degree offers concentrations in Computer Aided Design, Mechanical Systems, Mechanical Processes, and Nuclear Technology. Students can earn an Associate in Science degree while taking courses in Engineering Transfer which provides the first two years of a four-year engineering major in the areas of Electrical, Computer, Civil, Mechanical, Chemical Engineering, Computer Science, Computer Information Systems, and Manufacturing Technology.

Engineering Technologies also offers the associate degree in General Technology/Occupational Technology, which allows a student to plan an individual program of study to meet specific needs.

A number of the programs within Engineering Technologies have developed flexible, short-term certificate programs designed for students who wish to specialize in one area of employment. These certificates also give those in the workforce opportunities to upgrade their skills on modern equipment. The introduction of computers into virtually every aspect of business and industry has increased the need for these high-technology training opportunities. The training opportunities change continuously in response to community and industry needs. The certificate curricula are reviewed and updated periodically in response to these changes, so the student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

The College of Engineering and Computing at the University of South Carolina accepts courses from Midlands Technical College as approximately the first two years of the following USC programs:

- Chemical Engineering
- Civil and Environmental Engineering
- Mechanical Engineering
- Electrical Engineering
- Computer Engineering
- Computer Science
- Computer Information Systems

While completing courses for the above programs, students may take several additional courses to qualify for the Associate in Science degree.

**Associate Degree Programs**

Applied Science (Transfer)  
 Architectural Engineering Technology  
 Civil Engineering Technology  
 Electronics Engineering Technology  
 Mechanical Engineering Technology

**Certificate Programs**

Advanced Computer Systems  
 Advanced Manufacturing Automation  
 Alternate Energy Technology Principles  
 Architectural Computer Graphics  
 Architectural Design Technology  
 Architectural System and Codes  
 Basic Computer Maintenance  
 Basic Electronics  
 Chemical Technology

**Certificate Programs (con't)**

Computer-Aided Design  
 Computer Systems Infrastructure  
 Construction Engineering Technology  
 Digital Systems  
 Engineering Science  
 Environmental and Economic Design  
 Fundamentals of Robotics  
 Geographic Information Systems  
 Geomatics  
 Low Impact Land Development  
 Mechanical Process Technology  
 Mechanical Systems Dynamics  
 Mechanical Technology Fundamentals  
 Nuclear Systems Technology  
 Structural Technology

# ADVANCED COMPUTER SYSTEMS CERTIFICATE

Computer systems technicians combine practical hands-on ability with a theoretical approach toward repairing, maintaining, troubleshooting, and designing computer and network systems and other electronic systems including electronic instruments and control devices.

Either A+ certification or completion/exemption of the Basic Computer Maintenance certificate is required as a prerequisite for this certificate. Taken together, the Basic Computer Maintenance certificate and the Advanced Computer Systems certificate provide the skills required to be a competent technician in the manufacturing, sales, installation, and maintenance of computer and other electronic systems.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## CERTIFICATE: ADVANCED COMPUTER SYSTEMS (28 CREDIT HOURS)

	<u>Credit Hours</u>
CPE 220 Computer Operating Systems	3.0
CPE 224 Systems Troubleshooting	3.0
EET 103 Introduction to Electronics	3.0
EET 210 Digital Integrated Circuits	4.0
EGR 109 Engineering Project Management	<u>3.0</u>

Total Credit Hours: 19.0

# ADVANCED MANUFACTURING AUTOMATION CERTIFICATE

The Advanced Manufacturing Automation certificate is a program that addresses the fundamentals of automation, such as PLCs, mechatronics, digital electronics, and basic robotics. Students are eligible to enroll in this program only after the basic EET entry requirements are completed (the same requirements to get into the degree program) and prerequisites for the individual courses within the certificate are met. The program covers fundamentals of industrial electronic circuits, digital circuits, robotics, and programmable logic controllers. The Advanced Manufacturing Automation Certificate is designed to dovetail easily with other certificate in Electronic Engineering Technology and should appeal to students requiring training in manufacturing automation as well as those seeking a degree.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## CERTIFICATE: ADVANCED MANUFACTURING AUTOMATION (24 CREDIT HOURS)

	<u>Credit Hours</u>
EET 113 Electrical Circuits I	4.0
EET 141 Electronic Circuits	4.0
EET 231 Industrial Electronics	4.0
EET 235 Programmable Controllers	3.0
EET 236 PLC Systems Programming	3.0
EGR 110 Introduction to Computer Environment	3.0
ELT 208 Introduction to Robotics	<u>3.0</u>
Total Credit Hours:	24.0

## ALTERNATE ENERGY TECHNOLOGY PRINCIPLES CERTIFICATE

The Alternate Energy Technology Principles Certificate is a two-semester (24 credit hour) program that addresses the fundamentals of alternate energy technology. Students are eligible to enroll in this program only after the basic prerequisites for individual courses within the certificate are met. The program covers fundamentals of analytical instrumentation, manufacturing processes, basic electronic systems, material properties, fuel cell technology, solar energy, mobile and stationary power systems, and engineering project management among other related topics. There is a significant demand for chemical and alternate energy technicians with basic skills in laboratory technique, quality control, instruments and calibration, general chemistry, spectroscopy, and related skills. This certificate is designed both for the students needing a basic introduction to alternate energy and for those who intend to pursue a degree in chemical technology or power generation. This certificate is considered an advanced certificate and is designed to dovetail easily with the Chemical Technology Certificate. Graduates from this

certificate program are qualified to enter the workforce as a medium level operator, laboratory technician, water quality technician, or senior manufacturing technician. The course sequence is designed to also prepare the student for more advanced on-the-job training in chemical technology, fuel cell technology, or power generation and delivery.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: ALTERNATE ENERGY TECHNOLOGY PRINCIPLES (24 CREDIT HOURS)**

	<u>Credit Hours</u>
CHT 110 Introduction to Alternate Energy Technology	3.0
CHT 230 Survey in Engineering Chemistry	3.0
EET 103 Introduction to Electronics	3.0
EET 116 Polymer Electrolyte Membrane Fuel Cell Technology	3.0
EET 223 Stationary and Auxiliary Power Sources	3.0
EET 224 Fuel Cell Subsystems	3.0
EGR 109 Engineering Project Management	3.0
EGR 110 Introduction to Computer Environment	<u>3.0</u>
Total Credit Hours:	24.0

## **ARCHITECTURAL COMPUTER GRAPHICS CERTIFICATE**

The Architectural Computer Graphics Certificate is a two semester (21 credit hour) program that addresses the basics of architectural drafting. Students are eligible to enroll in this program only after the basic AET entry requirements are completed (the same requirements to get into the degree program) and prerequisites for individual courses within the certificate are met. The program covers fundamentals of computer aided design and project management. This certificate is designed both for the students needing a basic introduction to architectural drafting and those who intend to pursue a degree in AET.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: ARCHITECTURAL COMPUTER GRAPHICS (21 CREDIT HOURS)**

	<u>Credit Hours</u>
AET 101 Building Systems I	3.0
AET 110 Architectural Graphics I	3.0
AET 111 Architectural Computer Graphics I	3.0
AET 120 Architectural Graphics II	3.0

AET 202	History of Architecture	3.0
AET 235	Architectural 3-D Rendering	3.0
EGR 109	Engineering Project Management	<u>3.0</u>
Total Credit Hours:		21.0

## ARCHITECTURAL DESIGN CERTIFICATE

The Architectural Design Technology Certificate is a two semester program that addresses the basics of architectural design methodology. Students are eligible to enroll in this program only after the basic AET entry requirements are completed (the same requirements to get into the degree program) and prerequisites for individual courses within the certificate are met. The program covers fundamentals of computer aided design and project management, and building systems and codes. This certificate is designed both for the students needing a basic introduction to architectural engineering and those who intend to pursue a degree in AET.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### CERTIFICATE: ARCHITECTURAL DESIGN (21 CREDIT HOURS)

	<u>Credit Hours</u>	
AET 101	Building Systems I	3.0
AET 103	International Building and Residential Codes	3.0
AET 110	Architectural Graphics I	3.0
AET 111	Architectural Computer Graphics I	3.0
AET 120	Architectural Graphics II	3.0
CET 235	Construction Methods and Estimating	3.0
EGR 109	Engineering Project Management	<u>3.0</u>
Total Credit Hours:		21.0

## ARCHITECTURAL ENGINEERING TECHNOLOGY

Architectural engineering technicians assist architects, engineers and contractors. A wide variety of jobs are available for graduates, including architectural technicians, estimators and surveyors. Graduates convert preliminary designs of architects and engineers into working drawings and specifications, and they plan, supervise and do preliminary cost estimates of construction projects.

Architectural engineering technicians play an important support role to architects and engineers. There is a need for qualified technicians to assist architects, contractors and the allied construction industries in implementing new technological advances. With the development of new materials, building designs are limited only by one's knowledge, skills, creativity and imagination.

This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone (410) 347-7700.

## SPECIAL REQUIREMENTS

Students are required to purchase an engineering pocket calculator and a set of drawing instruments. The cost for these instruments will vary from year to year.

## GRADUATION REQUIREMENTS

In addition to college graduation requirements, students must earn a cumulative grade of "C" or better in all courses offered in the Engineering Technology and Engineering Transfer Department to be eligible for graduation.

**MAJOR: ARCHITECTURAL ENGINEERING TECHNOLOGY  
(77 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
AET 202 History of Architecture	3.0
ENG 101 English Composition I	3.0
ENG 102 English Composition II	
OR	
ENG 165 Professional Communications	3.0
MAT 110 College Algebra	3.0
Approved Social/Behavioral Science Course	<u>3.0</u>
Subtotal	15.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

### B. MAJOR COURSE REQUIREMENTS (13 CREDIT HOURS)

	<u>Credit Hours</u>
AET 101 Building Systems I	3.0
AET 110 Architectural Graphics I	3.0
CPT 101 Introduction to Computers*	
OR	
CPT 170 Microcomputer Applications*	3.0
EGR 194 Statics and Strength of Materials *	<u>4.0</u>
Subtotal	13.0

### C. ADDITIONAL COURSE REQUIREMENTS (46 CREDIT HOURS)

	<u>Credit Hours</u>
AET 105 Construction Documents	3.0
AET 111 Architectural Computer Graphics I	3.0
AET 120 Architectural Graphics II	3.0
AET 201 Building Systems II	3.0
AET 221 Architectural Computer Graphics II	4.0
AET 230 Architect Graphics III	4.0
AET 235 Architectural 3-D Rendering	3.0
CET 105 Surveying I	3.0
CET 235 Construction Methods and Cost Estimating*	3.0
CET 242 Concrete Design	

OR		
CET 244	Structural Steel Design	3.0
EGT 109	Engineering Project Management	3.0
MAT 111	College Trigonometry	3.0
MAT 195	Applied Calculus for Engineering Technology	
OR		
	Approved Calculus course	4.0
PHY 201	General Physics I *	4.0
	Mathematics/ Science Elective	<u>3.0</u>
	Subtotal	49.0
	Total Credit Hours:	77.0

## ARCHITECTURAL SYSTEMS AND CODES CERTIFICATE

The Architectural System and Codes Certificate is a two semester program that addresses the basics of architectural systems and the concepts of “designing to code.” Students are eligible to enroll in this program only after the basic AET entry requirements are completed (the same requirements to get into the degree program) and prerequisites for individual courses within the certificate are met. The program covers fundamentals of computer aided design and building systems and codes. This certificate is designed both for the students needing a basic introduction to architectural engineering technology and those who intend to pursue a degree in AET.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### CERTIFICATE: ARCHITECTURAL SYSTEMS AND CODES (22 CREDIT HOURS)

	<u>Credit Hours</u>	
AET 101	Building Systems I	3.0
AET 103	International Building and Residential Codes	3.0
AET 105	Construction Documents	3.0
AET 110	Architectural Graphics I	3.0
AET 201	Building Systems II	3.0
AET 221	Architectural Computer Graphics II	4.0
CET 235	Construction Methods and Estimating	<u>3.0</u>
	Total Credit Hours:	22.0

# BASIC COMPUTER MAINTENANCE CERTIFICATE

This certificate is designed to provide students with basic computer and local-area network installation and maintenance skills. Essential hardware and software knowledge required to pass the A+ Certification Exam is presented in this program.

This certificate is intended to be the prerequisite for the Advanced Computer Systems certificate. Taken together, the Basic Computer Maintenance certificate and the Advanced Computer Systems certificate provide the skills required to be a competent technician in the manufacturing, sales, installation, and maintenance of computer and other electronic systems.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## CERTIFICATE: BASIC COMPUTER MAINTENANCE (18 CREDIT HOURS)

	<u>Credit Hours</u>
BUS 130 Business Communications	3.0
CPE 215 LAN Setup and Troubleshooting	3.0
CPE 216 PC Networking	3.0
CPE 220 Computer Operating Systems	3.0
EEM 243 Introduction to Computer Servicing	3.0
ELT 120 Computer PEM/Applications	<u>3.0</u>
Total Credit Hours:	18.0

# BASIC ELECTRONICS CERTIFICATE

The Basic Electronics certificate is a program that addresses the fundamentals of electronics. Students are eligible to enroll in this program only after the basic EET entry requirements are completed (the same requirements to get into the degree program), and prerequisites for the individual courses within the certificate are met. The program covers fundamentals of electric circuits, electronics, digital circuits and engineering project management. This certificate is designed both for the students needing a basic introduction to electronics and those who intend to pursue a degree.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## CERTIFICATE: BASIC ELECTRONICS (25 CREDIT HOURS)

	<u>Credit Hours</u>
EEM 243 Introduction to Computer Servicing	3.0
EET 113 Electrical Circuits I	4.0
EET 114 Electrical Circuits II	4.0
EET 141 Electronic Circuits	4.0
EET 210 Digital Integrated Circuits	4.0

EGR 109	Engineering Project Management	3.0
EGR 110	Introduction to Computer Environment	<u>3.0</u>
Total Credit Hours:		25.0

## CHEMICAL TECHNOLOGY CERTIFICATE

The Chemical Technology certificate (CHT) is a three-semester (two regular semesters and one summer session) program that prepares students for employment as technicians playing a major role in the synthesis, manufacture, and analysis of engineered materials, and basic chemical constituents and intermediates. Chemical technicians work primarily as assistants to engineers and chemists doing basic research, manufacturing, analyses, and quality control. There is a significant need for qualified technicians to assist chemists and chemical engineers, and the allied materials industries, to implement new technological advances, and to development new materials and new analytical techniques. The program is designed to admit qualified students who need a basic introduction to Chemical Technology and other who desire to pursue a degree in chemistry, chemical technology, or chemical engineering.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### CERTIFICATE: CHEMICAL TECHNOLOGY (35 CREDIT HOURS)

	<u>Credit Hours</u>	
CHM 110	College Chemistry I	4.0
CHM 111	College Chemistry II	4.0
CHT 230	Survey in Engineering Chemistry	3.0
CHT 250	Methods in Analytical Chemistry I	3.0
CHT 252	Methods in Analytical Chemistry II	3.0
CHT 275	Chemical Process Technology	3.0
CPT 170	Microcomputer Applications	3.0
EGR 110	Introduction to Computer Environment	3.0
EGR 170	Engineering Materials	3.0
ENG 101	English Composition I	
OR		
SPC 209	Interpersonal Communication	3.0
MAT 110	College Algebra	3.0
QAT 102	Quality Concepts and Techniques	<u>3.0</u>
Total Credit Hours:		35.0

## CIVIL ENGINEERING TECHNOLOGY

Civil Engineering Technology graduates play a major role in the design and construction of airports, bridges, highways, pipelines, and water and sewage systems. They can become professionally licensed land surveyors, steel detailers, construction superintendents, civil engineering technologists and technicians, engineering design assistants, cost estimators and public works

technicians. To perform this work, civil engineering technicians must possess knowledge and skills in such technical areas as surveying, construction materials and cost estimating, structures, hydraulics, project management and use of computers.

This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone (410) 347-7700.

## SPECIAL REQUIREMENTS

Students are required to purchase an engineering pocket calculator at an approximate cost of \$75.

## GRADUATION REQUIREMENTS

In addition to college graduation requirements, students must earn a cumulative grade of “C” or better in all courses offered in the Engineering Technology and Engineering Transfer Department to be eligible for graduation.

**MAJOR: CIVIL ENGINEERING TECHNOLOGY  
(76 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
ENG 102 English Composition II	
OR	
ENG 165 Professional Communications	3.0
MAT 110 College Algebra	3.0
Approved Humanities Course	3.0
Approved Social/Behavioral Science Course	<u>3.0</u>
Subtotal	15.0

*Major courses meeting other college general education core requirements are (\*) below:*

### B. MAJOR COURSE REQUIREMENTS (16 CREDIT HOURS)

	<u>Credit Hours</u>
CET 105 Surveying I	3.0
CET 120 Construction Materials	3.0
EGR 110 Introduction to Computer Environment*	3.0
EGR 194 Statics and Strength of Materials	4.0
EGT 106 Blueprint Reading and Sketching	<u>3.0</u>
Subtotal	16.0

### C. ADDITIONAL COURSE REQUIREMENTS (45 CREDIT HOURS)

	<u>Credit Hours</u>
AET 105 Construction Documents	3.0
CET 205 Surveying II	
OR	
GMT 235 GPS and Geodesy	4.0

CET 216	Soil Mechanics	3.0
CET 218	Hydraulics	3.0
CET 235	Construction Methods and Cost Estimating	3.0
CET 242	Concrete Design	3.0
CET 244	Structural Steel Design	3.0
CET 246	Environmental Systems Technology	3.0
CET 251	Highway Design	3.0
EGR 109	Engineering Project Management	3.0
MAT 195	Applied Calculus for Engineering Technology	4.0
MAT 111	College Trigonometry	3.0
PHY 201	Physics I*	4.0
	Mathematics/Science Elective	<u>3.0</u>
	Subtotal	45.0
	Total Credit Hours:	76.0

## COMPUTER-AIDED DESIGN CERTIFICATE

The main purpose of the design process is to create sets of drawings that provide all the information required to build and assemble mechanical parts and buildings. The design process often requires that computer simulations and functional models called prototypes be developed to assure that the mechanical parts and assemblies function correctly. Building designs also require photo-realistic computer renderings and computer animations that show the clients how the building will look after they are built. This process requires Computer Aided Design (CAD) Technicians to understand the design process as well as be capable of using sophisticated computer software such as 2-dimensional Computer Aided Design (CAD) software and 3-dimensional modeling software.

The Computer Aided Design Certificate prepares students for employment as entry-level technicians capable of supporting the 2D and 3D CAD and modeling requirements of most industrial design and manufacturing organizations.

This certificate is designed to be used as an option within the Mechanical Engineering Technology Degree, or it can be used to dovetail easily with other certificates to build an Associate in General Technology degree specific to the student and potential employer's needs.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### CERTIFICATE: COMPUTER-AIDED DESIGN (24 CREDIT HOURS)

	<u>Credit Hours</u>	
EGR 109	Engineering Project Management	3.0
EGR 120	Engineering Computer Applications	3.0
EGT 106	Print Reading and Sketching	3.0
EGT 245	Principles of Parametric CAD	3.0
EGT 251	Principles of CAD	3.0
EGT 256	Modeling Mechanical Systems	3.0

EGT 258 Applications of CAD	3.0
EGT 285 Integrated Rapid Prototyping Applications	<u>3.0</u>
Total Credit Hours:	24.0

## COMPUTER SYSTEM INFRASTRUCTURE CERTIFICATE

This certificate is designed to provide students with basic computer and local-area network installation and maintenance skills, as well as to provide the skills required to be a competent technician in the manufacturing, sales, installation, and maintenance of computer and other electronic systems. Essential hardware and software knowledge required to pass the A+ Certification Exam is presented in this program.

Computer systems technicians combine practical hands-on ability with a theoretical approach toward repairing, maintaining, and troubleshooting, computer and network systems and other electronic systems including electronic instruments and control devices.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### CERTIFICATE: COMPUTER SYSTEMS INFRASTRUCTURE (35 CREDIT HOURS)

	<u>Credit Hours</u>
BUS 130 Business Communications	3.0
CPE 215 LAN Setup and Troubleshooting	3.0
CPE 216 PC Networking	3.0
CPE 220 Computer Operating System	3.0
EEM 140 National Electrical Code	3.0
EEM 172 Electrical Print Reading	4.0
EEM 243 Introduction to Computer Servicing	3.0
EET 103 Introduction to Electronics	3.0
EET 113 Electrical Circuits I	4.0
EGR 109 Engineering Project Management	3.0
ELT 120 Computer PEM/Applications	<u>3.0</u>
Total Credit Hours:	35.0

## CONSTRUCTION ENGINEERING TECHNOLOGY CERTIFICATE

The Construction Engineering Technology Certificate is a (25 credit hour) program that addresses the following: principles of engineering project management, engineering properties and testing procedures for construction materials, contract documents and legal concepts, material quantity and cost estimating, surveying, plans and specifications, and highway design.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: CONSTRUCTION ENGINEERING TECHNOLOGY (25 CREDIT HOURS)**

	<u>Credit Hours</u>
AET 105 Construction Documents	3.0
CET 105 Surveying I	3.0
CET 120 Construction Materials	3.0
CET 235 Construction Methods and Cost Estimation	3.0
CET 251 Highway Design	3.0
EGR 109 Engineering Project Management	3.0
EGR 194 Statics and Strength of Materials	4.0
EGT 106 Blueprint Reading and Sketching	
OR	
AET 110 Architectural Graphics I	
OR	
AET 111 Architectural Computer Graphics I	
OR	
Approved equivalent	<u>3.0</u>
Total Credit Hours:	25.0

## **DIGITAL SYSTEMS CERTIFICATE**

The Digital Systems Certificate is a basic program that addresses the fundamentals of digital electronics. Students are eligible to enroll in this program only after the basic EET entry requirements are completed (the same requirements to get into the degree program), and the prerequisites for the individual courses within the certificate are met. The program covers fundamentals of basic electronics, digital systems, logic, microprocessors, introductory robotics, and engineering project management. This certificate is designed both for the students needing a basic introduction to digital electronic systems and those who intend to pursue a degree.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: DIGITAL SYSTEMS (20 CREDIT HOURS)**

	<u>Credit Hours</u>
EEM 243 Introduction to Computer Servicing	3.0
EET 103 Introduction to Electronics	3.0
EET 210 Digital Integrated Circuits	4.0
EET 251 Microprocessor Fundamentals	4.0
EET 255 Advanced Microprocessor	3.0
EGR 109 Engineering Project Management	<u>3.0</u>
Total Credit Hours:	20.0

# ELECTRONICS ENGINEERING TECHNOLOGY

Electronics engineering technicians combine practical hands-on skills with a theoretical approach to repairing, maintaining, and troubleshooting electronics equipment including computers, PLCs, electronic instruments and control devices. Graduates of this program may work in a manufacturing environment, a research facility, sales center or an educational institution.

This program is accredited by the Technology Accreditation Commission of the Accreditation Board for Engineering and Technology, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone (410) 347-7700.

## SPECIAL REQUIREMENTS

Students are required to purchase a graphing calculator and a small set of hand tools.

## GRADUATION REQUIREMENTS

In addition to college graduation requirements, students must earn a cumulative grade of “C” or better in all courses offered in the Engineering Technology and Engineering Transfer Department to be eligible for graduation.

**MAJOR: ELECTRONICS ENGINEERING TECHNOLOGY  
(68 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
ENG 102 English Composition II	
OR	
ENG 165 Professional Communications	3.0
MAT 110 College Algebra	3.0
Approved Humanities Course	3.0
Approved Social and Behavioral Science Course	<u>3.0</u>
Subtotal	15.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

### B. MAJOR COURSE REQUIREMENTS (22 CREDIT HOURS)

	<u>Credit Hours</u>
EET 113 Electrical Circuits I	4.0
EET 114 Electrical Circuits II	4.0
EET 141 Electronic Circuits	4.0
EET 210 Digital Integrated Circuits	4.0
EGR 110 Introduction to Computer Environment*	3.0
MAT 111 College Trigonometry	3.0
Subtotal	22.0

### C. ADDITIONAL COURSE REQUIREMENTS (38 CREDIT HOURS)

	<u>Credit Hours</u>
EET 255 Advanced Microprocessors	3.0
EET 231 Industrial Electronics	4.0

EET 235	Programmable Controllers	3.0
EET 243	Data Communications	3.0
EET 251	Microprocessor Fundamentals	4.0
EET 273	Electronics Senior Project	1.0
EGR 109	Engineering Project Management	3.0
PHY 201	Physics I*	4.0
	Elective in Power or Automation	3.0
	Mathematics and Science Elective	<u>3.0</u>
	Subtotal	31.0
	Total Credit Hours:	68.0

## ENGINEERING SCIENCE CERTIFICATE

The Engineering Science Certificate is designed for students desiring to transfer to an engineering program at a four-year institution but who do not necessarily desire an Associate in Science Degree from Midlands Technical College. All of the courses in the Engineering Science Certificate can also be used toward the associate degree. The courses in the certificate are typically found in the first year of an engineering program and the certificate is based on South Carolina's Engineering Transfer Block so the courses should transfer to any institution in the state. However, all engineering programs are different, so a student planning to transfer to any four-year institution is strongly urged to discuss the curriculum and transfer requirements with a representative of that institution early in his or her academic career at Midlands Technical College.

To transfer to the University of South Carolina's College of Engineering and Computing, students must successfully complete each transfer course with grades of "C" or better and have an overall grade point average of at least 3.0.

High school preparation for engineering should include a strong emphasis on mathematics, science and basic English language skills. Students not meeting the requirements for entry into Mathematics 140 and English 101 will have preparatory work to complete that may extend the time required to complete the certificate.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### CERTIFICATE: ENGINEERING SCIENCE (32 CREDIT HOURS)

	<u>Credit Hours</u>	
CHM 110	College Chemistry I	4.0
CHM 111	College Chemistry II	4.0
ENG 101	English Composition I	3.0
ENG 102	English Composition II	3.0
HIS 101	Western Civilization to 1689	3.0
MAT 140	Analytical Geometry and Calculus I	4.0
MAT 141	Analytical Geometry and Calculus II	4.0
PHY 221	University Physics I	4.0
	Approved EGR Elective	3.0
	Total Credit Hours:	32.0

# ENGINEERING TRANSFER

Within the Associate in Science program, the first two years of engineering and information technology majors are offered. Students may choose from seven disciplines: Electrical, Computer, Civil and Environmental, Chemical, Mechanical Engineering, Computer Science or Computer Information Systems. The two-year sequence of courses provides courses that are nearly equivalent to the first two years of Engineering or Information Technology at the University of South Carolina (USC). Students may transfer after completing these courses or may take a few additional courses and receive the Associate in Science degree before transferring.

To transfer to the University of South Carolina's College of Engineering and Computing, students must complete the course work required for the selected engineering discipline with grades of "C" or better in each course and have an overall grade point average of at least 3.0. A student planning to transfer to any other four-year institution is strongly urged to discuss curriculum and transfer requirements with a representative of that institution early in his or her academic program at Midlands Technical College.

High school preparation for engineering should include a strong emphasis on mathematics, science and basic English language skills. Students not meeting the requirements for entry into Mathematics 140 and English 101 will have preparatory work to complete and may need more than four semesters to finish the transfer course sequence or the Associate in Science degree.

## **MAJOR: ENGINEERING TRANSFER (77-89 CREDIT HOURS)** **DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### **A. GENERAL EDUCATION COURSE REQUIREMENTS (27 CREDIT HOURS)**

	<u>Credit Hours</u>
1. COMMUNICATIONS (9 CREDIT HOURS)	
*ENG 101	3.0
*ENG 102	3.0
SPC 205	
OR	
SPC 209	<u>3.0</u>
Subtotal	9.0
2. HUMANITIES (12 CREDIT HOURS)	
Literature - 3 credits must be selected from the following: ENG 203, ENG 205, ENG 206, ENG 208, ENG 209, ENG 210, ENG 212, ENG 214, ENG 218, ENG 222	3.0
Fine Arts - 3 credits must be selected from the following: ART 101, ART 105, ART 107, ART 108, MUS 105, THE 101	3.0
History - 3 credits must be selected from the following: HIS 101, HIS 102, HIS 106, HIS 108, HIS 109, HIS 201, HIS 202	3.0

Associate in Science Elective - 3 credits must be selected from the following:

ART 101, ART 105, ART 107, ART 108, ENG 203, ENG 205, ENG 206, ENG 214, ENG 218, HIS 101, HIS 102, HIS 108, HIS 109, HIS 201, HIS 202, MUS 105, PHI 101, PHI 115, REL 101, REL 102, REL 103, SPA 101, SPA 102, SPA 122, THE 101	<u>3.0</u>
Subtotal	12.0

### 3. SOCIAL/BEHAVIORAL SCIENCE (6 CREDIT HOURS)

Core Requirement - 3 credits must be selected from the following:

ECO 210, PSC 201, PSY 201, SOC 101	3.0
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Elective - 3 credits must be selected from the following:

ANT 202, ANT 203, ECO 201, ECO 210, GEO 102, any PSC, PSY 201, any SOC	<u>3.0</u>
Subtotal	6.0

Elective credits must represent a different discipline from the core requirement.

Total General Education Credit Hours:	27.0
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## B. ENGINEERING TRANSFER AND INFORMATION TECHNOLOGY COURSE REQUIREMENTS (56-58 CREDIT HOURS) \*

Chemical:

CHM 110 College Chemistry I	4.0
CHM 111 College Chemistry II	4.0
CHM 211 Organic Chemistry I	4.0
CHM 212 Organic Chemistry II	4.0
EGR 266 Engineering Thermodynamics Fundamentals	3.0
EGR 270 Introduction to Engineering	3.0
PHY 221 University Physics I	4.0
PHY 222 University Physics II	4.0
MAT 140 Analytical Geometry and Calculus I	4.0
MAT 141 Analytical Geometry and Calculus II	4.0
MAT 240 Analytical Geometry and Calculus III	4.0
MAT 242 Differential Equations	4.0

TWO OF THE FOLLOWING COURSES:

ECE 221 Introduction to Electrical Engineering I	
ECE 222 Introduction to Electrical Engineering II	
EGR 260 Engineering Statics	
EGR 262 Engineering Dynamics	
EGR 264 Introduction to Engineering Mechanics of Solids	
EGR 280 Chemical Process Principles	<u>6.0</u>
Subtotal	52.0

## Civil and Environmental:

CHM 110	College Chemistry I	4.0
CHM 111	College Chemistry II	4.0
ECE 221	Introduction to Electrical Engineering I	3.0
EGR 260	Engineering Statics	3.0
EGR 262	Engineering Dynamics	3.0
EGR 264	Introduction to Engineering Mechanics of Solids	3.0
EGR 266	Engineering Thermodynamics Fundamentals	3.0
EGR 270	Introduction to Engineering	3.0
EGR 275	Introduction to Engineering Computer Graphics	3.0
PHY 221	University Physics I	4.0
PHY 222	University Physics II	4.0
MAT 140	Analytical Geometry and Calculus I	4.0
MAT 141	Analytical Geometry and Calculus II	4.0
MAT 242	Differential Equations	<u>4.0</u>
	Subtotal	53.0

## Mechanical:

CHM 110	College Chemistry I	4.0
CHM 111	College Chemistry II	4.0
ECE 221	Introduction to Electrical Engineering I	3.0
EGR 260	Engineering Statics	3.0
EGR 262	Engineering Dynamics	3.0
EGR 264	Introduction to Engineering Mechanics of Solids	3.0
EGR 266	Engineering Thermodynamics Fundamentals	3.0
EGR 270	Introduction to Engineering	3.0
EGR 274	Engineering Applications of Numerical Methods	3.0
EGR 275	Introduction to Engineering Computer Graphics	3.0
PHY 221	University Physics I	4.0
PHY 222	University Physics II	4.0
MAT 140	Analytical Geometry and Calculus I	4.0
MAT 141	Analytical Geometry and Calculus II	4.0
MAT 240	Analytical Geometry and Calculus III	4.0
MAT 242	Differential Equations	<u>4.0</u>
	Subtotal	56.0

## Electrical:

CHM 110	College Chemistry I	4.0
ECE 101	Electrical and Computer Engineering	3.0
ECE 102	Instrument Control	3.0
ECE 205	Electrical and Computer Lab	3.0
ECE 211	Introduction to Computer Engineering I	3.0
ECE 212	Introduction to Computer Engineering II	3.0
ECE 221	Introduction to Electrical Engineering I	3.0
ECE 222	Introduction to Electrical Engineering II	3.0
EGR 281	Introduction to Algorithmic Design I	4.0
EGR 283	Introduction to Algorithmic Design II	4.0
PHY 221	University Physics I	4.0

PHY 222	University Physics II	4.0
MAT 140	Analytical Geometry and Calculus I	4.0
MAT 141	Analytical Geometry and Calculus II	4.0
MAT 240	Analytical Geometry and Calculus III	4.0
MAT 242	Differential Equations	<u>4.0</u>
	Subtotal	57.0

## Computer:

CHM 110	College Chemistry I	4.0
ECE 211	Introduction to Computer Engineering I	3.0
ECE 212	Introduction to Computer Engineering II	3.0
ECE 221	Introduction to Electrical Engineering I	3.0
ECE 222	Introduction to Electrical Engineering II	3.0
ECE 240	Introduction to Software Engineering	3.0
ECE 245	Object-Oriented Programming Techniques	3.0
EGR 281	Introduction to Algorithmic Design I	4.0
EGR 283	Introduction to Algorithmic Design II	4.0
PHY 221	University Physics I	4.0
PHY 222	University Physics II	4.0
MAT 132	Discrete Mathematics	4.0
MAT 140	Analytical Geometry and Calculus I	4.0
MAT 141	Analytical Geometry and Calculus II	4.0
MAT 240	Analytical Geometry and Calculus III	4.0
MAT 242	Differential Equations	<u>4.0</u>
	Subtotal	58.0

## Computer Science:

ECE 211	Introduction to Computer Engineering I	3.0
ECE 212	Introduction to Computer Engineering II	3.0
ECE 240	Introduction to Software Engineering	3.0
ECE 245	Object-Oriented Programming Techniques	3.0
EGR 281	Introduction to Algorithmic Design I	4.0
EGR 283	Introduction to Algorithmic Design II	4.0
PHY 221	University Physics I	4.0
PHY 222	University Physics II	4.0
MAT 132	Discrete Mathematics	4.0
MAT 140	Analytical Geometry and Calculus I	4.0
MAT 141	Analytical Geometry and Calculus II	4.0
MAT 240	Analytical Geometry and Calculus III	4.0
MAT 242	Differential Equations	4.0
	Humanities	3.0
	Social and Behavioral Science	<u>3.0</u>
	Subtotal	54.0

Computer Information Technology:		
ACC 101	Accounting Principles I	3.0
ACC 102	Accounting Principles II	3.0
ECE 211	Introduction to Computer Engineering I	3.0
ECE 212	Introduction to Computer Engineering II	3.0
ECE 240	Introduction to Software Engineering	3.0
ECE 245	Object-Oriented Programming Techniques	3.0
EGR 281	Introduction to Algorithmic Design I	4.0
EGR 283	Introduction to Algorithmic Design II	4.0
MAT 132	Discrete Mathematics	4.0
MAT 140	Analytical Geometry and Calculus I	4.0
MAT 141	Analytical Geometry and Calculus II	4.0
	Science Elective	4.0
	Humanities	3.0
	Social and Behavioral Science	<u>6.0</u>
	Subtotal	51.0

\* These requirements are subject to change as USC revises its curricula. Students should consult their advisors periodically about changes USC may have made. Advisors can help students select humanities and social science courses to meet both the Associate in Science degree and the Bachelor of Science Engineering degree requirements.

## ENVIRONMENTAL AND ECONOMIC DESIGN CERTIFICATE

The Environmental and Economic Design Certificate is a two semester advanced program that addresses the fundamentals of energy efficient and environmentally friendly design methodology. Students are eligible to enroll in this program only after the basic AET entry requirements are completed (the same requirements to get into the degree program) and prerequisites for individual courses within the certificate are met. The program covers fundamentals of the current energy efficient methodology, and environmentally compliant building methods and codes. This certificate is designed both for the students nearing the completion of the AET degree and senior technicians interested in this ever expanding part of Architectural Engineering Technology.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### **CERTIFICATE: ENVIRONMENTAL AND ECONOMIC DESIGN (21 CREDIT HOURS)**

	<u>Credit Hours</u>	
AET 101	Building Systems I	3.0
AET 103	International Building and Residential Codes	3.0
AET 105	Construction Documents	3.0

AET 201	Building Systems II	3.0
AET 235	Architectural 3-D Rendering	3.0
CET 222	Principles of Low Impact Land Development	3.0
CET 224	Principles of Sustainable Construction	<u>3.0</u>
Total Credit Hours:		21.0

## ENVIRONMENTAL SYSTEMS TECHNOLOGY CERTIFICATE

The Environmental and Economic Design Certificate is a two-semester advanced program that addresses the fundamentals of energy efficient and environmentally friendly design methodology. Students are eligible to enroll in this program only after the basic AET entry requirements are completed (the same requirements to get into the degree program) and prerequisites for individual courses within the certificate are met. The program covers fundamentals of the current energy efficient methodology and environmentally compliant building methods and codes. This certificate is designed both for the students nearing the completion of the AET degree and senior technicians interested in this ever expanding part of Architectural Engineering Technology.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### CERTIFICATE: ENVIRONMENTAL SYSTEMS TECHNOLOGY (27 CREDIT HOURS)

		<u>Credit Hours</u>
CET 246	Environmental Systems Technology	3.0
CHM 110	College Chemistry I	4.0
CHM 111	College Chemistry II	4.0
CHT 250	Methods in Analytical Chemistry I	3.0
CHT 252	Methods in Analytical Chemistry II	3.0
EVT 102	Basic Water Treatment	3.0
EVT 111	Introduction to Water and Wastewater Treatment Lab	1.0
EVT 271	Special Topics in Environmental Engineering	3.0
	Any Approved EGR Course	<u>3.0</u>
Total Credit Hours:		27.0

#### Elective Choices

CET 218	Hydraulics	3.0
CET 222	Principles to Low Impact Land Development	3.0
CHT 230	Survey in Engineering Chemistry	3.0
NET 230	Nuclear Plant Chemistry	3.0

# FUNDAMENTALS OF ROBOTICS CERTIFICATE

The Fundamentals of Robotics Certificate is a program that addresses the fundamentals of industrial robotics including sensors and advanced microprocessors. Students are eligible to enroll in this program only after the basic EET entry requirements are completed (the same requirements to get into the degree program) and prerequisites for the individual courses within the certificate are met. The program covers fundamentals of digital circuits, sensors and advanced microprocessors. This certificate is designed both for the students needing a basic introduction to robotics and those who intend to pursue a degree in electronics.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## CERTIFICATE: FUNDAMENTALS OF ROBOTICS (23 CREDIT HOURS)

	<u>Credit Hours</u>
EEM 243 Introduction to Computer Servicing	3.0
EET 210 Digital Integrated Circuits	4.0
EET 235 Programmable Controllers	3.0
EET 251 Microprocessor Fundamentals	4.0
EET 255 Advanced Microprocessor	3.0
ELT 208 Introduction to Robotics	3.0
EGR 110 Introduction to Computer Environment	<u>3.0</u>
Total Credit Hours:	23.0

## GEOGRAPHIC INFORMATION SYSTEMS CERTIFICATE

The Geographic Information Systems (GIS) Certificate prepares students for employment as entry-level GIS technicians. Training provided covers typical GIS applications, hardware and software components of a GIS, methods of data capture and sources of data. Geomatics (surveying), Global Positioning Systems (GPS) and Computer Aided Design (CAD) and their GIS applications are presented with an emphasis on hands-on applications. Basic cartography (mapping) concepts and coordinates systems are presented to prepare the students to accurately combine data from multiple sources, manipulate the data and create professional quality output and presentations. Emphasis on modeling and decision-making with the use of spatial data is maintained throughout the certificate.

GIS technology has diverse applications. Some of these include:

- Business and Marketing
- Communication
- Natural resources
- Transportation
- Engineering
- Health care
- Law Enforcement
- Land use planning
- Environment studies
- Emergency preparedness
- Education
- Homeland security

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: GEOGRAPHIC INFORMATION SYSTEMS (22 CREDIT HOURS)**

	<u>Credit Hours</u>
AET 110 Architectural Graphics I OR	
AET 111 Architectural Computer Graphics I OR	
Approved equivalent	3.0
GMT 101 Introduction to Geographic Information Systems	3.0
GMT 102 Introduction to Geomatics and CAD	3.0
GMT 103 Introduction to Global Positioning Systems	3.0
GMT 104 Introduction to Spatial Analysis	3.0
GMT 105 Georeferencing and Mapping	3.0
GMT 240 GIS Analysis and Reporting	4.0
Total Credit Hours:	22.0

## **GEOMATICS CERTIFICATE**

The Geomatics certificate is a two-semester program that addresses the fundamentals of land surveying and geomatics (modern surveying practice with the application of the Geographic Information System (GIS) and Global Positioning System (GPS)).

Students are eligible to enroll in the Geomatics Program only after the basic Civil Engineering Technology entry requirements are completed (the same requirements to enter the CET degree program), and any prerequisites for the individual courses within the certificate program are met. The certificate will meet the needs of students seeking to acquire a thorough introduction to general land surveying and GPS and GIS practices commonly applied in the current workplace, as well as those who intend to pursue a two-year degree.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: GEOMATRICS (23 CREDIT HOURS)**

	<u>Credit Hours</u>
AET 110 Architectural Graphics I OR	
AET 111 Architectural Computer Graphics I OR	
Approved equivalent	3.0
CET 105 Surveying I	3.0
CET 205 Surveying II	4.0
CET 251 Highway Design	3.0

GMT 101	Introduction to Geographic Information Systems	3.0
GMT 102	Introduction to Geomatics and CAD	3.0
GMT 235	GPS and Geodesy	<u>4.0</u>
Total Credit Hours:		23.0

## LOW IMPACT LAND DEVELOPMENT CERTIFICATE

The Low Impact Land Development/Sustainable Construction certificate is a two-semester program that addresses the following: principles of low impact development including best management practices (BMP) for development conservation, impact and control of storm water runoff and non-point source pollution, computer design for residential and commercial land use applications, concepts of holistic construction, alternative transportation options, water conservation, environmental building design, and the LEED rating system for the civil engineering aspects of development project.

Students are eligible to enroll in the Low Impact Land Development Certificate Program only after the basic Civil Engineering Technology entry requirements are completed (the same requirements to enter the CET degree program), and any prerequisites for the individual courses within the certificate program are met. The certificate will meet the needs of students seeking to acquire a basic introduction and understanding of the fundamentals of low impact residential and commercial development and as well as those seeking a degree in Civil Engineering Technology.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### **CERTIFICATE: LOW IMPACT LAND DEVELOPMENT (24 CREDIT HOURS)**

		<u>Credit Hours</u>
AET 110	Architectural Graphics I	
	OR	
AET 111	Architectural Computer Graphics I	
	OR	
	Approved equivalent	3.0
CET 216	Soil Mechanics	3.0
CET 218	Hydraulics	3.0
CET 222	Principles of Low Impact Land Development	3.0
CET 224	Principles of Sustainable Construction	3.0
CET 235	Construction Methods and Cost Estimation	3.0
CET 246	Environmental Systems Technology	3.0
EGR 109	Engineering Project Management	<u>3.0</u>
Total Credit Hours:		24.0

# MECHANICAL ENGINEERING TECHNOLOGY

The Mechanical Engineering Technology program provides students with the opportunity to enter the engineering technology field as a Mechanical Technician, Computer Aided Design and Drafting (CAD) technician, or as an associate to a Nuclear Reactor Operator. Graduates may find themselves working within industries where they take a product from conception and design and through the manufacturing process, or on the nuclear/mechanical side of the energy production industry. The program of study includes computer-assisted drafting, nuclear technology, design engineering practices, and course work in mechanical design. Students will gain an understanding of the effects of forces, motion, material strengths, energy production, and the principles of thermodynamics, hydraulics and pneumatics.

## Special Requirements

There are four options available to students who are enrolled in the Mechanical Engineering Technology program. Those options align with the following four certificate programs:

- Computer Aided Design
- Mechanical Process Technology
- Mechanical Systems Dynamics
- Nuclear Systems Technology

Note that the certificate in Mechanical Technology Fundamentals is not included in the list, since all of the courses in that certificate are required core courses in the MET degree program. Students will be required to complete all of the requirements for at least one of these certificates as part of the requirements for the Associate Degree in Mechanical Engineering Technology. These courses will be taken as part, or all, of the seven technical electives listed in the “Additional Course Requirements” shown in the curriculum display. Curricula for each of these certificates are included elsewhere in this course catalogue.

## Graduation Requirements

In addition to curricular requirements, students must earn a cumulative grade of “C” or better in all courses offered in the Engineering Technology and Engineering Transfer Department to be eligible for graduation. Students completing the Nuclear Technology option must achieve a “B” or better in all NET courses to be eligible for Certification under the Nuclear Uniform Curriculum Program (NUCP).

**MAJOR:       MECHANICAL ENGINEERING TECHNOLOGY  
(76 CREDIT HOURS)**

**DEGREE:     ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
MAT 110 College Algebra	3.0
Approved Math/Science Elective Course	3.0
Approved Humanities Course	3.0
Approved Social/Behavioral Science Course	<u>3.0</u>
Subtotal	15.0

*Major courses meeting other college general education core requirements are (\*) below:*

**B. MAJOR COURSE REQUIREMENTS (16 CREDIT HOURS)**

	<u>Credit Hours</u>
EET 103 Introduction to Electronics*	
OR	
EGR 205 Introduction to Nuclear Science (NET students only)	3.0
EGR 109 Engineering Project Management	3.0
EGR 120 Engineering Computer Applications	3.0
EGR 170 Engineering Materials	3.0
EGT 106 Blueprint Reading and Sketching	3.0
ENG 102 English Composition II	3.0
MAT 111 College Trigonometry	3.0
MET 216 Mechanics of Fluid Systems	3.0
MET 217 Dynamics and Kinematics	3.0
MET 223 Thermodynamic Systems*	
OR	
EGR 235 Applied Engineering Materials (NET students only)	3.0
MET 224 Hydraulics and Pneumatics	3.0
MET 225 Fundamentals of Heat Transfer	3.0
PHY 201 Physics I	<u>4.0</u>
Subtotal	40.0

**C. ADDITIONAL COURSE REQUIREMENTS (21 CREDIT HOURS)**

	<u>Credit Hours</u>
EGR/MET/EGT/NET Elective	3.0
Subtotal	21.0
Total Credit Hours:	76.0

## MECHANICAL PROCESS TECHNOLOGY CERTIFICATE

The Mechanical Process Technology Certificate is a two semester (18 credit hour) program that addresses the basics of mechanical manufacturing processes. Students are eligible to enroll in this program only after all college admission requirements are met and the required course prerequisites are completed. The program covers fundamentals of manufacturing processes, project management, introduction to computer aided design, and sensors and mechanical systems. This certificate also covers basic heat transfer and fluid systems. This is a cross-disciplinary technology that has significant influence on local industry and manufacturing. The program is designed to allow the student to pursue skills where the demand is immediate and still be qualified to take advantage of the newer technologies when the local demand changes. This certificate is designed to be used as option within the Mechanical Engineering Technology Degree, or it can be used to dovetail easily with other certificates to build

an Associate in General Technology degree specific to the student and potential employer's needs.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: MECHANICAL PROCESS TECHNOLOGY (18 CREDIT HOURS)**

	<u>Credit Hours</u>
ECE 102 Instrument Control	3.0
EGR 109 Engineering Project Management	3.0
EGR 175 Manufacturing Processes	3.0
EGR 170 Engineering Materials	3.0
EGT 106 Print Reading and Sketching	3.0
MET 225 Fundamentals of Heat Transfer	<u>3.0</u>
Total Credit Hours:	18.0

## **MECHANICAL SYSTEMS DYNAMICS CERTIFICATE**

The Mechanical Systems Dynamics Certificate is a two semester (24 credit hour) program that addresses the basics of mechanical dynamics or machines in motion. Students are eligible to enroll in this program only after all college admission requirements are met and the required course prerequisites are completed. The program covers fundamentals of mechatronics, basic robotics, sensors, programmable controllers, and project management. This certificate also covers basic machine design. This is a cross-disciplinary technology that has significant influence on local industry and manufacturing. The program is designed to allow the student to pursue skills where the demand is immediate and still be qualified to take advantage of the newer technologies when the local demand changes. This certificate is designed to be used as an option within the Mechanical Engineering Technology Degree, or it can be used to dovetail easily with other certificates to build an Associate in General Technology degree specific to the student and potential employer's needs.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: MECHANICAL SYSTEMS DYNAMICS (24 CREDIT HOURS)**

	<u>Credit Hours</u>
EET 103 Introduction to Electronics	3.0
EGR 109 Engineering Project Management	3.0
EGR 120 Engineering Computer Applications	3.0
EGR 170 Engineering Materials	3.0
EGT 106 Print Reading and Sketching	
OR	
Approved EGR substitution	3.0

MET 217 Dynamics and Kinematics	3.0
MET 223 Thermodynamic Systems	3.0
MET 224 Hydraulics and Pneumatics	<u>3.0</u>
Total Credit Hours:	24.0

## **MECHANICAL TECHNOLOGY FUNDAMENTALS CERTIFICATE**

The Mechanical Process Technology Certificate is a two-semester (30 credit hour) program that addresses the basics of mechanical manufacturing processes. Students are eligible to enroll in this program only after all college admission requirements are met and the required course prerequisite requirements are completed. The program covers fundamentals of manufacturing processes, project management, introduction to computer aided design, and sensors and mechanical systems. This certificate also covers basic heat transfer and fluid systems. This is a cross-disciplinary technology that has significant influence on local industry and manufacturing. The program is designed to allow the student to pursue skills where the demand is immediate and still be qualified to take advantage of the newer technologies when the local demand changes. This certificate can dovetail easily with other certificates to build an Associate in General Technology degree specific to the student and potential employer's needs.

Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

### **CERTIFICATE: MECHANICAL TECHNOLOGY FUNDAMENTALS (30 CREDIT HOURS)**

	<u>Credit Hours</u>
EET 103 Introduction to Electronics	
OR	
Approved Substitution	3.0
EGR 109 Engineering Project Management	3.0
EGR 120 Engineering Computer Applications	3.0
EGR 170 Engineering Materials	3.0
EGT 106 Print Reading and Sketching	3.0
MET 216 Mechanics of Fluid Systems	3.0
MET 217 Dynamics and Kinematics	3.0
MET 223 Thermodynamic Systems	3.0
MET 224 Hydraulics and Pneumatics	3.0
MET 225 Fundamentals of Heat Transfer	3.0
Total Credit Hours:	30.0

# NUCLEAR SYSTEMS TECHNOLOGY CERTIFICATE

MTC's Nuclear Systems Technology program covers the fundamentals of nuclear power systems including nuclear plant components, radiological protection, reactor theory and nuclear plant chemistry. Nuclear systems technicians work in nuclear power plants, maintaining and operating plant equipment. Their work can include a variety of functions including conducting tests, operating and repairing equipment, and setting up and installing new instruments. These technicians work in highly structured environments that require them to make decisions quickly and accurately. They must be able to take direction, manage stress well, and have a strong commitment to safety and protocol. Depending on the specific job or task, nuclear technicians' duties can range from sedentary equipment monitoring to physical tasks.

This certificate is designed to be used as an option within the Mechanical Engineering Technology Degree, or it can be used to dovetail easily with other certificates to build an Associate in General Technology degree specific to the student and potential employer's needs. Certificate curricula are reviewed and updated periodically in response to community and Industry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## CERTIFICATE: NUCLEAR SYSTEMS TECHNOLOGY (24 CREDIT HOURS)

	<u>Credit Hours</u>
NET 112 Nuclear Power Plant Components	3.0
NET 122 Electrical Sciences	3.0
NET 210 Thermal Sciences	3.0
NET 225 Reactor Theory	3.0
NET 130 Radiological Protection	3.0
EGT 106 Print Reading and Sketching	3.0
NET 230 Nuclear Plant Chemistry	3.0
NET 240 Nuclear-Primary & Secondary Systems	<u>3.0</u>
Total Credit Hours:	24.0

# STRUCTURAL TECHNOLOGY CERTIFICATE

The Structural Technology Certificate is a two-semester program that examines the engineering properties and testing of a variety of building materials; principles of analysis and design of concrete and steel structures; estimation of material quantity takeoffs and costs; engineering plans and specifications; and legal principles and contract documents for engineering construction projects. Steel detailing concepts are also addressed in structural steel design.

Students are eligible to enroll in the Structural Technology program only after the basic Civil Engineering Technology entry requirements are completed (the same requirements to enter the CET degree program), and any prerequisites for the individual courses within the certificate program are met. The certificate will meet the needs of students seeking a basic introduction to structural-related engineering projects as well as those who intend to pursue a degree.

Certificate curricula are reviewed and updated periodically in response to community and In-

dustry demands. The student is cautioned to discuss certificate choices and course selections with an Engineering Advisor before each registration cycle.

## **CERTIFICATE: STRUCTURAL TECHNOLOGY (25 CREDIT HOURS)**

	<u>Credit Hours</u>
AET 105 Construction Documents	3.0
AET 110 Architectural Graphics I	
OR	
AET 111 Architectural Computer Graphics I	
OR	
Approved equivalent	3.0
CET 120 Construction Materials	3.0
CET 235 Construction Methods and Cost Estimation	3.0
CET 242 Concrete Design	3.0
CET 244 Structural Steel Design	3.0
EGR 109 Engineering Project Management	3.0
EGR 194 Statics and Strength of Materials	<u>4.0</u>
Total Credit Hours:	25.0

# Health Sciences



# HEALTH SCIENCES

Midlands Technical College offers six associate degrees, three diplomas and ten certificate programs in Health Sciences.

The college participates with Greenville Technical College in a cooperative arrangement to provide the first year general education courses for the Biotechnology Laboratory Technician and Pre-Occupational Therapy Programs; students complete their first year at MTC and transfer to Greenville Technical College to complete their clinical courses.

Health Sciences programs have the mission of educating students to work in the fields of patient care, public health, research and policy. Graduates will enter health professions as integral members of the health care team. Educational enrichment, professional training, personal development and lifelong learning are primary concerns of the Health Sciences faculty and staff. Each program contains an academically sound curriculum of general academic education and technical health specialty education taught under the guidance of qualified health professionals in conjunction with local hospitals and health care facilities.

The Health Sciences Web Page is located at <http://www.midlandstech.edu/healthsciences/>

## Associate Degree Programs

Dental Hygiene  
Health Information Management  
Medical Laboratory Technology  
Physical Therapist Assistant  
Radiologic Technology  
Respiratory Care

## Diploma Programs

Expanded Duty Dental Assisting  
Pharmacy Technician  
Surgical Technology

## Cooperative Programs

Biotechnology Laboratory Technician  
Pre-Occupational Therapy Assistant

## Certificate Programs

Community Pharmacy Technician  
Medical Assisting  
Medical Record Coder  
Nuclear Medicine  
Pre-Dental Hygiene  
Pre-Health Care  
Pre-Health Information Management  
Pre-Medical Laboratory Technology  
Pre-Physical Therapist Assistant  
Pre-Respiratory Care

## PLACEMENT TESTING

Applicants are required to complete testing for course placement according to regular college-wide admissions procedures, prior to being admitted to the Pre-Health Care Certificate program and prior to becoming interview eligible for Health Science programs. These tests include:

Midlands Technical College (MTC) Writing Sample

Midlands Technical College Placement Test

Students should complete all developmental and prerequisite courses one term prior to entry into the Health Sciences programs.

## HEALTH SCIENCES PROGRAM ELIGIBILITY REQUIREMENTS

In addition to the general requirements for college admission, Health Sciences programs have specific criteria for eligibility. The specific requirements for each program are outlined on the following pages. The criteria are on file in the Admissions Office and the offices of program directors. Admission to the individual program is based on indicators of success within each program. In addition to standardized test scores, the following factors may be considered for admissions into Health Sciences programs: previous work experience; college grades in sciences, mathematics and other specific courses; and previous college credentials. Certain programs require observations at area health organizations prior to admission. Most Health Sciences programs require an interview prior to final acceptance.

Standardized tests that may be taken as part of the criteria for interview eligibility include:

Health Occupations Basic Entrance Test (HOBET May 2009-May 2012) or (HOBET-V May 2012-Present)

Scholastic Aptitude Test (SAT)

American College Test (ACT)

These tests are not the same as the placement tests required for general college admissions. Students whose general college admission placement test scores place them into curriculum level English, math and reading courses are encouraged to take the above standardized program eligibility tests as soon as possible to establish an interview eligibility date. The standardized program eligibility tests noted above must have been taken within the previous three years to be utilized for meeting interview eligibility criteria for Health Sciences programs. The interview eligibility section for each program will note the appropriate test and required scores.

In addition to achieving acceptable standardized test scores for interview eligibility, the MTC Writing Sample score must be a "30". Some programs also require certain pre-requisite courses to be completed and a specific grade earned. The student's Midlands Technical College and transfer coursework within the past ten years is reviewed to determine that required standards are met. Students should read this catalog, review information on program web sites, and consult an academic advisor to understand the specific entry requirements for Health Sciences programs.

### Program Eligibility Via the Pre-Health Care Certificate

The Pre-Health Care certificate program is designed for students who have not met the Health Science program eligibility criteria on the above standardized tests. Students work closely with academic advisors to select courses that will help confirm their career choices and strengthen their academic skills.

In order to use the completed Pre-Health Care certificate to meet program interview eligibility criteria, the student must meet the specified academic performance standards set forth below:

- Must obtain the program grade point average (GPA) required by the designated program
- Must obtain a grade of "C" or better in each course
- No course in the curriculum can be repeated more than once
- No more than 2 courses within the certificate program may be repeated
- A "W" awarded since Fall 2008 counts as an attempt or a repeat.

Students who complete this certificate, meeting the established criteria for academic success must make application for graduation from the Pre-Health Care program to become interview

eligible for the designated program. Completion of the certificate does not guarantee admission into the program.

### Program Eligibility Via Prior Degree Attainment

Applicants may obtain program eligibility via documentation of having earned a prior degree. Students should be aware that the college's transcript evaluator will determine which general education courses are acceptable for transfer to MTC. The health science program directors will evaluate health science technology courses for transfer only after the student has gained admission to the college and after the college's transcript evaluator determines general education courses eligible for transfer. Note that acceptance of transferred math and science courses for health science program completion is determined according to the Health Sciences Department timeframes listed below.

## **MERIT ADMISSION**

Students applying to Health Sciences programs may experience delays in entering their program because of the limited number of students accepted each year. The Dental Hygiene, Physical Therapist Assistant, Radiologic Technology and Respiratory Care Technology Programs offer a merit admission opportunity for certain highly qualified students meeting specific objective criteria to be admitted in advance of the chronological future entry list. The Health Science Department "course repeat" policy applies to coursework evaluated for merit admission.

Students should access the programs' web sites to review Merit Admissions Procedures for the following programs: Dental Hygiene, Physical Therapist Assistant, Radiologic Technology, and Respiratory Care Technology.

Coursework evaluated for merit must be transferred into MTC with the exact Course Prefix and Course Number as listed in the curricula displays in this catalogue. Substitutions are not permitted.

## **DEPARTMENTAL POLICY ON ADMISSION DEFERRALS**

Each individual program establishes its own deferment policies. Students are accepted for a specific class. If a student is unable to matriculate for that class, some programs allow the student to defer one time. If the student is unable to matriculate at this deferred time, then the student can be placed at the bottom of the interview list. The new interview eligibility date is the date that the student or program director notifies Admissions, in writing, of the student's desire to be placed back on the list. Other programs do not permit one time deferrals and require all students who are not able to enter their originally designated class to be placed at the bottom of the interview list.

## **READMISSION TO THE PROGRAM**

Students who have an interruption of two semesters or less in the normal progression of their Health Sciences studies, whether by failure or withdrawal, may apply to the program director for readmission. Space in these programs is very limited; therefore, students will be readmitted on a space-available basis and in accordance with readmission restrictions specific to each program. The student handbook of each program details specific readmission procedures, including restrictions on the number of readmissions allowed. If the student has been out of the program for three semesters or more, then the student must meet the current admissions criteria.

## ADVANCED STANDING

The Health Sciences programs may accept comparable health science technology course work from other colleges. The health science program director will evaluate health science technology courses for transfer only after the student has gained admission to the college and has met eligibility requirements for the health sciences technology program. The college's transcript evaluator determines general education courses eligible for transfer. If there are questions about the differences of content or competency levels in health science technology courses, then the student may be requested to pass a validation exam administered either in writing, orally or clinically. The student must pass the validation exam in accordance with required program grading standards.

## COURSE ACCEPTANCE TIMEFRAMES

All mathematics and science courses (to include AHS courses) must be taken according to the following criteria:

- Grade of "C" completed within 3 years of program entry
- Grade of "B" completed within 4 years of program entry
- Grade of "A" completed within 5 years of program entry
- or must be validated in accordance with program standards

Other general education courses, completed with at least a "C" may be applied indefinitely for course credit within Health Science programs.

All academic major course work must be completed within the four years preceding graduation.

## COURSE REPEATS

Students graduating from Health Sciences programs may not repeat non-technology courses more than once to earn the requisite "C" or above grade. The "course repeat policy" will be applied to all coursework attempted in the 10 years prior to the student's applying for program eligibility status, whether the course work was completed at MTC or at other colleges.

The number of health science technology courses (courses which have the specific health sciences program prefix) that may be repeated is determined by the health science technology program and published in the program section of the catalog.

## GRADUATION REQUIREMENTS

To graduate, students must meet all requirements of the specific curriculum and receive a grade of "C" or better (in accordance with the "repeat policy" above) in all courses within the academic major; i.e., courses which have the specific health science program prefix. Students must also receive a "C" or better in all science, mathematics and Allied Health Science courses. Some Pre-program certificates require that the student earn a "C" or better in all courses to progress to the clinical portion of the curriculum and/or for that certificate to be applied towards the parent degree. Students must also apply for graduation.

## ATTENDANCE

The Health Sciences programs use a more stringent attendance policy than the general college policy. Faculty in each program will inform students of the applicable attendance policy.

## ADDITIONAL REQUIREMENTS

- High School or college credits in biology, chemistry and algebra are recommended.
- Emotional and physical ability ("Essential Functions" or "Technical Standards") to carry out normal activities of patient care are determined by physical examination. "Essential Functions/Technical Standards" may be found on each program's web page. Conditions that develop during the clinical or laboratory phases of training which prevent the student from carrying out the required activities may result in a delay in completion or temporary withdrawal from the program. In some cases, withdrawal may be permanent.
- All Health Sciences students are required to purchase liability insurance through the college each semester as part of their student fees. The minimum amount of coverage required is \$300,000 each claim, \$600,000 each incident. The approximate cost of this coverage is less than \$5 per semester. Some clinical affiliates may require additional coverage or higher limits. Any additional insurance or coverage will be the responsibility of the student.
- In addition to insurance, students may be required to purchase and maintain certain equipment, learning modules, supplies and uniforms as part of the educational program. These requirements will vary depending on the student's program.
- Upon acceptance, students are provided a health form and immunization record that must be completed and submitted no earlier than 6 months before and no later than the beginning of the first semester in their major unless a specific extension is granted by the program director or department chair. Students are not allowed to participate in clinical training until this requirement is met. All students must present satisfactory annual Tuberculosis Test results to remain in their program. Failure to complete these requirements may result in suspension or withdrawal from the program of study. Students must present evidence of adequate Hepatitis B antibody titer or begin the Hepatitis B vaccine protocol prior to program entry.
- All students must present current certification in adult, infant and child cardiopulmonary resuscitation (CPR) prior to program entry. Certification must be maintained in accordance with departmental and clinical affiliate policy. Some programs also require First Aid Certification.
- Students entering the clinical portion of the Health Sciences Programs will be required to produce acceptable results from a background investigation that may include but is not limited to: criminal background check, including all places of residence since the age of 18; Sex Offenders Registry; Office of the Inspector General, FBI fingerprint record, and any other registry or records required by law. In addition to background checks, students will be required to produce acceptable results from drug screenings before their participation in Health Sciences education. Clinical facilities may require additional background checks and additional drug screenings during the clinical rotations. Students must be eligible to rotate in all clinical locations utilized by the programs. Exclusion from any of the clinical locations based on a positive drug screen or criminal records check will prevent participation in clinical training. Information about possible exclusion criteria can be found on the Health Sciences web page.
- As an integral part of the learning experiences in Health Sciences, students need to understand procedures from both the patient's point of view as well as the clinician's point of view. Students will be expected to practice skills on other students as appropriate, and in turn participate as the "practice patient" during lab exercises.

- Eligibility for examination candidacy is determined by the individual state or national examination boards for each Health Science discipline. Eligibility for clinical rotation does not guarantee eligibility for licensing, certification or registry examinations.

## CLINICAL REGULATIONS

The clinical phase of instruction is an essential portion of all Health Sciences programs. During this phase, students may be involved in either direct or indirect patient care.

Students are responsible for their own transportation during rotations and to off-campus program-related activities, including clinical and laboratories.

When participating in a clinical experience at any affiliate health care facility, students are governed by the college policies and the affiliate facility's regulations and protocols. Affiliate policies may require students to submit to the same drug testing procedures and criminal background checks that apply to employees of the facility. Students may be dismissed from clinical activities and/or the program if found in violation of clinical affiliation policies. CPR certification must be current for clinical rotations. All immunizations and health tests must be kept current.

Students are required to observe standard precautions in all labs and clinics where there is a risk of exposure to blood and body fluids. Students must wear their identification badge while in clinical facilities in accordance with the "Lewis Blackman Patient Act of 2005".

Students in the Health Sciences programs are not generally permitted to receive compensation for time spent in a facility as a part of the clinical course assignment. Students should check with their program director for clarification of their accrediting agency standards.

## EXPANDED DUTY DENTAL ASSISTING

The Expanded Duty Dental Assisting program includes instruction in restorative dentistry and preventive oral care, including teaching patients oral self-care, applying sealants to the grooves of patients' teeth, taking impressions of teeth, producing diagnostically acceptable dental radiographs (x-rays), polishing teeth and fillings, assisting the dentist, preparing the filling materials, scheduling patients, managing health information and monitoring nitrous oxide.

Employment opportunities in South Carolina include private practice positions such as chair-side dental assistants, treatment coordinators, OSHA compliance specialists, dental laboratory assistants, secretarial assistants and office managers. There are also opportunities in public health settings, hospital dental practices, prison dental clinics and insurance companies.

Related careers include dental product sales representative, infection control consultant for private dental offices, dental office business manager and dental assisting educators.

The Expanded Duty Dental Assisting program is accredited by the Commission on Dental Accreditation of the American Dental Association.

Commission on Dental Accreditation  
American Dental Association  
211 East Chicago Avenue  
Chicago, Illinois 60611  
(312) 440-4653

Graduates are recognized as Expanded Duty Dental Assistants (EDDA) by the SC State Board of Dentistry. Graduates are eligible to be credentialed as Certified Dental Assistants (CDA) upon satisfactory completion of the three examinations administered by the Dental Assisting National Board.

Program information may be found at <http://www.midlandstech.edu/dental/dat.html>

## SPECIAL REQUIREMENTS

Students must receive a grade of “C” or better on all Expanded Duty Dental Assisting courses, math, and science courses. Math and science courses must be completed according to the time-frame established for Health Science Programs. Students are required to pass a comprehensive examination in each clinical course to continue in the program the following semester. Additionally, they must pass a final comprehensive exit examination to graduate from the program. Students may not repeat Expanded Duty Dental Assisting courses more than once, nor may they progress to the next semester until that course is passed. Students may repeat only two Expanded Duty Dental Assisting courses.

Students are required to purchase and maintain a set of x-ray instruments, dental instruments, dentofoms, laboratory coats, standard uniforms (to include gloves and masks), shoes, name pin and safety glasses at an approximate cost of \$2,000.

Students are encouraged to join the Student American Dental Assistants’ Association and to participate in its scheduled activities, including attendance at the annual meeting of the South Carolina Dental Assistants’ Association. In addition, they are required to participate in scheduled activities, such as visits to elementary schools for dental health educational presentations, and to take three national examinations (ICE, RHS, GC).

Students will rotate through private dental offices and clinics in the MTC service area for practical experience in Expanded Duty Dental Assisting. Students will be required to comply with regulations required by off-campus clinical sites, which might include finger printing, background checks and drug screenings.

In addition to the college’s placement test and the specific admissions requirements for the Health Sciences department, specific interview eligibility criteria for the Expanded Duty Dental Assisting program include:

### Acceptable eligibility criteria:

- MTC ASSET: reading 45, mathematics 40, algebra 36 and MTC writing sample score of 30; or
- COMPASS: reading 88, pre-algebra 44 and MTC writing sample score of 30; or
- HOBET V (May 2012 present): 52 total percent (minimum reading 63 percent, mathematics 57 percent, science 39 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent, mathematics 50 percent) and MTC writing sample score of 30; or
- SAT 840 (minimum critical reading 400) and MTC writing sample score of 30; or
- ACT 18 (minimum verbal 17) and MTC writing sample score of 30; or
- Completion of the Pre-Health Care Certificate with a “C” or higher in each course and a 2.5 GPA; or
- Associate degree or higher.

**Admission Criteria:**

- Successful program interview
- Acceptable criminal background check and drug screening results
- High school diploma or equivalent

**MAJOR: EXPANDED DUTY DENTAL ASSISTING  
(48 CREDIT HOURS)**

**DIPLOMA: APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (9 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
MAT 101 Beginning Algebra	3.0
PSY 201 General Psychology	<u>3.0</u>
Subtotal	9.0

**B. MAJOR COURSE REQUIREMENTS (18 CREDIT HOURS)**

	<u>Credit Hours</u>
DAT 113 Dental Materials	4.0
DAT 118 Dental Morphology	2.0
DAT 121 Dental Health Education	2.0
DAT 122 Dental Office Management	2.0
DAT 127 Dental Radiography	4.0
DAT 154 Clinical Procedures I	<u>4.0</u>
Subtotal	18.0

**C. ADDITIONAL COURSE REQUIREMENTS (21 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 110 General Anatomy and Physiology	3.0
DAT 115 Ethics and Professionalism	1.0
DAT 123 Oral Medicine/Oral Biology	3.0
DAT 174 Office Rotations	4.0
DAT 177 Dental Office Experience	7.0
DAT 183 Specialty Functions	<u>3.0</u>
Subtotal	21.0

Total Credit Hours: 48.0

## PRE-DENTAL HYGIENE CERTIFICATE

The Pre-Dental Hygiene Certificate curriculum is Phase I of the two-phase Dental Hygiene program and consists of the 36 hours of general education courses required for the Dental Hygiene curriculum. In addition to the college's placement test and the admissions requirements for the Health Sciences Department, specific eligibility and admissions criteria to the Pre-Dental Hygiene program include:

**Acceptable interview eligibility criteria:**

- HOBET V (May 2012-present): 60 total percent (minimum reading 70 percent, mathematics 68 percent, science 47 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent, mathematics 50 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430) and MTC writing sample score of 30; or
- ACT 19 (minimum verbal 18) and MTC writing sample score of 30; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA and “C” or higher in each course; or
- Associate degree or higher.

**Admissions Criteria:**

- High school diploma or equivalent
- Eligibility criteria met

A student’s acceptance of a position in the Pre-Dental Hygiene Certificate (Phase I) program implies that the student will work consistently to complete the 36 hour program within the next two or three semesters. All courses must be completed with a grade of “C” or higher. Students may not retake any course in the Pre-Dental Hygiene Certificate program more than once. The student may not repeat more than two different courses in the Pre-Dental Hygiene Certificate. The repeat policy applies to both internal and external transcripts.

**CERTIFICATE: PRE-DENTAL HYGIENE (36 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 210 Anatomy and Physiology I	4.0
BIO 211 Anatomy and Physiology II	4.0
BIO 115 Basic Microbiology	3.0
CHM 105 General Organic and Biochemistry	4.0
CPT 101 Introduction to Computers	
OR	
CPT 170 Microcomputer Applications	3.0
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0
MAT 102 Intermediate Algebra	3.0
PSY 201 General Psychology	3.0
SOC 101 Introduction to Sociology	3.0
Approved Humanities Course	<u>3.0</u>
Total Credit Hours:	36.0

Midlands Technical College students who complete the Pre-Dental Hygiene curriculum with a 2.5 GPA and “C” or above on all courses may apply for the Pre-Dental Hygiene Certificate. (Science and mathematics courses must be completed according to the timeframe established and published for all Health Sciences Programs.) At completion of the 36 hours of coursework, the student must complete the graduation clearance form for the Pre-Dental Hygiene

Certificate and submit an application for entry consideration and interview eligibility for the Dental Hygiene Associate Degree Program (Phase II). The student's date of interview eligibility for Phase II is based upon the date of acceptance to and completion of Phase I.

Students in Phase I should be aware that in the clinical phase of the Dental Hygiene program (Phase II), students will be expected to act as patients for classmates to practice all new skills, including infiltration anesthesia injections. Students who require antibiotics prior to dental procedures will be expected to comply with such self-medication so as to allow equitable classmate learning experiences during pre-clinical sessions. Students anticipating orthodontic procedures should complete their banding phase prior to entry into Phase II or they should delay initiation of the orthodontic procedures until the second year of Phase II.

Students entering into Phase II of the Dental Hygiene Program will be required to have a background check and a drug screening prior to beginning pre-clinical activities. Arrangements will be made by the Allied Dental Education Program.

### **Merit Admission Opportunity:**

Students may apply for merit admission after completing the Pre-Dental Hygiene Certificate Program. Merit admission is an opportunity for a special consideration for priority admission into Phase II of the Dental Hygiene Program. There are preset published criteria for merit admissions. The criteria and applications are available on-line at [midlandstech.edu/dental](http://midlandstech.edu/dental), through the Allied Dental Education Program, or through the merit admission coordinator in the Admissions Department.

Pre-Dental Hygiene coursework evaluated for merit admission must match the course prefix and number exactly as displayed in the list above.

## **DENTAL HYGIENE**

The Dental Hygiene program includes instruction in principles of preventive oral care, including teaching patients self-care, examining patients' head and neck areas for abnormal health status, nutritional counseling, smoking cessation, applying sealants to the grooves of patients' teeth, producing diagnostically acceptable dental radiographs (X-rays), managing pain and anxiety, removing deposits from patients' teeth with scaling procedures and managing health information.

Employment opportunities in South Carolina include private practice positions as employees of dentists. There are also opportunities in public health settings, hospital dental practices, prison dental clinics and in dental hygiene education.

Related career roles include dental product sales representatives, infection control consultants for private dental offices and dental hygiene educators.

The Dental Hygiene program is accredited by the Commission on Dental Accreditation of the American Dental Association.

Commission on Dental Accreditation  
American Dental Association  
211 East Chicago Avenue  
Chicago, Illinois 60611  
(312) 440-4653

Completion of the five clinical semesters in Phase II qualifies the student to take the Dental Hygiene National Board, the passing of which is a prerequisite for licensure by the South Carolina

Board of Dentistry. Students must also pass a Clinical Dental Hygiene Examination administered by a board approved testing agency to gain licensure in South Carolina.

Program information may be found at <http://www.midlandstech.edu/dental/dat.htm>

## SPECIAL REQUIREMENTS

### Admissions Criteria:

- High school diploma or equivalent
- Pre-DHG certificate completed with a 2.5 GPA and in accordance with timeframe and repeat policy contained here-in
- Satisfactory interview results.

Phase I, the Pre-Dental Hygiene certificate, must be completed with a 2.5 GPA, including “C” or better in all courses, as one of the criteria for advancement to Phase II, the Dental Hygiene major curriculum. Students may not retake any course in Phase I more than once. Students may not retake more than two courses in Phase I. Science and math courses must be completed according to the Health Sciences Departmental course acceptance timeframes. Other general education courses completed with at least a “C” may be applied indefinitely for course credit. Following the completion of the Pre-Dental Hygiene Certificate course work, the student will complete the graduation clearance form and submit an application for entry into Phase II, the Dental Hygiene Associate Degree program. The student will then be assigned an interview eligibility date. The student’s date of interview eligibility for Phase II is based upon the date of acceptance to and completion of Phase I.

Students in Phase II must receive a “C” or better on all dental hygiene courses and maintain a cumulative 2.0 GPA. Students may not repeat a major course more than once, nor may they progress until that course has been passed.

Students may not repeat more than two Phase II courses during their program matriculation.

A student may not be readmitted to the dental hygiene program more than once. Readmitted students will be expected to revalidate competencies prior to resuming participation in the program at the previous point of validated competence and may be required to comply with mutually agreed upon re-entry requirements.

Students are required to purchase and maintain a complete set of dental hygiene and x-ray instruments, clinical instruments, laboratory coats, standard uniforms (including gloves and masks), shoes, name pin and Loups at an approximate cost of \$5,500.

Students are required to pass a comprehensive examination in each clinical dental hygiene course to continue in the program the following semester. Students must pass a written competency examination prior to the third semester of Phase II. This competency exam tests students’ knowledge in all clinical and scientific subject matter presented during the Pre-Dental Hygiene Certificate and the first year in dental hygiene. All students will participate in a “Board Review” course prior to taking the Dental Hygiene National Board.

Primary clinical experience is gained in the on-campus dental clinic at the Airport Campus. Students may also rotate through local dental clinics, hospitals, private dental offices and nursing homes in the immediate area for practicum experiences in a variety of situations and age groups. Students will be required to comply with regulations required in off-campus clinical sites, which might include finger printing, additional background checks and drug screening.

Pre-clinical practice is performed on classmate patients. Students accepted into Phase II of the Dental Hygiene program will be expected to act as patients for classmates to practice all new

skills, including infiltration anesthesia injections. Students who require antibiotics prior to dental procedures will be expected to comply with such self-medication so as to allow equitable classmate learning experiences during pre-clinical sessions. Students anticipating orthodontic procedures should complete their banding phase prior to entry into Phase II or they should delay initiation of the orthodontic procedures until the second year of Phase II.

Students will be required to produce an acceptable background check and a drug screening prior to entering Phase II of the Dental Hygiene Program. Arrangements will be made by the Allied Dental Education Program.

Students are encouraged to join their student professional organization and to participate in its scheduled activities, including attendance at the annual meeting. In addition, they are required to participate in scheduled activities such as visits to elementary schools for dental health education presentations and dental screenings.

**MAJOR: DENTAL HYGIENE (84 CREDIT HOURS)**  
**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (19 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 210 Anatomy and Physiology I @	4.0
ENG 101 English Composition I @	3.0
ENG 102 English Composition II@	3.0
MAT 102 Intermediate Algebra@	3.0
PSY 201 General Psychology @	3.0
Approved Humanities Course @	<u>3.0</u>
Subtotal	19.0

*Major courses meeting other college general education core requirements are starred (\*)*  
*Courses designated with @ are part of Phase I - Pre-Dental Hygiene Certificate.*

**B. MAJOR COURSE REQUIREMENTS (45 CREDIT HOURS)**

	<u>Credit Hours</u>
AHS 113 Head and Neck Anatomy	1.0
BIO 115 Basic Microbiology @	3.0
DHG 121 Dental Radiography	3.0
DHG 125 Tooth Morphology and Histology	2.0
DHG 140 General and Oral Pathology	2.0
DHG 141 Periodontology	2.0
DHG 143 Dental Pharmacology	2.0
DHG 151 Dental Hygiene Principles	5.0
DHG 161 Clinical Dental Hygiene I Foundations	4.0
DHG 175 Clinical Dental Hygiene II*	5.0
DHG 230 Public Health Dentistry	3.0
DHG 231 Dental Health Education	1.0
DHG 239 Dental Assisting for DHGs	2.0
DHG 255 Clinical Dental Hygiene III	5.0
DHG 265 Clinical Dental Hygiene IV	<u>5.0</u>
Subtotal	45.0

**C. ADDITIONAL COURSE REQUIREMENTS (20 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 211 Anatomy and Physiology II @	4.0
CHM 105 General Organic and Biochemistry @	4.0
CPT 170 Microcomputer Applications @	3.0
DHG 115 Medical and Dental Emergencies	2.0
DHG 241 Integrated Dental Hygiene I	1.0
DHG 242 Integrated Dental Hygiene II	1.0
DHG 243 Nutrition and Dental Health	2.0
SOC 101 Introduction to Sociology @	<u>3.0</u>
Subtotal	20.0
Total Credit Hours:	84.0

## HEALTH INFORMATION MANAGEMENT PROGRAMS

Midlands Technical College currently offers an Associate in Applied Sciences Degree in Health Information Management (HIM) and a Certificate in Health Sciences in Medical Record Coder (MRC).

As a two-phase associate degree program, the HIM Degree Program requires general education instruction to be completed prior to the professional education and clinical experience component of the curriculum, with the award of a certificate in Pre-Health Information Management (Pre-HIM). This format allows for a more prepared student to enter the HIM classroom, as well as the clinical sites. Information about the Pre-HIM certificate and the HIM Degree are found immediately following this introduction.

As a one year certificate program, the Medical Record Coder (MRC) program offers a full-time, three semester, intense concentration in medical coding. Information about the MRC certificate is found under the Medical Record Coder heading farther into the Health Sciences section of this catalogue.

## PRE-HEALTH INFORMATION MANAGEMENT CERTIFICATE

Students must complete all Pre-HIM curriculum courses with a "C" or better within the time frame specified by the Health Science Department and may repeat no more than two courses. No course may be repeated more than once.

Movement into the second phase (HIM degree) is achieved by successful completion of the Pre-Health Information Management certificate with a 2.5 GPA or higher.

## SPECIAL REQUIREMENTS

In addition to the college's placement test and the admissions requirements of the Health Sciences department, specific eligibility and admissions criteria for entry into the Pre-Health Information Management program include:

### Preapplication Considerations:

- High school graduation or equivalent required.
- High school credits in mathematics, science and English (i.e., algebra, biology, English) recommended.
- Keyboarding skill development recommended.

### Acceptable eligibility criteria:

- HOBET V (May 2012-present): 60 total percent (minimum reading 70 percent, mathematics 68 percent and science 47 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent, mathematics 50 percent and algebra 40 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430, minimum mathematics 440) and MTC writing sample score of 30; or
- ACT 19 (minimum verbal 17 and minimum mathematics 23) and MTC writing sample score of 30; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA and “C” or higher in each course; or
- Associate degree or higher.

### Admissions criteria:

- High school diploma or equivalent
- Submission of a current Resume and questionnaire
- Successful interview

Students will be expected to join the HIM professional organization, American Health Information Management Association (AHIMA) as they begin their professional coursework (HIM 103).

## **CERTIFICATE:            PRE-HEALTH INFORMATION MANAGEMENT (35 CREDIT HOURS)**

	<u>Credit Hours</u>
AHS 102 Medical Terminology	3.0
AHS 208 Health Management	3.0
BIO 210 Anatomy and Physiology I	4.0
BIO 211 Anatomy and Physiology II	4.0
CPT 170 Microcomputer Applications	3.0
ENG 101 English Composition I	3.0
ENG 165 Professional Communications	3.0
HIM 103 Introduction to Health Information and Coding	3.0
MAT 120 Probability and Statistics	3.0
PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Total Credit Hours:	35.0

Students must complete all courses with a “C” or better within the timeframe specified by the Health Science Department and may repeat no more than two technology courses. Advancement to the HIM Degree Program (Phase II) is achieved by successful completion of the Pre-Health Information Management Certificate with at least a 2.5 GPA.

## HEALTH INFORMATION MANAGEMENT DEGREE PROGRAM

In the Health Information Management program at Midlands Technical College, the student will become skilled in health information systems and procedures. They will be trained to technically analyze; evaluate and manage sensitive data in health records according to licensure and accreditation standards; compile various types of administrative and health statistics and reports for planning and evaluation; code diagnoses and procedures for reimbursement and statistics; design and develop computer-based patient record systems; and supervise the daily activities of a health information management department.

The HIM student will learn to release health information according to state and federal laws and to maintain and utilize a variety of manual and automated health information indices and storage and retrieval systems. Students also receive detailed instruction in medical, administrative, ethical, legal, accreditation and regulatory requirements for the health care delivery system. In addition to classroom instruction, students begin applying new knowledge in class laboratories and clinical settings at local health care facilities.

Graduates of the Health Information Management program earn an Associate Degree in Applied Science that qualifies them to take the national accrediting examination to become a Registered Health Information Technician (RHIT). The program is fully accredited by the Commission on the Accreditation for Health Informatics and Information Management Education Programs in association with the American Health Information Management Association (AHIMA).

Commission on the Accreditation for Health Informatics and Information Management  
American Health Information Management Association  
233 N. Michigan Avenue  
Chicago, Illinois 60611-5800  
(312) 233-1100  
cahiim.org

After successful completion of the program and credentialing examination, graduates are qualified to be employed for the following positions: Health Information Management Department Manager/Supervisor; Health Information Management Systems Manager; Healthcare Privacy Officer; Information Security Officer; Insurance Claims Analyst; Records Technician Specialist; Clinical Coding Specialist; Physician Practice Manager; Patient Information Coordinator; Health Information Consultant.

Students who complete the Health Information Management Associate in Applied Science Degree can make application to earn a Bachelor’s Degree through a 2+ 2 agreement the college has with USC Upstate in Spartanburg, S.C.

## ELIGIBILITY REQUIREMENTS

Following submission of resume/questionnaire and after a successful interview for the Pre-Health Information Management certificate, students who complete the Pre-HIM certificate with at least a “C” in each course (adhering to the Health Science Department timeframe and repeat policy) and with at least a 2.5 GPA can matriculate, according to the chronological order of completing the Pre-HIM certificate and as space permits, into the degree phase (Phase II) of the Health Information Management Program. Students must also provide acceptable criminal background check and drug screening results.

## SPECIAL REQUIREMENTS

Students must complete all HIM technology curriculum courses with a “C” or higher in the time frame permitted by the Health Science Department and may repeat no more than two curriculum courses.

Students will be expected to maintain their student membership to the American Health Information Management Association (AHIMA), as well as join the MTC HIM Student Association..

Students are strongly advised to attend the South Carolina Health Information Management Association’s regional and annual meetings as student members in order to network with HIM professionals in the area.

Students taking HIM Courses will adhere to more stringent attendance policies than the general college policy.

## ADDITIONAL REQUIREMENTS

- Courses must be taken in the appropriate sequence as specified in the curriculum display
- Students should plan to sit for the American Health Information Management (AHIMA) credentialing examination during the last semester of Phase II or shortly after graduation. Eligibility for clinical rotation does not guarantee eligibility for certification examinations
- Refer to the Health Sciences “Additional Requirements” at the beginning of this section for requirements for all Health Sciences programs, such as background checks, drug screenings, health form and immunizations completions, CPR certification, insurance, equipment and supply purchases and technical standards/essential functions.

## CLINICAL REGULATIONS

The clinical phase of instruction is an integral and important portion of the Health Information Management program. During this phase, students will be involved in indirect patient care.

Students are responsible for their own transportation during rotations and to off-campus program-related activities, including clinical and laboratories to local facilities and possibly to sites up to 100 miles from campus.

When participating in a clinical experience at any affiliate health care facility, students are governed by the college policies and the affiliate facility's regulations and the protocols. Affiliate policies may require students to submit to the same drug testing procedures and criminal background checks that apply to employees of the facility. Students may be dismissed from clinical activities and/or the program if found in violation of clinical affiliation policies. CPR certification must be current for clinical rotations. All immunizations and health tests must be kept current.

Although low risk, students are required to observe standard precautions in all labs and clinics where there is a risk of exposure to blood and body fluids. Students must wear their identification badge while in clinical facilities in accordance with the "Lewis Blackman Patient Act of 2005".

Students in the Health Information Management program are not permitted to receive compensation for time spent in a facility as a part of the clinical course assignment. These assignments are considered learning experiences and are part of course requirements.

**MAJOR: HEALTH INFORMATION MANAGEMENT  
(83 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (22 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 210 Anatomy and Physiology I @	4.0
CPT 170 Microcomputer Applications @	3.0
ENG 101 English Composition I @	3.0
ENG 165 Professional Communications @	3.0
MAT 120 Probability and Statistics @	3.0
PSY 201 General Psychology @	3.0
Approved Humanities Course @	<u>3.0</u>
Subtotal	22.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

**B. MAJOR COURSE REQUIREMENTS (48 CREDIT HOURS)**

	<u>Credit Hours</u>
HIM 103 Introduction to Health Information Management @	3.0
HIM 110 Health Information Science I	3.0
HIM 115 Medical Records and the Law	2.0
HIM 120 Health Information Science II	3.0
HIM 125 Standards and Regulations	2.0
HIM 130 Billing and Reimbursement	3.0
HIM 135 Medical Pathology	3.0
HIM 138 Pharmacology for Medical Record Coding	2.0
HIM 140 Current Procedural Terminology	3.0
HIM 163 Supervised Clinical Practicum I	3.0
HIM 164 Supervised Clinical Practicum II	3.0
HIM 215 Registries and Statistics	3.0
HIM 216 Coding and Classification I	3.0

HIM 225	Coding and Classification II	3.0
HIM 227	Senior Professional Competencies	3.0
HIM 250	Coding and Classification III	3.0
HIM 266	Computer in Health Care	<u>3.0</u>
	Subtotal	48.0

### C. ADDITIONAL COURSE REQUIREMENTS (13 CREDIT HOURS)

		<u>Credit Hours</u>
AHS 102	Medical Terminology @	3.0
AHS 208	Health Management @	3.0
BIO 211	Anatomy and Physiology II @	4.0
IST 130	Project Management Essentials for IT Professionals	<u>3.0</u>
	Subtotal	13.0
	Total Credit Hours:	83.0

NOTE: Courses denoted with @ are part of the Phase I Pre-Health Information Management certificate.

## MEDICAL ASSISTING CERTIFICATE

Medical assistants perform a wide range of duties in physicians' offices, clinics and emergency medical centers. Clerical duties include screening and receiving patients; maintaining medical records; typing and transcribing medical reports; handling telephone calls and correspondence; entering data; filing insurance claims; and maintaining patient accounts. Clinical duties include preparing patients for examinations; obtaining vital signs; taking medical histories; assisting with examinations and treatments; performing routine office laboratory procedures (urinalysis, phlebotomy, CBC, specimen collection and shipment); performing electrocardiograms; and instructing patients for advanced procedures.

Required clinical experience (externship) is provided in a variety of outpatient settings including physician offices, clinics and emergency medical centers during the third semester of the program.

The Medical Assisting Certificate Program offered at the Airport Campus is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahep.org](http://www.caahep.org)) upon the recommendation of the Medical Assisting Education Review Board (MAERB).

Commission on Accreditation of Allied Health Education Programs  
1361 Park Street  
Clearwater, FL 33756  
(727) 210-2350  
[caahep.org](http://caahep.org)

Third semester students should plan to take a medical assisting certification examination. Upon successful completion of the examination, graduates will receive the Certified Medical Assistant, CMA (AAMA) or the Registered Medical Assistant, RMA (AMT) credentials.

## SPECIAL REQUIREMENTS

Students who are admitted to the Medical Assisting program are required to purchase and maintain standard white laboratory coats at an approximate cost of \$25. Students must maintain at least a “C” in all Medical Assisting courses. Students may repeat no more than two program courses. All classes are at Airport Campus and admitted only during the fall semester.

In addition to the college’s placement test and the admissions requirements of the Health Sciences Department, specific admission criteria to the Medical Assisting program are:

High school diploma or equivalent

Acceptable interview eligibility criteria:

- HOBET V (May 2012-present): 52 total percent (reading 63 percent, mathematics 57 percent, science 39 percent) and MTC writing sample score of 30; keyboarding skills of 25 wpm; math placement into MAT 101; or
- HOBET (May 2009-May 2012): 46 composite percent (minimum reading 46 percent) and MTC writing sample score of 30; or
- SAT 840 (minimum critical reading 400) and MTC writing sample score of 30; keyboarding skills of 25 wpm; math placement into MAT 101; or
- ACT 18 (minimum verbal 17) and MTC writing sample score of 30; keyboarding skills of 25 wpm; math placement into MAT 101; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA and “C” or higher in each course; and keyboarding skills of 25 wpm; or
- Associate degree or higher; keyboarding skills of 25 wpm; math placement into MAT 10.
- The keyboarding test is available through the MTC Assessment Center. To be utilized for eligibility in lieu of a current math placement test, math courses must adhere to the timeframe for the Health Science courses (See the general Health Science section of the catalog). A COMPASS reading score of 88 or an ASSET reading score of 45 would equate to reading placement at the RDG 101 completion level.

Acceptable admissions criteria:

- Current First Aid and CPR certifications at time of program entry
- Program interview
- Successful completion of all pre-requisite coursework for AOT 105, CPT 101/CPT 170, RDG 101, MAT 101
- Acceptable criminal background check and drug screening results at time of program entry.

Other criteria:

- High school or college credits in science (recommended)

## CERTIFICATE: MEDICAL ASSISTING (39 CREDIT HOURS)

	<u>Credit Hours</u>
AHS 102 Medical Terminology	3.0
BIO 112 Basic Anatomy and Physiology	4.0
ENG 101 English Composition I	3.0

MED 103	Medical Assisting Introduction <sup>1</sup>	3.0
MED 104	Medical Assisting Administrative Procedures <sup>2</sup>	4.0
MED 109	Medical Business Records	3.0
MED 112	Medical Assisting Pharmacology <sup>3</sup>	2.0
MED 113	Basic Medical Laboratory Techniques	3.0
MED 114	Medical Assisting Clinical Procedures	4.0
MED 117	Clinical Practice	5.0
MED 124	Medical Computer Practicum <sup>4</sup>	3.0
MED 134	Medical Assisting Financial Management	<u>2.0</u>
Total Credit Hours:		39.0

<sup>1</sup> MED-103 and MED-104 have a pre-requisite of RDG 101

<sup>2</sup> MED-104 has a pre-requisite of either AOT-105 or a keyboarding test score of 25 wpm.

<sup>3</sup> MED-112 has a pre-requisite of MAT 101.

<sup>4</sup> MED-124 has a pre-requisite of CPT 101/CPT 170.

## PRE-MEDICAL LABORATORY TECHNOLOGY CERTIFICATE

The Pre-Medical Laboratory Technology Certificate is Phase I of the two-phase Medical Laboratory Technology (MLT) Associate Degree program and consists of the 30 hours of general education courses required for the Medical Laboratory Technology curriculum.

### SPECIAL REQUIREMENTS:

- Students must meet college admission and testing requirements.
- A minimum grade of "C" must be attained in all Pre-Medical Laboratory Technology curriculum courses with minimum grade point of 2.0 to receive the certificate.
- No Science or Math course may be repeated more than one time and no more than 2 courses may be repeated to be eligible for progression into the Medical Laboratory Technology Program.

### CERTIFICATE: PRE-MEDICAL LABORATORY TECHNOLOGY (30 CREDIT HOURS)

		<u>Credit Hours</u>
BIO 210	Anatomy and Physiology I	4.0
BIO 211	Anatomy and Physiology II	4.0
CPT 101	Introduction to Computers	
OR		
CPT 170	Microcomputer Applications	3.0
CHM 110	College Chemistry I	4.0
ENG 101	English Composition I	3.0
ENG 102	English Composition II	3.0
MAT 102	Intermediate Algebra	3.0

PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Total Credit Hours:	30.0

## MEDICAL LABORATORY TECHNOLOGY

Medical laboratory technicians provide a wide range of information for physicians to use in diagnosis and treatment. Technicians work in clinical settings under the supervision of medical technologists and pathologists and are required to perform precise tests and procedures to guarantee accurate information for patient care. Technicians analyze body fluids, isolate and identify microorganisms, study blood components, perform pre-transfusion tests and determine disease-related immune responses.

The MLT Degree program prepares students to operate computerized lab equipment in a safe, cost-effective manner and to use quality control methods of assigned procedures. Students acquire a working knowledge in the areas of hematology, urology, parasitology, immunology, clinical chemistry, clinical microbiology and blood banking. In addition, they develop important communication skills to be used in translating reports, records and results.

Graduates of the program are eligible to take the Board of Certification (BOC) examination offered by the American Society for Clinical Pathology (ASCP) to earn the designation Medical Laboratory Technician (MLT).

The program is fully accredited by the National Accrediting Agency for Clinical Laboratory Sciences.

National Accrediting Agency for Clinical Laboratory Sciences  
 5600 N. River Road, Suite 720  
 Rosemount, Illinois 60018-5119  
 847-939-3597  
 773-714-8880  
[naacsls.org](http://naacsls.org)

### SPECIAL REQUIREMENTS

Students are required to purchase and maintain standard white uniforms, fluid-resistant laboratory coats, white shoes and safety equipment at an approximate total cost of \$300. The American Society of Clinical Pathology Board of Certification examination fee is approximately \$185.00.

Students must attain a grade of "C" in all curriculum courses to successfully complete the program. No course may be repeated more than one time. No more than 2 courses within the curriculum program may be repeated and only one Medical Laboratory Technology (MLT prefix) course may be repeated.

Courses must be taken in the appropriate sequences.

In addition to the college's placement test and the admission requirements for the Health Sciences Department, specific eligibility and interview criteria to the Medical Laboratory Technology program include:

Acceptable eligibility criteria:

- HOBET V (May 2012-present): 60 total percent (reading 70 percent, mathematics 68 percent, science 47 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent, algebra 50 percent, mathematics 50 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430, minimum mathematics 480) and MTC writing sample score of 30; or
- ACT 19 (minimum verbal 18, minimum mathematics 23) and MTC writing sample score of 30; or
- Successful completion of Pre-MLT certificate with a 2.0 GPA and “C” or higher in each course, or successful completion of pre-health certificate with 2.5 GPA and “C” or higher in each course; or
- Associate degree or higher.

Admissions Criteria:

- Observation in clinical setting
- TOEFL test for international students
- Interview by the Medical Laboratory Admissions Committee
- Acceptable criminal background check and drug screening
- Physical Examination with TB test (completed after interview) by entry date.

Other criteria:

- High school or college credits in science/mathematics (algebra, chemistry, physics, biology) recommended
- High school diploma or equivalent

**MAJOR: MEDICAL LABORATORY TECHNOLOGY  
(80 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition I @	3.0
ENG 102 English Composition II @	3.0
MAT 102 Intermediate Algebra @	3.0
PSY 201 General Psychology @	3.0
Approved Humanities Course @	<u>3.0</u>
Subtotal	15.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

**B. MAJOR COURSE REQUIREMENTS (16 CREDIT HOURS)**

	<u>Credit Hours</u>
MLT 110 Hematology	4.0
MLT 120 Immunohematology	4.0

MLT 130	Clinical Chemistry	4.0
MLT 205	Advanced Microbiology	<u>4.0</u>
	Subtotal	16.0

### C. ADDITIONAL COURSE REQUIREMENTS (49 CREDIT HOURS)

		<u>Credit Hours</u>
BIO 210	Anatomy and Physiology I @	4.0
BIO 211	Anatomy and Physiology II @	4.0
CHM 110	College Chemistry I @	4.0
MLT 102	Medical Lab Fundamentals	3.0
MLT 104	Basic Medical Microbiology	2.0
MLT 108	Urinalysis & Body Fluids	3.0
MLT 115	Immunology	3.0
MLT 210	Advanced Hematology	4.0
MLT 230	Advanced Clinical Chemistry	4.0
MLT 260	Clinical Practicum I	3.0
MLT 270	Clinical Applications*	12.0
CPT 101	Introduction to Computers @	<u>3.0</u>
	Subtotal	49.0
	Total Credit Hours:	80.0

NOTE: Courses denoted with @ are part of the Phase I Pre-Medical Laboratory Technology Certificate.

### RECOMMENDED ADDITIONAL COURSES:

		<u>Credit Hours</u>
AHS 102	Medical Terminology	3.0
CHM 105	General Organic and Biochemistry	4.0
CHM 111	College Chemistry II (for student continuing in chemistry)	4.0
CHM 112	College Chemistry II (for student not continuing in chemistry)	4.0

Biotechnology Cooperative Program with Greenville Technical College - Midlands Technical College has an agreement with Greenville Technical College wherein the general education courses required in Greenville Technical College's Biotechnology Phase I of their Associate Degree Program can be taken at Midlands Technical College. The Greenville Technical College program goal is to provide practical, "hands-on" learning and familiarity with cutting edge techniques, technologies, and equipment to gain a working knowledge of molecular biology, recombinant DNA, immunology, protein purification and tissue culture – both through classroom lectures and laboratory learning experiences. Coursework in Greenville Technical College's Biotechnology Phase I include: BIO 101, CHM 110, ENG 101, SPC 205, Humanities Elective, MAT 120, CPT 101, CHM 111, ENG 260 or ENG 102, and a Social Science Elective. A grade of at least a "C" in all courses and a cumulative GPA of at least a "2.0" is required for consideration for transfer as Greenville Technical College's Phase I curriculum. Although Midlands Technical College does not offer a Phase I credential in this program, the Midlands Technical College Medical Laboratory Technology program director can provide information about this program. Additional information can be accessed through Greenville Technical College at: <http://www.gvltec.edu/biotechnology>.

# MEDICAL RECORD CODER CERTIFICATE

The medical record coder is a health information specialist trained to assign diagnostic and procedural codes, applying classification systems for optimal reimbursement in a variety of health care settings. The medical record coder will establish a familiarity with other coding and classification systems utilized in non-traditional health care settings as well as reimbursement-related issues and skills including DRG assignment/validation, federal reimbursement systems, operations of third party payers and billing departments.

The general education component of this certificate program will allow the student to develop a background in human anatomy and physiology, medical terminology and computer skills.

The professional education component will consist of an introduction to the field of health information management, in-depth instruction on medical record coding, focus on medical pathology and interpretation of medical documentation. Hands-on coding practice will be achieved in lab settings, and when possible, in hospital and other health care facility Health Information Management departments supervised by health information management professionals. Students will be expected to join their professional organization, the American Health Information Management Association (AHIMA), as they begin their first semester.

Successful students will be required to sit for the AHIMA coding certification examination in order to receive credentials as a Certified Coding Associate (CCA). This examination is offered by the American Health Information Management Association (AHIMA). After successful completion of the program and credentialing examination, graduates are qualified to be employed for the following positions: Inpatient Hospital Coder, Outpatient Hospital Coder; Physician Office Coder; Surgical Center Coder; Home Health Care Coder; Nursing Facility Coder.

## SPECIAL REQUIREMENTS

In addition to the college's placement test and the admissions requirements of the Health Sciences department, specific eligibility and admissions criteria to the Medical Record Coder program include:

High school diploma or equivalent

High school or college credits in science (recommended)

Keyboarding skills

Acceptable eligibility criteria:

- HOBET V (May 2012-present): 60 total percent (reading 70 percent, mathematics 68 percent, science 47 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 46 composite percent (minimum reading 46 percent) and MTC writing sample score of 30; or
- SAT 840 (minimum critical reading 400) and MTC writing sample score of 30; or
- ACT 18 (minimum verbal 17) and MTC writing sample score of 30; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA and "C" or higher in each course; or
- Associate degree or higher.

**Admissions Criteria:**

- Successful completion, with at least a “C”, of Pre-requisite courses: BIO 210, CPT 170, ENG 101 and AHS 102 within the Health Sciences timeframe limits and repeat policy.
- Current CPR certification at time of program entry
- Acceptable criminal background check and drug screening
- Completed Health Form and Immunization Records

The program is offered as a full-time, three semester program on the Airport Campus. Courses must be taken in the appropriate sequence as specified in the curriculum display. Students must complete all courses (pre-requisite and curriculum courses) with at least a “C” or better in the timeframe permitted by the Health Science Department and may repeat no more than two courses.

**CERTIFICATE: MEDICAL RECORD CODER (36 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 211 Anatomy and Physiology II	4.0
HIM 103 Introduction to Health Information and Coding	3.0
HIM 130 Billing and Reimbursement	3.0
HIM 135 Medical Pathology	3.0
HIM 138 Pharmacology for Medical Records Coding	2.0
HIM 140 Current Procedural Terminology I	3.0
HIM 150 Coding Practicum I	3.0
HIM 151 Coding Practicum II	3.0
HIM 216 Coding and Classification I	3.0
HIM 225 Coding and Classification II	3.0
HIM 230 Supervisory Principles for Coding	3.0
HIM 250 Coding and Classification III	<u>3.0</u>
Total Credit Hours:	36.0

Pre-requisite courses: BIO 210, CPT 170, ENG 101 and AHS 102.

**NUCLEAR MEDICINE CERTIFICATE**

The Nuclear Medicine Certificate is an advanced certificate and requires entering students to have already completed prior college Health Sciences and/or science coursework. Because this program is an advanced certificate, it is strongly recommended that interested students meet with a Nuclear Medicine Technology program faculty and/or Health Sciences advisor early in their matriculation at Midlands Technical College

Nuclear medicine technologists are trained in the safe handling and application of radioactive materials for diagnostic and therapeutic procedures in the medical field. The applied skills of nuclear medicine technologists complement nuclear medicine physicians by providing clinical information pertinent to patient diagnosis and treatment.

The Nuclear Medicine Certificate program is a full-time program. Admission is limited to those who meet the specific admissions criteria. The certificate program begins each fall semester and ends with the summer semester.

Students will receive clinical education in affiliate hospitals' nuclear medicine departments. Students must provide their own transportation to clinical sites that may include Columbia, Florence, Anderson, Greenville and Charleston. Didactic instruction is given at the Health Science facility located on the Airport Campus.

The Nuclear Medicine Technology program is fully accredited by the Joint Review Committee on Educational Programs in Nuclear Medicine Technology and graduates are eligible to take the ARRT and the NMTCB examinations.

Joint Review Committee on Educational Programs in Nuclear Medicine Technology  
2000 W. Danforth Road  
Suite 103, #203  
Edmond, OK 73003  
jrcnmt.org

## SPECIAL REQUIREMENTS

### Interview Eligibility Criteria:

In addition to general Health Sciences Program requirements, specific requirements for attaining interview eligibility status for the NMT program include:

- A Bachelor's Degree and demonstrated progress in the Midlands Technical College Associates of Applied Science in General Technology/Nuclear Medicine (AAS-GEN-NMT), to be able to complete pre-requisite coursework\* as assigned by the nuclear medicine faculty and/or health science advisor. A minimum GPA of 2.75 is required in coursework utilized for admission; coursework must be within the 3-5 year timeframe prescribed by the Health Sciences Department.

OR

- An Associate Degree, with registration/certification or eligibility in radiologic technology, medical technology, nursing or other clinical health sciences field, and demonstrated progress in the Midlands Technical College Associates of Applied Science in General Technology/Nuclear Medicine (AAS-GEN-NMT), to be able to complete pre-requisite coursework\* as assigned by the nuclear medicine faculty and/or health science advisor. A minimum GPA of 2.75 is required in coursework utilized for admission; coursework must be within the 3-5 year timeframe prescribed by the Health Sciences Department.

OR

- Demonstrated progress in the Midlands Technical College Associates of Applied Science in General Technology/Health Care AASGEN.HLC3 to be able to complete pre-requisite coursework\* as assigned by the nuclear medicine faculty and/or health science advisor. A minimum GPA of 2.75 is required in coursework utilized for admission; coursework must be within the 3-5 year timeframe prescribed by the Health Sciences Department.

### PRE-REQUISITE GENERAL EDUCATION COURSES:

(Displayed in the AASGEN.NMT or the AASGEN.HLC3 described above)

	<u>Credit Hours</u>
AHS 102 Medical Terminology	3.0
BIO 210 Anatomy and Physiology I	4.0

BIO 211	Anatomy and Physiology II	4.0
CHM 101	General Chemistry I (or higher)	4.0
CPT 101	Intro to computers	3.0
ENG 101	English Composition I	3.0
ENG 102	English Composition II	3.0
MAT 102	Intermediate Algebra	3.0
PSY 201	General Psychology	3.0
RAD 104	Introduction to Physics	1.0
	Program - approved general physics course	3.0/4.0

### Admission Criteria:

- Attend an information session
- Perform two clinical observations
- Successfully complete formal interview
- Complete all pre-requisites and all coursework within the required AAS.GEN.NMT or the AAS.GEN.HLC3 degrees, as assigned by the nuclear medicine technology faculty and/or health science advisor. Each course must be completed with at least a "C". An overall GPA of 2.75 must be maintained in the prescribed coursework. No prerequisite AAS.GEN.NMT or AAS.GEN.HLC3 course may be repeated more than once; no more than two courses may be repeated.

### Clinical Requirements:

Students are accepted contingent upon successful completion of the health form, criminal background investigation and drug screening.

Students must present CPR certification (adult, infant and child) and first-aid certification cards at the time of advisement before entering their first nuclear medicine course. The CPR certification must be kept current while in the program.

Students who are accepted without extensive clinical imaging experience will be required to complete NMT 100–Preparation for Clinic during the summer semester prior to beginning professional courses.

In order to graduate from the NMT program, students must complete each course with at least a "C". No courses having an NMT prefix may be repeated.

## CERTIFICATE: NUCLEAR MEDICINE (39 CREDIT HOURS)

	<u>Credit Hours</u>	
NMT 101	Introduction to Nuclear Medicine	2.0
NMT 102	Nuclear Medicine Procedures I	2.0
NMT 103	Nuclear Medicine Physics	2.0
NMT 104	Nuclear Medicine Procedures II	2.0
NMT 105	Quality Assurance Methodology	2.0
NMT 106	Nuclear Medicine Procedures III	2.0
NMT 107	Nuclear Medicine Instrumentation	3.0
NMT 109	Special Topics in Nuclear Medicine	2.0
NMT 150	Applied Nuclear Medicine I	8.0
NMT 151	Applied Nuclear Medicine II	8.0
NMT 152	Applied Nuclear Medicine III	<u>6.0</u>
	Total Credit Hours:	39.0

**RECOMMENDED ADDITIONAL COURSES:**

	<u>Credit Hours</u>
AHS 127 Basic Patient Care	3.0
AHS 131 Computers in Healthcare	3.0
AHS 141 Phlebotomy	3.0
AHS 145 Electrocardiography	2.0

Nuclear medicine information packages are located on the nuclear medicine webpage: [www.midlandstech.edu/nucmed/](http://www.midlandstech.edu/nucmed/).

## PHARMACY TECHNICIAN

The Pharmacy Technician program teaches students proper pharmacy operations under the supervision of registered pharmacists.

The curriculum combines classroom, online and experiential learning into a well-balanced program of study. Students will train in pharmacies while receiving exposure to the duties carried out by the pharmacist and pharmacy technician in preparing drugs, filling prescriptions, pricing, patient profile records, drug calculations, controlled substances, IV compounding and other pharmacy-related activities.

Midlands Technical College is accredited for pharmacy technician training by the American Society of Health-System Pharmacists.

American Society of Health System Pharmacists  
7272 Wisconsin Avenue  
Bethesda, Maryland 20814  
(301) 657-3000  
[ashp.org](http://ashp.org)

## SPECIAL REQUIREMENTS

Students are required to purchase and maintain standard white laboratory coats, name tags and a technology patch at an approximate cost of \$55.

Students must attain a grade of “C” in all pharmacy, mathematics and science courses to successfully complete the program. Only two pharmacy courses may be repeated. No courses may be repeated more than once to obtain the grade of “C.”

In addition to the college’s placement test and the admissions requirements of the Health Sciences Department, specific eligibility and admissions criteria to the Pharmacy Technician program on the Midlands Technical College campus include:

Acceptable eligibility criteria:

- HOBET V (May 2012-present): 52 total percent (reading 63 percent, mathematics 57 percent, science 39 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430) and MTC writing sample score of 30; or
- ACT 19 (minimum verbal 18) and MTC writing sample score of 30; or

- Successful completion of the Pre-Health Care certificate with a 2.5 GPA., earning a "C" or higher in each course, no courses having been repeated more than once and no more than two courses having been repeated; or
- Cumulative GPA of 2.5 or higher for all general education coursework contained in the Pharmacy Technician Diploma curriculum, with all course grades being a "C" or above, no courses having been repeated more than once and no more than two courses having been repeated.
- Associate degree or higher.

Acceptable admissions criteria:

- Acceptable criminal background check and drug screening results
- Current CPR certification at time of program entry
- Preadmissions interview by the Pharmacy Technician Admission Committee
- High school diploma or equivalent
- Completed medical forms and immunization records

Other recommendations:

- High school or college credits in mathematics/science (algebra, biology, chemistry) recommended
- Computer skills/keyboarding skills (recommended)

**MAJOR: PHARMACY TECHNICIAN (49 CREDIT HOURS)**  
**DIPLOMA: APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (9 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
MAT 102 Intermediate Algebra	3.0
PSY 201 General Psychology	<u>3.0</u>
Subtotal	9.0

**B. MAJOR COURSE REQUIREMENTS (20 CREDIT HOURS)**

	<u>Credit Hours</u>
PHM 101 Introduction to Pharmacy	3.0
PHM 109 Applied Pharmacy Practice	2.0
PHM 111 Applied Pharmacy Practice Lab	2.0
PHM 118 Community Pharmacy Seminar	1.0
PHM 113 Pharmacy Technician Math	3.0
PHM 114 Therapeutic Agents I	3.0
PHM 152 Pharmacy Technician Practicum I	2.0
PHM 164 Pharmacy Technician Practicum II	<u>4.0</u>
Subtotal	20.0

**C. ADDITIONAL COURSE REQUIREMENTS (20 CREDIT HOURS)**

	<u>Credit Hours</u>
AHS 102 Medical Terminology	3.0
BIO 112 Basic Anatomy and Physiology	4.0
CHM 105 General Organic and Biochemistry	4.0

CPT 170	Microcomputer Applications	3.0
PHM 124	Therapeutic Agents II	3.0
PHM 173	Pharmacy Technician Practicum III	<u>3.0</u>
	Subtotal	20.0
	Total Credit Hours:	49.0

## COMMUNITY PHARMACY TECHNICIAN

The Community Pharmacy Technician Certificate provides pharmacy technician training with an application to community practice. The program teaches students proper pharmacy operations under the supervision of registered pharmacists. The curriculum combines classroom, online and experiential learning with duties carried out by pharmacy technicians in preparing drugs, filling prescriptions, pricing, patient profiles, drug calculations, controlled substances and other pharmacy-related activities.

Midlands Technical College is accredited for Pharmacy Technician training by the American Society of Health Systems Pharmacists.

American Society of Health System Pharmacists  
7272 Wisconsin Avenue  
Bethesda, Maryland 20814  
(301) 657-3000  
ashp.org

## SPECIAL REQUIREMENTS

Acceptable eligibility criteria:

- HOBET V (May 2012-present: 52 total percent (reading 63 percent, mathematics 57 percent, science 39 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430) and MTC writing sample score of 30; or
- ACT 19 (minimum verbal 18) and MTC writing sample score of 30; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA, earning a "C" or higher in each course, no courses having been repeated more than once and no more than two courses having been repeated; or
- Cumulative GPA of 2.5 or higher for all general education coursework contained in the Pharmacy Technician Diploma curriculum, with all course grades being a "C" or above, no courses having been repeated more than once and no more than two courses having been repeated; or
- Associate degree or higher.

Acceptable admissions criteria:

- Acceptable criminal background check and drug screening results
- Current CPR certification at time of program entry
- Completed medical forms and immunization records

- Preadmissions interview by the Pharmacy Technician Admission Committee
- High school diploma or equivalent

Other recommendations:

- High school or college credits in mathematics/science (algebra, biology, chemistry)
- Computer skills/keyboarding skills

## **CERTIFICATE: COMMUNITY PHARMACY TECHNICIAN (27 CREDIT HOURS)**

	<u>Credit Hours</u>
AHS 102 Medical Terminology	3.0
BIO 110 General Anatomy and Physiology	3.0
PHM 101 Introduction to Pharmacy	3.0
PHM 109 Applied Pharmacy Practice	2.0
PHM 113 Pharmacy Technician Math	3.0
PHM 114 Therapeutic Agents I	3.0
PHM 118 Community Pharmacy Seminar	1.0
PHM 124 Therapeutic Agents II	3.0
PHM 152 Pharmacy Technician Practicum I	2.0
PHM 164 Pharmacy Technician Practicum II	4.0
Total Credit Hours:	27.0

## **PRE-HEALTH CARE CERTIFICATE**

The Pre-Health Care certificate program is designed for students seeking admission to Health Science programs. Students work closely with academic advisors to select courses that will help confirm their career choices and strengthen their academic skills.

Students who complete this program must apply for Pre-Health Care certificate for graduation.

Successful completion of this certificate program (as outlined below) can be used for interview eligibility to other Health Science programs but the certificate does not guarantee admission into that program.

### **SPECIAL REQUIREMENTS**

Obtain a 2.5 GPA in the certificate and a “C” or greater in each course.

Admission requirements: admission to the college.

## **CERTIFICATE: PRE-HEALTH CARE (32 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
AHS 119 Health Careers	3.0
AHS 102 Medical Terminology	3.0

MAT 101 Beginning Algebra	3.0
AHS 127 Basic Patient Care <sup>1</sup>	3.0
AHS 128 Health Sciences Introduction	4.0
AHS 131 Computers in Health Care	3.0
BIO 112 Basic Anatomy and Physiology <sup>2</sup>	4.0
Program elective <sup>3</sup>	3.0
AHS guided elective	<u>3.0</u>
Total Credit Hours:	32.0

<sup>1</sup> Those Pre-Health Care Certificate students who want to apply to and who have completed the process of declaring a minor in the Pharmacy Technician, Health Information Management, Medical Records Coder, Expanded Duty Dental Assisting or Dental Hygiene can, with advisor approval, substitute another AHS course for AHS 127. If a substitute course is used, the Pre-Health Care Certificate can be used for establishing eligibility only for the program that authorized the substitution.

<sup>2</sup> With advisor approval, BIO 210 may be substituted for BIO 112 if required by the designated program

<sup>3</sup> With advisor approval, BIO 211 can be used as the program elective.

In order to use the completed Pre-Health Care certificate to meet interview eligibility criteria, the student must meet the specified academic performance standards set forth below:

- Must obtain the grade point average (GPA) required by the designated program (See individual program section).
- Must obtain a grade of “C” or better in each course.
- No course in the curriculum can be repeated more than once.
- No more than 2 courses within the certificate program may be repeated.
- “W’s” awarded since Fall 2008 count as an attempt or a repeat.

Students who complete this certificate, meeting the established criteria for academic success must make application for graduation from the Pre-Health Care program and submit a Pre-Health Completion Form, to become interview eligible for the designated program. Completion of the certificate does not guarantee admission into the program.

## **PRE-PHYSICAL THERAPIST ASSISTANT CERTIFICATE PROGRAM**

### **(PHYSICAL THERAPIST ASSISTANT-PHASE I)**

The Physical Therapist Assistant is a skilled technical health-care worker who carries out patient treatment programs under the supervision of a physical therapist. The assistant works to relieve pain and/or increase function in patients via therapeutic application of heat, cold, light, water, electricity, sound, massage, exercise, gait and functional activity.

Clinical experience is provided in a variety of settings including hospitals, rehabilitation agencies, schools, private practices and long-term care facilities.

The Physical Therapist Assistant curriculum is configured sequentially to allow the student to complete the general education courses (Phase I) in a flexible format. During Phase I, the student can complete not only the general education requirements needed for the associate degree, but can also complete the observation requirements and all necessary documentation required prior to acceptance into the technical portion (Phase II) of the degree. Students must academically qualify to be considered for acceptance to Phase II of the curriculum.

## SPECIAL REQUIREMENTS

All courses must be completed with a “C” or greater in each course. No more than two courses may be repeated and no course may be repeated more than once. The “Repeat Policy” applies to coursework taken at MTC and also at other colleges.

In addition to the college’s placement test, the student must meet the requirements of the Health Science “Course Repeat Policy” to be eligible for admissions to Phase I. Additional specific eligibility and admissions criteria to the Pre-Physical Therapist Assistant program include:

Pre-application considerations:

- High school diploma or equivalent
- High school or college credits in biology, algebra, chemistry, and physics are recommended.

Acceptable eligibility and admissions criteria for Phase I:

- HOBET V (May 2012-present): 60 percent total (reading 70 percent, mathematics 68 percent, science 47 percent) and Midlands Technical College writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent; mathematics 50 percent; algebra 50 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430, mathematics 440) and MTC writing sample score of 30; or
- ACT 20 (minimum English 18, Reading 21, Math 22, Science 24) and Midlands Technical College writing sample score of 30; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA and “C” or higher in each course; or
- Associate degree or higher.

Admission to the first phase of the program at Midlands Technical College does not guarantee admission to the second phase. Completion of Phase I with adherence to the Health Sciences “Course Repeat Policy” and earning a 2.75 GPA is required for interview eligibility to Phase II, but does not guarantee admission to Phase II.

## CERTIFICATE: PRE-PHYSICAL THERAPIST ASSISTANT (29 CREDIT HOURS)

### A. GENERAL EDUCATION COURSE REQUIREMENTS (29 CREDIT HOURS)

	<u>Credit Hours</u>
AHS 102 Medical Terminology **	3.0
BIO 210 Anatomy and Physiology I **	4.0

BIO 211	Anatomy and Physiology II**	4.0
ENG 101	English Composition I	3.0
ENG 102	English Composition II	3.0
MAT 120	Probability and Statistics **	3.0
PSY 201	General Psychology	3.0
SPC 205	Public Speaking	3.0
	Approved Humanities Elective	<u>3.0</u>
Total Credit Hours:		29.0

\*\* Course should not be taken until the student has an approximate date for program entry. This course is valid for 3-5 years, depending on the grade earned - (See Health Science admission requirements)

### RECOMMENDED ADDITIONAL COURSES:

		<u>Credit Hours</u>
CPT 101	Introduction to Computers	3.0
PSY 203	Human Growth and Development	3.0

# PHYSICAL THERAPIST ASSISTANT DEGREE PROGRAM

## (PHYSICAL THERAPIST ASSISTANT-PHASE II)

The Physical Therapist Assistant is a skilled technical health-care worker who carries out patient treatment programs under the supervision of a physical therapist. The assistant works to relieve pain and/or increase function in patients via therapeutic application of heat, cold, light, water, electricity, sound, massage, exercise, gait, and functional activity.

Clinical experience is provided in a variety of settings including hospitals, rehabilitation agencies, schools, private offices, and long-term care facilities.

The Physical Therapist Assistant curriculum is configured sequentially to allow the student to complete the general education courses (Phase I) in a flexible format. During Phase I, the student can complete not only the academic requirements needed for the associate degree, but can also complete the observation requirements and all necessary documentation required prior interviewing for the technical portion (Phase II) of the degree. Movement into the second phase is dependent on successful completion of the pre-PTA certificate and additional specific admissions requirements found below.

The Physical Therapist Assistant program is accredited by the Commission on Accreditation in Physical Therapy Education.

Commission on Accreditation in Physical Therapy Education  
 American Physical Therapy Association  
 1111 North Fairfax Street  
 Alexandria, VA 22314-1488  
 (703) 706-3245  
[accreditation@apta.org](mailto:accreditation@apta.org)

## SPECIAL REQUIREMENTS

Specific Interview Eligibility Criteria for to the Physical Therapist Assistant (Phase II) program include:

- Submission of the required application materials by the due dates published on the program web site;
- Completion of 20 hours of observation and submission of evaluation forms and student observation paper and
- Completion of Phase I courses with adherence to the Health Sciences “Course Repeat Policy” earning a cumulative GPA of 2.75 or higher.

Specific Admission Requirements to the Physical Therapist Assistant (Phase II) program include:

- Successful interviews by the Physical Therapist Assistant Program Admissions Committee;
- First-aid and CPR certification; and
- Acceptable criminal background check and drug screening results.

## MERIT ADMISSIONS

A merit admission opportunity is available for highly qualified applicants. Information can be found on the program website.

## PROGRESSION

All Physical Therapist Assistant courses must be completed with a “C” or higher in order to progress in the curriculum. No more than two courses may be repeated and no course may be repeated more than once. The repeat policy is applied to coursework taken both at MTC and at other colleges. All curriculum courses must be completed with a “C” or higher.

## READMISSION

Students who withdraw or who are unable to continue due to grades must reapply for readmission. Readmission is not guaranteed and is on a space-available basis. Students may re-enter the program only once and must repeat all courses in Phase II.

**MAJOR:        PHYSICAL THERAPIST ASSISTANT  
                  (71 CREDIT HOURS)**

**DEGREE:     ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (18 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I @	3.0
ENG 102 English Composition II @	3.0
MAT 120 Probability and Statistics @	3.0
PSY 201 General Psychology @	3.0

SPC 205 Public Speaking @	3.0
Approved Humanities Elective @	<u>3.0</u>
Subtotal	18.0

Major courses meeting other college general education core requirements are starred (\*) below.

## B. MAJOR COURSE REQUIREMENTS (24 CREDIT HOURS)

	<u>Credit Hours</u>
PTH 206 Therapeutic Procedures	2.0
PTH 221 Pathology I	2.0
PTH 222 Pathology II	2.0
PTH 225 Electrotherapy	2.0
PTH 226 Therapeutic Exercises	3.0
PTH 244 Rehabilitation	4.0
PTH 253 Clinical Practice II	3.0
PTH 266 Physical Therapy Practicum I *	<u>6.0</u>
Subtotal	24.0

## C. ADDITIONAL COURSE REQUIREMENTS (29 CREDIT HOURS)

	<u>Credit Hours</u>
AHS 102 Medical Terminology @	3.0
BIO 210 Anatomy and Physiology I @	4.0
BIO 211 Anatomy and Physiology II @	4.0
PTH 101 Physical Therapy Professional Preparation	2.0
PTH 202 Physical Therapy Modalities	4.0
PTH 205 Physical Therapy Functional Anatomy	4.0
PTH 252 Clinical Practice	2.0
PTH 276 Physical Therapy Practicum II	<u>6.0</u>
Subtotal	29.0
Total Credit Hours:	71.0

Note: Courses denoted with @ are part of the Phase I Pre-Physical Therapist Assistant certificate program.

# PRE-OCCUPATIONAL THERAPY ASSISTANT CERTIFICATE

## (COOPERATIVE PROGRAM)

Occupational Therapy's purpose is to promote improvement of health and self-sufficiency. The field involves evaluating patients' abilities and disabilities and establishing goals and methods of treatment. Treatment methods include light handicrafts, sports, vocational skills and training to overcome specific disabilities. Typical activities include helping a patient with a disability find activities that encourage growth and development, helping a patient with a neurological handicap overcome poor coordination and communication, or helping a senior citizen adjust to the special problems of aging and maintaining optimum physical function.

Midlands Technical College works cooperatively with Greenville Technical College (GTC) to offer the first year of the two-year GTC associate degree program. Students must make direct application to Greenville Technical College to complete their degree requirements. Completion of Phase I does not guarantee admission to Phase II.

## SPECIAL REQUIREMENTS

In addition to the college's placement test and the admissions requirements of the Health Sciences department, specific admission criteria to the Pre-Occupational Therapy Assistant program include:

Acceptable admission criteria:

- HOBET V (May 2012-present): 60 percent total (reading 70 percent, mathematics 68 percent, science 47 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent mathematics 50 percent; algebra 50 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430, minimum mathematics 440) and MTC writing sample score of 30; or
- ACT 19 (minimum verbal 18, mathematics 23) and MTC writing sample score of 30; or
- Successful completion of the Pre-Health Care Certificate with a 2.5 GPA and a "C" or higher in each course; or
- An Associate degree or higher.

Specific criteria for Phase II Admissions to Greenville Technical College OTA Program includes:

- Completion of Pre-OTA Certificate with a 2.5 GPA
- Attend a Career Talk Session for the OTA Program
- Attain a minimum cumulative GPA of 2.50 for all Phase I courses and have passed all Phase I courses with a minimum grade of "C" or higher on the first or second attempt

Admission to the first phase of the program at Midlands Technical College does not guarantee admission to the second phase at Greenville Technical College. Selection for admission for the limited positions held for Midlands Technical College students is based on weighted admission score ranking within the MTC cohort completing Phase I and meeting the Greenville Technical College application deadlines.

Interested students should review admission information for the Greenville Technical College OTA Program at [www.gvltec.edu/ota](http://www.gvltec.edu/ota).

## CERTIFICATE: PRE-OCCUPATIONAL THERAPY ASSISTANT (35 CREDIT HOURS)

	<u>Credit Hours</u>
BIO 210 Anatomy and Physiology I **	4.0
BIO 211 Anatomy and Physiology II **	4.0
CPT 101 Introduction to Computers	3.0

ENG 101	English Composition I	3.0
ENG 102	English Composition II	3.0
MAT 120	Probability and Statistics <sup>1</sup>	3.0
PSY 201	General Psychology	3.0
PSY 203	Human Growth and Development <sup>2</sup>	3.0
SPC 205	Public Speaking <sup>3</sup>	3.0
	Approved Humanities Course	3.0
	General Elective	<u>3.0</u>
Total Credit Hours:		35.0

\*\* Science courses and CPT 101 should be delayed until the student is ready to transfer. These courses are valid for no more than five years at Greenville Technical College.

- <sup>1</sup> MAT 110 - College Algebra may be substituted.
- <sup>2</sup> PSY 212 - Abnormal Psychology may be substituted
- <sup>3</sup> SPC 209 - Interpersonal Communication may be substituted

For more information and programmatic advisement, interested students should contact the Midlands Technical College Health Science Advisor/Retention Advocate who is the liaison for this program with Greenville Technical College.

## **RADIOLOGIC TECHNOLOGY DEGREE PROGRAM**

Radiographers (X-ray technologists) assist radiologists (MDs) in performing examinations of the body to rule out or confirm and identify fractures or disease. To accomplish this, radiographers must be well-trained in using highly technical X-ray equipment and applying specialized techniques. Radiographers study human anatomy and physiology, pathology, exposure techniques, positioning, fluoroscopic procedures, radiation protection, trauma and mobile radiography. Elective topics in radiation therapy, nuclear medicine, ultrasound, C.T. and MRI are also provided.

The Radiologic Technology program is fully accredited by the Joint Review Committee on Education in Radiologic Technology and by the S.C. Radiation Quality Standards Association.

Joint Review Committee on Educational Radiologic Technology  
20 N. Wacker Drive  
Suite 2850  
Chicago, IL 60606-3182  
(312) 704-5300  
jrcert.org

Graduates are eligible to take the ARRT examination. Upon successful completion, students receive the designation of Registered Radiologic Technologist RT(R).

Required rotations through various hospitals, offices, trauma centers and immediate care areas of radiology are scheduled for certain days. Evenings and weekends are scheduled by the program to enhance their clinical education experience. These rotations are required.

## SPECIAL REQUIREMENTS

Students are required to purchase and maintain a set of standard white uniforms, laboratory coats, white shoes and a name pin (approximate cost of \$450), radiography books and manuals (approximate cost of \$1100) and membership fees in professional organizations (approximate cost of \$35).

In addition to the college's placement test and the admissions requirements of the Health Sciences department, specific eligibility and admissions criteria to the Radiologic Technology program are:

Pre-application considerations:

- High school diploma or equivalent
- High school or college credits in mathematics/science (recommended)

Acceptable interview eligibility criteria:

- HOBET V (May 2012-present): 60 total percent (reading 70 percent, mathematics 68 percent, science 47 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 60 composite percent (minimum reading 60 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430) and MTC writing sample score of 30; or
- ACT 19 (minimum verbal 18) and MTC writing sample score of 30; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA and "C" or higher in each course; or
- Associate degree or higher.

Acceptable admissions criteria:

- Demonstrate satisfactory progress in general education science courses, to include completion of BIO 210 and BIO 211 with at least a "C" prior to information session/observations
- Attend information session
- Two clinical observations
- Compliance with the program's dress code and personal appearance policies found on the program's website at [www.midlandstech.edu/radtech](http://www.midlandstech.edu/radtech). (The Program Policy and Procedure Manual can also be reviewed in the Counseling and Career Services Office on both Airport and Beltline Campuses.)
- Successful formal interview following an information session/observations
- Satisfactory compliance with required medical physical and immunization requirements
- Acceptable criminal background check and drug screening results

All applicants for the program must complete two observations prior to being interviewed.

Students must earn a grade of "C" or higher in all math, science and technology courses. No course may be repeated more than once, no radiology course may be repeated.

## MERIT ADMISSIONS

A merit admission opportunity is available for certain highly qualified applicants which will permit interviewing in advance of the chronologically determined interview eligibility date. Information about merit admission and program information can be found at [midland-stech.edu/radtech](http://midland-stech.edu/radtech).

### MAJOR: RADIOLOGIC TECHNOLOGY (84 CREDIT HOURS) DEGREE: ASSOCIATE IN APPLIED SCIENCE

#### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
CPT 101 Introduction to Computers	3.0
MAT 102 Intermediate Algebra	3.0
ENG 101 English Composition I	3.0
PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	15.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

#### B. MAJOR COURSE REQUIREMENTS (59 CREDIT HOURS)

	<u>Credit Hours</u>
RAD 101 Introduction to Radiography	2.0
RAD 105 Radiographic Anatomy	4.0
RAD 110 Radiographic Imaging I	3.0
RAD 115 Radiographic Imaging II	3.0
RAD 121 Radiographic Physics	4.0
RAD 130 Radiographic Procedures I	3.0
RAD 136 Radiographic Procedures II	3.0
RAD 153 Applied Radiography I	3.0
RAD 155 Applied Radiography I	5.0
RAD 165 Applied Radiography II	5.0
RAD 220 Selected Imaging Topics	3.0
RAD 225 Selected Radiographic Topics*	2.0
RAD 235 Radiography Seminar I	1.0
RAD 258 Advanced Radiography I	8.0
RAD 268 Advanced Radiography II	8.0
RAD 284 Fluoroscopic Procedures	<u>2.0</u>
Subtotal	59.0

#### ADDITIONAL COURSE REQUIREMENTS (10 CREDIT HOURS)

	<u>Credit Hours</u>
BIO 210 Anatomy and Physiology I	4.0
BIO 211 Anatomy and Physiology II	4.0
RAD 102 Patient Care Procedures	<u>2.0</u>
Subtotal	10.0
Total Credit Hours:	84.0

# PRE-RESPIRATORY CARE CERTIFICATE

This certificate is Phase I of a two-phase Respiratory Care program. The certificate includes all the general education and related courses (English, math, anatomy and physiology, integrated science, etc.) required in the degree curriculum. Although not required, the student can take all Phase I courses prior to taking the professional courses in Phase II. When coursework is completed according to the Health Science timeframes and repeat policy, the student can qualify for a Pre-Respiratory Care Certificate. The student determines the length of time they want to spend in this phase before seeking entry into Phase II.

## SPECIAL REQUIREMENTS

Students must attain a grade of “C” in all respiratory care, mathematics and science courses to successfully complete the certificate. Students may not repeat curriculum, mathematics and/or science courses more than once. Students are permitted to repeat no more than two different courses.

In addition to the college’s placement test and the admission requirements for the Health Sciences department, specific eligibility and admissions criteria to the Pre-Respiratory Care certificate include:

Pre-application considerations:

- High school diploma or equivalent
- High school or college credits in mathematics/science (algebra, chemistry, physics or biology) recommended

Acceptable eligibility and admissions criteria (one or more of the following):

- HOBET V (May 2012): 60 total percent (reading 70 percent, mathematics 68 percent, science 47 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent; mathematics 50 percent; algebra 50 percent) and MTC writing sample score of 30; or
- SAT 910 (minimum critical reading 430, mathematics 480) and MTC writing sample score of 30; or
- ACT 19 composite (minimum verbal 18, mathematics 23), and MTC writing sample score of 30; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA and “C” or higher in each course; or
- Associate degree or higher.

NOTE: Admission to the first phase of the program at Midlands Technical College does not guarantee admission to the second phase.

## CERTIFICATE: PRE-RESPIRATORY CARE (26 CREDIT HOURS)

	<u>Credit Hours</u>
BIO 112 Basic Anatomy and Physiology	4.0
CPT 170 Microcomputer Applications	3.0
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0

MAT 102	Intermediate Algebra	3.0
PHS 115	Integrated Sciences	4.0
PSY 201	General Psychology	3.0
	Approved Humanities Course	<u>3.0</u>
Total Credit Hours:		26.0

**ADDITIONAL RECOMMEND COURSE:**

	<u>Credit Hours</u>	
AHS 102	Medical Terminology	3.0
AHS 145	Electrocardiography	2.0
BIO 115	Microbiology	3.0
BIO 210	Anatomy and Physiology I	4.0
BIO 211	Anatomy and Physiology II	4.0
CHM 105	General Organic and Biochemistry	4.0

## RESPIRATORY CARE DEGREE PROGRAM

Respiratory Care is a health specialty relating to the diagnosis, treatment, preventive and rehabilitative care of individuals suffering from deficiencies, diseases and abnormalities affecting the process of breathing. They are trained to be members of the highly technical life support teams, patient educators and rehabilitation specialists. The Respiratory Care curriculum has a variety of program options sequenced to offer the student the greatest flexibility in achieving their career goals. While the programs are listed separately, they are actually combined in a unique sequencing format. They can be taken in phases. Students may enter at any time into Phase I (Pre-Respiratory Care Certificate), which includes all the general education and related courses (English, math, anatomy and physiology, integrated science, etc.) required by the curriculum. The student can take all or part of these courses prior to taking the professional courses. The student determines the length of time they want to spend in this phase before moving into the next phase (Phase II).

Phase II may be started only in the fall semester and completes the technical or professional training. Here, students study respiratory care procedures and concepts in class, laboratory and clinical facilities. The curriculum blends classroom, laboratory and hospital experience. Much of the time is spent in supervised patient-care learning while working with physicians, nurses, respiratory therapists and other members of the health care team at clinical sites.

The Respiratory Care program is accredited by Commission on Accreditation for Respiratory Care (CoARC).

Students graduating from the Respiratory Care program are eligible to take the National Board of Respiratory Care (NBRC) Therapist Certification Examination and the Advanced Practitioner Credentialing Examinations given by the NBRC. Upon successful completion of these registry examinations, graduates are designated as Registered Respiratory Therapists. Graduates from the program are eligible to apply to the South Carolina State Board of Medical Examiners for state licensing.

### SPECIAL REQUIREMENTS

Students in the program are required to purchase and maintain two monogrammed uniforms, two lab coats, white shoes, stethoscope and a watch at an approximate cost of \$150.

Students are required to join the professional association (AARC) at the student rate of \$50 and attend some workshops and scheduled professional meetings at their own expense (approximately \$150/year).

Students must earn at least a “B” in BIO 112 on the first attempt. Students must attain a grade of at least a “C” in all other respiratory care, mathematics and science courses to successfully complete the program. Students may not repeat mathematics, science and/or major courses more than once and permitted to repeat no more than two different curriculum courses.

In addition to the college’s placement test and the admissions requirements of the Health Sciences department, specific eligibility and admissions criteria to the Respiratory Care program are:

Pre-application considerations:

- High school diploma or equivalent
- High school or college credits in mathematics/science (algebra, chemistry, physics or biology) recommended

Acceptable eligibility criteria (one or more of the following):

- HOBET V (May 2012 – present): 60 total percent (reading 70 percent, mathematics 68 percent, science 47 percent) and MTC writing sample score of 30; and a minimum grade of “B” on the first attempt in BIO 112 or in an equivalent course; or
- HOBET (May 2009-May 2012): 50 composite percent (minimum reading 50 percent; mathematics 50 percent; algebra 50 percent) and MTC writing sample score of 30; and a minimum grade of “B” on the first attempt in BIO 112 or in an equivalent course; or
- SAT 910 (minimum critical reading 430, mathematics 480) and MTC writing sample score of 30; and a minimum grade of “B” on the first attempt in BIO 112 or in an equivalent course; or
- ACT 19 (minimum verbal 18 and mathematics 23) and MTC writing sample score of 30; and a minimum grade of “B” on the first attempt in BIO 112 or in an equivalent course; or
- Successful completion of the Pre-Health Care certificate with a 2.5 GPA and “C” or higher in each course; and a minimum grade of “B” on the first attempt in BIO 112 or in an equivalent course; or
- Associate degree or higher and a minimum grade of “B” on the first attempt in BIO 112 or in an equivalent course.

Acceptable admissions criteria:

- Hospital observation as notified by the Admissions Office.
- Successful program interview scheduled after completion of the hospital observation
- Health form completed and turned in prior to start of first semester of classes
- Acceptable criminal background check and drug screening results
- First aid and CPR Certificates - A Community and Basic Life Support CPR for Adults and Children certificate from the American Red Cross or Heart Association is due before entry into the first respiratory class and must be current (within 3 months of starting the program)

Individual evaluations may be given to applicants who do not meet all of the above criteria. Students must have a clinical observation before being interviewed.

## MERIT ADMISSIONS

A merit admission opportunity is available for highly qualified applicants. Information can be found on the program website.

### MAJOR: RESPIRATORY CARE (82 CREDIT HOURS) DEGREE: ASSOCIATE IN APPLIED SCIENCE

#### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I @	3.0
ENG 102 English Composition II @	3.0
MAT 102 Intermediate Algebra@	3.0
PSY 201 General Psychology @	3.0
Approved Humanities Course @	<u>3.0</u>
Subtotal	15.0

Major courses meeting other college general education core requirements are starred (\*) below.

#### B. MAJOR COURSE REQUIREMENTS (36 CREDIT HOURS)

	<u>Credit Hours</u>
RES 101 Introduction to Respiratory Care	3.0
RES 110 Cardiopulmonary Science I	2.0
RES 121 Respiratory Skills I	4.0
RES 150 Clinical Applications I	4.0
RES 152 Clinical Applications II*	3.0
RES 204 Neonatal/Pediatric Care	3.0
RES 235 Respiratory Diagnostics	4.0
RES 244 Advanced Respiratory Skills	4.0
RES 255 Clinical Practice	5.0
RES 277 Advanced Clinical Practice II	<u>4.0</u>
Subtotal	36.0

#### C. ADDITIONAL COURSE REQUIREMENTS (31 CREDIT HOURS)

	<u>Credit Hours</u>
CPT 170 Microcomputer Applications @	3.0
BIO 112 Basic Anatomy and Physiology@	4.0
PHS 115 Integrated Science @	4.0
RES 111 Pathophysiology	2.0
RES 125 Cardiopulmonary Physiology	2.0
RES 131 Respiratory Skills II	4.0
RES 220 Hemodynamic Monitoring	1.0
RES 232 Respiratory Therapeutics	2.0
RES 241 Respiratory Care Transition	1.0
RES 242 Advanced Respiratory Care Transition	1.0
RES 246 Respiratory Pharmacology	2.0
RES 275 Advanced Clinical Practice I	<u>5.0</u>
Subtotal	31.0

Total Credit Hours: 82.0

**RECOMMENDED ADDITIONAL COURSES:**

AHS 102	Medical Terminology	3.0
AHS 142	Phlebotomy	2.0
AHS 145	Electrocardiography	2.0
BIO 115	Microbiology	3.0
BIO 210	Anatomy and Physiology I	4.0
BIO 211	Anatomy and Physiology II	4.0
CHM 105	General Organic and Biochemistry	4.0

Note: Courses denoted with @ are part of the Phase I Pre-Respiratory Therapy Certificate.

## SURGICAL TECHNOLOGY

Surgical Technologists are integral members of the operating room team. They work in cooperation with surgeons and other healthcare professionals to deliver safe, direct patient care during all phases of surgery. Technologists prepare and sterilize instruments and surgical supplies, assist physicians during surgical procedures, ensure necessary equipment is properly maintained and available when needed, handle surgical specimens, maintain a sterile atmosphere in the operating room environment and complete necessary paperwork related to surgical procedures.

The comprehensive Surgical Technology program offers students the opportunity to prepare for entry-level positions as Surgical Technologists. The three-semester curriculum gives students a balanced set of experiences in the classroom, laboratory and clinical setting. Students are trained in procedures, aseptic (sterile) techniques, medical equipment nomenclature, human anatomy and physiology, physics, robotics, and pharmacology for the operating room. Graduates of the program may be employed in a variety of areas such as the operating room, labor and delivery, physicians' offices, cath labs, and outpatient surgery centers.

The Surgical Technology program is accredited by the Commission on Accreditation of Allied Health Education Program (CAAHEP), on the recommendation of the Accreditation Review Committee in Surgical Technology (ARC-ST).

Commission on Accreditation of Allied Health Education Programs  
1361 Park Street  
Clearwater, FL 33756  
(727) 210-2350  
caahep.org

Graduates of the program are eligible to sit for the National Certification Examination for Surgical Technologists.

## SPECIAL REQUIREMENTS

Students are required to purchase and maintain blue scrub suits, white shoes, white hose, a name pin and protective eye wear at an approximate cost of \$180.

Students must attain a grade of "C" or better in all required curriculum courses to complete the program successfully. All courses in the curriculum may be repeated no more than once to obtain a grade of "C" or better. No more than two curriculum courses may be repeated. All Surgical Technology courses must be taken in the appropriate sequence.

In addition to the college's placement test and the admissions requirements for the Health Sciences Department, specific eligibility and admissions criteria to the Surgical Technology program include:

Pre-application considerations:

- High school diploma or equivalent
- High school or college credits in mathematics/science (algebra, chemistry, physics or biology) recommended

Acceptable interview eligibility:

- HOBET V (May 2012-present): 52 total percent (reading 63 percent, mathematics 57 percent, science 39 percent) and MTC writing sample score of 30; or
- HOBET (May 2009-May 2012): 46 composite percent (minimum reading 46 percent) and MTC writing sample score of 30; or
- SAT 840 (minimum critical reading 430); and MTC writing sample score of 30; or
- ACT 18 (minimum verbal 17) and MTC writing sample of score of 30; or
- Successful completion of the Pre-Health Care Certificate with a 2.5 GPA and "C" or higher in each course; or
- Associate degree or higher.

Acceptable admissions criteria:

- Successful interview by the Surgical Technology Admission Committee
- Must be 17 years of age by date of program entry
- Certification in Basic First-aid and CPR
- Acceptable criminal background check and drug screening results

## **MAJOR:       SURGICAL TECHNOLOGY (51 CREDIT HOURS)**

### **DIPLOMA:    APPLIED SCIENCE**

#### **A. GENERAL EDUCATION COURSE REQUIREMENTS (9 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
MAT 101 Beginning Algebra	3.0
PSY 201 General Psychology	<u>3.0</u>
Subtotal	9.0

#### **B. MAJOR COURSE REQUIREMENTS (30 CREDIT HOURS)**

	<u>Credit Hours</u>
SUR 101 Introduction to Surgical Technology	5.0
SUR 102 Applied Surgical Technology	5.0
SUR 103 Surgical Procedures I	4.0
SUR 104 Surgical Procedures II	4.0
SUR 110 Introduction to Surgical Practicum	5.0
SUR 114 Surgical Specialty Practicum	<u>7.0</u>
Subtotal	30.0

**C. ADDITIONAL COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<u>Credit Hours</u>
AHS 102 Medical Terminology	3.0
BIO 112 Basic Anatomy and Physiology	4.0
BIO 115 Basic Microbiology	3.0
SUR 120 Surgical Seminar	<u>2.0</u>
Subtotal	12.0
Total Credit Hours:	51.0

# Industrial Technologies



# INDUSTRIAL TECHNOLOGIES

Programs offered within Industrial Technologies are designed to provide a highly skilled and competent work force to support the economic development of the Greater Midlands.

In the area of Industrial Technology, associate degree programs are offered in Commercial Graphics; Heating, Ventilation, Air Conditioning/Refrigeration Technology; Automotive Technology; Machine Tool Technology; and Building Construction Technology.

Industrial Technologies also offers the Associate Degree in General Technology/Occupational Technology, which allows a student to plan an individual program of study to meet specific needs.

Diplomas are offered in Air Conditioning and Refrigeration Mechanics, Industrial Electricity/Electronics, and Machine Tool.

A number of the programs within Industrial Technologies have developed flexible, short-term certificate programs designed for students who wish to specialize in one area of employment. These certificates also give those in the work force opportunities to upgrade their skills on modern equipment. The introduction of computers into virtually every aspect of business and industry has increased the need for high-technology training opportunities.

## **Associate Degree Programs**

Automotive Technology  
 Commercial Graphic Communications  
 General Technology  
 Heating, Ventilation,  
     Air Conditioning Technology  
 Machine Tool Technology  
 Building Construction Technology

## **Diploma Programs**

Air Conditioning/Refrigeration Mechanics  
 Industrial Electricity/Electronics  
 Machine Tool

## **Certificate Programs**

Automotive (various)  
 Basic Electrical Wiring  
 Carpentry - Qualified  
     Framer Technology  
 CNC Operator  
 Commercial Graphics (various)  
 Heating/Ventilation/  
     Air Conditioning/Refrigeration  
 Industrial Systems Maintenance  
 Machine Tool (various)  
 Welding Technologies I

# AUTOMOTIVE TECHNOLOGY

Automotive technicians make up the largest service and repair group in the country, and the increasing application of computerized systems in cars and trucks has created a great demand for highly trained professionals.

The Automotive Technology program at Midlands Technical College is designed to provide theory and hands-on training to prepare students to be well-rounded entry-level automotive technicians. Specialization areas emphasize diagnostic and engine performance service, engine overhaul, manual and automatic transmission reconditioning and repair, heat and air conditioning, and all phases of chassis service. Graduates of the Automotive Technology program work in dealerships, independent garages and other related businesses as technicians, parts personnel, services writers and field representatives for manufacturers.

Six separate certificate programs have been developed based on eight ASE (Automotive Service Excellence) categories — engine repair; drive train repair; heating and air conditioning repair; electrical systems repair; brake, suspension and steering repair; and engine performance — to prepare students for the ASE certification exam.

Graduates of this program earn an Associate Degree in Automotive Technology. The six (6) individual certificate programs are also available.

The Automotive Technology Program is Master Certified by NATEF, the National Automotive Technicians Education Foundation. NATEF accreditation validates the quality of the curriculum, facilities and competency of the instructors. NATEF is nationally recognized as the benchmark of automotive education.

## SPECIAL REQUIREMENTS

Students are required to purchase their own safety equipment and tools. A tool list for each course is available upon request.

Newly entering students are required to attend mandatory orientation prior to beginning AUT courses.

**MAJOR: AUTOMOTIVE TECHNOLOGY (84 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
ENG 165 Professional Communications	3.0
MAT 155 Contemporary Mathematics	3.0
PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	15.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

**B. MAJOR COURSE REQUIREMENTS (21 CREDIT HOURS)**

	<u>Credit Hours</u>
AUT 105 Beginning Engine Repair	4.0
AUT 112 Braking Systems	4.0
AUT 115 Manual Drive Train/Axle	3.0
AUT 131 Electrical Systems	3.0
AUT 221 Suspension and Steering Diagnosis	3.0
AUT 241 Automotive Air Conditioning	<u>4.0</u>
Subtotal	21.0

**C. OTHER HOURS REQUIRED FOR GRADUATION (48 CREDIT HOURS)**

	<u>Credit Hours</u>
AUT 106 Intermediate Engine Repair	4.0
AUT 116 Manual Transmission and Axle	4.0
AUT 132 Automotive Electricity	4.0
AUT 133 Electrical Fundamentals	3.0
AUT 141 Introduction to Heating and Air Conditioning	4.0
AUT 145 Engine Performance	3.0
AUT 151 Automotive Transmission/Transaxle	3.0
AUT 153 Automatic Transmission Diagnosis	3.0
AUT 222 Four-Wheel Alignment	2.0
AUT 245 Advanced Engine Performance	5.0
AUT 262 Advanced Auto Diagnosis and Repair	4.0
CPT 101 Introduction to Computers*	3.0
PHS 111 Conceptual Physics I*	3.0
General Elective	<u>3.0</u>
Subtotal	48.0
Total Credit Hours:	84.0

## AUTOMOTIVE CERTIFICATES

**ENGINE REPAIR (8 CREDIT HOURS)**

	<u>Credit Hours</u>
AUT 105 Beginning Engine Repair	4.0
AUT 106 Intermediate Engine Repair	<u>4.0</u>
Total Credit Hours:	8.0

**DRIVE TRAIN REPAIR (13 CREDIT HOURS)**

	<u>Credit Hours</u>
AUT 115 Manual Drive Train/Axle	3.0
AUT 116 Manual Transmission and Axle	4.0
AUT 151 Automatic Transmission/Transaxle	3.0
AUT 153 Automatic Transmission Diagnosis	<u>3.0</u>
Total Credit Hours:	13.0

**HEATING AND AIR CONDITIONING REPAIR (8 CREDIT HOURS)**

	<u>Credit Hours</u>
AUT 141 Introduction to Heating and Air Conditioning	4.0
AUT 241 Automotive Air Conditioning	<u>4.0</u>
Total Credit Hours:	8.0

**ELECTRICAL SYSTEMS REPAIR (10 CREDIT HOURS)**

	<u>Credit Hours</u>
AUT 131 Electrical Systems	3.0
AUT 132 Automotive Electricity	4.0
AUT 133 Electrical Fundamentals	<u>3.0</u>
Total Credit Hours:	10.0

**BRAKE, SUSPENSION AND STEERING REPAIR (9 CREDIT HOURS)**

	<u>Credit Hours</u>
AUT 112 Braking Systems	4.0
AUT 221 Suspension and Steering Diagnosis	3.0
AUT 222 Four-Wheel Alignment	<u>2.0</u>
Total Credit Hours:	9.0

**ENGINE PERFORMANCE (12 CREDIT HOURS)**

	<u>Credit Hours</u>
AUT 145 Engine Performance	3.0
AUT 245 Advanced Engine Performance	5.0
AUT 262 Advanced Auto Diagnosis and Repair	<u>4.0</u>
Total Credit Hours:	12.0

## BASIC ELECTRICAL WIRING CERTIFICATE

The Basic Electrical Wiring Certificate provides a fundamental knowledge of electrical wiring and AC and DC circuits. Students become familiar with electrical codes, ordinances, print reading and electricity fundamentals. Courses taken in this program may be applied toward the Diploma in Industrial Electricity if students later elect to pursue this program.

### SPECIAL REQUIREMENTS

- Students are required to purchase a set of small hand tools at an approximate cost of \$100.
- Courses taken in this program may be applied toward the Associate of Applied Science in General Technology degree program if the student later elects to pursue the degree.

**CERTIFICATE: BASIC ELECTRICAL WIRING (29 CREDIT HOURS)**

	<u>Credit Hours</u>
EEM 117 AC/DC Circuits I	4.0
EEM 118 AC/DC Circuits II	4.0
EEM 140 National Electrical Code	3.0
EEM 141 Residential/Commercial Codes	3.0
EEM 142 Commercial/Industrial Codes	3.0
EEM 165 Residential/Commercial Wiring	4.0
EEM 166 Commercial/Industrial Wiring	4.0
EEM 172 Electrical Print Reading	<u>4.0</u>

Total Credit Hours: 29.0

**BUILDING CONSTRUCTION TECHNOLOGY**

Building Construction Technology is designed specifically to train the next generation of home-builders, superintendents, job site personnel, building inspectors and contractors for the construction industry of South Carolina. Training is based on a set of detailed skills standards from the nation's leaders in the construction industry. Students are encouraged to become a professional in the construction industry. Students learn to build with a "zero-defect" construction philosophy. This means that a commitment to flawless workmanship and unparalleled quality is at the heart of all training activities. Students will experience training in print reading, layout, frame assembly, door and window installation, estimating, scheduling, and other job site duties. The cooperative education experiences provide students opportunities to hone their management skills, stay in touch with new technologies and trends, and interact with potential employers.

**MAJOR: BUILDING CONSTRUCTION TECHNOLOGY  
(65 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (18 CREDIT HOURS)**

	<u>Credit Hours</u>
CPT 170 Microcomputer Applications	3.0
ENG 101 English Composition I	3.0
ENG 165 Professional Communications	3.0
MAT 102 Intermediate Algebra	3.0
PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	18.0

**B. MAJOR COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<u>Credit Hours</u>
BCT 101 Introduction to Building Construction	5.0
BCT 102 Fundamentals of Building Construction	4.0
BCT 104 Site Layout and Preparation	2.0
BCT 111 Blueprint Reading and Specifications	3.0

BCT 115	Construction Safety and Equipment	2.0
BCT 131	Estimating and Quantity Takeoff	2.0
BCT 132	Introduction to Commercial Estimating	2.0
BCT 209	Construction Project Management	3.0
BCT 212	Construction Methods and Design	3.0
BCT 221	Construction Building Codes	3.0
BCT 223	Residential Mechanical Systems	3.0
WLD 102	Introduction to Welding	<u>2.0</u>
	Subtotal	34.0

### C. ADDITIONAL COURSE REQUIREMENTS (29 CREDIT HOURS)

	<u>Credit Hours</u>	
CWE 111	Cooperative Work Experience I	1.0
	Approved Departmental Electives (Minimum of 12 credit hours from the specialty groups)	<u>12.0</u>
	Subtotal	13.0
	Total Credit Hours:	65.0

### Specialty Groups

Business  
 Engineering Technologies  
 Heating Ventilation and Air Conditioning  
 Industrial Electricity  
 Industrial Maintenance  
 Welding Technologies I  
 Transfer Students to Clemson's Construction Management Program  
 (courses must be approved by Clemson)  
 Spanish

## CARPENTRY—QUALIFIED FRAMER TECHNOLOGY CERTIFICATE

The Carpentry-Qualified Framer certificate is designed to train the next generation of skilled workers needed in the construction industry. This certificate can provide multiple avenues to enter the construction industry without a degree in building construction technology. Students will experience training in print reading, layout frame assembly, door and windows installation, estimating, scheduling and other job site duties.

### CERTIFICATE: CARPENTRY—QUALIFIED FRAMER TECHNOLOGY (24 CREDIT HOURS)

	<u>Credit Hours</u>	
BCT 101	Introduction to Building Construction	5.0
BCT 102	Fundamentals of Building Construction	4.0
BCT 104	Site Layout and Preparation	2.0

BCT 111	Blueprint Reading and Specifications	3.0
BCT 115	Construction Safety and Equipment	2.0
BCT 131	Estimating/Quantity Take-off	2.0
BCT 221	Construction Building Codes	3.0
CWE 111	Cooperative Work Experience	1.0
WLD 102	Introduction to Welding	<u>2.0</u>

Total Credit Hours: 24.0

## COMMERCIAL GRAPHICS COMMUNICATIONS

Commercial graphics technicians provide critical support for the printing industry. This highly technical industry involves the production of forms, newspapers, packages, books, magazines, pamphlets and other print-related materials.

In response to the growing specialization within the industry, the college offers an associate degree and two separate certificate programs: Electronic Publishing and Offset Pre-Press Techniques. All Commercial Graphics courses must be passed with a "C" or better to receive credit towards a degree.

### **MAJOR: COMMERCIAL GRAPHICS (61 CREDIT HOURS)** **DEGREE: ASSOCIATE IN APPLIED SCIENCE**

#### **A. GENERAL EDUCATION COURSE REQUIREMENTS (18 CREDIT HOURS)**

	<u>Credit Hours</u>	
ENG 101	English Composition I	3.0
ENG 102	English Composition II	3.0
MAT 102	Intermediate Algebra	3.0
PSY 201	General Psychology	3.0
SPC 205	Public Speaking	3.0
	Approved Humanities Course	<u>3.0</u>
	Subtotal	18.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

#### **B. MAJOR COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<u>Credit Hours</u>	
CGC 110	Electronic Publishing	3.0
CGC 122	Basic Offset Press Operations	3.0
CGC 125	Basic Offset Preparation	3.0
CGC 222	Advanced Offset Press Operations	3.0
CGC 225	Image Assembly	<u>3.0</u>
	Subtotal	15.0

#### **C. ADDITIONAL COURSE REQUIREMENTS (28 CREDIT HOURS)**

	<u>Credit Hours</u>	
BAF 101	Personal Finance	3.0
CGC 101	Introduction to Graphic Techniques	3.0
CGC 135	Commercial Graphic Operations	3.0
CGC 206	Typography II	3.0
CGC 210	Advanced Electronic Publishing	3.0
CGC 240	Senior Projects in Commercial Graphics *	3.0

CHM 101	General Chemistry I*	4.0
CWE 111	Cooperative Work Experience I	1.0
CWE 122	Cooperative Work Experience II	2.0
	General Elective	<u>3.0</u>
	Subtotal	28.0
	Total Credit Hours:	61.0

## COMMERCIAL GRAPHICS CERTIFICATES

### ELECTRONIC PUBLISHING (30 CREDIT HOURS)

	<u>Credit Hours</u>	
CGC 101	Introduction to Graphic Techniques	3.0
CGC 110	Electronic Publishing	3.0
CGC 206	Typography II	3.0
CGC 210	Advanced Electronic Publishing	3.0
CWE 111	Cooperative Work Experience I	1.0
CWE 122	Cooperative Work Experience II	2.0
ENG 101	English Composition I	3.0
ENG 102	English Composition II	3.0
MAT 102	Intermediate Algebra	3.0
AOT 105	Keyboarding	3.0
AOT 210	Document Production	<u>3.0</u>
	Total Credit Hours:	30.0

### OFFSET PRE-PRESS TECHNIQUES (26 CREDIT HOURS)

	<u>Credit Hours</u>	
CGC 101	Introduction to Graphic Techniques	3.0
CGC 105	Photography I	3.0
CGC 110	Electronic Publishing	3.0
CGC 125	Basic Offset Preparation	3.0
CGC 225	Image Assembly	3.0
CWE 112	Cooperative Work Experience I	2.0
ENG 101	English Composition I	3.0
MAT 102	Intermediate Algebra	<u>3.0</u>
	Total Credit Hours:	26.0

## GENERAL TECHNOLOGY

The associate degree program in General Technology allows students to tailor their coursework to meet their individual needs.

Students work with their advisors to develop a specific contract for the courses they will take under this degree. (To receive financial assistance, veterans must have prior approval of their programs by a VA counselor.)

**MAJOR:           GENERAL TECHNOLOGY (60-84 CREDIT HOURS)**  
**DEGREE:        ASSOCIATE IN APPLIED SCIENCE**

Each contract must have the following elements:

A. Minimum of 15 semester-hour credits in general education.

The Associate in General Technology degree program requires a basic core of 15 credits in general education courses. One component of this core must be designed to develop oral and written communication skills and another component must be designed to develop computational skills. Other components of the core must be drawn from each of the following areas: information literacy, humanities or fine arts, social and behavioral sciences, natural sciences and mathematics.

B. Minimum of 40 semester-hour credits in major.

The major consists of a minimum of 28 semester-hour credits in an approved degree, diploma or technical education certificate program and an additional 12 semester-hour credits in another technical specialty.

Additional courses from the major technical specialty and courses from other technical specialties shall be chosen by students with guidance from their faculty advisor. Students adapt their program to employment objectives and compatible interests.

C. A range of 5-29 semester-hour credits of electives and/or other additional courses is required for graduation.

The courses in this section are used to adapt the program to meet local employer requirements and student needs.

Students' contracted programs must be approved by the department chair of the major technical specialty.

## **HEATING, VENTILATION, AIR CONDITIONING TECHNOLOGY**

The Heating, Ventilation, Air Conditioning Technology program provides theory and practice in installing, maintaining and repairing residential and light commercial refrigeration, air conditioning, and heating equipment and systems. With increased emphasis on the environment, technicians are involved in providing total air quality in residential, commercial and industrial settings. Entry-level positions are available in hospitals, factories, schools, restaurants, office complexes, government agencies and through local service companies. The associate degree program and shorter diploma and certificate programs are available.

### **SPECIAL REQUIREMENTS**

Students are required to purchase hand tools and personal safety equipment at an approximate cost of \$1050.

**MAJOR: HEATING, VENTILATION, AIR CONDITIONING  
TECHNOLOGY (75 CREDIT HOURS)**  
**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
ENG 102 English Composition II	
OR	
ENG 165 Professional Communications	3.0
MAT 155 Contemporary Mathematics	3.0
Approved Social and Behavioral Science Course	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	15.0

Major courses meeting other college general education core requirements are starred (\*) below.

**B. MAJOR COURSE REQUIREMENTS (20 CREDIT HOURS)**

	<u>Credit Hours</u>
ACR 101 Fundamentals of Refrigeration	5.0
ACR 102 Tools and Service Techniques	3.0
ACR 106 Basic Electricity for HVAC/R	4.0
ACR 110 Heating Fundamentals *	4.0
ACR 120 Basic Air Conditioning	<u>4.0</u>
Subtotal	20.0

**C. ADDITIONAL COURSE REQUIREMENTS (40 CREDIT HOURS)**

	<u>Credit Hours</u>
ACR 130 Domestic Refrigeration	4.0
ACR 131 Commercial Refrigeration	4.0
ACR 206 Advanced Electricity for HVAC/R	2.0
ACR 207 Advanced Refrigeration Electricity	3.0
ACR 210 Heat Pumps	4.0
ACR 220 Advanced Air Conditioning	4.0
ACR 221 Residential Load Calculations*	2.0
ACR 224 Codes and Ordinances	2.0
ACR 231 Advanced Refrigeration	4.0
ACR 232 Refrigeration Calculation and Equipment Selection	3.0
ACR 250 Duct Fabrication	3.0
CPT 101 Introduction to Computers*	3.0
General Elective	<u>2.0</u>
Subtotal	40.0

Total Credit Hours: 75.0

# AIR CONDITIONING/REFRIGERATION TECHNICIAN

The diploma in Air Conditioning/Refrigeration Mechanics is also the first year of the Associate Degree in Heating, Ventilation, Air Conditioning Technology. It provides the graduate with the basic technical, math and communication skills needed to enter the service industry.

## SPECIAL REQUIREMENTS

Students are required to purchase hand tools and personal safety equipment at an approximate cost of \$1050.

**MAJOR: AIR CONDITIONING/REFRIGERATION TECHNICIAN  
(47 CREDIT HOURS)**

**DIPLOMA: APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (9 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
MAT 155 Contemporary Mathematics	3.0
Approved Social and Behavioral Science Course	<u>3.0</u>
Subtotal	9.0

### B. MAJOR COURSE REQUIREMENTS (20 CREDIT HOURS)

	<u>Credit Hours</u>
ACR 101 Fundamentals of Refrigeration	5.0
ACR 102 Tools and Service Techniques	3.0
ACR 106 Basic Electricity for HVAC/R	4.0
ACR 110 Heating Fundamentals	4.0
ACR 120 Basic Air Conditioning	<u>4.0</u>
Subtotal	20.0

### C. ADDITIONAL COURSE REQUIREMENTS (18 CREDIT HOURS)

	<u>Credit Hours</u>
ACR 130 Domestic Refrigeration	4.0
ACR 131 Commercial Refrigeration	4.0
ACR 210 Heat Pumps	4.0
ACR 250 Duct Fabrication	3.0
CPT 101 Introduction to Computers	<u>3.0</u>
Subtotal	18.0

Total Credit Hours: 47.0

# HEATING/VENTILATION/ AIR CONDITIONING/REFRIGERATION MECHANICS CERTIFICATE

The certificate in Heating/Ventilation/Air Conditioning/Refrigeration is composed of the first-year technical courses of the Associate Degree in Heating, Ventilation, Air Conditioning Technology. It provides the graduate with the basic technical skills needed to enter the service industry.

## SPECIAL REQUIREMENTS

Students are required to purchase hand tools and personal safety equipment at an approximate cost of \$1050.

## CERTIFICATE: HEATING/VENTILATION/AIR CONDITIONING/ REFRIGERATION MECHANICS (35 CREDIT HOURS)

	<u>Credit Hours</u>
ACR 101 Fundamentals of Refrigeration	5.0
ACR 102 Tools and Service Techniques	3.0
ACR 106 Basic Electricity for HVAC/R	4.0
ACR 110 Heating Fundamentals	4.0
ACR 120 Basic Air Conditioning	4.0
ACR 130 Domestic Refrigeration	4.0
ACR 131 Commercial Refrigeration	4.0
ACR 210 Heat Pumps	4.0
ACR 250 Duct Fabrication	<u>3.0</u>
Total Credit Hours:	35.0

## INDUSTRIAL ELECTRICITY/ELECTRONICS

The Industrial Electricity/Electronics Diploma program emphasizes theory and hands-on training in electrical wiring, including the applications to residential, commercial and industrial installations. Although basic installation of electrical components is an important part of the technician's job, increased emphasis has been placed on wiring and programming of programmable logic controllers. Entry-level positions for graduates are available with local electrical contractors, industrial plants, hospitals, power companies, government agencies and other related businesses.

## SPECIAL REQUIREMENTS

- Students are required to purchase a set of small hand tools at an approximate cost of \$100.
- Courses taken in this program may be applied toward the Associate in Applied Science in General Technology degree program if the student later elects to pursue the degree.

**MAJOR: INDUSTRIAL ELECTRICITY/ELECTRONICS  
(48 CREDIT HOURS)**

**DIPLOMA: APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (9 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition	3.0
MAT 155 Contemporary Mathematics	3.0
Approved Social/Behavioral Science Course	<u>3.0</u>
Subtotal	9.0

**B. MAJOR COURSE REQUIREMENTS (14 CREDIT HOURS)**

	<u>Credit Hours</u>
EEM 117 AC/DC Circuits I	4.0
EEM 140 National Electrical Code	3.0
EEM 151 Motor Controls I	4.0
EEM 201 Electronic Devices I	<u>3.0</u>
Subtotal	14.0

**C. ADDITIONAL COURSE REQUIREMENTS (25 CREDIT HOURS)**

	<u>Credit Hours</u>
EEM 118 AC/DC Circuits II	4.0
EEM 141 Residential/Commercial Codes	3.0
EEM 142 Commercial/Industrial Codes	3.0
EEM 165 Residential/Commercial Wiring	4.0
EEM 166 Commercial/Industrial Wiring	4.0
EEM 172 Electrical Print Reading	4.0
EEM 251 Programmable Controllers	<u>3.0</u>
Subtotal	25.0

Total Credit Hours: 48.0

## MACHINE TOOL TECHNOLOGY

The Machine Tool Technology program is designed to provide qualified individuals for manufacturing industries. The curriculum offers the knowledge and skills necessary to obtain entry-level jobs in a variety of manufacturing environments, as well as the potential to advance to supervisory, sales and training positions.

Skills are developed in the use of precision layout tools, layout techniques, setup and operation of mills, lathes, grinders, and other important conventional machines found in a machine shop. More advanced courses are taught in computer numerical control (CNC) programming, setup and operation, plastic injection molding, moldmaking, die making and repair, and jig and fixture design.

With the development of advanced technical systems, there are a variety of career paths. Examples are tool and die maker and computer numerical control setup and programming.

## SPECIAL REQUIREMENTS

Students are required to purchase a set of tools each semester at a cost of approximately \$800.

**MAJOR: MACHINE TOOL TECHNOLOGY (72 CREDIT HOURS)**  
**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 160 Technical Communications	3.0
MAT 155 Contemporary Mathematics	3.0
PSY 201 General Psychology	3.0
SCP 209 Interpersonal Communication	3.0
Humanities Elective	<u>3.0</u>
Subtotal	15.0

Major courses meeting other college general education core requirements are starred (\*) below.

### B. MAJOR COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
MTT 151 Precision Machining I	3.0
MTT 152 Precision Machining II	3.0
MTT 153 Precision Machining III	3.0
MTT 154 Precision Machining IV	3.0
MTT 250 Principles of CNC *	<u>3.0</u>
Subtotal	15.0

+ 3.0 Hours of Print Reading is included in the combination of MTT 121, 122 and 253.

### C. ADDITIONAL COURSE REQUIREMENTS (42 CREDIT HOURS)

	<u>Credit Hours</u>
MTT 105 Machine Tool Math Applications	3.0
MTT 106 Machine Tool Computer Applications	3.0
MTT 120 Machine Tool Print Reading	3.0
MTT 141 Metals and Heat Treatment	3.0
MTT 155 Precision Grinding	3.0
MTT 171 Industrial Quality Control	2.0
MTT 212 Tool Design	4.0
MTT 215 Tool Room Machining I	4.0
MTT 216 Tool Room Machining II	4.0
MTT 246 Plastic Moldmaking I	2.0
MTT 253 CNC Programming and Operations	3.0
MTT 252 CNC Setup and Operations	4.0
MTT 258 Machine Tool CAM	3.0
General Elective	<u>1.0</u>
Subtotal	42.0

Total Credit Hours: 72.0

# MACHINE TOOL

The diploma in Machine Tool is the first year of the Associate Degree in Machine Tool Technology. It provides the student with the basic skills in manual machining to enter the manufacturing or machining industry.

**MAJOR: MACHINE TOOL (43 CREDIT HOURS)**

**DIPLOMA: APPLIED SCIENCE**

## A. GENERAL EDUCATION COURSE REQUIREMENTS (9 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 160 Technical Communications	3.0
MAT 155 Contemporary Mathematics	3.0
PSY 201 General Psychology	<u>3.0</u>
Subtotal	9.0

## B. MAJOR COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
MTT 151 Precision Machining I	3.0
MTT 152 Precision Machining II	3.0
MTT 153 Precision Machining III	3.0
MTT 154 Precision Machining IV	3.0
MTT 250 Principles of CNC	<u>3.0</u>
Subtotal	15.0

## C. ADDITIONAL COURSE REQUIREMENTS (19 CREDIT HOURS)

	<u>Credit Hours</u>
MTT 105 Machine Tool Math Applications	3.0
MTT 106 Machine Tool Computer Applications	3.0
MTT 120 Machine Tool Print Reading	3.0
MTT 141 Metals and Heat Treatment	3.0
MTT 155 Precision Grinding	3.0
MTT 212 Tool Design	<u>4.0</u>
Subtotal	19.0

Total Credit Hours: 43.0

# MACHINE TOOL CERTIFICATES

## MACHINING (24 CREDIT HOURS)

	<u>Credit Hours</u>
MAT 155 Contemporary Mathematics	3.0
MTT 105 Machine Tool Math Applications	3.0
MTT 106 Machine Tool Computer Applications	3.0
MTT 120 Machine Tool Print Reading	3.0
MTT 151 Precision Machining I	3.0
MTT 152 Precision Machining II	3.0

MTT 153 Precision Machining III	3.0
MTT 154 Precision Machining IV	<u>3.0</u>
Total Credit Hours:	24.0

## WELDING TECHNOLOGIES I CERTIFICATE

The Welding Technologies I Certificate prepares students for employment and advancement in the welding industry. Students will receive training in the latest welding technology as well as the traditional welding skills and a good foundation in basic welding theory, metallurgy and blueprint reading. Safety is stressed throughout the program. These skills will enable students to produce structurally sound and quality welds. Employment opportunities are found in maintenance, construction, manufacturing and other related fields.

### SPECIAL REQUIREMENTS

- Students must meet the required placement test scores before enrolling in curriculum courses.
- Students are required to purchase approximately \$100 worth of welding safety kit and small hand tools.
- Courses taken in this program may be applied toward the Associate in Applied Science in General Technology degree program if the student later elects to pursue the degree.

### CERTIFICATE: WELDING TECHNOLOGIES I (28 CREDIT HOURS)

	<u>Credit Hours</u>
WLD 102 Introduction to Welding	2.0
WLD 103 Print Reading	1.0
WLD 104 Gas Welding and Cutting	2.0
WLD 105 Print Reading II	1.0
WLD 111 Arc Welding I	4.0
WLD 113 Arc Welding II	3.0
WLD 134 Inert Gas Welding Non-Ferrous	3.0
WLD 136 Advanced Inert Gas Welding	2.0
WLD 140 Weld Testing	1.0
WLD 154 Pipe Fitting and Welding	4.0
WLD 170 Qualification Welding	<u>4.0</u>
Total Credit Hours:	28.0

# Information Systems Technology



# INFORMATION SYSTEMS TECHNOLOGY

All organizations today rely on computer information and networking technology to conduct business and operate more efficiently. Information Systems Technology offers a variety of educational programs designed to prepare students for careers in fields such as application programming, web design, Internet programming, database development, computer networking and administrative office technology.

Students must earn a grade of “C” or better in all of the courses offered within the Business/Public Services and Information Systems Technology Departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT, MKT, and TEL.

## **Associate Degree Programs**

Administrative Office Technology  
Computer Technology  
Network Systems Management

## **Certificate Programs**

Application Programming  
Customer Service  
Database Development  
Enterprise  
Help Desk  
Information Systems Networking  
LAN Networking Systems  
Legal Administrative Assistant  
Medical Office Administrative Assistant  
Networking Specialist  
Office Support Specialist  
Routing and Networking Configuration  
Web Design and Maintenance

# ADMINISTRATIVE OFFICE TECHNOLOGY

With new technological advances in today's modern office, the professional must fill many roles. The office professional works alongside the executive in decision making, research and public relations while using current office technology. The Administrative Office Technology (AOT) program is designed to provide students with the skills and experience necessary to achieve top-level information processing/administrative positions.

In addition to offering traditional office skills training, the program offers specialized courses in legal and medical employment areas. The AOT program includes the use of the microcomputer and in-depth training on the most popular training software packages, such as Microsoft Word, Access, Excel, Publisher and PowerPoint.

## SPECIAL REQUIREMENTS

Basic keyboarding is a skill necessary for successful course completion in the AOT program; therefore, AOT 105-Keyboarding is a prerequisite course for most AOT courses. Students are required to take AOT 105-Keyboarding or score 25 net words per minutes (nwpm) on the keyboarding placement test.

Students must earn a grade of "C" or better in all of the courses offered within the Business/Public Service and Information Systems Technology Departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT and MKT.

Students must meet all exit program competencies for graduation from this program.

**MAJOR: ADMINISTRATIVE OFFICE TECHNOLOGY  
(69 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (18 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0
CPT 170 Microcomputer Applications	3.0
MAT 155 Contemporary Mathematics	3.0
PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	18.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

### B. MAJOR COURSE REQUIREMENTS (42 CREDIT HOURS)

	<u>Credit Hours</u>
AOT 110 Document Formatting	3.0
AOT 133 Professional Development	3.0
AOT 134 Office Communications	3.0
AOT 143 Office Systems and Procedures	3.0
AOT 161 Information Management	3.0
AOT 210 Document Production	3.0

AOT 234	Administrative Office Communications	3.0
AOT 255	Senior Practicum	3.0
AOT 265	Office Desktop Publishing	3.0
CPT 113	Information Systems	3.0
CPT 172	Microcomputer Database	3.0
CPT 174	Microcomputer Spreadsheets	3.0
CPT 179	Microcomputer Word Processing	3.0
CPT 279	Advanced Microcomputer Word Processing	<u>3.0</u>
	Subtotal	42.0

### C. ADDITIONAL COURSE REQUIREMENTS (9 CREDIT HOURS)

		<u>Credit Hours</u>
ACC 111	Accounting Concepts	3.0
BUS 130	Business Communications*	3.0
	Departmental Electives**	<u>3.0</u>
	Subtotal	9.0
Total Credit Hours:		69.0

\*\*Departmental electives are three-credit-hour courses taken within the Information Systems Technology department. Information Systems Technology course prefixes include AOT, IST, and CPT. CPT 101-Introduction to Computers and AOT 105-Keyboarding cannot be used as departmental electives.

## APPLICATION PROGRAMMING CERTIFICATE

The Application Programming Certificate provides the foundation for an entry-level programmer to gain access to the information processing field. Students will be able to code in two high-level languages found in the business environment. Students will be able to develop Windows applications using object-based visual tools.

Students must earn a grade of "C" or better in all of the courses offered within the Business/Public Services and Information Systems Technology departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, IST, LEG, MGT and MKT.

### CERTIFICATE: APPLICATION PROGRAMMING (18 CREDIT HOURS)

Prerequisite: "B" in CPT 170 or proficiency in using microcomputers.

		<u>Credit Hours</u>
CPT 115	Cobol Programming I	3.0
CPT 236	Introduction to Java Programming	3.0
CPT 185	Event-Driven Programming	3.0
CPT 244	Data Structures	
	OR	
CPT 215	Cobol Programming II	3.0
IST 226	Internet Programming	
	OR	

CPT 240	Internet Programming with Databases	3.0
	Approved CPT or IST Elective	<u>3.0</u>
	Total Credit Hours:	18.0

Approved CPT or IST Electives include the following:

- CPT 113 Information Systems
- CPT 114 Computers and Programming
- CPT 115 COBOL Programming I
- CPT 185 Event-Driven Programming
- CPT 215 Cobol Programming II
- CPT 236 Introduction to Java Programming
- CPT 237 Advanced Java Programming
- CPT 240 Internet Programming with Databases
- CPT 242 Database
- CPT 244 Data Structures
- CPT 246 Introduction to XML
- CPT 247 Unix Operating System
- CPT 248 Unix Administration
- CPT 250 Java Certification Topics
- CPT 257 Operating Systems
- CPT 260 Fundamentals of Operating Systems and Web Servers
- CPT 262 Advanced Web Page Publishing
- CPT 263 Advanced Multimedia for Web Pages
- CPT 264 Systems and Procedures
- CPT 282 Information Systems Security
- CPT 290 Microcomputer Multimedia Concepts and Applications
- IST 225 Internet Communications
- IST 226 Internet Programming
- IST 238 Advanced Tools for Website Design
- IST 270 Client/Server Systems
- IST 272 Relational Database
- IST 274 Database Administration

## COMPUTER TECHNOLOGY

Computer software is needed to operate and protect computer systems and networks. Programmers write, test, and maintain the detailed instructions that computers must follow to perform their functions. Database administrators determine ways to organize, store, and protect data. The curriculum stresses critical thinking skills and the concepts, principles and techniques of information processing, while providing a background in general education and business.

Students must earn a grade of “C” or better in all of the courses offered within the Business/Public Services and Information Systems Technology Departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT and MKT.

**MAJOR: COMPUTER TECHNOLOGY (66 CREDIT HOURS)**  
**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)**

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
ENG 102 English Composition II	3.0
MAT 110 College Algebra	3.0
PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	15.0

Major courses meeting other college general education core requirements are starred (\*) below.

**B. MAJOR COURSE REQUIREMENTS (24 CREDIT HOURS)**

	<u>Credit Hours</u>
CPT 104 Introduction to Information Technology	3.0
CPT 236 Introduction to Java Programming	3.0
CPT 242 Database	3.0
CPT 247 Unix Operating System	3.0
CPT 257 Operating Systems	
OR	
CPT 260 Fundamentals of Operating Systems and Web Servers	3.0
CPT 264 Systems and Procedures	3.0
CPT 282 Information Systems Security	3.0
IST 225 Internet Communications	<u>3.0</u>
Subtotal	24.0

**C. BUSINESS COURSE REQUIREMENTS (6 CREDIT HOURS)**

	<u>Credit Hours</u>
ACC 101 Accounting Principles I	3.0
BUS 130 Business Communications*	<u>3.0</u>
Subtotal	6.0

**D. DEGREE SPECIALITY (21 CREDIT HOURS)**

	<u>Credit Hours</u>
7 courses from one specialty group	<u>21.0</u>
Subtotal	21.0
Total Credit Hours:	66.0

\*\*Departmental electives are three-credit-hour courses taken within the Information Systems Technology department. Information Systems Technology course prefixes include AOT, IST, and CPT. CPT 101-Introduction to Computers and AOT 105-Keyboarding cannot be used as departmental electives.

**Specialty Groups**

Group A APPLICATION PROGRAMMING CONCENTRATION

CPT 115 COBOL Programming I	3.0
CPT 185 Event-Driven Programming	3.0
CPT 215 COBOL Programming II	

	OR	
	CPT 250	Java Certification Topics 3.0
	CPT 237	Advanced Java Programming 3.0
	CPT 244	Data Structures 3.0
	CPT 240	Internet Programming with Databases
	OR	
	IST 226	Internet Programming 3.0
	IST 270	Client/Server Systems 3.0
Group B	DATABASE DEVELOPMENT CONCENTRATION	
	CPT 172	Microcomputer Database 3.0
	CPT 185	Event Driven Programming 3.0
	CPT 272	Advanced Microcomputer Database 3.0
	CPT 115	COBOL Programming I
	OR	
	CPT 240	Internet Programming with Databases 3.0
	IST 270	Client/Server Systems 3.0
	IST 272	Relational Database 3.0
	IST 274	Database Administration 3.0
Group C	INTERNET PROGRAMMING CONCENTRATION	
	CPT 185	Event Driven Programming 3.0
	CPT 262	Advanced Web Publishing 3.0
	CPT 263	Advanced Multimedia for Web Pages 3.0
	CPT 290	Microcomputer Multimedia Concepts and Applications 3.0
	CPT 240	Internet Programming with Databases
	OR	
	IST 226	Internet Programming 3.0
	IST 238	Advanced Tools for Website Design 3.0
	IST 270	Client-Server Systems
	OR	
	CPT 246	Introduction to XML 3.0

## CUSTOMER SERVICE CERTIFICATE

The Customer Service Certificate Program provides the educational competencies necessary for entry-level, professional employment in the numerous multi-dimensional careers of customer service. Students who complete the program will demonstrate the necessary skills to support the success of organizations committed to excellence in customer service.

The academic focus of the comprehensive, short-term Customer Service Certificate will be providing students with training in computer skills, communication (speaking and listening) and interpersonal skills, sales and marketing techniques. They will also understand decision-making practices as well as be knowledgeable about and value the diverse backgrounds of customers.

Students must earn a grade of “C” or better in all of the courses offered within the Business/Public Services and Information Systems Technology departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT and MKT.

Students must meet all exit program competencies for graduation from this program.

## **CERTIFICATE: CUSTOMER SERVICE (24 CREDIT HOURS)**

	<u>Credit Hours</u>
AOT 105 Keyboarding*	3.0
AOT 134 Office Communications	3.0
AOT 180 Customer Service	3.0
BUS 130 Business Communications	3.0
CPT 170 Microcomputer Applications	3.0
MKT 135 Customer Service Techniques**	3.0
SPA 155 Technical Spanish I**	3.0
SPC 209 Interpersonal Communication	<u>3.0</u>
Total Credit Hours:	24.0

### NOTE:

- \* AOT 105 Keyboarding or demonstrate keyboarding proficiency through the keyboarding placement test.
- \*\* Appropriate course substitution will be made when this course is not offered.

## **DATABASE DEVELOPMENT CERTIFICATE**

The Database Development certificate provides the student an opportunity to gain knowledge of relational databases. The student will use SQL in the design and manipulation of the database. The student will develop Windows-based interfaces as well as Internet-based interfaces. The emphasis will be on database application development.

Students must earn a grade of “C” or better in all of the courses offered within the Business/Public Services and Information Systems Technology departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT and MKT.

## **CERTIFICATE: DATABASE DEVELOPMENT (18 CREDIT HOURS)**

	<u>Credit Hours</u>
CPT 185 Event-Driven Programming	3.0
CPT 242 Database	3.0
CPT 272 Advanced Microcomputer Database	3.0
IST 270 Client/Server Systems	3.0
IST 272 Relational Database	3.0
IST 274 Database Administration	<u>3.0</u>
Total Credit Hours:	18.0

# ENTERPRISE CERTIFICATE

The Enterprise Certificate is designed to provide students with the necessary skills to design applications used in enterprise systems. The student will also be familiar with the design and implementation of object-oriented programs. The student will use industry-accepted database design tools and application development tools. The Enterprise Certificate is designed to provide access for those people currently in information processing who want to expand their knowledge of new information systems technologies.

Students must earn a grade of “C” or better in all of the courses offered within the Business/Public Services and Information Systems Technology Departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT and MKT.

## CERTIFICATE: ENTERPRISE (18 CREDIT HOURS)

	<u>Credit Hours</u>
CPT 185 Event-Driven Programming	3.0
CPT 244 Data Structures	3.0
CPT 236 Introduction to Java Programming	3.0
CPT 237 Advanced Java Programming	3.0
IST 270 Client/Server Systems	3.0
Approved CPT or IST Elective	<u>3.0</u>
Total Credit Hours:	18.0

Approved CPT or IST Electives include the following:

- CPT 113 Information Systems
- CPT 114 Computers and Programming
- CPT 115 COBOL Programming I
- CPT 185 Event-Driven Programming
- CPT 215 Cobol Programming II
- CPT 236 Introduction to Java Programming
- CPT 237 Advanced Java Programming
- CPT 240 Internet Programming with Databases
- CPT 242 Database
- CPT 244 Data Structures
- CPT 246 Introduction to XML
- CPT 247 Unix Operating System
- CPT 248 Unix Administration
- CPT 250 Java Certification Topics
- CPT 257 Operating Systems
- CPT 260 Fundamentals of Operating Systems and Web Servers
- CPT 262 Advanced Web Page Publishing
- CPT 263 Advanced Multimedia for Web Pages
- CPT 264 Systems and Procedures
- CPT 282 Information Systems Security
- CPT 290 Microcomputer Multimedia Concepts and Applications
- IST 225 Internet Communications

IST	226	Internet Programming
IST	238	Advanced Tools for Website Design
IST	270	Client/Server Systems
IST	272	Relational Database
IST	274	Database Administration

## HELP DESK CERTIFICATE

(May be incorporated into a 2-year Associate in Occupational Technology (A.O.T.) degree)

The student will receive course work in basic technical support and customer service concepts, hardware, advanced software training, interpersonal and professional communications, management information systems, and practical experience under close supervision.

Students may want to work with their advisors to incorporate this certificate's requirements into an Associate degree in Occupational Technology (A.O.T.). The 2-year A.O.T. degree, after being tailored to meet a student's needs, will carry approximately the same total credit hour requirement as other computer technology degrees (about 72 credit hours). To receive financial assistance, veterans must have prior approval of their programs by a VA counselor.

Students must earn a grade of "C" or better in all of the courses offered within the Business/Public Services and Information Systems Technology departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT and MKT.

### CERTIFICATE: HELP DESK (30 CREDIT HOURS)

	<u>Credit Hours</u>
AOT 267 Integrated Information Processing	3.0
CPT 267 Technical Support Concepts	3.0
CPT 268 Computer End-User Support	3.0
EEM 243 Introduction to Computer Servicing	3.0
ENG 165 Professional Communications	3.0
IST 225 Internet Communications	3.0
IST 286 Technical Support Internship I	3.0
IST 287 Technical Support Internship II	3.0
MGT 230 Managing Information Resources	3.0
SPC 209 Interpersonal Communications	<u>3.0</u>
Total Credit Hours:	30.0

# INFORMATION SYSTEMS NETWORKING CERTIFICATE

Networking is the common factor in distributed processing, online systems, teleprocessing, terminal-based systems and real-time systems. Wide-area communications and local-area networks are explored as well as many of the latest protocols. All topics are covered from a practical rather than a theoretical viewpoint.

Students must earn a cumulative grade of “C” or better in all courses offered within the Information Systems Technology Department to be eligible for graduation.

## CERTIFICATE: INFORMATION SYSTEMS NETWORKING (24 CREDIT HOURS)

	<u>Credit Hours</u>
IST 200 Cisco LAN Concepts	3.0
IST 201 Cisco Internetworking Concepts	3.0
IST 202 Cisco Router Configuration	3.0
IST 250 Network Management	3.0
IST 260 Network Design	3.0
IST 266 Internet and Firewall Security	3.0
IST 295 Fundamentals of Voice over IP	3.0
TEL 203 Fundamentals of Wireless Communications	<u>3.0</u>
Total Credit Hours:	24.0

\*\*Departmental electives are three-credit hour courses taken within the group of courses designated as telecommunications courses. For more information, see a telecommunications faculty advisor.

# LAN NETWORKING SYSTEMS CERTIFICATE

The LAN Networking Systems Certificate provides students with the knowledge and skills to prepare for occupations in the field of local-area networks administration. Students learn local-area networking concepts, standards and protocols used in a client server environment. In addition, students learn how to use networking software in a networked lab and how to install networking software and hardware in servers and work stations.

Students must earn a cumulative grade of “C” or better in all courses offered within the Information Systems Technology Department to be eligible for graduation.

## **CERTIFICATE: LAN NETWORKING SYSTEMS (24 CREDIT HOURS)**

	<u>Credit Hours</u>
CPT 176 Microcomputer Operating Systems (Microsoft)	3.0
CPT 209 Computer Systems Management (Microsoft)	3.0
CPT 255 Operating System Fundamentals (Microsoft)	3.0
IST 188 Hardware Basics and Operating Systems	3.0
IST 200 Cisco LAN Concepts	3.0
IST 201 Cisco Internetworking Concepts	3.0
IST 202 Cisco Router Configuration	3.0
IST 257 LAN Network Server Techniques	<u>3.0</u>
Total Credit Hours:	24.0

## **LEGAL ADMINISTRATIVE ASSISTANT CERTIFICATE**

The Legal Administrative Assistant Certificate program is a specialized program designed to provide advanced training and simulated practice in the administrative responsibilities required to complement the legal team in law firms, private or public corporations, or government departments. Legal terminology, legal transcription, court procedures, and computer applications are emphasized. This comprehensive, short-term certificate prepares students for employment in law offices, insurance companies, financial institutions, courts, and police departments, as well as in legal departments of business firms and government offices.

Students must earn a grade of "C" or better in all of the courses offered within the Business/Public Services and Information Systems Technology departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT and MKT.

Students must meet all exit program competencies for graduation from this program.

## **CERTIFICATE: LEGAL ADMINISTRATIVE ASSISTANT (36 CREDIT HOURS)**

	<u>Credit Hours</u>
AOT 123 Legal Machine Transcription	3.0
AOT 161 Information Management	3.0
AOT 213 Legal Document Production***	3.0
AOT 214 Software Applications in the Law Office	3.0
AOT 253 Legal Systems and Procedures	3.0
AOT 255 Senior Practicum	3.0
BUS 121 Business Law I	3.0
CPT 179 Microcomputer Word Processing	3.0
LEG 135 Introduction to Law and Ethics	3.0
LEG 201 Civil Litigation I	3.0

LEG 232 Law Office Management	3.0
General Elective**	<u>3.0</u>
Total Credit Hours:	36.0

## **MEDICAL OFFICE ADMINISTRATIVE ASSISTANT CERTIFICATE**

The Medical Office Administrative Assistant Certificate provides the training students need as specialists in administrative support activities in hospitals, free standing outpatient clinics, and group practices with large numbers of physicians and medical support personnel. The focus of the program is on the clerical and administrative functions with no clinical training or responsibilities. However, students in the program will receive course work in medical office procedures and terminology to insure a sound basic understanding of the environment in which they will work.

### **SPECIAL REQUIREMENTS:**

Basic keyboarding is a skill necessary for successful course completion in the Medical Office Administrative Assistant program; therefore, AOT 105-Keyboarding is a prerequisite course for most AOT courses. Students are required to take AOT 105-Keyboarding or score 25 net words per minutes (nwpm) on the keyboarding placement test.

Students must earn a grade of "C" or better in all of the courses offered within the Business/Public Services and Information Systems Technology Departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, AHS, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MED, MGT and MKT.

Students must meet all exit program competencies for graduation from this program.

### **CERTIFICATE: MEDICAL OFFICE ADMINISTRATIVE ASSISTANT (38 CREDIT HOURS)**

	<u>Credit Hours</u>
ACC 111 Accounting Concepts	3.0
AHS 102 Medical Terminology	3.0
AOT 110 Document Formatting	3.0
AOT 134 Office Communications	3.0
AOT 196 Office Confidentiality and Security	3.0
AOT 212 Medical Document Production	3.0
AOT 252 Medical Systems and Procedures	3.0
AOT 271 SCWE in Administrative Office	4.0
CPT 170 Microcomputer Applications	3.0
MED 103 Medical Assisting Introduction	3.0
MED 104 Medical Assisting Administrative Procedures	4.0
MED 109 Medical Business Records	<u>3.0</u>
Total Credit Hours:	38.0

# NETWORKING SPECIALIST CERTIFICATE

The Networking Specialist Certificate provides the core sequence of courses needed to prepare for the installation, configuration, maintenance and administration of a network infrastructure. The student will work with active directory services. The sequence of courses provides a foundation for students seeking certification through industry standard examinations.

Students must earn a cumulative grade of “C” or better in all courses offered within the Information Systems Department Technology to be eligible for graduation.

## CERTIFICATE: NETWORKING SPECIALIST (18 CREDIT HOURS)

	<u>Credit Hours</u>
CPT 176 Microcomputer Operating Systems	3.0
CPT 209 Computer Systems Management	3.0
CPT 255 Operating Systems Fundamentals	3.0
IST 257 LAN Network Server Technologies	3.0
IST 227 Internet Operations and Management	3.0
IST 228 Intranet Operations and Management	<u>3.0</u>
Total Credit Hours:	18.0

# OFFICE SUPPORT SPECIALIST CERTIFICATE

The Office Support Specialist Certificate program offers students training in the latest technological advances in order to keep skills current, as well as provide those traditional job skills needed for re-entry into the office job markets.

The Office Support Specialist Certificate includes courses in keyboarding, transcription and written communication. It also includes the use of the microcomputer and in-depth training on popular software packages such as Microsoft Word, Access, Excel, and PowerPoint.

## SPECIAL REQUIREMENTS

Basic keyboarding is a skill necessary for successful course completion in the Office Support Specialist Certificate program; therefore, AOT 105-Keyboarding is a prerequisite course for most AOT courses. Students are required to take AOT 105-Keyboarding or score 25 net words per minutes (nwpm) on the keyboarding placement test.

Students must earn a grade of “C” or better in all of the courses offered within the Business/Public Service and Information Systems Technology Departments for the grade to be counted toward graduation. Specifically, these include courses with the following prefixes: ACC, AOT, BAF, BUS, CPT, EGR, HUS, IST, LEG, MGT and MKT.

Students must meet all exit program competencies for graduation from this program.

## **CERTIFICATE: OFFICE SUPPORT SPECIALIST (33 CREDIT HOURS)**

	<u>Credit Hours</u>
AOT 110 Document Formatting	3.0
AOT 134 Office Communications	3.0
AOT 143 Office Systems and Procedures	3.0
AOT 161 Information Management	3.0
AOT 234 Administrative Office Communications	3.0
BUS 130 Business Communications	3.0
CPT 170 Microcomputer Applications	3.0
CPT 172 Microcomputer Database	3.0
CPT 174 Microcomputer Spreadsheets	3.0
CPT 179 Microcomputer Word Processing	3.0
CPT 279 Advance Microcomputer Word Processing	<u>3.0</u>
Total Credit Hours:	33.0

## **ROUTING AND NETWORKING CONFIGURATION CERTIFICATE**

The certificate in Routing and Networking Configuration is a CCNA level series of routing and networking configuration courses. This sequence of courses will assist the student in preparing for national certification. The certificate focuses on the configuration of the physical infrastructure supporting networked systems.

Students must earn a cumulative grade of “C” or better in all courses offered within the Information Systems Technology Department to be eligible for graduation.

## **CERTIFICATE: NETWORKING SPECIALIST (18 CREDIT HOURS)**

	<u>Credit Hours</u>
IST 200 Cisco LAN Concepts	3.0
IST 201 Cisco Internetworking Concepts	3.0
IST 202 Cisco Router Configuration	3.0
IST 203 Advanced Cisco Router Configuration	3.0
IST 204 Cisco Troubleshooting	3.0
IST 221 Advanced Data Communications	<u>3.0</u>
Total Credit Hours:	18.0

# NETWORK SYSTEMS MANAGEMENT

Networking is the common factor in distributed processing, online systems, teleprocessing, terminal-based systems and real-time systems. The Network Systems Management curriculum is designed to prepare students to successfully pass several major industry certification exams while completing the degree. The curriculum emphasizes hands-on experiences and is constantly tuned to be as “cutting edge” as possible.

NSM students must complete core courses, three approved networking elective courses, and the required general education courses.

Students must earn a cumulative grade of “C” or better within all courses offered in the Information Systems Technology Department to be eligible for graduation.

**MAJOR: NETWORK SYSTEMS MANAGEMENT  
(63 CREDIT HOURS)**

**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

## A. GENERAL EDUCATION COURSE REQUIREMENTS (15 CREDIT HOURS)

	<u>Credit Hours</u>
ECO 210 Macroeconomics	3.0
ENG 101 English Composition I	3.0
MAT 102 Intermediate Algebra	3.0
SPC 205 Public Speaking	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	15.0

## B. MAJOR COURSE REQUIREMENTS (39 CREDIT HOURS)

	<u>Credit Hours</u>
CPT 176 Microcomputer Operating Systems	3.0
CPT 209 Computer Systems Management	3.0
CPT 255 Operating Systems Fundamentals	3.0
IST 200 Cisco LAN Concepts	3.0
IST 201 Cisco Internetworking Concepts	3.0
IST 202 Cisco Router Configurations	3.0
IST 203 Advanced Cisco Router Configuration	3.0
IST 204 Cisco Troubleshooting	3.0
IST 250 Network Management	3.0
IST 260 Network Design	3.0
IST 266 Internet and Firewall Security	3.0
IST 295 Fundamentals of Voice over IP	3.0
TEL 203 Fundamentals of Wireless Communications	<u>3.0</u>
Subtotal	39.0

## C. ADDITIONAL COURSE REQUIREMENTS (9 CREDIT HOURS)

	<u>Credit Hours</u>
Approved Departmental Electives	<u>9.0</u>
Subtotal	9.0
Total Credit Hours:	63.0

Approved CPT or IST Electives include the following:

- IST 150 Project Management Essentials for IT Professionals
- IST 188 Hardware Basics and Operating Systems
- IST 209 Fundamentals of Wireless LANs
- IST 221 Advanced Data Communications
- IST 227 Internet Operations and Management
- IST 243 Network Architecture III
- IST 257 LAN Network Server Technologies
- IST 259 Electronic Messaging
- IST 261 Advanced Network Administration
- IST 290 Special Topics – Network+
- IST 291 Fundamentals of Network Security I

## **WEB DESIGN AND MAINTENANCE CERTIFICATE**

(May be incorporated into a 2-year A.O.T. degree)

The Web Design and Maintenance Certificate provides the student a knowledge base for supporting a web site. The student should gain the fundamentals of good web design, the connecting to a database and programming for interactive web pages. Moreover, the student should be able to work cooperatively in a team to maintain a web site and assist in keeping the content of the web site current.

### **CERTIFICATE: WEB DESIGN AND MAINTENANCE (30 CREDIT HOURS)**

	<u>Credit Hours</u>
CPT 172 Microcomputer Database	3.0
CPT 185 Event-Driven Programming	
OR	
CPT 240 Internet Programming with Databases	3.0
CPT 262 Advanced Web Page Publishing	3.0
CPT 263 Advanced Multimedia for Web Pages	3.0
CPT 290 Microcomputer Multimedia Concepts and Applications	3.0
IST 225 Internet Communications	3.0
IST 226 Internet Programming	3.0
IST 238 Advanced Tools for Website Design	3.0
Approved Departmental Electives**	<u>6.0</u>
Total Credit Hours:	30.0

\*\*Departmental electives are three-credit hour courses taken within the Information Systems Technology Department. Information Systems Technology course prefixes include AOT, IST, and CPT. CPT 101-Introduction to Computers and OST 105-Keyboarding cannot be used as departmental electives.

# Nursing



# NURSING

Midlands Technical College offers one associate degree, one diploma and one certificate program in Nursing.

The mission of the Nursing Department is to provide a high quality educational program that prepares students to become eligible for licensure and for entry level practice as a licensed practical nurse and a registered nurse. The Nursing programs offer, in partnership with local health care agencies, a curriculum that includes general academics and technical skills in an organized, competency-based sequence which facilitates articulation between nursing levels.

## **Associate Degree Programs**

Nursing (ADN)

## **Diploma Programs**

Practical Nursing (PN)

## **Certificate Programs**

Pre-Nursing

Students entering Nursing Programs will be required to undergo a background investigation that will include but is not limited to: criminal background, including all places of residence since the age of 18; Sex Offenders Registry; Office of the Inspector General; FBI fingerprint record and any other registry or records required by law. Some clinical facilities may require additional background checks. In addition to background checks, students will be required to submit to drug screening before and/or during their participation in Nursing Programs. Students must be eligible to rotate to all clinical locations utilized by the programs. Exclusion from any of the clinical locations based on a positive drug screen or criminal records check will prevent participation in clinical training.

A flexible schedule is required and will be defined by the college/clinical agencies' needs. The schedule may include different shifts and weekends.

For information about Nursing, see the program information for the specific nursing program. Additional coursework maybe required based on placement scores.

# PRE-NURSING CERTIFICATE

The Pre-Nursing certificate provides a structured curriculum for those students seeking to qualify for nursing without testing. The completion of all eight courses in the curriculum with a minimum grade point average of 2.75 on these 8 courses, no grade lower than a "C" and no more than one repeat per course at any post-secondary institution will enable the student to secure a place on the qualified list for nursing. In addition, the courses in this certificate serve as a background for the study of either practical nursing or associate degree nursing.

## SPECIAL REQUIREMENTS

Students must meet college admission and testing requirements.

## CERTIFICATE: PRE-NURSING (25 CREDIT HOURS)

	<u>Credit Hours</u>
AHS 102 Medical Terminology	3.0
BIO 210 Human Anatomy & Physiology I	4.0
BIO 211 Human Anatomy & Physiology II	4.0
COL 105 Freshman Seminar	3.0
ENG 101 English Composition I	3.0
MAT 102 Intermediate Algebra	3.0
NUR 115 Basic Concepts in Nursing	2.0
PSY 201 General Psychology	<u>3.0</u>
Total Credit Hours:	25.0

# NURSING (ADN)

The Associate Degree Nursing program is designed to incorporate a base of biological and social sciences with the knowledge and skills necessary for the practice of nursing in the Registered Nurse (RN) role. The role of the associate degree nurse (ADN) builds on the basic knowledge and practice of the practical nurse. The ADN is able to function with greater independence, in more complex situations and with more acutely ill patients. The ADN serves a vital role in teaching the patient about his or her condition and ways to improve his or her health. The ADN assesses the patient's condition, develops the plan of care and makes ongoing judgments regarding the patient's progress. Associate degree nurses have supervisory responsibilities for licensed practical nurses, nursing assistants and other health care workers. The curriculum includes classroom instruction, practice in simulated laboratories and various clinical settings.

Upon completion of the program, the student is eligible to take the National Council Licensure Examination for Registered Nurses (NCLEX-RN). The program is accredited by the National League for Nursing Accrediting Commission, (3343 Peachtree Road, NE, Suite 850, Atlanta, Georgia 30326, 404-975-5000) and approved by the South Carolina Board of Nursing. Candidates who have criminal records may be required to appear before the South Carolina Board of Nursing, which will determine eligibility to take the NCLEX-RN exam.

## SPECIAL REQUIREMENTS

Students are required to take standardized tests at an approximate cost of \$78 a semester. Approximate cost for taking the licensure exam (NCLEX-RN) upon completion of the program is \$300. Students must purchase liability insurance each semester at a cost of approximately \$5. Students must purchase a uniform and special equipment the first semester (the approximate cost is \$150). Skills packets, learning packets and books must be purchased at the bookstore for nursing courses.

In addition to the college's placement test, specific admission criteria to the Associate Degree Nursing program include:

- SAT: Minimum verbal or critical reading 500, minimum mathematics 500, both taken within the last 3 years; OR
- ACT: 20 composite (minimum English 20, minimum mathematics 23), taken within the last 3 years; OR
- Completion of the Pre-Nursing Certificate with a cumulative minimum grade point average of 2.75 on these 8 courses, no grade lower than a "C," and no more than one repeat per course at any post-secondary institution; OR
- Completion of an associate degree from a regionally accredited school with a minimum grade point average of 2.75 or completion of a baccalaureate or higher degree from a regionally accredited school with a minimum grade point average of 2.5 at the time of the degree.

## ADDITIONAL REQUIREMENTS

- High school or college credits in biology and algebra are recommended
- Emotional and physical ability to carry out normal activities of nursing care as determined by physical examination

Qualified applicants must attend a two-part orientation session and present BLS for healthcare providers (adult, infant and child) certification, health forms and immunization records prior to entering NUR 101/NUR 201.

All science courses taken prior to admission to the program must have been completed within 5 years of entry into NUR 101/NUR 201.

Applicants must have a cumulative 2.0 GPA for all Midlands Technical College course work for entrance into and progression through the nursing curriculum.

The *Nursing Student Handbook* outlines other policies relevant to students in the program.

(The Handbook is located at [www.midlandstech.edu/nursing](http://www.midlandstech.edu/nursing)).

## ADVANCED PLACEMENT

Licensed Practical Nurses seeking advanced placement in the ADN program may be admitted to the fourth semester of the ADN curriculum. LPNs seeking advanced placement must have an active unrestricted S.C. Practical Nurse license and must qualify for the program as indicated above under “Admission Criteria”. In addition, the following courses must be completed prior to entry with a grade of “C” or better (with no more than one repeat to achieve a “C”): ENG 101, PSY 201, BIO 210, BIO 211, MAT 120 and NUR 201. BIO 210 and BIO 211 must be completed within 5 years of admission to the transition program. NUR 201 must be taken in the fall semester for spring admission to the fourth semester of the ADN program or in the spring semester for fall admission to the fourth semester of the ADN program. The LPN who qualifies for admission using the Pre-Nursing Certificate may substitute COL 103 for COL 105 if there is previous college level course work, MAT 120 or MAT 110 for MAT 102, and may take a validation exam for AHS 102 and NUR 115.

Admission of transfer students is determined on a space available basis. Students must meet all departmental admission requirements and have completed all prerequisite courses. Students must provide transcripts, course descriptions, course outlines and a letter of reference from the chair of the previous Nursing program. Students may be asked to validate theory and/or skills at the discretion of the Nursing department chair.

## PROGRESSION

All courses in the curriculum must be passed with a grade of “C” or better. Courses may be repeated only once to obtain a grade of “C” or better. No more than one clinical nursing course may be repeated. Students must pass math competency tests throughout the program. Students must have satisfactory clinical performance in every clinical nursing course.

Students who withdraw from or receive a grade lower than a “C” in any clinical nursing course must seek readmission to the program in order to repeat the course. A student may be readmitted provided he/she had a cumulative GPA of 2.0 prior to having failed the course. Students who withdraw from or are unsuccessful in NUR 101 must take an additional course, NUR 100 Pre-Nursing (non-degree credit) before their second attempt at NUR 101. Readmission is based on space availability and eligibility. The dropped, withdrawn or failed course must be successfully completed before the student can take another nursing course. Students who have not completed a nursing clinical course within the last nine months are required to validate knowledge for previously completed clinical nursing courses.

CPR certification and TB skin testing must be kept current in order to remain in the program.

**MAJOR: NURSING (68 CREDIT HOURS)**  
**DEGREE: ASSOCIATE IN APPLIED SCIENCE**

**A. GENERAL EDUCATION COURSE REQUIREMENTS (16 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 210 Anatomy and Physiology I	4.0
ENG 101 English Composition I	3.0
MAT 120 Probability and Statistics	3.0
PSY 201 General Psychology	3.0
Approved Humanities Course	<u>3.0</u>
Subtotal	16.0

*Major courses meeting other college general education core requirements are starred (\*) below.*

**B. MAJOR COURSE REQUIREMENTS (23 CREDIT HOURS)**

	<u>Credit Hours</u>
NUR 101 Fundamentals of Nursing	6.0
NUR 165 Nursing Concepts and Clinical Practice I*	6.0
NUR 162 Psychiatric and Mental Health Nursing	3.0
NUR 263 Nursing Across the Life Span II	4.0
NUR 264 Nursing Across the Life Span III	<u>4.0</u>
Subtotal	23.0

**C. ADDITIONAL COURSE REQUIREMENTS (29 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 211 Anatomy and Physiology II	4.0
BIO 225 Microbiology	4.0
NUR 105 Pharmacology for Nurses	1.0
NUR 107 Nutrition and Diet Therapy	1.0
NUR 131 Introduction to Pharmacology	1.0
NUR 163 Nursing Across the Life Span I	2.0
NUR 210 Complex Health Problems	5.0
NUR 265 Nursing Concepts and Clinical Practice II	6.0
NUR 215 Management of Patient Care*	<u>5.0</u>
Subtotal	29.0

Total Credit Hours: 68.0

# PRACTICAL NURSING (PN)

The Practical Nursing program is designed to help students develop basic nursing skills in medical, surgical, obstetrical and pediatric nursing. The role of the practical nurse focuses on the technical skills, general knowledge and judgment necessary to organize and provide caring interventions to patients with commonly occurring medical conditions. The practical nurse participates in health promotion/maintenance activities for the individual in the context of the family. The practical nurse is prepared to provide nursing care within the scope of practice defined by the South Carolina Board of Nursing under the direct supervision of the registered nurse and/or other health care provider. The course of study balances classroom instruction with relevant clinical experience and provides the opportunity for students to gain the knowledge and skills necessary to become effective practitioners of practical nursing.

Upon completion of the program, the student is eligible to take the National Council Licensure Examination for Practical Nurses (NCLEX-PN). The program is accredited by the National League for Nursing Accrediting Commission, (3343 Peachtree Road, NE, Suite 850, Atlanta, Georgia 30326, 404-975-5000) and approved by the South Carolina Board of Nursing. Candidates who have criminal records may be required to appear before the South Carolina Board of Nursing, which will determine eligibility to take the NCLEX-PN exam.

## SPECIAL REQUIREMENTS

Students are required to take standardized tests at an approximate cost of \$78 a semester. Approximate cost for taking the licensure exam (NCLEX-PN) upon completion of the program is \$300. Students must purchase liability insurance each semester at a cost of approximately \$5. Students must purchase a uniform and special equipment the first semester (the approximate cost is \$150). Skills packets, learning packets and books must be purchased at the bookstore for nursing courses.

In addition to the college's placement test, specific admission criteria to the Practical Nursing program include:

- SAT: Minimum verbal or critical reading 500, minimum mathematics 500 both taken within the last 3 years; OR
- ACT: 20 composite (minimum English 20, minimum mathematics 23), taken within the last 3 years; OR
- Completion of the Pre-Nursing Certificate with a cumulative minimum grade point average of 2.75 on these 8 courses, no grade lower than a "C," and no more than one repeat per course at any post secondary institution; OR
- Completion of an associate degree from a regionally accredited school with a minimum grade point average of 2.75 or completion of a baccalaureate or higher degree from a regionally accredited school with a minimum grade point average of 2.5 at the time of the degree.

## ADDITIONAL REQUIREMENTS

- High school or college credits in biology and algebra are recommended
- Emotional and physical ability to carry out normal activities of nursing care as determined by physical examination

Qualified applicants must attend a two-part orientation session and present BLS for healthcare providers (adult, infant and child) certification, health forms and immunization records prior

to entering NUR 101.

All science courses taken prior to admission to the program must have been completed within 5 years of entry into NUR 101.

Applicants must have a cumulative 2.0 GPA for all Midlands Technical College course work for entrance into and progression through the nursing curriculum.

The *Nursing Student Handbook* outlines other policies relevant to students in the program. (The Handbook is located at [www.midlandstech.edu/nursing](http://www.midlandstech.edu/nursing))

## ADVANCED PLACEMENT

Admission of transfer students is determined on a space available basis. Students must meet all departmental admission requirements and have completed all prerequisite courses. Students must provide transcripts, course descriptions, course outlines and a letter of reference from the chair of the previous Nursing program. Students may be asked to validate theory and/or skills at the discretion of the Nursing department chair.

## PROGRESSION

All courses in the curriculum must be passed with a grade of “C” or better. Courses may be repeated only once to obtain a grade of “C” or better. No more than one clinical nursing course may be repeated. Students must pass math competency tests throughout the program. Students must have satisfactory clinical performance in every clinical nursing course.

Students who withdraw from or receive a grade lower than a “C” in any clinical nursing course must seek readmission to the program in order to repeat the course. A student may be readmitted provided he/she had a cumulative GPA of 2.0 prior to having failed the course. Students who withdraw from or are unsuccessful in NUR 101 must take an additional course, NUR 100 - Pre-Nursing (non-degree credit) before a second attempt at NUR 101. Readmission is based on space availability and eligibility. The dropped, withdrawn or failed course must be successfully completed before the student can take another nursing course. Students who have not completed a nursing clinical course within the last nine months are required to validate knowledge for previously completed clinical nursing courses.

CPR certification and TB skin testing must be kept current in order to remain in the program.

**MAJOR: PRACTICAL NURSING (44 CREDIT HOURS)**  
**DIPLOMA: APPLIED SCIENCE**

### A. GENERAL EDUCATION COURSE REQUIREMENTS (9 CREDIT HOURS)

	<u>Credit Hours</u>
ENG 101 English Composition I	3.0
MAT 102 Intermediate Algebra	3.0
PSY 201 General Psychology	<u>3.0</u>
Subtotal	9.0

### B. MAJOR COURSE REQUIREMENTS (24 CREDIT HOURS)

	<u>Credit Hours</u>
NUR 101 Fundamentals of Nursing	6.0
NUR 165 Nursing Concepts and Clinical Practice I	6.0
NUR 265 Nursing Concepts and	

Clinical Practice II	6.0
NUR 163 Nursing Across the Life Span I	2.0
NUR 263 Nursing Across the Life Span II	<u>4.0</u>
Subtotal	24.0

**C. ADDITIONAL COURSE REQUIREMENTS (11 CREDIT HOURS)**

	<u>Credit Hours</u>
BIO 210 Anatomy and Physiology I	4.0
BIO 211 Anatomy and Physiology II	4.0
NUR 105 Pharmacology for Nurses	1.0
NUR 107 Nutrition and Diet Therapy	1.0
NUR 131 Introduction to Pharmacology	<u>1.0</u>
Subtotal	11.0
Total Credit Hours:	44.0

# Course Descriptions



Prerequisites and corequisites may have changed since this catalog was published. Please verify prerequisites and corequisites at [midlandstech.edu/edu/sds/sas/hb/prerequisites.html](http://midlandstech.edu/edu/sds/sas/hb/prerequisites.html). Developmental reading courses are required if a student's reading placement test score indicates the need for RDG 032 and/or RDG 100 or the ESL equivalent. Developmental math courses are required if a student's math placement test score indicates the need for MAT 032 and/or MAT 100. Developmental English courses are required if a student's English placement test score indicates the need for ENG 032 and/or ENG 100, or the ESL equivalent. Students must discuss their placement test scores with an academic advisor before registering for any courses.

# COURSE DESCRIPTIONS

## **ACC 101 ACCOUNTING PRINCIPLES I**

**3.0 Credits**

This course introduces basic accounting procedures for analyzing, recording and summarizing financial transactions, adjusting and closing the financial records at the end of the accounting cycle, and preparing financial statements. Students identify sound ethical and personal values. *(Prerequisites: RDG 100 or ESL 100 or equivalent placement test score, MAT 100)*

## **ACC 102 ACCOUNTING PRINCIPLES II**

**3.0 Credits**

This course emphasizes managerial accounting theory and practice in basic accounting and procedures for cost accounting, budgeting, cost-volume analysis and financial statement analysis. *(Prerequisites: ACC 101)*

## **ACC 111 ACCOUNTING CONCEPTS**

**3.0 Credits**

This course is a study of the principles of the basic accounting functions – collecting, recording, analyzing, and reporting information. *(Prerequisites: RDG 100 or ESL 100, MAT 100)*

## **ACC 112 ORGANIZATIONAL ACCOUNTING**

**3.0 Credits**

This course is a study of financial accounting with specific emphasis on partnerships and the corporate form of organization. *(Prerequisite: ACC 111)*

## **ACC 115 MANAGERIAL ACCOUNTING**

**3.0 Credits**

This course is a study of the types and uses of internal accounting information for management decision-making, including cost determination, cost control, performance evaluation, and financial planning. *(Prerequisite: ACC 112)*

## **ACC 124 INDIVIDUAL TAX PROCEDURES**

**3.0 Credits**

This course is a study of the basic income tax structure from the standpoint of the individual, including the preparation of individual income tax returns. *(Prerequisite: RDG 100)*

## **ACC 150 PAYROLL ACCOUNTING**

**3.0 Credits**

This course introduces the major tasks of payroll accounting; employment practices; federal, state and local governmental laws and regulations; internal controls; and various forms and records. *(Prerequisite: ACC 101 or ACC 112)*

## **ACC 201 INTERMEDIATE ACCOUNTING I**

**3.0 Credits**

This course explores fundamental processes of accounting theory including the preparation of financial statements. Also covered are the time value of money, cash and receivables, and the valuation of inventories. Professional ethics and generally accepted accounting principles are introduced. *(Prerequisites: ACC 101 or ACC 112)*

## **ACC 202 INTERMEDIATE ACCOUNTING II**

**3.0 Credits**

This course covers the application of accounting principles and concepts to account evaluation and income determination, including special problems peculiar to corporations and the analysis of financial reports. Accounting for the acquisition and disposal of long-term assets and procedures for handling current and long-term liabilities are covered. *(Prerequisite: ACC 201)*

## **ACC 203 INTERMEDIATE ACCOUNTING III**

**3.0 Credits**

This course covers the application of accounting theory to income tax allocation, accounting for leases and stock options, and constructing financial statements from incomplete records and fund flow statements. Also covered are procedures for revenue recognition, pensions and earnings per share. *(Prerequisite: ACC 202, or permission of department chair)*

## **ACC 224 BUSINESS TAXATION**

**3.0 Credits**

This course is an introduction to tax reporting requirements and taxation of the proprietorship, partnership, S Corporation, C Corporation, and limited liability company. Some form preparation is required. *(Prerequisites: ACC 101 or ACC 112)*

**ACC 230 COST ACCOUNTING I****3.0 Credits**

This course is a study of the accounting principles involved in job order cost systems. (Prerequisite: ACC 102)

**ACC 240 COMPUTERIZED ACCOUNTING****3.0 Credits**

This course is a study of using the computer to design and implement various accounting functions, including financial transactions, records, statements, reports and documents. (Prerequisites: ACC 101 or ACC 102, CPT 101)

**ACC 245 ACCOUNTING APPLICATIONS****3.0 Credits**

This course introduces microcomputer accounting using database software and/or electronic spreadsheets. (Prerequisites: ACC 101 or ACC 112, CPT 101 or CPT 170)

**ACC 246 INTEGRATED ACCOUNTING SOFTWARE****3.0 Credits**

This course includes the use of pre-designed integrated accounting software for accounting problems. (Prerequisites: ACC 101 or ACC 112, CPT 101 or CPT 170)

**ACC 260 AUDITING****3.0 Credits**

This course is a study of the procedures for conducting audits and investigations of various enterprises. Attention is given to the nature and purpose of auditing, auditing standards, professional conduct and ethics, auditor's legal liability and the approaches followed in performing audits of financial statements. (Prerequisite: ACC 101 or ACC 112)

**ACC 265 NOT-FOR-PROFIT ACCOUNTING****3.0 Credits**

This course introduces the special accounting needs of municipalities, counties, states, the federal government and governmental agencies, and other not-for-profit organizations. (Prerequisite: ACC 101 or ACC 112)

**ACR 101 FUNDAMENTALS OF REFRIGERATION****5.0 Credits**

This course covers the refrigeration cycle, refrigerants, pressure-temperature relationship, and system components. (Prerequisite: RDG 100 or ESL 100) (Corequisites: ACR 102, ACR 106 - DAY; ACR 102 - NIGHT)

**ACR 102 TOOLS AND SERVICE TECHNIQUES****3.0 Credits**

This course is a basic study of the tools and service equipment used in the installation and repair of HVAC equipment. (Prerequisite: RDG 100 or ESL 100) (Corequisites: ACR 101, ACR 106 - DAY; ACR 101 - NIGHT)

**ACR 105 TOOLS AND SERVICE TECHNIQUES I****1.0 Credits**

This course is an introduction to basic uses of tools and service equipment used in installation and repair of HVAC equipment. (Prerequisite: RDG 100 or ESL 100)

**ACR 106 BASIC ELECTRICITY FOR HVAC/R****4.0 Credits**

This course includes a basic study of electricity, including Ohm's Law and series and parallel circuits, as they relate to heating, ventilating, air conditioning and/or refrigeration systems. (Prerequisite: RDG 100 or ESL 100) (Corequisites: ACR 101, ACR 102 - DAY)

**ACR 109 TOOLS AND SERVICE TECHNIQUES II****2.0 Credits**

This course is an advance study of uses of tools and service equipment used in the installation and repair of HVAC equipment. (Prerequisite: ACR 105)

**ACR 110 HEATING FUNDAMENTALS****4.0 Credits**

This course covers the basic concepts of oil, gas and electric heat, their components and operation. (Prerequisites: ACR 101, ACR 102, ACR 106, ESL 100 or RDG 100) (Corequisite: ACR 120)

**ACR 120 BASIC AIR CONDITIONING****4.0 Credits**

This course is a study of various types of air conditioning equipment including electrical components, schematics and service to the refrigerant circuit. (Prerequisites: ACR 101, ACR 102 or ACR 105 and ACR 109, ACR 106) (Corequisites: ACR 110)

- ACR 130 DOMESTIC REFRIGERATION** **4.0 Credits**  
 This course is a study of domestic refrigeration equipment. (*Prerequisites: ACR 101, ACR 102, ACR 106*) (*Corequisites: ACR 131*)
- ACR 131 COMMERCIAL REFRIGERATION** **4.0 Credits**  
 This course is a study of maintenance and repair of commercial refrigeration systems. (*Prerequisites: ACR 101, ACR 102, ACR 106*) (*Corequisites: ACR 130 - DAY*)
- ACR 206 ADVANCED ELECTRICITY FOR HVAC/R** **2.0 Credits**  
 This course includes a practical application of electrical and electronic components and circuits used to control HVAC and/or refrigeration systems. (*Prerequisites: ACR 110, ACR 120, ACR 210, ACR 250*)
- ACR 207 ADVANCED REFRIGERATION ELECTRICITY** **3.0 Credits**  
 This course covers the theory and application of electrical circuits and starting components in commercial and industrial refrigeration. (*Prerequisites: ACR 130, ACR 131*)
- ACR 210 HEAT PUMPS** **4.0 Credits**  
 This course is a study of the theory and operational principles of the heat pump. (*Prerequisites: ACR 110, ACR 120*) (*Corequisites: ACR 250*)
- ACR 220 ADVANCED AIR CONDITIONING** **4.0 Credits**  
 This course is an advanced study of air conditioning systems. (*Prerequisites: ACR 110, ACR 120, ACR 210, ACR 250*)
- ACR 221 RESIDENTIAL LOAD CALCULATIONS** **2.0 Credits**  
 This course is a study of heat losses/gains in residential structures. (*Prerequisites: ACR 110, ACR 120, ACR 210, ACR 250*)
- ACR 224 CODES AND ORDINANCES** **2.0 Credits**  
 This course covers instruction on how to reference appropriate building codes and ordinances when they apply to installation of heating and air conditioning equipment. (*Prerequisites: ACR 110, ACR 120, ACR 210, ACR 250*)
- ACR 231 ADVANCED REFRIGERATION** **4.0 Credits**  
 This course is an in-depth study of commercial and industrial refrigeration equipment. (*Prerequisites: ACR 130, ACR 131*)
- ACR 232 REFRIGERATION, CALCULATION AND EQUIPMENT SELECTION** **3.0 Credits**  
 This course involves a study of load calculations and selection of refrigeration equipment and components. (*Prerequisites: ACR 130, ACR 131*)
- ACR 250 DUCT FABRICATION** **3.0 Credits**  
 This course covers the design, fabrication, and installation of air duct systems. (*Prerequisites: ACR 110, ACR 120*) (*Corequisites: ACR 210*)
- AET 101 BUILDING SYSTEMS I** **3.0 Credits**  
 This course is a study of the fundamental concepts of design and construction techniques in residential, commercial, and industrial buildings. (*Prerequisite: AET 110*)
- AET 103 INTERNATIONAL BUILDING AND RESIDENTIAL CODES** **3.0 Credits**  
 This course is an introduction to the international building codes and the international residential codes, as well as local code requirements. (*Prerequisite: MAT 102*)
- AET 105 CONSTRUCTION DOCUMENTS** **3.0 Credits**  
 This course covers the interpretation of residential, commercial, and industrial building construction documents, including construction specifications, general conditions, and construction industry symbols. (*Prerequisite: AET 101*)

**AET 110 ARCHITECTURAL GRAPHICS I****3.0 Credits**

This course is an introduction to the skills of architectural manual drafting. The principles of architectural design and model construction are also studied. (*Prerequisites: ENG 100, MAT 100, RDG 100*)

**AET 111 ARCHITECTURAL COMPUTER GRAPHICS I****3.0 Credits**

This course includes architectural/construction, basic computer-aided design commands, and creation of construction industry symbols and standards. (*Prerequisites: MAT 100, RDG 100*)

**AET 120 ARCHITECTURAL GRAPHICS II****3.0 Credits**

This course requires the production of a set of working drawings of a residential or commercial building. Exercises incorporate construction methods, materials, building code requirements, site development, and the technical skills required to draw and graphically present projects. This course is also a further study of architectural design. Perspective construction is introduced. (*Prerequisite: AET 110*)

**AET 202 HISTORY OF ARCHITECTURE****3.0 Credits**

This course is a study of the origins, influences and aesthetics that underlie the various styles of architecture from prehistoric times to the present. (*Prerequisite: RDG 100 or ESL 100 or RDG 101*)

**AET 221 ARCHITECTURAL COMPUTER GRAPHICS II****4.0 Credits**

This course includes a study of cad commands with architectural applications and routines. A complete set of working drawings of a residential or commercial building using the computer as a drafting tool is produced. (*Prerequisite: AET 111*)

**AET 230 ARCHITECTURAL GRAPHICS III****4.0 Credits**

This course encompasses a model and set of working drawings of a complex architectural project. (*Prerequisites: AET 120, AET 221*)

**AET 232 ARCHITECTURAL CAD APPLICATIONS****4.0 Credits**

This course covers advanced architectural CAD applications, such as 3-D building drawing and data base manipulations. (*Prerequisite: AET 111 or EGT 251*) *Medical Terminology Review*

**AET 235 ARCHITECTURAL THREE-D RENDERING****3.0 Credits**

Topics in this course includes Three-D rendering of residential and commercial buildings, walk-through animations, animated site plans and advanced graphics topics and their relationship to illustration of code compliance and project planning. (*Prerequisite: AET 111 or EGT 251*)

**AHS 102 MEDICAL TERMINOLOGY****3.0 Credits**

This course covers medical terms, including roots, prefixes and suffixes, with emphasis on spelling, definition and pronunciation. (*Prerequisites: ENG 100 or ESL 110, RDG 100 or ESL 100 with a minimum grade of "C"*)

**AHS 104 MEDICAL VOCABULARY/ANATOMY****3.0 Credits**

This course introduces the fundamental principles of medical terminology and includes a survey of human anatomy and physiology. (*Prerequisite: RDG 100*)

**AHS 106 CARDIOPULMONARY RESUSCITATION****1.0 Credit**

This course provides a study of the principles of cardiopulmonary resuscitation. (*Prerequisite: RDG 100 or ESL 100*)

**AHS 110 PATIENT CARE PROCEDURES****2.0 Credits**

This course provides a study of the procedures and techniques used in the general care of the patient. (*Prerequisites: AHS 102, RAD 101 or permission of department chair*)

**AHS 113 HEAD AND NECK ANATOMY****1.0 Credit**

This course provides a detailed study of the structure of the head and neck with special emphasis on structure as it pertains to the study of dental science. (*Prerequisite: acceptance into DHG Phase II*) (*Corequisites: DHG 151, DHG 125*)

- AHS 114 BASIC FIRST AID** **1.0 Credit**  
 This course provides instruction in basic procedures used in medical emergencies. (*Prerequisite: ESL 100 or RDG 100*)
- AHS 119 HEALTH CAREERS** **3.0 Credits**  
 This course provides information on various health careers to include job responsibility and personal and educational requirements, as well as an overview of the health care system with its unique nomenclature and delivery of care. (*Prerequisite: RDG 100 or ESL 100*)
- AHS 125 ALLIED HEALTH SCIENCES** **4.0 Credits**  
 This course includes a study of basic integrated sciences for health care professionals.
- AHS 126 HEALTH CALCULATIONS** **1.0 Credit**  
 This course is a study of the mathematical concepts needed in health science studies. (*Prerequisite: RDG 100 or ESL 100, MAT 100*) (*Corequisite: admission to Health Science or Nursing degree or diploma program*)
- AHS 127 BASIC PATIENT CARE** **3.0 Credits**  
 This course is a study of basic procedures for patient care for health professionals including vital signs, patient transport, patient care relations and patient communications. (*Prerequisite: AHS 102*)
- AHS 128 HEALTH SCIENCES INTRODUCTION** **4.0 Credit**  
 This course is a study of the core competencies common to numerous health science professions. (*Prerequisite: AHS 102, AHS 119*)
- AHS 130 SURGICAL ENVIRONMENT FOR HEALTH PROFESSIONALS** **3.0 Credits**  
 This course offers a comprehensive introduction to the surgical team, basic instruction in the protocols of the operating room and aseptic techniques. (*Corequisite: admission to Health Science or Nursing degree or diploma program*)
- AHS 131 COMPUTERS IN HEALTHCARE** **3.0 Credits**  
 This course is the study of hardware and software used in various healthcare setting including information systems, computerized medical interfaces, telemedicine, networking, as well as other basic computer applications. (*Prerequisites: AHS 102, AHS 119, CPT 101 or CPT 170*)
- AHS 135 PRINCIPLES OF TEACHING USED IN HEALTH CARE SETTINGS** **3.0 Credits**  
 This course is the study of the skills necessary to be an effective educator in a variety of health care settings. Basic teaching skills, including assessment of the learner, development of teaching plans, and evaluation of overall teaching effectiveness will be presented. (*Prerequisite: Permission of Program Director*)
- AHS 138 MEDICAL CODING BASICS** **3.0 Credits**  
 This course is a study of basic concepts of coding for medical/dental services for the health professions. (*Prerequisite: AHS 102*)
- AHS 140 THERAPEUTICS FOR HEALTH** **3.0 Credits**  
 This course provides a basic study of therapeutic agents applicable to health science and nursing professions. (*Prerequisites: AHS 102, BIO 112, BIO 210 or BIO 211 with minimum grade of "C"*)
- AHS 141 PHLEBOTOMY FOR THE HEALTH CARE PROVIDER** **3.0 Credits**  
 This course contains the essential theory, skills, and special procedures required to meet the venipuncture needs in hospital, clinics, and other health care settings. (*Prerequisites: AHS 102, BIO 112, BIO 210 or BIO 211 with minimum grade of "C"*)

**AHS 142 PHLEBOTOMY****2.0 Credits**

This course is a study of phlebotomy procedures utilized in clinical facilities and physicians' offices. (Prerequisites: AHS 141, Permission of Program Director)

**AHS 145 ELECTROCARDIOGRAPHY****2.0 Credits**

This course provides the basic skills necessary to perform ECGs in a hospital, physician's office or other health care setting. The student will be able to perform and interpret basic ECGs. (Prerequisites: AHS 102, BIO 112 or BIO 211 with minimum grade of "C")

**AHS 153 CONCEPTS OF GERIATRIC CARE****4.0 Credits**

This course includes a study of developmental theory, modern concepts of aging, and geriatric health care concepts. (Prerequisite: RDG 101)

**AHS 156 ELECTROCARDIOGRAPHY PRACTICUM****1.0 Credit**

This course provides the detailed study and practice necessary to perform ECGs in a hospital, physician's office or other health care setting. The student will be able to perform and interpret basic ECGs. (Corequisite: AHS 145 or permission of department chair)

**AHS 162 HEALTH CARE SKILLS II****2.0 Credits**

This course includes clinical experiences in the long-term care facility. (Prerequisites: AHS 102, AHS 127, AHS 145, AHS 141, BIO 112)

**AHS 164 MEDICAL TERMINOLOGY REVIEW****1.0 Credit**

This course is designed as a review of medical terms, including roots, prefixes, suffixes, with emphasis on spelling, definition and pronunciation. (Prerequisite: AHS 102)

**AHS 166 ECG in a Clinical Setting****2.0 Credits**

This course provides an opportunity for students to perform ECGs in a hospital, physician's office or other health care setting. (Prerequisites: AHS 145, AHS 156, BIO 112 or 210)

**AHS 170 Fundamentals of Disease****3.0 Credits**

This course provides a study of general principles of disease and the disorders that affect the human body, with an emphasis on symptoms and signs routinely assessed in health care facilities. (Prerequisites: AHS 102, BIO 211)

**AHS 175 Multi-Skilled Clinical Practicum****4.0 Credits**

This course offers clinical experiences across health related disciplines exposing students to a variety of patient care areas such as cardiac monitoring, EKG, patient transport, and medical and surgical asepsis. (Prerequisites: AHS 127, AHS 141, AHS 142, AHS 145, AHS 156)

**AHS 205 ETHICS AND LAW FOR ALLIED HEALTH PROFESSIONS** **3.0 Credits**

This course is an introduction to ethical, bioethical and legal concepts related to allied health professions. (Prerequisite: AHS 102, AHS 119, RDG 100)

**AHS 208 HEALTH MANAGEMENT****3.0 Credits**

This course is a study of the principles of management in a health career environment, including supervision, medically ethical decision making, medical team concepts, human resource management, supervision of medical professionals at various levels, & organizational structure in health care settings. (Prerequisites: AHS 102, AHS 119)

**AHS 210 Nutrition for Healthcare Professionals****3.0 Credit**

This course focuses on aspects of both normal and clinical nutrition, including topics related to the essential principles of nutrition, assessment of nutritional status, weight control, life-cycle nutrition, health promotion and maintenance, disease prevention, and diet therapy. (Prerequisites: AHS 102, BIO 112 or BIO 210)

**AMT 103 SENSORS****3.0 Credits**

This course covers the theory of operation of various processes and discrete sensors used in modern industrial plants plus the techniques of interfacing these sensors with controllers (i.e., robot, work cell, programmable and process). (Prerequisite: EET 113)

**ANT 101 GENERAL ANTHROPOLOGY****3.0 Credits**

This course is the study of physical and cultural anthropology. This course explores subfields of anthropology to examine primatology, human paleontology, human variation, archeology and ethnology. *(Prerequisite: RDG 100 or ESL 100, ENG 032 or ESL 038)*

**ANT 202 CULTURAL ANTHROPOLOGY****3.0 Credits**

This course includes an exploration and comparison of selected contemporary cultures, including their languages. The course also includes an introduction to the concepts, methods, and data of socio-cultural anthropology and anthropological linguistics. *(Prerequisite: RDG 100 or ESL 100, ENG 032 or ESL 038)*

**ANT 203 PHYSICAL ANTHROPOLOGY AND ARCHEOLOGY****3.0 Credits**

This course includes an exploration of human origins, human evolution, human prehistory, and cultural existence from its less complex forms to early civilizations. The course also includes an introduction to the concepts, methods, and data of physical, biological and archaeological anthropology. *(Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038)*

**AOT 105 KEYBOARDING****3.0 Credits**

This course focuses on the mastery of touch keyboarding. *(Prerequisite: ESL 037 or RDG 032)*

**AOT 110 DOCUMENT FORMATTING****3.0 Credits**

This course emphasizes speed, accuracy, and developing document formatting skills using keyboarding competencies. *(Prerequisite: AOT 105 or keyboard placement test)*

**AOT 123 LEGAL TRANSCRIPTION****3.0 Credits**

This course focuses on the development of speed and accuracy in transcribing legal documents from dictation. *(Prerequisite: CPT 179)*

**AOT 133 PROFESSIONAL DEVELOPMENT****3.0 Credits**

This course emphasizes development of personal and professional skills required of an office worker in areas such as projecting a professional image, job seeking skills, office etiquette, ethics, and time and stress management. *(Prerequisite: ESL 100 or RDG 100)*

**AOT 134 OFFICE COMMUNICATIONS****3.0 Credits**

This course is a study of grammar, punctuation, and written communication skills for the office environment. *(Prerequisites: AOT 105 or keyboard placement test, ENG 100 or ESL 110)*

**AOT 143 OFFICE SYSTEMS AND PROCEDURES****3.0 Credits**

This course emphasizes procedures and applications used in the office environment. *(Prerequisites: AOT 105 or keyboard placement test, ESL 100 or RDG 100)*

**AOT 161 RECORDS MANAGEMENT****3.0 Credits**

This course emphasizes records management functions and various types of storage methods, technology, and procedures. *(Prerequisite: ESL 100 or RDG 100)*

**AOT 180 CUSTOMER SERVICE****3.0 Credits**

This course is a study of issues in the workplace relating to effective customer service. The course includes topics such as oral, written, verbal and nonverbal communication skills, effective telephone techniques and cultural diversity in the workplace. *(Prerequisite: ESL 100 or RDG 100)*

**AOT 196 OFFICE CONFIDENTIALITY AND SECURITY****3.0 Credits**

This course is the study of legal issues encountered in the office environment to include accessibility, interviewing, HIPPA and other rules as they apply to specific types of offices. Office security issues and basic response to crisis are also reviewed. *(Prerequisites: ENG 100, ESL 110 or RDG 100)*

**AOT 210 DOCUMENT PRODUCTION****3.0 Credits**

This course emphasizes the production of documents found in typical business offices. The major focus is on productivity and excellence in document production. *(Prerequisite: AOT 110)*

- AOT 212 MEDICAL DOCUMENT PRODUCTION 3.0 Credits**  
This course covers the production of documents found in medical offices. The major focus is on productivity and excellence in medical document production. (*Prerequisite: AOT 110*)
- AOT 213 LEGAL DOCUMENT PRODUCTION 3.0 Credits**  
This course introduces legal terminology and covers the production of documents found in the legal office environment. Emphasis is on productivity and excellence in legal document production. (*Prerequisite: AOT 110*)
- AOT 214 SOFTWARE APPLICATIONS IN THE LAW OFFICE 3.0 Credits**  
This course includes an introduction to software applications commonly used in a legal environment. (*Prerequisite: CPT 170*)
- AOT 234 ADMINISTRATIVE OFFICE COMMUNICATIONS 3.0 Credits**  
This course emphasizes communication skills necessary in the business environment. It includes composing business correspondence, developing and giving oral presentations, practicing recording and translating information using the latest technology, and developing effective communication skills. (*Prerequisite: AOT 110*)
- AOT 252 MEDICAL SYSTEMS AND PROCEDURES 3.0 Credits**  
This course emphasizes development of proficiency in integrating skills commonly performed in medical offices. (*Prerequisite: AOT 110*)
- AOT 253 LEGAL SYSTEMS AND PROCEDURES 3.0 Credits**  
This course emphasizes development of proficiency in integrating knowledge and skills performed in legal offices. (*Prerequisite: AOT 110*)
- AOT 255 SENIOR PRACTICUM 3.0 Credits**  
This course includes practical experience in an approved office setting as well as class meetings. Emphasis is placed on such topics as career planning, ethics, attitude, and other subjects which enhance employability skills. (*Prerequisites: AOT 110, AOT 143, AOT 161, AOT 265, CPT 172, CPT 174, CPT 179 or advisor approval*)
- AOT 265 OFFICE DESKTOP PUBLISHING 3.0 Credits**  
This course emphasizes the integration of text and graphics using computer software to design, edit, and produce a variety of documents. (*Prerequisite: CPT 179*)
- AOT 267 INTEGRATED INFORMATION PROCESSING 3.0 Credits**  
This course emphasizes the application of integrated computer software. (*Prerequisites: AOT 105 or keyboard placement test, CPT 170, RDG 100*)
- AOT 271 SCWE IN ADMINISTRATIVE OFFICE TECHNOLOGY 4.0 Credits**  
This course integrates office skills within an approved work site related to administrative office technology. (*Prerequisites: AHS 102, AOT 252, CPT 170, MED 109*)
- ART 101 ART HISTORY AND APPRECIATION 3.0 Credits**  
This is an introductory course to the history and appreciation of art, including the elements and principles of the visual arts. (*Prerequisite: RDG 100 or ESL 100*)
- ART 105 FILM AS ART 3.0 Credits**  
This course provides an introduction to the appreciation of film and covers the elements and principles of cinema with historical and contemporary examples. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- ART 107 HISTORY OF EARLY WESTERN ART 3.0 Credits**  
This course is a visual and historical survey of western art from the Paleolithic Age to the Renaissance. The techniques, forms, and expressive content of paintings, sculptures and architectures are studied within the context of the cultural environments that produced them. (*Prerequisite: RDG 100 or ESL 100*)

**ART 108 HISTORY OF WESTERN ART****3.0 Credits**

This course is a visual and historical survey of western art from the Renaissance through modern times. The techniques, forms, and expressive content of paintings, sculptures and architectures will be studied within the context of the cultural environments that produced them. (Prerequisite: RDG 100 or ESL 100)

**ART 111 BASIC DRAWING I****3.0 Credits**

This course provides an introduction to the materials and the basic techniques of drawing. (Prerequisite: RDG 100 or ESL 100)

**ART 112 BASIC DRAWING II****3.0 Credits**

This course covers a study of the materials and basic techniques of drawing. (Prerequisite: RDG 100 or ESL 100)

**ART 211 INTRODUCTION TO PAINTING****3.0 Credits**

This course is an introduction to the materials and techniques of painting. (Prerequisite: RDG 100 or ESL 100)

**ART 212 INTRODUCTION TO WATERCOLOR****3.0 Credits**

This course is an introduction to the transparent American watercolor technique, emphasizing the creation of landscapes and still-life subjects that utilize appropriate brush techniques and proper color mixing for this medium. (Prerequisite: RDG 100 or ESL 100)

**ART 220 ART LABORATORY I****1.0 Credit**

This course provides supervised participation in a museum internship. Students will receive practical experience in various technical areas tailored specifically to the needs of the assigned gallery or auction house. (Prerequisite: RDG 100 or ESL 100)

**ART 221 ART LABORATORY II****1.0 Credit**

This course is the second in a sequence of courses offering supervised participation in a museum internship. Students will receive practical experience in technical areas such as exhibit design, packaging, or other curatorial duties. (Prerequisite: RDG 100 or ESL 100)

**ART 222 ART LABORATORY III****1.0 Credit**

This course is the third in a sequence of courses offering supervised participation in a museum internship. Students will receive continued practical experience in various technical areas tailored specifically to the needs of the assigned gallery or auction house. (Prerequisite: RDG 100 or ESL 100)

**ART 292 FOUNDATIONS FOR ART EDUCATION****3.0 Credits**

This course is the study of historical, functional, theoretical, philosophical & ethical posits of art education. It surveys standards, research, technology, diversity & legislation's impact; cognitive/artistic development; curriculum design; assessment; instructional planning and classroom management. (Prerequisite: ENG-102, RDG 100 or ESL 100)

**ASL 101 AMERICAN SIGN LANGUAGE I****4.0 Credits**

This course is a study of visual readiness and basic vocabulary, grammar features, and non-manual behaviors, all focusing on receptive language skill developments. (Prerequisites: ENG 100, RDG 100)

**ASL 102 AMERICAN SIGN LANGUAGE II****4.0 Credits**

This course is a continuation of American Sign Language I, designed to expose students to additional vocabulary, grammar features, and non-manual behaviors, all focusing on conversational skills. (Prerequisite: ASL 101)

**ASL 110 CAREERS IN AMERICAN SIGN LANGUAGE****2.0 Credits**

This course will provide students with a knowledge of various career options related to the field of sign language interpretation and deafness. Students will observe, research, and analyze various settings in ASL. (Prerequisites: ENG 100, RDG 100)

**ASL 201 AMERICAN SIGN LANGUAGE III****3.0 Credits**

This course is a continuation of American Sign Language II and covers additional vocabulary, grammar features, and non-manual behaviors, all focusing on conversational skills. (*Corequisite: ASL 102*)

**ASL 202 AMERICAN SIGN LANGUAGE IV****3.0 Credits**

This course concentrates on intermediate conversational and discourse skills using American Sign Language. This course is conducted entirely using American Sign Language. (*Prerequisite: ASL 201*)

**AST 101 SOLAR SYSTEM ASTRONOMY****4.0 Credits**

This course is a descriptive survey of the universe with emphasis on basic physical concepts and the objects in the solar system. Related topics of current interest are included in the course. (*Prerequisite: RDG 100 or ESL 100*)

**AST 102 STELLAR ASTRONOMY****4.0 Credits**

This course is a descriptive survey of the universe with emphasis on basic physical concepts and galactic and extra-galactic objects. Related topics of current interest are included in the course. (*Prerequisite: RDG 100 or ESL 100*)

**AUT 105 BEGINNING ENGINE REPAIR****4.0 Credits**

This course is a basic study of minor engine repairs, including in-frame repairs and cylinder head reconditioning. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisite: AUT 106 - DAY*)

**AUT 106 INTERMEDIATE ENGINE REPAIR****4.0 Credits**

This course includes an application of the fundamentals of engine diagnosis and repair, including engine removal and installation procedures. (*Prerequisites: AUT 105, MAT 100, RDG 100 or ESL 100*) (*Corequisite: AUT 105 - DAY*)

**AUT 112 BRAKING SYSTEMS****4.0 Credits**

This course covers hydro-boost power brakes and vacuum power brakes as well as master cylinders and calipers rebuilding. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 221, AUT 222 - DAY*)

**AUT 115 MANUAL DRIVE TRAIN/AXLE****3.0 Credits**

This course is a basic study of clutches, gearing and manual transmission operation, including the basic study of rear axles and rear axle setup. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 116, AUT 151, AUT 153 - DAY*)

**AUT 116 MANUAL TRANSMISSION AND AXLE****4.0 Credits**

This course is an advanced study of manual transmissions and transaxles, including proper overhaul procedures for axles and manual transmissions and transaxles. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 115, AUT 151, AUT 153 - DAY*)

**AUT 131 ELECTRICAL SYSTEMS****3.0 Credits**

This course is a study of the individual systems and components that when combined form the entire automobile electrical system. The course includes starting and charging systems, ignition, engine, chassis, and accessory systems as well as instruction in the proper use of electrical schematics. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 133, AUT 132 - DAY*)

**AUT 132 AUTOMOTIVE ELECTRICITY****4.0 Credits**

This course is a study of electricity as used in automotive applications. This course includes DC and AC principles and their various uses in the automobile. The relationship between Ohm's law and actual automotive circuits is demonstrated. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 131, AUT 133 - DAY*)

- AUT 133 ELECTRICAL FUNDAMENTALS 3.0 Credits**  
 This course is a study of the theories of electricity, including magnetism, series and parallel circuits, Ohm's Law and an introduction to the use of various electrical test equipment. (*Prerequisite: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 131, AUT 132 - DAY*)
- AUT 141 INTRODUCTION TO HEATING AND AIR CONDITIONING 4.0 Credits**  
 This course is a basic study of the principles of heat transfer and refrigeration in automotive technology. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisite: AUT 241 - DAY*)
- AUT 145 ENGINE PERFORMANCE 3.0 Credits**  
 This course covers the diagnosis of various performance problems using the appropriate diagnostic equipment and diagnostic manuals. Logical thinking is also included in the course. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 245, AUT 262 - DAY*)
- AUT 151 AUTOMOTIVE TRANSMISSION/TRANSAXLE 3.0 Credits**  
 This course is a basic study of automotive transmission and transaxle service, including proper procedures for doing minor transmission and transaxle removal and replacement procedures. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 115, AUT 116, AUT 153 - DAY*)
- AUT 153 AUTOMATIC TRANSMISSION DIAGNOSIS 3.0 Credits**  
 This course is a basic study of powerflow charts and their use in diagnosing automatic transmissions, including the use of pressure testing in diagnosing automatic transmission concerns. Automatic transmission overhaul is included. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 116, AUT 151 - DAY*)
- AUT 221 SUSPENSION AND STEERING DIAGNOSIS 3.0 Credits**  
 This course covers the diagnosis and repair of front and rear suspension, using suspension diagnostic charts, shop manuals and alignment equipment. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 112, AUT 222 - DAY*)
- AUT 222 FOUR WHEEL ALIGNMENT 2.0 Credits**  
 This course is a review of alignment angles and adjusting procedures used in four-wheel alignment, including the use of four-wheel alignment equipment. (*Prerequisites: AUT 221, MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 112, AUT 221 - DAY*)
- AUT 241 AUTOMOTIVE AIR CONDITIONING 4.0 Credits**  
 This course is a study in the principles of refrigeration, operation and testing procedures to determine the cause of malfunction, and servicing or repairing by approved methods. Emphasis is on special tools, equipment and safety procedures. (*Prerequisites: AUT 141, MAT 100, RDG 100 or ESL 100*) (*Corequisite: AUT 141*)
- AUT 245 ADVANCED ENGINE PERFORMANCE 5.0 Credits**  
 This course includes "hands-on" diagnostics, including an in-depth study and use of the oscilloscope in diagnosing engine performance problems. (*Prerequisites: AUT 145, AUT 262, MAT 100, RDG 100 or ESL 100*) (*Corequisite: AUT 145, AUT 262*)
- AUT 262 ADVANCED AUTOMOTIVE DIAGNOSIS AND REPAIR 4.0 Credits**  
 This course is an advanced study of the proper diagnostic and repair procedures required on newer computerized automobiles, including scan tool and digital multi-meter operation. (*Prerequisites: MAT 100, RDG 100 or ESL 100*) (*Corequisites: AUT 145, AUT 245 - DAY*)
- BAF 101 PERSONAL FINANCE 3.0 Credits**  
 This course includes the practical applications of concepts and techniques used in managing personal finances. Major areas of study include financial planning, budgeting, credit use, housing, insurance, investments and retirement planning. (*Prerequisite: RDG 100 or ESL 100*)
- BAF 201 PRINCIPLES OF FINANCE 3.0 Credits**  
 This is an introductory course to the field of finance. The monetary and credit systems are examined along with how the demand for funds is met in both the public and private sector.

Quantitative features include financial ratios, the time value of money, capital budgeting and working capital budgeting. *(Prerequisites: ACC 101 or ACC 111, MAT 102 or MAT 155)*

**BCT 101 INTRODUCTION TO BUILDING CONSTRUCTION 5.0 Credits**

This course is an introduction to residential and light commercial construction, construction terms, tools of the trade and their safe use. *(Prerequisite: RDG 100 or equivalent placement test scores)*

**BCT 102 FUNDAMENTALS OF BUILDING CONSTRUCTION 4.0 Credits**

This course is a study of framing for residential and light commercial buildings. *(Prerequisite: BCT 101)*

**BCT 103 CONSTRUCTION SITE LAYOUT 4.0 Credits**

This course covers location and layout of building corners, elevation, and the use of appropriate tools. *(Prerequisite: RDG 100 or equivalent placement test scores)*

**BCT 104 SITE LAYOUT AND PREPARATION 2.0 Credits**

This course is a study of principles, equipment, and methods used to perform site layouts and distance measurements. *(Prerequisite: RDG 100 or equivalent placement test scores)*

**BCT 111 BLUEPRINT READING AND SPECIFICATIONS 3.0 Credits**

This course is an introductory study of construction plans and specifications and how they represent finished buildings. *(Prerequisite: RDG 100 or equivalent placement test scores)*

**BCT 112 CONSTRUCTION PRINT READING 2.0 Credits**

This course is a study of residential and light commercial prints. *(Prerequisite: RDG 100 or equivalent placement test scores)*

**BCT 115 CONSTRUCTION SAFETY AND EQUIPMENT 2.0 Credits**

This course includes what personal protective clothing and equipment to wear, how to perform basic construction tasks safely, and how to respond to accidents if they occur. *(Prerequisite: RDG 100 or equivalent placement test scores)*

**BCT 131 ESTIMATING/QUANTITY TAKE OFF 2.0 Credits**

This course covers construction estimation and quantity take off for construction trades based on local and national building codes. *(Prerequisite: RDG 100 or equivalent placement test scores)*

**BCT 132 INTRODUCTION TO COMMERCIAL ESTIMATING 2.0 Credits**

This course is a study of the commercial estimating practices, techniques and software as it applies to the construction of light commercial building projects, such as school, office building, retail facilities and other buildings used by commercial businesses. *(Prerequisite: BCT 131)*

**BCT 142 FUNDAMENTALS OF CONSTRUCTION SAFETY 4.0 Credits**

This course covers safety standards and practices as they apply to the building construction industry. *(Prerequisite: RDG 100 or equivalent placement test scores)*

**BCT 201 PRINCIPLES OF ROOF CONSTRUCTION 4.0 Credits**

This course is a study of design and construction of roof systems and roofing materials for residential and light commercial construction. *(Prerequisites: BCT 101, BCT 102, BCT 103, BCT 112, BCT 131, BCT 142)*

**BCT 209 CONSTRUCTION PROJECT MANAGEMENT 3.0 Credits**

This is a course designed with projects using building construction skills. *(Prerequisites: BCT 201, BCT 102, BCT 103, BCT 212, BCT 142, BCT 221)*

**BCT 212 CONSTRUCTION METHODS AND DESIGN 3.0 Credits**

This course covers residential construction methods and designs. *(Prerequisites: BCT 101, BCT 102, BCT 103, BCT 112, BCT 142, BCT 221)*

**BCT 221 CONSTRUCTION BUILDING CODE 3.0 Credits**

This course is a study of local, state, and national building code requirements as they apply to residential and commercial construction. *(Prerequisite: RDG 100 or equivalent placement test scores)*

- BCT 223 RESIDENTIAL MECHANICAL SYSTEMS** **3.0 Credits**  
 This course is a study of the workings of the basic HVAC, electrical, and plumbing systems found in residential structures. (*Prerequisite: BCT 111*)
- BIO 100 INTRODUCTORY BIOLOGY** **4.0 Credits**  
 This is a course in general biology designed to introduce principles of biology. Emphasis is on organ systems. Selected medical terminology and basic chemical principles are included. This course does not meet the requirements for an associate degree, but may meet the requirements for a diploma or certificate. (*Prerequisite: RDG 032 or ESL 037*)
- BIO 101 BIOLOGICAL SCIENCE I** **4.0 Credits**  
 This course is a study of the scientific method, basic biochemistry, cell structure and function, cell physiology, cell reproduction and development, Mendelian genetics, population genetics, natural selection, evolution and ecology. (*Prerequisite: RDG 100 or ESL 100*) (*ENG 101 recommended*)
- BIO 102 BIOLOGICAL SCIENCE II** **4.0 Credits**  
 This course is a study of the classification of organisms and structural and functional considerations of all kingdoms (particularly major phyla as well as viruses). Vertebrate animals and vascular plants are emphasized. (*Prerequisite: BIO 101*)
- BIO 110 GENERAL ANATOMY AND PHYSIOLOGY** **3.0 Credits**  
 This course is a general introduction to the anatomy and physiology of the human body. Emphasis is on the organ systems of the human and their interrelationships. (*Prerequisite: RDG 100 or ESL 100*)
- BIO 112 BASIC ANATOMY AND PHYSIOLOGY** **4.0 Credits**  
 This course is a basic integrated study of the structure and function of the human body. (*Prerequisite: RDG 100 or ESL 100*) (*BIO 100, ENG 101 recommended*)
- BIO 115 BASIC MICROBIOLOGY** **3.0 Credits**  
 This is a general course in microbiology, including epidemiology and the presence, control, and identification of microorganisms. (*Prerequisite: BIO 112 or BIO 211*)
- BIO 205 ECOLOGY** **3.0 Credits**  
 This course introduces basic principles of population biology, ecology and environmental science as applied to the study of interactions between human kind and the biosphere. (*Prerequisite: RDG 100 or ESL 100*) (*Corequisite: BIO 206*)
- BIO 206 ECOLOGY LAB** **1.0 Credit**  
 This ecology laboratory experience consists of discussions, demonstrations, experiments, films, and field trips pertaining to the relationships of man to the biosphere, human ecology, resource use and environmental impact. (*Prerequisite: RDG 100 or ESL 100*) (*Corequisite: BIO 205*)
- BIO 210 ANATOMY AND PHYSIOLOGY I** **4.0 Credits**  
 This is the first in a sequence of courses, including an intensive coverage of the body as an integrated whole. All body systems are studied. Emphasis is placed on the manner in which systems interact to maintain homeostasis. The study includes general chemistry principles, biochemistry, cells and tissues and the following systems will be covered: integumentary, skeletal, muscular, nervous and special senses. (*Prerequisite: RDG 100 or ESL 100*) (*BIO 100, 101 or 110, ENG 101 recommended*)
- BIO 211 ANATOMY AND PHYSIOLOGY II** **4.0 Credits**  
 This is a continuation of a sequence of courses, including intensive coverage of the body as an integrated whole. All body systems are studied. Emphasis is placed on the manner in which systems interact to maintain homeostasis. The following systems will be covered: endocrine, lymphatic, immune, circulatory, respiratory, digestive, urinary and reproductive. (*Prerequisite: BIO 210*)

**BIO 225 MICROBIOLOGY****4.0 Credits**

This is a detailed study of microbiology as it relates to infection and the disease processes of the body. Topics include immunity, epidemiology, medically important microorganisms, and diagnostic procedures for identification. Application to clinical health will be emphasized. (Prerequisite: BIO 101 or BIO 211)

**BIO 240 NUTRITION****3.0 Credits**

This course is an introduction to the essential aspects concerning the science of nutrition. Particular emphasis is on the classes of nutrients and their physiological uses in the body. Body energy requirements and the nutritional status of the world are considered. (Prerequisite: BIO 112 or BIO 210)

**BIO 290 SCWE IN BIOLOGY RESEARCH****4.0 Credits**

This course provides valuable work and research skills related to the biological sciences by assigning students to a state agency, national agency, or private industry. Lecture will consist of an introduction to biological research. (Prerequisite: BIO 102, permission of instructor)

**BUS 101 INTRODUCTION TO BUSINESS****3.0 Credits**

This course is a study of the nature of business activity in relation to the economic society, including how a business is owned, organized, managed, and controlled. (Prerequisite: RDG 100 or ESL 100)

**BUS 110 ENTREPRENEURSHIP****3.0 Credits**

This course is an introduction to the process of starting a small business, including forms of ownership and management. (Prerequisites: MAT 100, RDG 100)

**BUS 121 BUSINESS LAW I****3.0 Credits**

This course is a study of legal procedures, law and society, classifications and systems of law, the tribunals administering justice and their actions, contracts, sales, transfer of titles, rights and duties of the parties, conditions, and warranties. (Prerequisite: RDG 100)

**BUS 130 BUSINESS COMMUNICATIONS****3.0 Credits**

This course covers the application of communication skills to situations routinely encountered in business environments. Students will generate oral and written reports and presentations. (Prerequisite: ENG 101)

**BUS 210 INTRODUCTION TO E-COMMERCE IN BUSINESS****3.0 Credits**

This course is the study of electronic commerce and the operations and applications from the business perspective. Emphasis is placed on business concepts and strategies and how they apply to the process of buying and selling goods and services online. (Prerequisite: RDG 100 or ESL 100)

**BUS 240 BUSINESS STATISTICS****3.0 Credits**

This course is a study of statistical methods related to business, including descriptive statistics, probability, binomial and normal distributions, and hypothesis testing. (Prerequisites: RDG 100 or ESL 100, MAT 102 or MAT 155)

**BUS 250 INTRODUCTION TO INTERNATIONAL BUSINESS****3.0 Credits**

This is a survey course in international business designed to enhance the global perspective of business students. Emphasis is placed on the legal, cultural, economic and political factors faced in operating an international business. (Prerequisite: BUS 101)

**BUS 260 INSURANCE PRINCIPLES****3.0 Credits**

This course is a study of the types of insurance companies, varieties of coverage, and the relation of insurance to business activity, the national economy, and personal interests. (Prerequisite: BUS 101)

**CET 105 SURVEYING I****3.0 Credits**

This course includes surveying theory and practice; care and use of instruments; traversing procedures; and computation of closure. Also included in this course are differential and trigono-

metric leveling and computation of the area of real property. (*Prerequisites: CPT 170, EGT 106, MAT 110*)

**CET 120 CONSTRUCTION MATERIALS 3.0 Credits**

This course includes a study of basic materials used in construction, including research of building product specifications. (*Prerequisites: ENG 032, MAT 100, RDG 100 or equivalent placement test score*)

**CET 205 SURVEYING II 4.0 Credits**

This course includes electro-optical instrumentation techniques and complex computations used in surveying. Also included are field astronomy, highway curves and topographic surveying. (*Prerequisites: CET 105, MAT 111*)

**CET 216 SOIL MECHANICS 3.0 Credits**

This course covers soil types, their engineering properties, and techniques of field and laboratory identification and testing. Also covered is analysis and design of soil-related structures, including spread footings and retaining walls. (*Prerequisite: EGR 194*)

**CET 218 HYDRAULICS 3.0 Credits**

This course includes the fundamentals of flow, control, disposal of water, and flow through open and closed conduits, orifices, and weirs. (*Prerequisite: EGR 194*)

**CET 222 PRINCIPLES TO LOW IMPACT LAND DEVELOPMENT 3.0 Credits**

Topics include low impact land development, Best Management Practices (BMP), Integrated Management Practices (IMP) control of storm water runoff & nonpoint source pollution. Process flow and mass balance techniques & Low Impact Development (LID) computer design for residential/commercial land use. (*Prerequisite: MAT 110*)

**CET 224 PRINCIPLES OF SUSTAINABLE CONSTRUCTION 3.0 Credits**

This course includes, storm water control, resource conservation, planning and permitting, sustainable construction practices, urban heat island concepts, development densities, alternative transportation options, water conservation, environmental design & an introduction to the LEED rating system. (*Prerequisites: CET 222, MAT 110*)

**CET 235 CONSTRUCTION METHODS AND ESTIMATING 3.0 Credits**

This course covers basic construction techniques with emphasis on cost estimating. This course includes quantity takeoff and tabulation of data using spreadsheet format. Oral and written presentations are included. (*Prerequisites: AET 110 or EGT 106, MAT 110*)

**CET 242 CONCRETE DESIGN 3.0 Credits**

This course covers the design of concrete structural members according to the ACI codes, quality control of concrete and structural inspection. (*Prerequisite: EGR 194*)

**CET 244 STRUCTURAL STEEL DESIGN 3.0 Credits**

This course covers the design of beams, columns, floor framing, tension and compression members, and bolted and welded connections according to AISC specifications. The course includes making detailed fabrication drawings of beams, columns and connections. (*Prerequisite: EGR 194*)

**CET 246 ENVIRONMENTAL SYSTEMS TECHNOLOGY 3.0 Credits**

This course covers a study of the sources, treatment, collection and distribution of water and waste water. Also included are water and sewer pipe hydraulics and loads on buried pipes. (*Prerequisites: CET 218, EGR 194*)

**CET 251 HIGHWAY DESIGN 3.0 Credits**

This course covers a study of the design and construction of a highway. Topics include geometric design, earthwork computations and drainage. (*Prerequisites: CET 205, CET 218*)

**CGC 101 INTRODUCTION TO GRAPHIC TECHNIQUES 3.0 Credits**

This course covers the processes of printed reproduction with an emphasis on offset printing. A variety of printing equipment and operating techniques are included. (*Prerequisites: ESL 100 or RDG 100, MAT 100*) (*Corequisite: CGC 110*)

- CGC 105 BASIC PHOTOGRAPHY 3.0 Credits**  
This course covers the fundamentals of the photographic process, including principles of picture composition, camera operation, and darkroom techniques. (*Prerequisite: RDG 100 or ESL 100*)
- CGC 106 TYPOGRAPHY I 3.0 Credits**  
This course covers typography and photocomposition. (*Prerequisites: CGC 101, CGC 110*)
- CGC 110 ELECTRONIC PUBLISHING 3.0 Credits**  
This is an introductory course to the fundamentals of electronic publishing. (*Prerequisites: ESL 100 or RDG 100 or RDG 101, MAT 100*) (*Corequisite: CGC 101*)
- CGC 122 BASIC OFFSET PRESS OPERATIONS 3.0 Credits**  
This course covers the basic competencies required to operate an offset press. (*Prerequisites: CGC 101, CGC 110*)
- CGC 125 BASIC OFFSET PREPARATION 3.0 Credits**  
This course covers the basics of preparing a job to be reproduced from the mechanical stage to preparing the offset printing plate. (*Prerequisites: CGC 101, CGC 110*)
- CGC 132 SCREEN PRINTING 3.0 Credits**  
This course covers an introduction to screen printing terminology, equipment, and processes. (*Prerequisites: ENG 032, RDG 100*)
- CGC 135 COMMERCIAL GRAPHICS OPERATIONS 3.0 Credits**  
This course is a study of customer service, cost factors, quality issues, and daily operations associated with the commercial graphics industry. (*Prerequisites: CGC 101, CGC 110*)
- CGC 206 TYPOGRAPHY II 3.0 Credits**  
This course covers advanced typography and photocomposition. (*Prerequisites: CGC 101, CGC 110*)
- CGC 210 ADVANCED ELECTRONIC PUBLISHING 3.0 Credits**  
This course covers a wide range of computer hardware, software, and peripherals. (*Prerequisite: CGC 206*)
- CGC 222 ADVANCED OFFSET PRESS OPERATIONS 3.0 Credits**  
This course covers advanced techniques in the operation of the offset press. (*Prerequisite: CGC 122*)
- CGC 225 IMAGE ASSEMBLY 3.0 Credits**  
This course covers an in-depth study of the image assembly techniques used for offset printing. (*Prerequisite: CGC 125*)
- CGC 240 SENIOR PROJECT IN COMMERCIAL GRAPHICS 3.0 Credits**  
This course consists of advanced projects related to the commercial graphics industry. (*Prerequisites: CGC 210, CGC 222*)
- CGC 250 SPECIAL PROJECTS IN COMMERCIAL GRAPHICS 3.0 Credits**  
This course consists of special projects related to the commercial graphics industry. (*Corequisite: Permission of Department Chair*)
- CHM 100 INTRODUCTORY CHEMISTRY 4.0 Credits**  
This is an introductory course in general chemistry and principles of chemistry. Emphasis is placed on mathematical solutions and laboratory techniques. (This course does not meet the requirements for an associate degree, but may meet the requirements for a diploma or certificate.) (*Prerequisite: RDG 032 or ESL 037*)
- CHM 101 GENERAL CHEMISTRY I 4.0 Credits**  
This is the first of a sequence of courses in fundamental principles of chemistry. Topics include atomic and molecular structure, nomenclature, formulas and equations, common substances

and reactions, stoichiometry, states of matter, solutions, and equilibria. (*Prerequisite: RDG 100 or ESL 100, MAT 101 or MAT 155*)

**CHM 105 GENERAL ORGANIC AND BIOCHEMISTRY 4.0 Credits**

This course is a study of the fundamental principles of chemistry, including atomic and molecular structure, common substances and reactions, introduction to organic chemistry and biochemistry. (*Prerequisite: RDG 100 or ESL 100, MAT 101 or MAT 155*)

**CHM 110 COLLEGE CHEMISTRY I 4.0 Credits**

This is the first course in a sequence that includes the following topics: atomic and molecular structure, nomenclature and equations, properties, reactions and states of matter, stoichiometry, gas laws, solutions, and equilibria. (*Prerequisite: RDG 100 or ESL 100, MAT 102*)

**CHM 111 COLLEGE CHEMISTRY II 4.0 Credits  
(FOR STUDENTS CONTINUING IN CHEMISTRY)**

This course is a continuation of the study of atomic and molecular structure, nomenclature and equations, properties, reactions and states of matter, stoichiometry, gas laws, solutions and equilibria. Other topics included are kinetics, thermodynamics and electrochemistry. (*Prerequisites: CHM 110, MAT 110*)

**CHM 112 COLLEGE CHEMISTRY II 4.0 Credits  
(FOR STUDENTS NOT CONTINUING IN CHEMISTRY)**

This course is a continuation of the study of atomic and molecular structure, nomenclature and equations, properties, reactions and states of matter, stoichiometry, gas laws, solutions and equilibria. Other topics included are organic chemistry and biochemistry. (*Prerequisites: CHM 110, MAT 110*)

**CHM 211 ORGANIC CHEMISTRY I 4.0 Credits**

This is the first in a sequence of courses that includes nomenclature, structure and properties, and reaction mechanisms of basic organic chemistry. (*Prerequisite: CHM 111 or CHM 112*)

**CHM 212 ORGANIC CHEMISTRY II 4.0 Credits**

This course is a continuation of basic organic chemistry. Topics include nomenclature, structure and properties, reaction mechanisms of basic organic chemistry, biochemistry, and spectroscopy. (*Prerequisite: CHM 211*)

**CHT 110 INTRODUCTION TO ALTERNATE 3.0 Credits  
ENERGY TECHNOLOGY**

This course addresses the fundamentals of hydrogen fuel cells. Special emphasis is placed on energy production using biofuels, nuclear energy, and other renewable sources. Photovoltaic cells and their limitations as it relates to energy production are also discussed. (*Prerequisites: CHM 110, MAT 102*)

**CHT 225 INSTRUMENTAL CHEMICAL ANALYSIS 4.0 Credits**

This course covers modern chemical instrumentation and includes analytical theory and laboratory experiments. Instruments studied include ultraviolet, visible, infrared, and atomic absorption spectrophotometers; gas chromatographs; pH meters; ion analyzers; refractometers; and polarimeters. Microcomputer use is required for verification of experimental results. (*Prerequisite: CHM 111 or CHM 112*)

**CHT 230 SURVEY IN ENGINEERING CHEMISTRY 3.0 Credits**

Topics in this course include supplement to general chemistry with emphasis on engineering applications, basic physical chemistry principles, organics and the properties of polymers, chemical nomenclature, chemical thermodynamics and other topics of interest to the chemical technician. (*Prerequisite: CHM 110*)

**CHT 250 METHODS IN ANALYTICAL CHEMISTRY I 3.0 Credits**

Topics in this course include wet chemistry techniques & standard non-automated laboratory procedures used in engineering and manufacturing environments, including separations, titra-

tions, gravimetric analysis, volumetric analysis, pH, refractive index, molecular weight & other standard procedures. (Prerequisite: CHM 110)

**CHT 252 METHODS IN ANALYTICAL CHEMISTRY II 3.0 Credits**

Topics in this course include the theory & operation of instruments used for chemical analysis in engineering and manufacturing environments including spectroscopy, chromatography, & electrochemical analyses among others. It covers both automated and semi-automated systems, sample preparation, etc. (Prerequisites: CHM 110, CHT 250, MAT 110)

**CHT 271 CHEMICAL ENGINEERING PROCESS PRINCIPLES 4.0 Credits**

This course provides a systematic approach to quantitative descriptions of chemical engineering systems, while including quantitative relations of chemical reactions and chemical processes. (Prerequisite: CHM 111 or CHM 112)

**CHT 275 CHEMICAL PROCESS TECHNOLOGY 3.0 Credits**

Topics in this course include lecture & labs designed to teach systematic methods for the quantitative description of chemical engineering systems including the theory of chemical processing, modeling, simulation, process control, systems control & analytical software common in the industry. (Prerequisites: CHM 111, MAT 110)

**COL 102 INTRODUCTION TO COLLEGE 2.0 Credits**

This course may include selected topics such as career planning study skills, stress management, tutoring, group guidance, and other subjects to facilitate student success. (Prerequisite: COL 106)

**COL 103 COLLEGE SKILLS 3.0 Credits**

This course may include selected topics such as career planning, study skills, stress management, tutoring, group guidance and other subjects to facilitate student success. It focuses on listening skills, note-taking strategies, time management, textbook mastery, memory techniques and test-taking strategies, and research skills.

**COL 104 STUDY SKILLS 1.0 Credit**

This course includes selected topics under study skills and student success.

**COL 105 FRESHMAN SEMINAR 3.0 Credit**

This course is a study of the purposes of higher education and provides a general orientation to the functions and resources of the college. The course is designed to help freshmen adjust to the college community, develop a better understanding of the learning process, and acquire essential academic survival skills.

**COL 106 SKILLS FOR COLLEGE SUCCESS 1.0 Credit**

This course is designed to enhance the skills of entering freshmen to facilitate their ability to succeed in the college environment. The course topics include student/instructor expectations, time management, library/computer orientation, listening/note-taking, studying for success, learning styles/personality types, and diversity and differences on campus. (Corequisite: ENG 032)

**COL 109 ADVANCED ACADEMIC STUDY SKILLS 1.0 Credit**

The course is designed to develop advanced study skills for enhanced contextual readings in an academic setting.

**COL 250 INFORMATION LITERACY 3.0 Credit**

Course introduces students to a wide range of print and electronic information resources and literacy skills basic to success in their academic work, their career, & in life long learning. (Prerequisite: ENG 100, RDG 100)

**CPE 208 PERIPHERALS 4.0 Credits**

This course covers the basic input and output equipment interface with computers, including an analysis of the operation of various types of equipment. (Prerequisite: EEM 243, ELT 120)

- CPE 215 LOCAL AREA NETWORK, SETUP AND TROUBLESHOOTING 3.0 Credits**  
This course is an introduction to client server system hardware and software setup and troubleshooting. (*Prerequisites: RDG 032 or RDG 100 or RDG 101, MAT 100 or equivalent placement test scores*)
- CPE 216 PC NETWORKING 3.0 Credits**  
This course covers an introduction to LANs for technicians. Topics include installation and troubleshooting of small local area networks. (*Prerequisite: CPE 215*)
- CPE 220 COMPUTER OPERATING SYSTEMS 3.0 Credits**  
This course covers the operation of the operating system and its use in analyzing a computer system.
- CPE 224 SYSTEM TROUBLESHOOTING 3.0 Credits**  
This course covers the tools and techniques used in troubleshooting computer systems, fault isolation in computer systems by using logical analysis of systems, and test equipment indications. (*Prerequisite: EEM 243*)
- CPT 101 INTRODUCTION TO COMPUTERS 3.0 Credits**  
This course covers basic computer history, theory and applications, including word processing, spreadsheets, databases, and the operating system. (*Prerequisite: RDG 100 or ESL 100*)
- CPT 104 INTRODUCTION TO INFORMATION TECHNOLOGY 3.0 Credits**  
This course is a study of basic computer components and peripherals, basic computer functions, I/O concepts, storage concepts, data communications, distributed processing, and programming language concepts. (*Prerequisites: MAT 100, RDG 100 or MAT 039*)
- CPT 113 INFORMATION SYSTEMS 3.0 Credits**  
This course is an introduction to the principles and technologies used in modern management information systems. (*Prerequisite: RDG 100 or ESL 100*)
- CPT 114 COMPUTERS AND PROGRAMMING 3.0 Credits**  
This course introduces computer concepts and programming. Topics include basic concepts of computer architecture, files, memory, and input/output devices. Programming is done in a modern high-level language. (*Prerequisites: RDG 100, MAT 101*)
- CPT 115 COBOL PROGRAMMING I 3.0 Credits**  
This course introduces the nature and use of the common business oriented language — COBOL. (*Prerequisite: CPT 101 or CPT 104*)
- CPT 170 MICROCOMPUTER APPLICATIONS 3.0 Credits**  
This course introduces microcomputer applications software, including word processing, data bases, spreadsheets, graphs and their integration. (*Prerequisites: MAT 100, ESL 100 or RDG 100*)
- CPT 172 MICROCOMPUTER DATA BASE 3.0 Credits**  
This course introduces microcomputer data base concepts, including generating reports from the data base and creating, maintaining and modifying data bases. (*Prerequisite: CPT 101 or CPT 104 or CPT 170*)
- CPT 174 MICROCOMPUTER SPREADSHEETS 3.0 Credits**  
This course introduces the use of spreadsheet software on the microcomputer. Topics include creating, editing, using formulas, using functions, and producing graphs. (*Prerequisite: CPT 101 or CPT 104 or CPT 170*)
- CPT 176 MICROCOMPUTER OPERATING SYSTEMS 3.0 Credits**  
This course covers operating systems concepts of microcomputers, including file maintenance, disk organization, batch files and subdirectory concepts. This course also provides the knowledge and skills needed to perform post-installation and day-to-day administration on tasks in a single-domain or multiple-domain Microsoft Windows NT-based network. Instruction in-

cludes: disk resources and management; tracking usage and disk space; creating and administering user and group accounts; and administering the MS Windows NT Server and Windows NT Workstation operating system in a real world environment. (*Prerequisite: CPT 101 or CPT 170 or IST 201*)

**CPT 179 MICROCOMPUTER WORD PROCESSING 3.0 Credits**

This course introduces microcomputer word processing. Topics include creating, editing, formatting and printing documents. (*Prerequisites: AOT 105 or equivalent, CPT 101 or CPT 104 or CPT 170*)

**CPT 185 EVENT-DRIVEN PROGRAMMING 3.0 Credits**

This course introduces the student to the development of professional-looking, special purpose Windows applications using the graphical user interface of Windows. (*Prerequisite: CPT 236*)

**CPT 208 SPECIAL TOPICS IN COMPUTER TECHNOLOGY 3.0 Credits**

This course focuses on changes in computer technology. Emphasis will be placed on cutting-edge technologies in networking or information systems, and the course will cover material of special interest to the student. (*Prerequisite: department chair approval*)

**CPT 209 COMPUTER SYSTEMS MANAGEMENT 3.0 Credits**

This course examines the methods and procedures used in maintaining microcomputer systems. Topics include hardware and software installation, configuration, operations, and troubleshooting. This course also serves as foundational training in supporting the MS Windows NT operating system. Students learn to boot up, install, configure and trouble shoot the Windows NT operating system. Instruction includes how to manage system policies; file systems, how to configure protocols; NT networking services; remote access; implementing network clients; file synchronization and directory replication. (*Prerequisites: CPT 101, CPT 170 or IST 201*)

**CPT 210 COMPUTER RESOURCE MANAGEMENT 3.0 Credits**

This course examines the interaction of people, systems and computers. Strategic management issues unique to the information technology environment are discussed. (*Prerequisites: CPT 104, CPT 113 or IST 220, IST 225*)

**CPT 215 COBOL PROGRAMMING II 3.0 Credits**

This course emphasizes file maintenance and tables using advanced concepts in COBOL (*Prerequisite: CPT 115*)

**CPT 220 E-COMMERCE 3.0 Credits**

This course is a study of fundamental computer and business concepts applied to the world of e-commerce.

**CPT 236 INTRODUCTION TO JAVA PROGRAMMING 3.0 Credits**

This course is an introduction to Java programming. Topics will cover Java syntax and classes for use in the development of Java applications and applets. (*Prerequisites: RDG 100, MAT 102*)

**CPT 237 ADVANCED JAVA PROGRAMMING 3.0 Credits**

This course is a study of advanced topics of the Java Programming language by building on a basic knowledge of the Java language. Topics covered will include multi-threading, Swing classes, Swing events models, advanced layout managers, the JavaBeans components model, network programming and server-side programming. (*Prerequisite: CPT 244*)

**CPT 240 INTERNET PROGRAMMING WITH DATABASES 3.0 Credits**

This course is a study of the implementation of dynamic web pages focusing on the development of web sites that interact with databases utilizing current server-side technologies along with the databases to deliver dynamic content to client browser. (*Prerequisite: CPT 185, IST 225*)

**CPT 242 DATABASE****3.0 Credits**

This course introduces data base models and the fundamentals of data base design. Topics include data base structure, data base processing, and application programs which assess a data base. *(Prerequisite: CPT 104)*

**CPT 244 DATA STRUCTURES****3.0 Credits**

This course examines data structures widely used in programming. Topics include linked lists, stacks, queues, trees, and sorting and searching techniques. *(Prerequisite: CPT 236)*

**CPT 246 INTRODUCTION TO XML****3.0 Credits**

This course is a introduction to the Extensible Markup Language (XML) and will examine how XML can be used to describe data in a structured manner for use on the world wide web. *(Prerequisites: IST 225, CPT 242)*

**CPT 247 UNIX OPERATING SYSTEM****3.0 Credits**

This course is a study of basic UNIX commands including the vi editor, file structures, and shell programming. *(Prerequisite: CPT 104)*

**CPT 248 UNIX ADMINISTRATION****3.0 Credits**

This course is a study of UNIX system operation procedures, administration, and networking. *(Prerequisite: CPT 247)*

**CPT 250 JAVA CERTIFICATION TOPICS****3.0 Credits**

This course examines topics that are anticipated to be on the Java programmer certification test and is intended for students seeking programming certification for the Java language. *(Prerequisite: CPT 237)*

**CPT 255 OPERATING SYSTEM FUNDAMENTALS****3.0 Credits**

This course examines popular operating systems of several different types of computers. Topics include command languages, utility programs, and screen design. This course also examines designing, implementing and supporting the Windows NT Server network operating system in a multi-domain enterprise environment. *(Prerequisite: CPT 209)*

**CPT 257 OPERATING SYSTEMS****3.0 Credits**

This course examines the theory of operating systems and how the operating system theory is implemented in current operating systems. *(Prerequisite: CPT 104)*

**CPT 260 FUNDAMENTALS OF OPERATING SYSTEMS AND WEB SERVERS****3.0 Credits**

This course is a study of operating techniques needed for setting up and maintaining web server. *(Prerequisites: CPT 104, IST 225, CPT 247)*

**CPT 262 ADVANCED WEB PAGE PUBLISHING****3.0 Credits**

This course is a study of advanced techniques in web page design and implementation. The course focuses on designing website interfaces for effective communication, navigation, visibility and accessibility. *(Prerequisite: IST 225, CPT 290)*

**CPT 263 ADVANCED MULTIMEDIA FOR WEB PAGES****3.0 Credits**

This course is a study of advanced topics in graphics, audio, and video elements to be used in the design and implementation of effective web pages. Animation, graphics editing, and graphics based interactivity are applied to the design of website interfaces. *(Prerequisites: CPT 290, IST 225)*

**CPT 264 SYSTEMS AND PROCEDURES****3.0 Credits**

This course covers the techniques of system analysis, design, development, and implementation. *(Prerequisite: CPT 236)*

**CPT 267 TECHNICAL SUPPORT CONCEPTS****3.0 Credits**

This course is a study of technical support/help desk concepts and techniques for supporting computers and computer services. *(Prerequisites: CPT 172, CPT 174, CPT 179, CPT 168, CPT 113 or IST 220)*

- CPT 268 COMPUTER END-USER SUPPORT 3.0 Credits**  
This course prepares students to train and support end-users. Topics include end-user support functions, developing training modules, and strategies to provide ongoing technical support. Emphasis is on solving problems with users (needs analysis, troubleshooting, and interaction with users). *(Prerequisite: CPT 267)*
- CPT 272 ADVANCED MICROCOMPUTER DATA BASE 3.0 Credits**  
This course emphasizes accessing data bases using advanced concepts in microcomputer data base application software. Techniques include SQL, application generators, and data base programming to generate various applications. *(Prerequisite: CPT 172)*
- CPT 275 COMPUTER TECHNOLOGY SENIOR PROJECT 3.0 Credits**  
This course includes the design, development, testing, and implementation of an instructor approved project. *(Prerequisites: CPT 104, CPT 113 or IST 220, IST 225)*
- CPT 279 ADVANCED MICROCOMPUTER WORD PROCESSING 3.0 Credits**  
This course emphasizes complex applications of word processing software for the microcomputer using advanced concepts. *(Prerequisite: CPT 179)*
- CPT 282 INFORMATION SYSTEMS SECURITY 3.0 Credits**  
This course is a study of the protection of information and equipment in computer systems. Topics include all aspects of systems protection, including physical security, hardware, software and communications security. Addresses technical, legal and ethical issues. *(Prerequisites: CPT 104, CPT 236, IST 225)*
- CPT 290 MICROCOMPUTER MULTIMEDIA CONCEPTS AND APPLICATIONS 3.0 Credits**  
This course will cover introductory microcomputer multimedia concepts and applications. The course will utilize text, graphics, animation, sound, video, and various multimedia applications in the design, development, and creation of multimedia presentations. Graphics and audio files will be prepared for websites. *(Prerequisite: CPT 104)*
- CPT 293 ADVANCED MICROCOMPUTER MULTIMEDIA APPLICATIONS 3.0 Credits**  
This course covers advanced topics for microcomputer multimedia development utilizing advanced techniques in the use of text, graphics, animation, sound, video, and compact disc. Script language programming and its use in the development of interactive multimedia presentations are included. *(Prerequisite: CPT 290)*
- CRJ 101 INTRODUCTION TO CRIMINAL JUSTICE 3.0 Credits**  
This course includes an overview of the functions and responsibilities of agencies involved in the administration of justice including police organizations, court systems, correctional systems, and juvenile justice agencies. *(Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038)*
- CRJ 115 CRIMINAL LAW I 3.0 Credits**  
This course covers the development of criminal law in America. The basic elements of specific criminal offenses, criminal defenses, and various legal principles upon which criminal law is established are reviewed. *(Prerequisites: CRJ 101, ENG 100 or ESL 110)*
- CRJ 125 CRIMINOLOGY 3.0 Credits**  
This course is a study of the various theories of criminal causation and control, the identification of criminal typologies, and the reaction of society to crime and criminals. *(Prerequisites: CRJ 101, ENG 100 or ESL 110)*
- CRJ 130 POLICE ADMINISTRATION 3.0 Credits**  
This course is a study of the organization, administration, and management of law enforcement agencies. Students are introduced to the principles of organization and management and to

concepts such as organizational behavior, planning and research, budgeting, selection and training of personnel, and coordination of services. (*Prerequisites: CRJ 101, ENG 100 or ESL 110*)

**CRJ 210 THE JUVENILE AND THE LAW 3.0 Credits**

This course is a study of the juvenile justice system. This process is examined from initial custody to disposition, both from a historical and modern perspective. (*Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038*)

**CRJ 220 THE JUDICIAL PROCESS 3.0 Credits**

This course includes an overview of the law-making function of the courts, the growth of common law, the structure and organization of the courts, court processes and procedures involved in criminal and civil cases, and the question of reform for the administration of justice. (*Prerequisites: CRJ 101, ENG 100 or ESL 110*)

**CRJ 230 CRIMINAL INVESTIGATION I 3.0 Credits**

This course is a study of the fundamentals of interviewing witnesses and interrogating suspects. Different methods of conducting crime scene searches and methods used in investigating various crimes are studied in the course. (*Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038*)

**CRJ 236 CRIMINAL EVIDENCE 3.0 Credits**

This course is a study of the established rules of evidence from arrest to release in the administration of criminal justice. (*Prerequisites: CRJ 101, ENG 100 or ESL 110*)

**CRJ 242 CORRECTIONAL SYSTEMS 3.0 Credits**

This course is an introduction to aspects of the correctional function in criminal justice, including organization, process, procedure, and clients incarcerated and on conditional release. (*Prerequisites: CRJ 101, ENG 100 or ESL 110*)

**CRJ 244 PROBATION, PARDON AND PAROLE 3.0 Credits**

This course is a study of the development, organization, operation, and results of systems of probation and parole as substitutes for incarceration. The philosophy and methods of treatment of offenders and the operational problems and activities of the probation/parole officer are studied in the course. (*Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038*)

**CRJ 246 SPECIAL PROBLEMS IN CRIMINAL JUSTICE 3.0 Credits**

In this course issues are examined within the criminal justice community/profession which are of special concern to students and practitioners because of such elements as timeliness, local concern, legalistics, or other dynamic factors of such issues. (*Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038*)

**CRJ 250 CRIMINAL JUSTICE INTERNSHIP I 3.0 Credits**

This course includes practical experience in a criminal justice or private security setting. (*Prerequisites: CRJ 101, ENG 100 or ESL 110; two other CRJ courses; 30 credit hours toward degree; approval of CRJ Program Director*)

**CWE 111 COOPERATIVE WORK EXPERIENCE I 1.0 Credit**

This course includes cooperative work experience in an approved setting.

**CWE 112 COOPERATIVE WORK EXPERIENCE I 2.0 Credits**

This course includes cooperative work experience in an approved setting.

**CWE 122 COOPERATIVE WORK EXPERIENCE II 2.0 Credits**

This course includes cooperative work experience in an approved setting.

**DAT 113 DENTAL MATERIALS 4.0 Credits**

This course is a study of physical and chemical properties of matter and identification, characteristics, and manipulation of dental materials. (*Prerequisite: acceptance into the Dental Assisting program*)

- DAT 115 ETHICS AND PROFESSIONALISM 1.0 Credit**  
This course introduces a cursory history of dental assisting, professional associations, scope of service in dentistry, and ethical, legal and professional considerations. The state dental practice act is reviewed. *(Prerequisite: acceptance into the Dental Assisting program)*
- DAT 118 DENTAL MORPHOLOGY 2.0 Credits**  
This course emphasizes the development, eruption, and individual characteristics of each tooth and surrounding structures. This course also covers the embryology and histology of the head and neck. *(Prerequisite: acceptance into the Dental Assisting program)*
- DAT 121 DENTAL HEALTH EDUCATION 2.0 Credits**  
This course defines the responsibilities of the dental assistant in individual and community dental health education with emphasis on the etiology of dental disease, methods for prevention, and principles of nutrition in relationship to oral health and preventive dentistry. *(Prerequisites: DAT 113, DAT 118, DAT 154) (Corequisite: DAT 174)*
- DAT 122 DENTAL OFFICE MANAGEMENT 2.0 Credits**  
This course provides a study of the business aspect of a dental office. It includes exposure to dental practice management software. *(Prerequisite: acceptance into the Dental Assisting program)*
- DAT 123 ORAL MEDICINE/ORAL BIOLOGY 3.0 Credits**  
This course presents a basic study of oral pathology, pharmacology, nutrition, and common emergencies as related to the role of the dental assistant. *(Prerequisites: BIO 110, DAT 118) (Corequisite: DAT 174)*
- DAT 127 DENTAL RADIOGRAPHY 4.0 Credits**  
This course provides the fundamental background and theory for the safe and effective use of x-radiation in dentistry. It encompasses the history of x-rays, production and uses of radiation, radiographic film, exposure factors, interpretation of radiographs and radiation hygiene. *(Prerequisites: BIO 110, DAT 118, DAT 154)*
- DAT 154 CLINICAL PROCEDURES I 4.0 Credits**  
This course includes preparation to assist a dentist efficiently in four-handed dentistry. Emphasis is on the names and functions of all dental instruments, the principles involved in their use, and the assistants' role in dental instrumentation. *(Prerequisite: acceptance into the Dental Assisting program)*
- DAT 174 OFFICE ROTATIONS 4.0 Credits**  
This is an introductory course to a general office with emphasis placed on chairside assisting and office management. *(Prerequisites: DAT 113, DAT 154) (Corequisites: DAT 121, DAT 127, DAT 123, DAT 183)*
- DAT 177 DENTAL OFFICE EXPERIENCE 7.0 Credits**  
This course consists of practice in the dental office or clinic, with rotation of assignments to encompass experiences in office management and clinical experience in all areas of dentistry. *(Prerequisites: DAT 127, DAT 174)*
- DAT 183 SPECIALTY FUNCTIONS 3.0 Credits**  
This course is an introduction to dental specialties, the refinement, the roles served by assistants in the dental specialties, and the expanded legal functions for qualified assistants. *(Prerequisites: DAT 113, DAT 154) (Corequisites: DAT 174, DAT 127)*
- DHG 115 MEDICAL AND DENTAL EMERGENCIES 2.0 Credits**  
This course provides a study of the various medical/dental emergencies and appropriate treatment measures. Additionally, it includes managing medically compromised dental patients, and provides for CPR certification. *(Prerequisite: Admission to DHG Phase II)*

- DHG 121 DENTAL RADIOGRAPHY** **3.0 Credits**  
 This course provides the application of the principles of radiology with emphasis on exposing, processing, mounting, evaluating, and interpreting dental radiographs. Radiation safety is stressed. *(Prerequisite: DHG 151)*
- DHG 125 TOOTH MORPHOLOGY AND HISTOLOGY** **2.0 Credits**  
 This course covers the embryogenesis and histology of the head and neck structures with primary emphasis on the oral cavity. The formation, eruption patterns, and morphology of primary and permanent dentitions are studied. *(Prerequisite: Admission to DHG Phase II)*
- DHG 140 GENERAL AND ORAL PATHOLOGY** **2.0 Credits**  
 This course provides a correlation of basic pathologic principles to disease processes in the oral cavity. The role of the dental hygienist in early disease detection is emphasized. Diagnosis, treatment and prognosis of diseases affecting the head and neck are discussed. *(Prerequisite: DHG 175)*
- DHG 141 PERIODONTOLOGY** **2.0 Credits**  
 This course presents a study of the principles, etiologies, classifications and treatments of periodontal disease with emphasis on the role of the dental hygienist. *(Prerequisites: DHG 151)*
- DHG 143 DENTAL PHARMACOLOGY** **2.0 Credits**  
 This course provides a study of drugs used in dentistry. Emphasis is placed on the physical and chemical properties of the drugs, dosages and therapeutic effects, methods of administration, and indications/contraindications for the use of the drug. A study of dental anesthetics is included. *(Prerequisite: DHG 151)*
- DHG 151 DENTAL HYGIENE PRINCIPLES** **5.0 Credits**  
 This course is a study of the principles of infection control and hazardous waste communication; instrumentation, and instrument design; operator and patient positioning; operation of basic dental equipment; patient evaluation and medical history review. *(Prerequisite: Admission to DHG Phase II)*
- DHG 161 CLINICAL DHG I FOUNDATIONS** **4.0 Credits**  
 This course completes the basic instrumentation instruction; introduces polishing and anti-carries therapies; presents periodontal health assessment and introduces the clinical setting for application of dental hygiene skills for patient care. *(Prerequisite: DHG 151)*
- DHG 175 CLINICAL DENTAL HYGIENE II** **5.0 Credits**  
 This course provides for the continued development of the skills necessary to perform dental hygiene care. Emphasis is placed on total patient care and treatment planning. Introduction to dental hygiene supportive functions is presented. *(Prerequisite: DHG 161)*
- DHG 230 PUBLIC HEALTH DENTISTRY** **3.0 Credits**  
 This course provides a study of oral health and the prevention of oral disease in a community. Emphasis is on assessment of community groups and dental health needs, planning, implementation, and evaluation of community programs. *(Prerequisite: DHG 175)*
- DHG 231 DENTAL HEALTH EDUCATION** **1.0 Credit**  
 This course provides an opportunity for the dental hygiene student to present and apply dental health information to various community groups and organizations. Project implementation and evaluation are included. Public speaking concepts will be addressed in this course. *(Prerequisite: DHG 175)*
- DHG 239 DENTAL ASSISTING FOR DHG's** **2.0 Credits**  
 This course introduces the dental assisting role and responsibilities. Emphasis is on four-handed dentistry, the use and manipulations of dental materials, and office management. *(Prerequisite: acceptance into the Dental Hygiene program)*
- DHG 241 INTEGRATED DENTAL HYGIENE I** **1.0 Credit**  
 This course provides for the integration of the basic and dental hygiene sciences with current

concepts of clinical dental hygiene practice. Client case studies will be used to enhance clinical decision making skills. (Prerequisite: DHG 151)

**DHG 242 INTEGRATED DENTAL HYGIENE II** **1.0 Credit**

This course provides for the integration of the basic and dental sciences with current dental hygiene concepts. Emphasis is placed on ethical/legal aspects of dental hygiene practice and practice management techniques. Topics dealing with evidence based practices, dental hygiene research, and transition to non-academic clinical settings will be studied. (Prerequisite: DHG 175)

**DHG 243 NUTRITION AND DENTAL HEALTH** **2.0 Credits**

This course provides a study of nutrients, their nature, source and utilization. Emphasis is placed on the relationship between diet and oral health. Oral manifestations of nutritional deficiencies are also studied. (Prerequisite: DHG 175)

**DHG 255 CLINICAL DENTAL HYGIENE III** **5.0 Credits**

This course provides for the development of proficiency in the clinical dental hygiene setting with emphasis on the implementation of treatment plans to meet the individual patient's oral health needs. Also included in this course are concepts and experiences with geriatric patients, introduction to recent technological advances for periodontal debridement, and pain and anxiety control for dental hygiene procedures via infiltration anesthesia and nitrous oxide sedation monitoring. (Prerequisite: DHG 175)

**DHG 265 CLINICAL DENTAL HYGIENE IV** **5.0 Credits**

This course permits refinement of clinical techniques and skills, technology and current procedural practices of the dental hygienist with emphasis on self-evaluation and quality assurance. Dental ethics and jurisprudence are addressed in this course. (Prerequisite: DHG 175)

**ECD 101 INTRODUCTION TO EARLY CHILDHOOD** **3.0 Credits**

This course includes an overview of growth and development, developmentally appropriate curriculum, positive guidance techniques, regulations, health, safety, and nutrition standards in early care and education. Professionalism, family/cultural values and practical applications based on historical and theoretical models in early care and education are highlighted in this course.

**ECD 102 GROWTH AND DEVELOPMENT I** **3.0 Credits**

This course is an extensive study of philosophies and theories of growth and development of infants/toddlers. Focus is on "total" development of the child, with emphasis on physical, social, emotional, cognitive, and nutritional areas. Developmental tasks and appropriate activities are explored in the course. (Prerequisites: RDG 100, ENG 100)

**ECD 105 GUIDANCE-CLASSROOM MANAGEMENT** **3.0 Credits**

This course is an overview of developmentally appropriate, effective guidance and classroom management techniques for the teacher of young children. A positive pro-active approach is stressed in the course. (Prerequisites: RDG 100, ENG 100)

**ECD 107 EXCEPTIONAL CHILDREN** **3.0 Credits**

This course includes an overview of special needs children and their families. Emphasis is on prevalence of disorders, treatment modalities, community resources serving exceptional children, the teacher's role in mainstreaming and early identification, and on federal legislation affecting exceptional children. (Prerequisites: ECD 102, ENG 100, RDG 100)

**ECD 108 FAMILY AND COMMUNITY RELATIONS** **3.0 Credits**

This course is an overview of techniques and materials for promoting effective family/program partnerships to foster positive child development. Emphasis is on availability and accessibility of community resources and on developing appropriate communication skills. (Prerequisites: ECD 101, ENG 101)

**ECD 109 ADMINISTRATION AND SUPERVISION** **3.0 Credits**

This course is a study of the role and responsibilities of an early childhood administrator. Special focus is on program monetary matters, space management, curriculum, health and food services, and relations among the public, staff and parents. (Prerequisites: ECD 101, ENG 101)

**ECD 131 LANGUAGE ARTS****3.0 Credits**

This course is a study of methods and materials in age-appropriate language experiences. Opportunities are provided to develop listening, speaking, prereading and prewriting skills through planning, implementation, and evaluation of media, methods, techniques and equipment. Methods of selection, evaluation, and presentation of children's literature are included. *(Prerequisites: ENG 100, RDG 100)*

**ECD 132 CREATIVE EXPERIENCES****3.0 Credits**

In this course the importance of creativity and independence in creative expression are stressed. A variety of age-appropriate media, methods, techniques and equipment are utilized. Students plan, implement, and evaluate instructional activities. *(Prerequisites: ENG 100, RDG 100)*

**ECD 133 SCIENCE AND MATH CONCEPTS****3.0 Credits**

This course includes an overview of pre-number and science concepts developmentally-appropriate for young children. Emphasis is on the planning, implementation, and evaluation of developmentally-appropriate activities utilizing a variety of methods and materials. *(Prerequisites: ENG 100, RDG 100)*

**ECD 135 HEALTH, SAFETY AND NUTRITION****3.0 Credits**

This course covers a review of health/safety practices recommended for child care and includes information on common diseases and health problems. Certification preparation is provided in pediatric safety, CPR, and first aid. Guidelines and information on nutrition and developmentally-appropriate activities are also studied in the course. *(Prerequisites: ECD 100, ENG 100)*

**ECD 138 MOVEMENT AND MUSIC FOR CHILDREN****3.0 Credits**

This course is a study of criteria for selecting and implementing appropriate experiences to support the physical and musical development of young children. Emphasis is on the selection of materials, equipment, and related design of indoor/outdoor environments. *(Prerequisites: ENG 100, RDG 100)*

**ECD 200 CURRICULUM ISSUES IN INFANT AND TODDLER DEVELOPMENT****3.0 Credits**

This course is a study of infant and toddler care. Emphasis is on brain development and its implications for caring for infants and toddlers. Planning and teaching strategies as they relate to child development, curriculum and environment are included in the course. *(Prerequisites: ECD 101, ECD 102)*

**ECD 201 PRINCIPLES OF ETHICS AND LEADERSHIP IN EARLY CARE AND EDUCATION****3.0 Credits**

This course includes an overview of historical views on leadership and issues and challenges of leadership in early care and education. Emphasis is on current trends and issues. This course also reviews ethical principles as they relate to children, families, colleagues, and the community and society. *(Prerequisites: ECD 101, ENG 101)*

**ECD 203 GROWTH AND DEVELOPMENT II****3.0 Credits**

This course is an in-depth study of preschool children growing and developing in today's world. Focus is on "total" development of the child with emphasis on physical, social, emotional, cognitive, and nutritional areas of development. Developmental tasks and appropriate activities are explored in the course. *(Prerequisites: ECD 102, ENG 100, RDG 100)*

**ECD 205 SOCIALIZATION AND GROUP CARE OF INFANTS AND TODDLERS****3.0 Credits**

This course is the study of the socialization and group care of infants and toddlers. Emphasis is on guidance and management, understanding behavior, temperament, the importance of routines, primary care and continuity of care, and examining the elements of quality environments. *(Prerequisites: ECD 101, ECD 102)*

- ECD 207 INCLUSIVE CARE OF INFANTS AND TODDLERS 3.0 Credits**  
This course provides an overview of the field of infants and toddlers with special needs. Emphasis will be placed on instructional strategies, adaptations, environment, inclusion, etiology, federal legislation, family partnership, multicultural considerations, and optimal development. *(Prerequisites: ECD 101, ECD 102)*
- ECD 210 EARLY CHILDHOOD INTERVENTION 3.0 Credits**  
This course provides a study of a variety of intervention procedures reflecting various models, including child centered, child directed, behavioral, cognitive, and social approaches to instruction. *(Prerequisites: ENG 100 or ESL 110 and RDG 100 or ESL 100)*
- ECD 237 METHODS AND MATERIALS 3.0 Credits**  
This course includes an overview of developmentally-appropriate methods and materials for planning, and evaluating environments. Emphasis is on integrating divergent activities in each curriculum area. *(Prerequisites: ENG 101, 18 hours of ECD)*
- ECD 243 SUPERVISED FIELD EXPERIENCE I 3.0 Credits**  
This course includes emphasis on planning, implementing, and evaluating scheduled programs, age appropriate methods, materials, activities, and environments of early childhood principles and practices. *(Prerequisite: 30 semester hours and permission of Program Director)*
- ECD 251 SUPERVISED FIELD EXPERIENCES IN INFANTS/TODDLERS ENVIRONMENT 3.0 Credits**  
This course is the study of planning, implementing, and evaluating scheduled programs, age-appropriate methods, materials, activities and environments of infants and toddlers. *(Prerequisites: ECD 200, ECD 205, ECD 207)*
- ECD 252 DIVERSITY ISSUES IN EARLY CARE AND EDUCATION 3.0 Credits**  
This course meets the growing need for students in early care and education to learning how to interact with people who are different from them. It also allows students to examine and appreciate the differences that exist because of diversity from race, language, ethnicity, age and socio-economic levels. *(Prerequisites: ECD 101, ENG 101)*
- ECD 257 SUPERVISED FIELD EXPERIENCES IN EARLY CHILDHOOD SPECIAL EDUCATION 3.0 Credits**  
This course includes a supervised field experience in a team environment by certified/licensed professionals who monitor and evaluate students' skills in order to work with children who are developmentally delayed. *(Prerequisites: Permission of Program Director)*
- ECD 259 BEHAVIOR MANAGEMENT FOR SPECIAL NEEDS 3.0 Credits**  
This course is an overview of understanding and managing challenging behavior in school and child care settings. It includes common causes of problem behaviors and treatment for attention disorders, making changes in the classroom, and administrative steps to help children with challenging behaviors.. *(Prerequisites: ECD 102)*
- ECD 260 METHODS OF TEACHING SPECIAL NEEDS STUDENTS 3.0 Credits**  
This course focuses on developmentally appropriate methods for teaching special needs students. Emphasis is on planning, implementation, and evaluation of developmentally appropriate activities utilizing a variety of methods and materials. *(Prerequisites: ECD 102, ECD 107)*
- ECD 270 FOUNDATIONS IN EARLY CARE AND EDUCATION 3.0 Credits**  
This course includes an overview of the history, theories, program models, and trends in Early Care and Education. Teaching as a profession will be explored with an emphasis on characteristics of the early childhood teacher. *(Prerequisite: ENG 101 or ENG 102)*
- ECE 101 ELECTRICAL AND ELECTRONICS ENGINEERING 3.0 Credits**  
This course is a study of entertainment, communication, and computer technology.

- ECE 102 INSTRUMENT CONTROL** **3.0 Credits**  
This course is a study of automated instrument control and data acquisition.
- ECE 205 ELECTRICAL AND COMPUTER LAB I** **3.0 Credits**  
This course covers basic test and measurement instrumentation, basic electrical components and circuits, and technical writing using word processing. (*Prerequisites: ECE 211, ECE 221*)
- ECE 211 INTRODUCTION TO COMPUTER ENGINEERING I** **3.0 Credits**  
This course covers digital systems and employs basic mathematical techniques used in the design of conventional and sequential systems. (*Prerequisite: MAT 111*)
- ECE 212 INTRODUCTION TO COMPUTER ENGINEERING II** **3.0 Credits**  
This course applies the overall concepts of microprocessor orientation and architecture and fundamental concepts of assembly-level programming. (*Prerequisites: ECE 211, EGR 281*)
- ECE 221 INTRODUCTION TO ELECTRICAL ENGINEERING I** **3.0 Credits**  
This course introduces the basic concepts of circuit analysis, applying fundamental laws and principles, resistor circuits, and first and second-order linear circuits in the time domain using calculus-based solutions where applicable. (*Prerequisites: ECE 102, MAT 141*)
- ECE 222 INTRODUCTION TO ELECTRICAL ENGINEERING II** **3.0 Credits**  
This course covers sinusoidal steady-state analysis of AC circuits, complex frequency analysis, Fourier series analysis and Laplace transforms. (*Prerequisite: ECE 221*)
- ECE 240 INTRODUCTION TO SOFTWARE ENGINEERING** **3.0 Credits**  
This course covers fundamentals of software design and development, software implementation strategies, object-oriented design techniques, and ethics in software development. (*Prerequisite: EGR 283*)
- ECE 245 OBJECT-ORIENTED PROGRAMMING TECHNIQUES** **3.0 Credits**  
This course is a study of advanced object-oriented concepts and techniques, multiple inheritance, memory management, operator overloading, polymorphism, and performance issues. (*Prerequisite: EGR 283*)
- ECO 201 ECONOMIC CONCEPTS** **3.0 Credits**  
This course is a study of micro- and macro-economic concepts and selected economic problems. Topics include the economizing problem and opportunity cost, operation of product and factor markets and the mechanics of pricing, production costs and profit maximizing behavior of business firms, short run instability and long run economics growth, fiscal policy and budget deficits, AD-AS Model, money and monetary policy, and international trade. (*Prerequisites: ENG 032 or ESL 038, RDG 100 or ESL 100, MAT 102*)
- ECO 210 MACROECONOMICS** **3.0 Credits**  
This course includes the study of fundamental principles and policies of a modern economy to include markets and prices, national income accounting, cycles, employment theory and fiscal policy, banking and monetary controls, and the government's role in economic decisions and growth. (*Prerequisites: RDG 100 or ESL 100, MAT 102 or MAT 155*)
- ECO 211 MICROECONOMICS** **3.0 Credits**  
This course includes the study of the behavior of households and firms, including supply and demand, elasticity, price/input in different market structures, pricing of resources, regulations, and comparative advantage and trade. (*Prerequisite: ECO 210 with a minimum grade of "C"*)
- EDU 201 CLASSROOM INQUIRY WITH TECHNOLOGY** **3.0 Credits**  
This course explores teaching as a data driven, reflective practice. The students will use research tools to understand teaching and learning with a classroom context and reflect on the relationship among and between technology, theory, student learning, and instructional practices. This course includes a practicum requirement of 30 hours service/observation in public schools as designated by the instructor. (*Prerequisite: CPT 101 or CPT 170*)

**EDU 230 SCHOOLS IN COMMUNITIES****4.0 Credits**

This course provides students with a basic understanding of the social, political, and historical aspects of diverse educational institutions in American culture with an emphasis on families, schools, and communities. Within the parameters of an approved articulation agreement, this course may transfer to an accredited Education program at a comprehensive four-year college or university. *(Prerequisites: ENG 100 or ESL 110, RDG 100 or ESL 100)*

**EDU 241 LEARNERS AND DIVERSITY****4.0 Credits**

This course is a study of lifespan development and learning with an emphasis on individual and group diversity. The students are required to participate in a field experience. This course transfers to USC College of Education. This course includes a practicum requirement of 30 hours service/observation in public schools as designated by the instructor. *(Prerequisites: ENG 100 or ESL 110, RDG 100 or ESL 100)*

**EEM 117 AC/DC CIRCUITS I****4.0 Credits**

This course is a study of direct and alternating theory, Ohm's Law, and series, parallel and combination circuits. Circuits are constructed and tested. *(Prerequisite: RDG 032 or equivalent placement test scores)*

**EEM 118 AC/DC CIRCUITS II****4.0 Credits**

This course is a continuation of the study of direct and alternating current theory to include circuit analysis using mathematics and verified with electrical measurements. *(Prerequisite: RDG 032 or equivalent placement test scores)*

**EEM 140 NATIONAL ELECTRICAL CODE****3.0 Credits**

This course is a study of the national electrical code and is based on the latest codes as published by the National Fire Protection Association (NFPA). *(Prerequisite: RDG 032 or equivalent placement test scores)*

**EEM 141 RESIDENTIAL/COMMERCIAL CODES****3.0 Credits**

This course covers national electrical code (NEC), including a study in, and application of, the NEC and city and county electrical ordinances as pertaining to residential and commercial wiring. *(Prerequisite: EEM 140)*

**EEM 142 COMMERCIAL/INDUSTRIAL CODES****3.0 Credits**

This course covers national electrical code (NEC), including a study in, and application of, the NEC and city and county electrical ordinances as pertaining to commercial and industrial wiring. *(Prerequisite: EEM 141)*

**EEM 151 MOTOR CONTROLS I****4.0 Credits**

This course is an introduction to motor controls, including a study of the various control devices and wiring used in industrial processes. *(Prerequisite: EEM 165)*

**EEM 165 RESIDENTIAL/COMMERCIAL WIRING****4.0 Credits**

This course is a study of wiring methods and practices used in residential and commercial applications. *(Prerequisites: EEM 117, EEM 118)*

**EEM 166 COMMERCIAL/INDUSTRIAL WIRING****4.0 Credits**

This course is a study of wiring methods and practices in commercial and industrial applications. *(Prerequisite: EEM 165)*

**EEM 172 ELECTRICAL PRINT READING****4.0 Credits**

This course is a study of electrical prints as they pertain to layout, planning, and installation of wiring systems in residential, commercial and/or industrial complexes. *(Prerequisite: RDG 032 or equivalent placement test scores)*

**EEM 201 ELECTRONIC DEVICES I****3.0 Credits**

This course is a study of the fundamental principles of common electronic devices and circuits. Emphasis is placed on solid-state principles and applications. *(Prerequisites: EEM 117, EEM 118)*

- EEM 243 INTRODUCTION TO COMPUTER SERVICING** **3.0 Credits**  
 This course is an introduction to the fundamental operation and capabilities of peripheral devices. Topics such as input/output standards and interfacing to minicomputers are covered. *(Prerequisites: RDG 032, MAT 100 or equivalent placement test scores)*
- EEM 251 PROGRAMMABLE CONTROLLERS** **3.0 Credits**  
 This course is an introduction to programmable control systems with emphasis on basic programming techniques. A variety of input/output devices and their applications are covered. *(Prerequisite: EEM 151)*
- EET 101 BASIC ELECTRONICS** **2.0 Credits**  
 This course is a survey of electrical and electronic circuits and measurement methods for non-electronics engineering technology students. Circuits are constructed and tested. *(Prerequisites: ENG 100, MAT 100, CPT 101 or CPT 170)*
- EET 103 INTRODUCTION TO ELECTRONICS** **3.0 Credits**  
 This course is an introduction to simple linear circuits, voltage, current, resistance, ohm's law, power, AC versus DC, linear solutions to diode, transistor circuits, ideal operational amplifiers and essential terminology. *(Prerequisites: ENG 100, MAT 100)*
- EET 113 ELECTRICAL CIRCUITS I** **4.0 Credits**  
 This course is a study of direct and alternating currents, covering resistance and impedance in series, parallel, and series-parallel circuits using Ohm's Law, Kirchoff's laws, and basic circuit theorems. Circuits are analyzed using mathematics and verified using electrical instruments. *(Prerequisite: MAT 102)*
- EET 114 ELECTRICAL CIRCUITS II** **4.0 Credits**  
 This course is a continuation of electrical circuits, including advanced network theorems. Circuits are analyzed using mathematics and verified using electrical instruments. *(Prerequisites: EET 113, MAT 110)*
- EET 116 POLYMER ELECTROLYTE MEMBRANE FUEL CELL TECHNOLOGY** **3.0 Credits**  
 Topics in this course include basic principles of PEM fuel cells, electrolysis, & hydrocarbon sources, pyrolysis, catalysts, porous electrodes, cooling problems, flow field patterns, emissions, bipolar plate structure, fuel cell efficiency, power calculations, topology, structure of PEM fuel cells. *(Prerequisite: MAT 101)*
- EET 141 ELECTRONIC CIRCUITS** **4.0 Credits**  
 This course is a study of electronic circuits using discrete and integrated devices, including analysis, construction, testing and troubleshooting. *(Prerequisites: EET 113, EGR 110, MAT 110)*
- EET 210 DIGITAL INTEGRATED CIRCUITS** **4.0 Credits**  
 This course is a study of digital integrated circuits, including multiplexers, demultiplexers, buffers, decoders, encoders, converters, memory devices, and programmable logic devices. Circuits are modeled, constructed and tested.
- EET 212 INDUSTRIAL ROBOTICS** **3.0 Credits**  
 This course is a study of the systems design, modeling and simulation, signals and control systems, AI, sensor integration, vision systems, robot programming, and principles of mechatronics. *(Prerequisite: ELT 208)*
- EET 218 ELECTRICAL POWER SYSTEMS** **4.0 Credits**  
 This course is a study of power generation, transmission, transformers, distribution, and motor controls. *(Prerequisite: EET 113)*
- EET 219 THREE-PHASE POWER SYSTEMS** **3.0 Credits**  
 This course includes basic principles of sinusoid steady state, impedance concepts, instantaneous power, RMS, average power, power factor, maximum power transfer, transformers, balanced three-phase y and delta connections and power measurements. *(Prerequisite: EET 113)*

- EET 223 STATIONARY AND AUXILIARY POWER SOURCES 3.0 Credits**  
This course includes basic principles of hydrogen fuel cells, types of fuel cells, gas supplies and cooling, PEM systems, direct methanol fuel cells, fueling problems, electrolysis, hydrogen storage, loading, auxiliary power systems, and systems configuration. (*Prerequisite: EET 113*)
- EET 224 FUEL CELL SUBSYSTEMS 3.0 Credits**  
This course includes basic principles of hydrogen fuel cell systems, gas supplies and cooling, compressors, turbines, turbochargers, ejectors, fans and blowers, and membrane/diaphragm pumps and the integration into the system. (*Prerequisites: EET 113, EET 116*)
- EET 227 ELECTRICAL MACHINERY 3.0 Credits**  
This course is a study of AC and DC electro-mechanical energy conversion devices, theory, applications and control. Devices are tested and verified using electrical instruments. (*Prerequisite: EET 113*)
- EET 231 INDUSTRIAL ELECTRONICS 4.0 Credits**  
This course is a survey of topics related to industrial application of electronic devices and circuits. The course covers switches, DC and AC motor controls, sensors and transducers, open and closed loop control circuits and voltage converting interfaces. Circuits are constructed and tested. (*Prerequisite: EET 141*)
- EET 234 PRINCIPLES OF MECHATRONICS 3.0 Credits**  
This course is a survey of the systems design process, information systems, modeling, automatic controls, block diagram analysis, mechanical systems, electronics, logic and systems interfacing. (*Prerequisite: EET 141*)
- EET 235 PROGRAMMABLE CONTROLLERS 3.0 Credits**  
This course is a study of relay logic, ladder diagrams, theory of operation and applications. Loading ladder diagrams, debugging and trouble-shooting techniques are applied to programmable controllers. (*Prerequisites: EET 113, ELT 208*)
- EET 236 PLC SYSTEMS PROGRAMMING 3.0 Credits**  
This course covers advanced topics in programmable logic controllers (PLC) systems and programming including timing, conversations, analog operations, PID control, auxiliary commands and functions, and PLC to PLC systems communications. (*Prerequisite: EET 235*)
- EET 243 DATA COMMUNICATIONS 3.0 Credits**  
This course is a study of the techniques for sending and receiving information. Topics include media characteristics, modulation and demodulation, signal conversions, multiplexing and demultiplexing, protocols, industrial standards, networks, and error detection and correction. Circuits are modeled, constructed and tested. (*Prerequisite: EET 141, MAT 111*)
- EET 251 MICROPROCESSOR FUNDAMENTALS 4.0 Credits**  
This course is a study of binary numbers; micro-processor operation, architecture, instruction sets, and interfacing with operating systems; and applications in control, data acquisition, and data reduction and analysis. Programs are written and tested. (*Prerequisites: EET 210, EGR 110*)
- EET 255 ADVANCED MICROPROCESSORS 3.0 Credit**  
This course is a study of advanced microprocessor, controllers, and hardware/software interfacing techniques for controlling external devices. Hardware is designed and constructed, and control programs are written and tested. (*Prerequisite: EET 251*)
- EET 273 ELECTRONICS SENIOR PROJECT 1.0 Credit**  
This course includes the construction and testing of an instructor-approved project. (*Prerequisites: EET 231, EET 235, EET 255, ENG 101*)
- EET 274 SELECTED TOPICS IN ELECTRICAL/ELECTRONICS ENGINEERING TECH 3.0 Credit**  
This course is a study of current topics related to electrical electronics engineering technology. Technical aspects of practical applications are discussed. (*Prerequisites: EET 231, EET 255*)

- EGR 108 ENGINEERING ETHICS** **3.0 Credits**  
 Topics include the professional, ethical, and social responsibilities of the engineer and technologist, the impact of ethics and knowledge of contemporary professional, societal and global issues (including respect for diversity) in the field of engineering and engineering technology. *(Prerequisite: RDG 100 or the equivalent placement score)*
- EGR 109 ENGINEERING PROJECT MANAGEMENT** **3.0 Credits**  
 This course is the study of integrated project management for the engineering technologist with emphasis on the methods and software used by engineers including task lists, Gantt charts, discussion of critical path, statistical resource management, scheduling, budgeting, and economics factors. *(Prerequisite: RDG 100)*
- EGR 110 INTRODUCTION TO COMPUTER ENVIRONMENT** **3.0 Credits**  
 This course provides an overview of computer hardware, available software, operating systems and applications. This course also includes fundamental techniques of programming in one or more languages used in engineering technology. *(Prerequisites: CPT 101 or CPT 170, ENG 100, MAT 100 or equivalent placement test score)*
- EGR 120 ENGINEERING COMPUTER APPLICATIONS** **3.0 Credits**  
 This course includes the utilization of applications software to solve engineering technology problems. *(Prerequisite: MAT 102)*
- EGR 140 COLLABORATIVE PRODUCT DEVELOPMENT** **3.0 Credits**  
 This course provides insight into nonlinear product design processes in which all the people necessary to produce a product work together as a team. *(Prerequisite: EGT 106)*
- EGR 170 ENGINEERING MATERIALS** **3.0 Credits**  
 This course is a study of the properties, material behaviors, and applications of materials used in engineering structures and products. *(Prerequisite: MAT 110)*
- EGR 175 MANUFACTURING PROCESSES** **3.0 Credits**  
 This course includes the processes, alternatives and operations in the manufacturing environment. *(Prerequisites: CPT 101 or CPT 170, EGT 106, MAT 101, MTT 102)*
- EGR 176 MANUFACTURING INDUSTRIES** **3.0 Credits**  
 This course introduces the concepts and principles of the manufacturing industries and technologies. Plant visits supplement study of industrial organizations, economics, management, production and products.
- EGR 194 STATICS AND STRENGTH OF MATERIALS** **4.0 Credits**  
 This course covers external and internal forces in structures and/or machines, including conditions of equilibrium, systems of force, moments of inertia and friction. It also covers the stress/strain relationships in materials. *(Prerequisite: MAT 111)*
- EGR 205 INTRODUCTION TO NUCLEAR SCIENCE** **3.0 Credits**  
 The course is a study of mass energy relationships and the basic interactions between radiation and matter. Topics include fundamental concepts in reactor technologies, radiation protection, atomic and nuclear physics, radiation damage, thermal effects, shielding and environmental concerns. *(Prerequisite: MAT 110)*
- EGR 227 TELECOMMUNICATIONS MANUFACTURING PROCESS/QUALITY CONTROL** **3.0 Credits**  
 This course includes a survey of the principles of manufacturing processes as related to the telecommunications industry.
- EGR 235 APPLIED ENGINEERING MATERIALS** **3.0 Credits**  
 This course is an advanced study of applied engineering materials. Emphasis is placed on properties such as ceramics, composites, alloys, semiconductors, and polymers. Other topics include atomic structure, imperfections in solids, failure analysis, and radiation damage. *(Prerequisite: MAT 110)*

**EGR 255 ENGINEERING TECHNOLOGY SENIOR SYSTEM PROJECT 3.0 Credits**

This course includes a instructor-approved project which is designed, specified, constructed and tested. (Prerequisites: EET 235, EGT 265, MET 213, MET 224)

**EGR 260 ENGINEERING STATICS (TRANSFER COURSE) 3.0 Credits**

This course is an introduction to the principles of engineering mechanics as applied to forces and force systems. The techniques of vector mathematics are employed. This course also includes a study of equilibrium of particles and rigid bodies, distributed forces, centroids and centers of gravity, moments of inertia of areas, analysis of simple structures and machines, and a study of friction. (Prerequisite: MAT 140)

**EGR 262 ENGINEERING DYNAMICS (TRANSFER COURSE) 3.0 Credits**

This course is an introduction to the principles of engineering as applied to kinematics and kinetics of particles and rigid bodies. The techniques of vector mathematics are employed. This course also includes an emphasis on Newton's second law along with energy and momentum methods. (Prerequisite: EGR 260)

**EGR 264 INTRODUCTION TO ENGINEERING MECHANICS OF SOLIDS (TRANSFER COURSE) 3.0 Credits**

This course covers the relationships between external loads on solid bodies or members and the resulting internal effects and dimensional changes. Included are concepts of stress and strain, stress analysis of basic structural members, combined stress including Mohr's circle, and introductory analysis of deflection and buckling of columns. (Prerequisites: EGR 260, MAT 240)

**EGR 266 ENGINEERING THERMODYNAMICS FUNDAMENTALS (TRANSFER COURSE) 3.0 Credits**

This course is an introduction to the first and second laws of thermodynamics as applied to engineering systems. Definitions, work, heat, energy and first law analysis of systems and control volumes are included. (Prerequisite: MAT 240)

**EGR 270 INTRODUCTION TO ENGINEERING (TRANSFER COURSE) 3.0 Credits**

This course covers the applications of computers in engineering practices, including the use of an appropriate operating system, programming in a high level language, spread sheets, and word processing applications. (Prerequisite: MAT 110)

**EGR 274 ENGINEERING APPLICATION OF NUMERICAL METHODS (TRANSFER COURSE) 3.0 Credits**

This course is a calculus-based study of the application of numerical methods to the solution of engineering problems. Techniques include iterative solution techniques, methods for solving systems of equations, numerical integration, differentiation and graphical analysis. (Prerequisite: MAT 141)

**EGR 275 INTRODUCTION TO ENGINEERING/COMPUTER GRAPHICS (TRANSFER COURSE) 3.0 Credits**

This course is a study of basic graphical concepts needed for engineering applications. (Prerequisites: CPT 101 or CPT 170, ENG 100, MAT 102)

**EGR 280 CHEMICAL PROCESS PRINCIPLES 4.0 Credits**

This course is a study of chemical process principles. Topics include material and energy balances in the chemical industry, including reactive and non-reactive systems. Properties of gases, liquids and solids are also emphasized. (Prerequisites: CHM 110, MAT 140)

**EGR 281 INTRODUCTION TO ALGORITHMIC DESIGN I 4.0 Credits**

This course integrates a presentation of concepts of object-oriented programming, including program structures, objects, code, and programming styles. (Prerequisite: MAT 111)

- EGR 283 INTRODUCTION TO ALGORITHMIC DESIGN II** **4.0 Credits**  
 This course is a study of rigorous development of algorithms and computer programs, including elementary data structures. *(Prerequisite: EGR 281)*
- EGT 106 PRINT READING AND SKETCHING** **3.0 Credits**  
 This course covers the interpretation of basic engineering drawings and sketching techniques for making multi-view pictorial representations. This course also includes an introduction to engineering technology, and an introduction to Computer Aided Design (CAD). *(Prerequisites: ELT 120, ENG 100, MAT 102)*
- EGT 245 PRINCIPLES OF PARAMETRIC CAD** **3.0 Credits**  
 This course is the study of 3D product and machine design utilizing state-of-the-art parametric design software. *(Prerequisite: MAT 102)*
- EGT 251 PRINCIPLES OF CAD** **3.0 Credits**  
 This course includes the additional use of CAD software for production of technical drawings and related documentation. *(Prerequisites: EGT 106, MAT 101)*
- EGT 256 MODELING MECHANICAL SYSTEMS** **3.0 Credits**  
 This course includes 3-D modeling of mechanical systems in residential structures using applicable software. *(Prerequisites: EGT 281, MET 110)*
- EGT 258 APPLICATIONS OF CAD** **3.0 Credits**  
 This course is the study of the use of CAD within the different drafting and design fields. Students will complete CAD projects for various fields which may include architectural, civil, mechanical, HVAC, and electrical. *(Prerequisite: EGT 106)*
- EGT 265 CAD/CAM APPLICATIONS** **3.0 Credits**  
 This course includes applications using CAD/CAM routines. *(Prerequisites: EGT 152, EGT 281 or MTT 102)*
- EGT 283 RAPID PROTOTYPING II** **4.0 Credits**  
 This course includes an advanced series of problems and exercises requiring the production of prototypes of architectural models, mechanical devices, and structural applications. *(Prerequisite: EGT 281)*
- EGT 285 INTEGRATED RAPID PROTOTYPING APPLICATIONS** **3.0 Credits**  
 This course includes generating a prototype for a real-world problem utilizing 3-D modeling and rapid prototyping technologies. *(Prerequisites: EGT 282, EGT 283)*
- ELT 103 ACTIVE DEVICES** **4.0 Credits**  
 This course covers basic fundamental concepts of the operation of various solid state devices, with a brief overview of tubes. *(Prerequisite: ELT 111)*
- ELT 105 LOGIC AND DIGITAL CIRCUITS** **4.0 Credits**  
 This course includes an introduction to number systems, math, gates, combinational logic, and flip-flops. *(Prerequisite: ELT 120)*
- ELT 111 DC/AC CIRCUITS** **4.0 Credits**  
 This course is an introduction to DC and AC circuits and the components and devices used therein. *(Prerequisites: RDG 032 or ESL 037, MAT 100 or equivalent placement test score)*
- ELT 120 COMPUTER PEM/APPLICATIONS** **3.0 Credits**  
 This course provides an introduction to operating system concepts, applications software, and high-level languages that pertain to electronic applications. This course also introduces students to DOS, Windows, Microsoft Office, Diagnostic Software and Electronic Workbench. *(Prerequisites: RDG 032 or ESL 037, MAT 100 or equivalent placement test score)*

**ELT 208 INTRODUCTION TO ROBOTICS****3.0 Credits**

This is an introductory course covering the basic concepts and limitations of industrial robots. The course includes terminology, sensing devices, methods of controlling robots, and interfacing. *(Prerequisite: EET 113)*

**ELT 224 BASIC VIDEO CIRCUITS/SYSTEMS****3.0 Credits**

This course covers the use, operation, and parameters of modern video techniques, circuits used, computer monitors, and various other types of video displays. *(Prerequisite: EEM 243)*

**ELT 229 MICROCOMPUTER REPAIR****3.0 Credits**

This course includes servicing of popular microcomputers, disk drives, modems, and other peripheral devices. *(Prerequisite: EET 251)*

**ENG 012 DEVELOPMENTAL ENGLISH WORKSHOP****1.0 Credit**

This course provides support for mastery of English 032 competencies (e.g., may include, but is not limited to, laboratory work, computerized instruction, and/or projects.) *(Prerequisite: COL 104 or RDG 032)*

**ENG 032 DEVELOPMENTAL ENGLISH****3.0 Credits**

Developmental English is intensive review of grammar and usage; mechanics of punctuation, spelling, and capitalization; sentence structure; and the writing process. Evidence of planning, organizing, drafting, editing, and revising are emphasized in the course along with a study of different modes of writing for a variety of rhetorical situations. *(Prerequisite: Appropriate placement test score)*

**ENG 100 INTRODUCTION TO COMPOSITION****3.0 Credits**

This course is a study of basic writing and different modes of composition and may include a review of usage. English 100 will develop basic composition skills by requiring frequent writing of short (three- to five-paragraph) essays. Those grammar and usage errors that occur frequently and disrupt writing will also be stressed. This course does not meet the requirements for an associate degree, but may meet requirements for a diploma or certificate. *(Prerequisites: ENG 032 or ESL 038, RDG 032 or ESL 037 or equivalent placement test scores)*

**ENG 101 ENGLISH COMPOSITION I****3.0 Credits**

This is a (college-transfer) course in which the following topics are presented: a study of composition in conjunction with appropriate literary selections, with frequent theme assignments to reinforce effective writing. A review of standard usage and the basic techniques of research are also presented. *(Prerequisites: ENG 100 or ESL 110, RDG 100 or ESL 100 or equivalent placement test scores)*

**ENG 102 ENGLISH COMPOSITION II****3.0 Credits**

This is a (college-transfer) course in which the following topics are presented: development of writing skills through logical organization, effective style, literary analysis and research. An introduction to literary genre is also included. *(Prerequisite: ENG 101)*

**ENG 105 EDITING ACADEMIC WRITING****1.0 Credit**

This course provides students with instruction and practice in editing their own writing for academic purposes. The course focuses on errors that interfere with communication or that cause readers to question the writer's academic competence.

**ENG 150 BASIC COMMUNICATIONS****3.0 Credits**

This course develops practical oral and written communication skills. Students apply principles of concise, clear technical communication to realistic writing and speaking situations. This course does not meet requirements for an associate degree, but may meet the requirements for a diploma or certificate. *(Prerequisite: ENG 032 or ESL 038, RDG 032 or ESL 037 or equivalent placement scores)*

**ENG 160 TECHNICAL COMMUNICATIONS****3.0 Credits**

This course is a study of various technical communications such as definitions, processes, instructions, descriptions, and technical reports. (*Prerequisites: ENG-100 or ESL-110, RDG-100 or ESL-100 or equivalent placement test scores*)

**ENG 165 PROFESSIONAL COMMUNICATIONS****3.0 Credits**

This course develops practical written and oral professional communication skills. The course is oriented to current needs in industry and business, and assignments are drawn from students' majors. (*Prerequisite: ENG 101*)

**ENG 203 AMERICAN LITERATURE SURVEY****3.0 Credits**

This course is a survey of American literature: major authors, genres and periods. The course emphasizes historical, descriptive and analytical modes of study. This is a college-transfer course. (*Prerequisite: ENG 102*)

**ENG 205 ENGLISH LITERATURE I****3.0 Credits**

This is a (college-transfer) course in which the following topics are presented: the study of English literature from the old English period to the romantic period with emphasis on major writers and periods. (*Prerequisite: ENG 102*)

**ENG 206 ENGLISH LITERATURE II****3.0 Credits**

This is a (college-transfer) course in which the following topics are presented: the study of English literature from the romantic period to the present with emphasis on major writers and periods. (*Prerequisite: ENG 102*)

**ENG 207 LITERATURE FOR CHILDREN****3.0 Credits**

This course provides an introduction to children's literature in America through an examination of picture books & novels that depict Americans of various backgrounds and experiences. It focuses on defining quality in children's book writing & illustration, and assessing concerns in the field. This is a college-transfer course. (*Prerequisite: ENG 102*)

**ENG 208 WORLD LITERATURE I****3.0 Credits**

This course is a study of masterpieces of world literature in translation from the ancient world to the sixteenth century. Works studied are selected from various cultures throughout the world. This is a college-transfer course. (*Prerequisite: ENG 102*)

**ENG 209 WORLD LITERATURE II****3.0 Credits**

This course is a study of masterpieces of world literature in translation from the seventeenth century to the present. Works studied are selected from various cultures throughout the world. This is a college-transfer course. (*Prerequisite: ENG 102*)

**ENG 210 ASIAN LITERATURE****3.0 Credits**

This course is a survey of the major works, genres and writers of several Asian countries including China and Japan, emphasizing their relationships with the histories and cultures of the region. This is a college-transfer course. (*Prerequisite: ENG 102*)

**ENG 211 AFRICAN LITERATURE****3.0 Credits**

This course is a survey of the major works, genres and writers of Africa. The relationships between the literature, the culture, and the history of Africa will be emphasized. This is a college-transfer course. (*Prerequisite: ENG 102*)

**ENG 212 LATIN AMERICAN LITERATURE****3.0 Credits**

This course is a survey of the major works, genres, and writers of Latin America. The relationships among the literature, culture, and history of Latin America will be emphasized. This is a college-transfer course. (*Prerequisite: ENG 102*)

**ENG 214 FICTION****3.0 Credits**

This course is a study of fiction from several cultures. Emphasis is on the nature of the genre and appropriate reading strategies. It concentrates particularly on analytic reading and writing skills. This is a college-transfer course. (*Prerequisite: ENG 102*)

- ENG 218 DRAMA 3.0 Credits**  
This course is a study of drama from several cultures. Emphasis is on the nature of the genre and appropriate reading strategies. This is a college-transfer course. (*Prerequisite: ENG 102*)
- ENG 222 POETRY 3.0 Credits**  
This course is a study of poetry from several cultures. Emphasis is on the nature of the genre and appropriate reading strategies. It concentrates on analytical reading and writing skills to increase understanding and appreciation of poetry. This is a college-transfer course. (*Prerequisite: ENG 102*)
- ENG 230 WOMEN IN LITERATURE 3.0 Credits**  
This course is a critical study of women's writings examined from historical, social, and psychological points of view. This is a college-transfer course. (*Prerequisite: ENG 102*)
- ENG 234 SURVEY IN MINORITY LITERATURE 3.0 Credits**  
This course is a critical study of minority writings, examined from historical, social, and psychological points of view. This is a college-transfer course. (*Prerequisite: ENG 102*)
- ENG 236 AFRICAN AMERICAN LITERATURE 3.0 Credits**  
This course is a critical study of African American literature examined from historical, social, and psychological perspectives. This is a college-transfer course. (*Prerequisite: ENG 102*)
- ENG 238 CREATIVE WRITING 3.0 Credits**  
This course presents an introduction to creative writing in various genres. (*Prerequisite: ENG 102*)
- ESL 036 ENGLISH AS A SECOND LANGUAGE 3.0 Credits**  
English as a Second Language is intended for non-native English speaking students who need assistance in developing and improving listening and speaking skills, written communication skills, and basic English grammar. This course is designed to prepare students with ESL needs to speak English in a variety of everyday, academic, and professional settings. Speaking and listening activities also develop students' skills in listening comprehension and note-taking in English. (*Prerequisite: Interview with ESL Faculty*)
- ESL 037 ENGLISH AS A SECOND LANGUAGE 3.0 Credits**  
English as a Second Language is intended for non-native English speaking students who need assistance in developing and improving listening and speaking skills, written communication skills, and basic English grammar. This course is designed to prepare students with ESL needs in reading English for advanced intermediate courses in basic English skills. Reading assignments develop themes in contemporary American society, with an emphasis on education and business. (*Prerequisite: Interview with ESL Faculty*)
- ESL 038 ENGLISH AS A SECOND LANGUAGE 3.0 Credits**  
English as a Second Language is intended for non-native English speaking students who need assistance in developing and improving listening and speaking skills, written communication skills, and basic English grammar. This course is designed to prepare students with ESL needs in English grammar and writing for advanced intermediate courses in basic English skills. Writing assignments develop themes in contemporary American society, with an emphasis on education and business. (*Prerequisite: Interview with ESL Faculty*)
- ESL 100 READING IN ENGLISH AS A SECOND LANGUAGE 3.0 Credits**  
This course covers the application of basic reading skills to improve critical comprehension, higher order thinking skills, and standard academic vocabulary for students who are taking English as a Second Language. (*Prerequisite: ESL 037 or RDG 032 or equivalent placement test score*)
- ESL 103 SPOKEN AMERICAN ENGLISH 3.0 Credits**  
This course is a study of issues in American English pronunciation, including stress, intonation, and phonetic patterns, with an emphasis on applying these principles to produce clear and comprehensible spoken English. (*Prerequisite: ESL 037 or RDG 032 or equivalent placement test score*)

**ESL 110 INTRODUCTION TO COMPOSITION FOR ENGLISH AS A SECOND LANGUAGE 3.0 Credits**

This course is a study of basic writing, different modes of composition, and English grammar and usage for students who are taking English as a Second Language. (*Prerequisites: ESL 038 or ENG 032, ESL 037 or RDG 032 or equivalent placement test score*)

**EVT 102 BASIC WATER TREATMENT 3.0 Credits**

This course will enable the student to have a general concept of groundwater and surface water treatment techniques as well as the physical and chemical unit processes applied to drinking water treatment and the daily routine tasks associated with the operation of potable water supply systems. (*Prerequisites: CHM 110, MAT 102*)

**EVT 111 INTRODUCTION TO WATER AND WASTEWATER TREATMENT LABORATORY 1.0 Credit**

This course introduces the chemical and biological analytical techniques used to measure water and wastewater quality. (*Prerequisites: CHM 110, MAT 102*)

**EVT 271 SPECIAL TOPICS IN ENVIRONMENTAL ENGINEERING TECHNOLOGY 3.0 Credits**

This course covers specific topics related to environmental engineering technology. (*Prerequisites: NONE*)

**EVT 254 INDUSTRIAL SAFETY AND EMERGENCY RESPONSE 3.0 Credits**

This course covers state and federal regulations related to worker safety, industrial hygiene, and response to emergency situations. Emphasis is placed on response to releases of hazardous materials. (*Prerequisite: CHM 110*)

**FRE 101 ELEMENTARY FRENCH I 4.0 Credits**

This course consists of a study of the four basic language skills: listening, speaking, reading and writing, including an introduction to French culture. (*Prerequisite: ENG 100 and have never studied French or placed by examination into FRE 101*)

**FRE 102 ELEMENTARY FRENCH II 4.0 Credits**

This course continues the development of basic language skills and includes a study of French culture. It stresses the grammar and vocabulary necessary for fundamental communications skills. (*Prerequisite: FRE 101 with a "C" or better or have placed by examination into FRE 102*)

**FRE 122 BASIC PROFICIENCY IN FRENCH 3.0 Credits**

This course covers the practice and further development of essential reading, writing, listening, and speaking skills. (*Prerequisite: FRE 102 with a "C" or better or have placed by examination into FRE 122*)

**GEO 102 WORLD GEOGRAPHY 3.0 Credits**

This course includes a geographic analysis of the regions of the world, i.e., North and South America, Europe, Australia, Asia and Africa. Diversity of each region is emphasized by examining its physical environment, natural resources, social, cultural, economic and political systems. (*Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038*)

**GER 101 ELEMENTARY GERMAN I 4.0 Credits**

This course is a study of the four basic language skills: listening, speaking, reading, and writing. The course includes an introduction to German culture. (*Prerequisite: ENG 100 and have never studied German or placed by examination into GER 101*)

**GER 102 ELEMENTARY GERMAN II 4.0 Credits**

This course continues the development of the four basic language skills and the study of German culture. (*Prerequisite: GER 101 with a "C" or better or have placed by examination into GER 102*)

- GER 122 BASIC PROFICIENCY IN GERMAN 3.0 Credits**  
 This course provides practice and an opportunity for enhanced proficiency in the German language to include essential listening, speaking, reading, and writing skills. Emphasis is also placed on Germanic culture. *(Prerequisite: GER 102)*
- GMT 101 INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS 3.0 Credits**  
 This course is a study of the development of digital techniques to portray mapping/spatial data, hardware and software components of digital mapping systems, and review of basic procedures in creating, maintaining and utilizing digital mapping. *(Prerequisites: CPT 101 or CPT 170, ENG 100)*
- GMT 102 INTRODUCTION TO GEOMATICS AND CAD 3.0 Credits**  
 This course is a study of geomatics and CAD, and their GIS applications. *(Prerequisites: CPT 101 or CPT 170, ENG 100, MAT 101)*
- GMT 103 INTRODUCTION TO GLOBAL POSITIONING SYSTEMS 3.0 Credits**  
 This course introduces global positioning systems and remote sensing and their applications to GIS. *(Prerequisites: CPT 101 or CPT 170, ENG 100, MAT 101)*
- GMT 104 INTRODUCTION TO SPATIAL ANALYSIS 3.0 Credits**  
 This course introduces various components of spatial analysis. *(Prerequisite: GMT 101)*
- GMT 105 GEOREFERENCING AND MAPPING 3.0 Credits**  
 This course introduces coordinate systems and cartography. *(Prerequisites: GMT 101, GMT 102, GMT 103)*
- GMT 235 GPS AND GEODESY 4.0 Credits**  
 This course is a study of basic geodetic concepts including the ellipsoid, geode and gravity. The theory and operation of the global positioning system; design of GPS projects; horizontal and vertical geodetic datums, computations of spherical geographical coordinates and inverse; state plane and UTM coordinate systems; geodetic leveling; design and evaluation of mapping grade GPS project. Design and execution of survey grade GPS project. *(Prerequisite: CET 105)*
- GMT 240 GEOGRAPHIC INFORMATION SYSTEMS ANALYSIS AND REPORTING 4.0 Credits**  
 This course is a study of techniques of retrieving spatial and database information from a digital mapping system, preparing analysis and reports and producing maps, graphics and charts using plotters and printers, and use of software designed specifically for analysis and reporting. *(Prerequisites: GMT 101, GMT 102, GMT 103)*
- HIM 101 INTRODUCTION TO HEALTH INFORMATION 1.0 Credit**  
 This course provides an introduction to the health information science profession. *(Prerequisite: Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coding programs)*
- HIM 102 INTRODUCTION TO CODING AND CLASSIFICATION SYSTEMS 1.0 Credit**  
 This course provides an introduction to classification systems including those such as ICD-9-CM, CPT-IV, DSM-IV, HCPCS and SNOMED, the role of coding in reimbursement, indexing, and statistics and the beginning foundation of the study of disease and procedural coding. *(Prerequisite: Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coding programs)*
- HIM 103 INTRODUCTION TO HEALTH INFORMATION AND CODING 3.0 Credits**  
 This course focuses on the principles of health information management and explores basic concepts in diagnostic and procedural coding and classification systems. *(Prerequisites: AHS*

102, BIO 210, CPT 170, ENG 101. Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coder programs)

**HIM 110 HEALTH INFORMATION SCIENCE I 3.0 Credits**

This course provides an in-depth study of the content, storage, retrieval, control and retention of health information systems. (Prerequisite: HIM 103. Restricted to students accepted into Pre-Health Information Management or Health Information Management programs)

**HIM 115 MEDICAL RECORDS AND THE LAW 2.0 Credits**

This course provides an introduction to the study of laws applicable to the health care field with emphasis on health information practices. (Prerequisite: HIM 110. Restricted to students accepted into Pre-Health Information Management or Health Information Management programs)

**HIM 120 HEALTH INFORMATION SCIENCE II 3.0 Credits**

This course covers quality assurance and health information management. (Prerequisite: HIM 110. Restricted to students accepted into Pre-Health Information Management or Health Information Management programs)

**HIM 125 STANDARDS AND REGULATIONS 2.0 Credits**

This course provides the student with a study of regulations and standards for health facilities with emphasis on health information systems. (Prerequisite: HIM 110. Restricted to students accepted into Pre-Health Information Management or Health Information Management programs)

**HIM 130 BILLING AND REIMBURSEMENT 3.0 Credits**

This course provides an introduction to medical insurance billing and reimbursement practices with emphasis on the primary payers such as Medicare and Medicaid. (Prerequisite: HIM 216. Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coding programs)

**HIM 135 MEDICAL PATHOLOGY 3.0 Credits**

This course is a study of disease processes, general classification of disease, including signs and symptoms, systems affected by disease, diagnostic measures, types of treatment including surgical and/or chemical intervention, and terminology. (Prerequisites: AHS 102, BIO 211, HIM 103. Restricted to students accepted into the Pre-Health Information Management, Health Information Management or Medical Records Coding programs)

**HIM 137 PHARMACOLOGY FOR CODERS 1.0 Credit**

This course is a study of therapeutic agents in relation to medical record coding and reimbursement issues. (Prerequisite: Restricted to students accepted into the Pre-Health Information Management program, the Health Information Management program or the Medical Records Coding Certificate program)

**HIM 138 PHARMACOLOGY FOR MEDICAL RECORDS CODING 2.0 Credits**

This course is a study of therapeutic drug categories appropriate for medical insurance billing and reimbursement practices. (Prerequisites: AHS 102, BIO 210. Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coding programs)

**HIM 140 CURRENT PROCEDURAL TERMINOLOGY I 3.0 Credits**

This course provides a basic study of the CPT and HCPCS coding and classification systems particular to the physician's office setting. Students will learn how to assign codes to capture the professional component of services provided. (Prerequisite: HIM 216. Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coding programs)

**HIM 150 CODING PRACTICUM I 3.0 Credits**

This course provides clinical practice in the application of basic coding and classification system guidelines in selected health care facilities. (Prerequisite: HIM 225. Restricted to students accepted into Medical Records Coding program)

**HIM 151 CODING PRACTICUM II****3.0 Credits**

This course provides clinical practice in the application of advanced coding and classification system guidelines in selected health care facilities. *(Prerequisite: HIM 225. Restricted to students accepted into Medical Records Coding program)*

**HIM 163 SUPERVISED CLINICAL PRACTICE I****3.0 Credits**

This course includes correlation of didactic and laboratory experiences with clinical experiences in various health facilities. *(Prerequisite: HIM 120. Restricted to students accepted into Pre-Health Information Management or Health Information Management programs)*

**HIM 164 SUPERVISED CLINICAL PRACTICE II****3.0 Credits**

This course includes clinical experience in the technical aspects of health information management. *(Prerequisites: HIM 120, HIM 163. Restricted to students accepted into Pre-Health Information Management or Health Information Management programs)*

**HIM 165 SUPERVISED CLINICAL PRACTICE III****3.0 Credits**

This course provides clinical practice in the application of health information theory in selected health care facilities. LCD-9-CM and CPT coding skills will be utilized. *(Prerequisite: Restricted to students accepted into the Pre-Health Information Management program)*

**HIM 215 REGISTRIES AND STATISTICS****3.0 Credits**

This course includes a study of vital and health care statistics and registries in health information systems. *(Prerequisite: HIM 120. Restricted to students accepted into Pre-Health Information Management or Health Information Management programs)*

**HIM 216 CODING AND CLASSIFICATION I****3.0 Credits**

This course includes a study of disease and procedural coding and classification systems. *(Prerequisites: AHS 102, BIO 210. Restricted to students accepted into the Pre-Health Information Management, Health Information Management program or Medical Records Coding programs)*

**HIM 225 CODING AND CLASSIFICATION II****3.0 Credits**

This course provides a study of advanced coding and classification systems. *(Prerequisite: HIM 216. Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coding programs)*

**HIM 227 SENIOR PROFESSIONAL COMPETENCIES****3.0 Credits**

This capstone course is designed to promote interactive discussion related to the HIM professional to include career issues and opportunities. The course includes specific projects and capstone competencies in a mock testing environment. *(Prerequisites: HIM 120, HIM 163. Restricted to students accepted into Pre-Health Information Management or Health Information Management Programs)*

**HIM 230 SUPERVISORY PRINCIPLES FOR CODING****3.0 Credits**

This course provides a study of health care management and unique organizational structures. Emphasis is placed on supervisory principles and techniques, including recruitment, selection and retention of staff, monitoring productivity and quality of coding. *(Prerequisites: HIM 103, HIM 225. Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coder programs)*

**HIM 250 CODING AND CLASSIFICATION III****3.0 Credits**

This course is study of ICD-10-CM, ICD-10-PCS and the coding guidelines and procedures associated with this classification system. *(Prerequisite: HIM 225. Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coder programs)*

**HIM 266 COMPUTERS IN HEALTHCARE****3.0 Credits**

This course covers hardware and software components of computers for medical record applications, methods of controlling accuracy and security of data in computer systems, records linkage, and data sharing concepts. *(Prerequisite: HIM 110. Restricted to students accepted into Pre-Health Information Management, Health Information Management or Medical Records Coding programs)*

- HIS 101 WESTERN CIVILIZATION TO 1689 3.0 Credits**  
 This course is a survey of western civilization from ancient times to 1689, including the major political, social, economic, and intellectual factors shaping western cultural tradition. (*Prerequisite: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 102 WESTERN CIVILIZATION POST 1689 3.0 Credits**  
 This course is a survey of western civilization from 1689 to the present, including the major political, social, economic, and intellectual factors which shape the modern western world. (*Prerequisite: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 104 WORLD HISTORY I 3.0 Credits**  
 This course covers world history from prehistory to circa 1500 A.D., focusing on economic, social, political, and cultural aspects of people before the onset of western dominance and identifying major patterns and trends which characterized the world in each era. (*Prerequisite: ENG 100 or ESL 110*)
- HIS 105 WORLD HISTORY II 3.0 Credits**  
 This course covers world history from circa 1500 A.D. to the present, focusing on the development of a system of interrelationships based on western expansion and on the economic, social, political, and cultural aspects of each era. (*Prerequisite: ENG 100 or ESL 110*)
- HIS 106 INTRODUCTION TO AFRICAN HISTORY 3.0 Credits**  
 This course is an examination of several traditional sub-Saharan African societies and their political and economic transformation in the modern, colonial, and post-independence periods. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 107 INTRODUCTION TO THE MIDDLE EAST 3.0 Credits**  
 This course analyzes the evolution of diverse social, political, environmental, & cultural patterns in the Middle East. Emphasis is placed on the development of historical, geographical, & religious constructs and their effect on rural, urban, & global relationships across the historical timeline. It is recommended that students complete HIS 201 or HIS 202 prior to enrolling in this course. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 108 INTRODUCTION TO EAST ASIAN CIVILIZATION 3.0 Credits**  
 This course is an analysis of the evolution of social, political, and cultural patterns in East Asia, emphasizing the development of philosophical, religious, and political institutions and their relationship to literary and artistic forms in China and Japan. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 109 INTRODUCTION TO LATIN AMERICAN CIVILIZATION 3.0 Credits**  
 This course is an analysis of the political, cultural, and economic forces which have shaped the development of institutions and ideas in Spanish and Portuguese America. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 113 NATIVE AMERICAN HISTORY 3.0 Credits**  
 This course is the study of several Native American societies and their cultural, political, and economics transformation in the pre-Columbian, colonial, and modern periods. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 130 AFRICAN-AMERICAN HISTORY TO 1877 3.0 Credits**  
 This survey course describes the efforts of afro-Americans to define themselves through their social, economic and political contributions to American history. The history, impact and significance of the institution of slavery will be included. The chronological scope of the course ranges from the African origins of afro-Americans to the frustrations associated with the failure of Reconstruction. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 131 AFRICAN-AMERICAN HISTORY 1877 TO PRESENT 3.0 Credits**  
 This course describes the efforts of African Americans to define themselves through their social, economic, and political contributions to American history from the time of reconstruction to the present. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)

- HIS 201 AMERICAN HISTORY: DISCOVERY TO 1877 3.0 Credits**  
This course is a survey of U.S. history from discovery to 1877. This course includes political, social, economic, and intellectual developments during this period. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 202 AMERICAN HISTORY: 1877 TO PRESENT 3.0 Credits**  
This course is a survey of U.S. history from 1877 to the present. This course includes political, social, economic, and intellectual developments during this period. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 213 HISTORY STUDY IN THE UNITED STATES 3.0 Credits**  
This course includes travel to selected cities/areas around the United States and provides a field study of historical and contemporary history of the city/area to which the class is traveling. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 214 HISTORY STUDY ABROAD 3.0 Credits**  
The course includes travel to selected regions outside the United States and provides a field study of historical and contemporary history. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 220 AMERICAN STUDIES I 3.0 Credits**  
This course is an interdisciplinary study of selected topics and eras in U.S. history. It is recommended that students complete HIS 201 or HIS 202 prior to enrolling in this course. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 221 AMERICAN STUDIES II 3.0 Credits**  
This course is an interdisciplinary study of selected topics and eras in U.S. history. It is recommended that students complete HIS 201 or HIS 202 prior to enrolling in this course. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 230 THE AMERICAN CIVIL WAR 3.0 Credits**  
This course explores the history of the Civil War from the election of 1860 through the end of reconstruction in 1877. It is recommended that students complete HIS 201 or HIS 202 and ENG 101 prior to enrolling in this course. (*Prerequisite: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HIS 235 AMERICAN MILITARY HISTORY 3.0 Credits**  
This course explores the development of the American military from the 1600s through the Vietnam War. Study focuses on the military's actions during conflicts with other nations, its relation to society and its role in the evolution of the American nation. It is recommended that students complete HIS 201 or HIS 202 and ENG 101 prior to enrolling in this course. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- HSS 100 CULTURAL CONTEXTS 3.0 Credits**  
This course guides students through a survey of cultural concepts; provides a foundation for dealing with ideas; and develops awareness of cultural diversity. This course does not meet the requirements for an associate degree, but may meet the requirements for a diploma or a certificate.
- HUS 101 INTRODUCTION TO HUMAN SERVICES 3.0 Credits**  
This course covers an overview of the field of human services. Role responsibilities, problems, boundaries, and strategies of human service workers are included. This course also includes an overview of agencies in the service area, curriculum requirements and career opportunities. A 20-hour practicum in a social service organization is required. (*Prerequisite: HUS 102*)
- HUS 102 PERSONAL AND PROFESSIONAL DEVELOPMENT 3.0 Credits**  
**IN THE HELPING PROFESSIONS**  
This course provides students with the opportunity to gain a greater awareness of "self" through values clarification activities, reflective writing, etc., and to understand how attitudes,

values and beliefs impact both their personal and professional lives. (*Prerequisite: RDG 032, ENG 032*)

**HUS 112 SERVICES FOR THE ELDERLY 2.0 Credits**

This course is a study of services available for older adults (55 and over), including health, social, recreational, financial, and educational services. (*Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038*)

**HUS 134 ACTIVITY THERAPY 3.0 Credits**

The course is a study of activity programs for human services settings. Actual activity projects for various settings are developed by the students. (*Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038*)

**HUS 150 SUPERVISED FIELD PLACEMENT I 3.0 Credits**

The course includes work experience assignments by students in selected human services agencies. (*Prerequisites: HUS 205, HUS 209*)

**HUS 201 FAMILY SYSTEM DYNAMICS 3.0 Credits**

This course examines the role of family structure, interaction and other dynamics in the development, maintenance and treatment of family dysfunctions. (*Prerequisites: ENG 100 or ESL 110, PSY 201, SOC 101*)

**HUS 204 INTRODUCTION TO SOCIAL WORK 3.0 Credits**

This course includes a general introduction to social work, including history, philosophy, organization, methods, and settings, with emphasis on rehabilitation and other community services. (*Prerequisites: ENG 100 or ESL 110, HUS 101*)

**HUS 205 GERONTOLOGY 3.0 Credits**

This course is a survey of the physical, social and mental changes that occur as a person ages. The related problems and current programs designed for people age 55 and over are studied in the course. (*Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038*)

**HUS 206 DEATH AND DYING 3.0 Credits**

This course is a study of the issues of death and dying. Stages of dying, dealing with dying, dealing with sudden death and grief are covered in the course. An examination of the socio-cultural issues surrounding death and the process of dying in society are made. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)

**HUS 207 COMMUNITY ORGANIZING 3.0 Credits**

This course is a study of the process and skills needed to organize communities to address identified problems or issues that affect them. The political and social context in which organizing takes place will be examined. (*Prerequisite: HUS 101 or HUS 204*)

**HUS 208 ALCOHOL AND DRUG ABUSE 3.0 Credits**

This course is a study of the etiology of alcohol and drug abuse, various types of addictive substances, physical, mental and social implications, programs in rehabilitation, and preventive education. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)

**HUS 209 CASE MANAGEMENT 3.0 Credits**

This course covers accepted methods and strategies for effectively assessing client needs, accessing necessary provider agencies, and monitoring and properly documenting service delivery and client welfare. (*Prerequisite: ENG 101, HUS 101, HUS 230, PSY 201*)

**HUS 212 SURVEY OF DISABILITIES AND DISORDERS 3.0 Credits**

This course is a survey of the major categories of disabilities and disorders with which the helping professional is most likely to work. These will include, but not be limited to, developmental and psychological disorders, visual and hearing impairment, and physical disabilities

resulting from injury or disease. Students will learn to understand and appreciate the challenges and abilities of these clients, as well as enabling resources and practices. (*Prerequisite: ENG 101, PSY 203, BIO 110 or BIO 210*)

**HUS 217 ADDICTIONS COUNSELING 3.0 Credits**

The course provides specific skills for the diagnosis and treatment of substance abuse and addictions. Topics to be discussed includes causes and diagnoses of addictions, and treatment modalities. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)

**HUS 221 PROFESSIONAL ETHICS IN HUMAN SERVICES PRACTICE 3.0 Credits**

The course is an in-depth analysis of human services ethics, application of NOHSE codes of ethics, and concepts and dilemmas specific to helping relationships. (*Prerequisite: HUS 102*)

**HUS 222 LEADERSHIP DEVELOPMENT IN HUMAN SERVICES 3.0 Credits**

The course is an overview of human services leadership and professional development principles, historical and contemporary issues common to human services management and administration, and comparative analyses of the personal and professional development philosophies of leaders in the human services field. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)

**HUS 230 INTERVIEWING TECHNIQUES 3.0 Credits**

This course covers the development of skills necessary for interviews in various organizational settings. Students in Human Services will use these skills and knowledge later on their supervised field placements. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)

**HUS 231 COUNSELING TECHNIQUES 3.0 Credits**

This course is a study of a variety of counseling techniques necessary to assist qualified therapists in a variety of therapeutic settings. Students will demonstrate procedures and knowledge of basic counseling theories and techniques related to human services. (*Prerequisites: ENG 101, HUS 230, HUS 237, PSY 201*)

**HUS 235 GROUP DYNAMICS 3.0 Credits**

This course is an examination of the theory and practice of group dynamics. Emphasis is on the application of the value and use of the group process in specialized settings related to human services. (*Prerequisites: ENG 101, HUS 101, HUS 230, PSY 201*)

**HUS 237 CRISIS INTERVENTION 3.0 Credits**

This course is a study of the effects of crisis on people, the methods of intervention and other use of multiple resources to reestablish individual function. Students are required to demonstrate mock crisis activities. (*Prerequisites: ENG 101, HUS 101, HUS 102, HUS 230, PSY 201*)

**HUS 250 SUPERVISED FIELD PLACEMENT I 4.0 Credits**

This course includes work experience assignments in selected human service agencies. (*Prerequisites: (HUS-209, HUS-221, HUS-235, HUS-237, with a minimum grade of "C" or better; Complete 30 credit hours)*)

**HUS 251 SUPERVISED FIELD PLACEMENT II 4.0 Credits**

This course includes work assignments in selected human service agencies. (*Prerequisite: HUS 250 with a grade of "C" or better*)

**HUS 260 HUMAN SERVICES SPECIAL TOPICS 3.0 Credits**

This course is a study of special topics of interest to particular populations and locations. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)

**IDS 102 PERSONAL AND CAREER ASSESSMENT 3.0 Credits**

This course covers an in-depth examination of the personal needs, wants, values, strengths, abilities and interests of an individual. Multiple inventories and evaluation strategies allow the student to evaluate and apply individual data to a personal career choice. (*Prerequisite: RDG 032 or equivalent placement test score*)

- IDS 201 LEADERSHIP DEVELOPMENT 3.0 Credits**  
 This course focuses on the development of leadership, including philosophy, moral/ethics, and individual ability/style. It is designed to increase students understanding of themselves and the theories and techniques of leadership and group processes by integrating theoretical concepts with the reality of application within a group setting. *(Prerequisites: ENG 100, RDG 100)*
- IMT 108 INTRODUCTION TO INDUSTRIAL TECHNOLOGY 3.0 Credits**  
 This course will provide information needed to help in choosing a career in selected industrial areas. The student will be subjected to some of the tasks and skills that would be expected of a person working in the field. *(Prerequisites: RDG 100 or ESL 100, ENG 032 or ESL 038)*
- IMT 111 INDUSTRIAL TOOLS 5.0 Credits**  
 This course covers the use of hand/or power tools. *(Prerequisites: RDG 032, MAT 100 or equivalent placement test score)*
- IMT 120 MECHANICAL INSTALLATIONS 5.0 Credits**  
 This course covers techniques of assembling, rigging, and installation and/or maintenance of mechanical equipment. *(Prerequisites: RDG 032, MAT 100 or equivalent placement test score)*
- IMT 131 HYDRAULICS AND PNEUMATICS 4.0 Credits**  
 This course covers the basic technology and principles of hydraulics and pneumatics. *(Prerequisites: RDG 032, MAT 100 or equivalent placement test score)*
- IST 100 ACADEMIC COMPUTING SKILLS 1.0 Credit**  
 This course is an introduction to the computing skills needed for academic success, including computer management, file management, printing, basic word processing, email, and using a Web browser for research and for accessing Web-based systems.
- IST 150 PROJECT MANAGEMENT ESSENTIALS FOR IT PROFESSIONALS 3.0 Credits**  
 This course is the study of integrated project management for computer technology professionals with emphasis on the methods & software used by IT professionals, including task lists, Gantt charts, discussion of critical path statistical resource management, scheduling, budgeting, & economic factors. *(Prerequisite: RDG 100)*
- IST 188 HARDWARE BASICS AND OPERATING SYSTEMS 5.0 Credits**  
 This course is the study of installation, upgrading and configuration of personal computers from the basics of motherboards and memory to an introduction to networking, along with installation, configuration and upgrading operating systems. *(Prerequisite: RDG 100)*
- IST 200 CISCO LAN CONCEPTS 3.0 Credits**  
 This course is a study of small local area networks - home and small office/home offices (SOHO) networks. Topics include an introduction to networking, basic cabling for SOHO, LAN addressing and network services, basic security and wireless, planning and building a home network. *(Prerequisites: RDG 100 or ESL 100, MAT 100 or equivalent placement test scores)*
- IST 201 CISCO INTERNETWORKING CONCEPTS 3.0 Credits**  
 This course is a study of current and emerging computer networking technology. Topics covered include safety, networking, network terminology and protocols, network standards, LANs, WANs, OSI models, cabling, cabling tools, Cisco routers, router programming, star topology, IP addressing, and network standards. *(Prerequisite: IST 200)*
- IST 202 CISCO ROUTER CONFIGURATION 3.0 Credits**  
 This course is a study of LANs, WANs, OSI models, Ethernet, token ring, fiber distributed data interface TCP/IP addressing protocol, dynamic routing, routing, and the network administrator's role and function. *(Prerequisite: IST 201)*
- IST 203 ADVANCED CISCO ROUTER CONFIGURATION 3.0 Credits**  
 This course is a study of configuring Cisco routers. *(Prerequisite: IST 202)*

- IST 204 CISCO TROUBLESHOOTING 3.0 Credits**  
This course is a study of troubleshooting network problems. (*Prerequisite: IST 203*)
- IST 205 CISCO ADVANCED ROUTING 3.0 Credits**  
This course is a study of the concepts and technologies of extending IP addresses, routing principles, scalable routing protocols, managing traffic and access, and building and optimizing scalable internetworks. (*Prerequisite: IST 204*)
- IST 206 CISCO REMOTE ACCESS 3.0 Credits**  
This course is a study of building a remote access network to interconnect central sites to branch offices and home office/telecommuters, control access to the central site, and maximize bandwidth utilization over the remote links. (*Prerequisite: IST 205*)
- IST 207 CISCO MULTILAYER SWITCHING 3.0 Credits**  
This course is the detailed study on how routing and switching technologies work together. Included is an in-depth analysis of combining layer 2 and layer 3 switching technologies. (*Prerequisite: IST 206*)
- IST 208 CISCO INTERNETWORK TROUBLESHOOTING 3.0 Credits**  
This course is a study of how to perform fundamental hardware maintenance and advanced troubleshooting tasks on Cisco routers and switches. (*Prerequisite: IST 207*)
- IST 209 FUNDAMENTALS OF WIRELESS LANS 3.0 Credits**  
This introductory course is the study of design, installation, configuration, operations and troubleshooting of Wireless LANs. The course includes an overview of wireless technologies, standards, devices, security, design, and best practices, emphasizing real world applications and skills. (*Prerequisite: TEL 203*)
- IST 221 ADVANCED DATA COMMUNICATIONS 3.0 Credits**  
This course is a study of the structure of the telecommunications industry. Topics include the components, services and features of the most popular voice communications system. (*Prerequisite: IST 202*)
- IST 225 INTERNET COMMUNICATIONS 3.0 Credits**  
This course covers introductory topics and techniques associated with the internet and internet communications. Techniques on how to use and access various types of information as well as how to find resources and navigate the internet are included. (*Prerequisite: CPT 101 or CPT 104 or CPT 170*)
- IST 226 INTERNET PROGRAMMING 3.0 Credits**  
This course covers designing internet pages and applications for personal/business use, writing the required program code in languages such as HTML, Java, and VRML, testing and debugging programs, uploading and maintaining internet pages and applications. (*Prerequisites: CPT 115 or CPT 236, IST 225*)
- IST 227 INTERNET OPERATIONS AND MANAGEMENT 3.0 Credits**  
This course covers the duties/responsibilities of an internet webmaster, appropriate hardware, software & telecommunications technology, designing, implementing & maintaining a web site, and utilizing security mechanisms. Also covered is installing, configuring and testing TCP/IP. Topics include Subnet addressing; implementing IP routing; dynamic host configuration protocol; IP address resolution; NetBIOS name resolution; Windows Internet Name Service; connectivity; in heterogeneous environments; implementing Microsoft SNMP service; performance optimization and troubleshooting. (*Prerequisite: CPT 209*)
- IST 228 INTRANET OPERATIONS AND MANAGEMENT 3.0 Credits**  
This course covers the duties and responsibilities of an intranet webmaster, selecting appropriate hardware, software and telecommunications technology, designing, implementing and maintaining an intranet site, describing issues relating to interconnection of internet to an intranet, and utilizing security mechanisms. Also covered is the integrated web server included

with Windows NT Server. Topics include sharing documents and information across a company intranet or the Internet, deploying scalable and reliable web-based applications, combining HTML, scripts or reusable ActiveX server components to create dynamic and powerful web-based business solutions. *(Prerequisite: IST 227)*

**IST 229 INTERNET FIREWALL MANAGEMENT 3.0 Credits**

This course is a study of network security. Course topics include how to implement, administer, and troubleshoot a firewall solution to control information access at the intranet-to-internet border. This course includes Novell education course 770 securing intranets with border manager, and helps students prepare for the corresponding CNE/Master CNE Certification Exam.

**IST 235 HANDHELD COMPUTER PROGRAMMING 3.0 Credits**

This course is a survey of the techniques of Rapid Application Development for handheld devices. Topics include setup of development environment, creation and deployment of programs, and design strategies to overcome memory and interface limitations. *(Prerequisite: CPT 115, CPT 234 or CPT 185)*

**IST 236 MOBILE AND WIRELESS APPLIANCES 3.0 Credits**

This course is a survey of the protocols and interface standards for mobile and wireless appliances accessing the internet. An introduction to development and deployment of applications is included in this course. *(Prerequisite: IST 235)*

**IST 238 ADVANCED TOOLS FOR WEBSITE DESIGN 3.0 Credits**

This course is a study of an advanced (4th generation) web authoring tool (such as Dreamweaver) to develop increased efficiency and sophistication in website design and web project management. *(Prerequisites: CPT 290, IST 225)*

**IST 241 NETWORK ARCHITECTURE I 3.0 Credits**

This course is a study of how the computer architecture relates to the interconnecting of the various network components, the environment in which the applications processes execute, and the overall plan defining services to be provided in a distributed environment. *(Prerequisite: IST 201)*

**IST 243 NETWORK ARCHITECTURE III 3.0 Credits**

This course covers a cohesive and logical explanation of the IBM created design for an end-to-end communications network SNA. Topics include an overview of SNA and its operational characteristics and the physical and logical structure of SNA. A major emphasis will be TCP/IP protocols. TCP/IP formats are examined along with how TCP/IP operates at the network and transport layers. *(Prerequisite: IST 201)*

**IST 245 LOCAL AREA NETWORKS 3.0 Credits**

This course is a study of the methods used to interconnect computers, terminals, word processors, facsimiles and other office machines within a given area. Examples of vendor implementations are used to illustrate various approaches. *(Prerequisite: IST 201)*

**IST 246 INTEGRATED DIGITAL NETWORK 3.0 Credits**

This course discusses the characteristics and operation of packet switching and networking technologies such as ISDN, Frame Relay and ATM. *(Prerequisite: IST 241)*

**IST 250 NETWORK MANAGEMENT 3.0 Credits**

This course is a study of planning, organizing and controlling network functions for the potential networking manager. Emphasis is placed on current situations and techniques. *(Prerequisite: IST 202)*

**IST 251 LAN NETWORKING TECHNOLOGIES 3.0 Credits**

This course provides basic software-specific concepts of Local Area Network (LAN) communications, networking and connectivity. Topics include: data translation, network structures, protocols and IEEE 802 standards. Novell 5.x is used for course reference. *(Prerequisite: IST 220 or TEL 110)*

- IST 257 LAN NETWORK SERVER TECHNOLOGIES 3.0 Credits**  
This course is a study of network operating system technologies including network operating system architecture, the installation, configuration, monitoring and troubleshooting of network resources, and network administration functions such as user/group maintenance, network security, print services, remote access, fault tolerance, backup and recovery. (*Prerequisite: RDG 100*)
- IST 259 ELECTRONIC MESSAGING 3.0 Credits**  
This course is a study of electronic mail system software including the system architecture. The course covers the concepts and methods employed in the generation, storage, and transmission of electronic mail messages and the implementation, configuration, and administration of messaging software. (*Prerequisite: CPT 209*)
- IST 260 NETWORK DESIGN 3.0 Credits**  
This course is a study of the processes and techniques required to identify the most attractive design solution of a telecommunications network—combining creativity, rigorous discipline, analysis, and synthesis—and while emphasizing the solution in terms of cost and performance. (*Prerequisite: IST 202*)
- IST 261 ADVANCED NETWORK ADMINISTRATION 3.0 Credits**  
This course is an advanced study of the network operating system. Topics include installation upgrades, IP services, internet infrastructure, advanced server management and security, NDS management, and server optimization. (*Prerequisite: IST 202*)
- IST 266 INTERNET AND FIREWALL SECURITY 3.0 Credits**  
This course is an introduction to firewalls and other network security components that can work together to create an in-depth defensive perimeter around a Local Area Network (LAN). (*Prerequisite: IST 200*)
- IST 270 CLIENT/SERVER SYSTEMS 3.0 Credits**  
This course emphasizes the use of case tools coupled with client tools to allow RAD and prototyping of client applications. Networking and server concepts will be explored. Case studies of existing client/server systems will be used to examine the various phases of client/server applications. (*Prerequisites: CPT 185, CPT 242*)
- IST 272 RELATIONAL DATABASE 3.0 Credits**  
This course provides a comprehensive foundation in both SQL and relational database design and implementation. Dynamic and embedded SQL programming techniques are emphasized. (*Prerequisite: CPT 242 or permission of department chair*)
- IST 274 DATABASE ADMINISTRATION 3.0 Credits**  
This course is a study of the duties and responsibilities of a database administrator. The course covers setting up, maintaining, and troubleshooting a distributed, multi-user database. (*Prerequisite: IST 272*)
- IST 286 TECHNICAL SUPPORT INTERNSHIP I 3.0 Credits**  
This course is an entry level technical support/help desk internship. Students intern at the college's help desk and provide support to faculty and staff. Students will participate in weekly evaluation sessions of calls and solutions. (*Prerequisite: CPT 268*)
- IST 287 TECHNICAL SUPPORT INTERNSHIP II 3.0 Credits**  
This course is an intermediate level technical support/help desk internship. Students intern at the college's help desk and provide support to faculty and staff. The student prepares a portfolio for submission. (*Prerequisite: IST 286*)
- IST 290 SPECIAL TOPICS IN INFORMATION SCIENCES 3.0 Credits**  
This course covers special topics in information sciences technologies. (*Prerequisite: permission of department chair*)

- IST 291 FUNDAMENTALS OF NETWORK SECURITY I 3.0 Credits**  
 This course is a study of intro levels of security processes based on a security policy, emphasizing hands-on skills in the areas of secure perimeter, security connectivity, security management, identity services, and intrusion detection. The course prepares students to manage network security. (*Prerequisites: IST 202, IST 203, IST 266*)
- IST 292 FUNDAMENTALS OF NETWORK SECURITY II 3.0 Credits**  
 This course is a study of advanced security processes based on a security policy, emphasizing hands-on skills in the areas of secure perimeter, security connectivity, security management, identity services, and intrusion detection. The course prepares students to install/configure secure firewalls. (*Prerequisite: IST 291*)
- IST 295 FUNDAMENTALS OF VOICE OVER IP 3.0 Credits**  
 This course is an introduction to features of Voice over IP protocols, including VOIP hardware selection and network design considerations. Concepts include analog and digital voice encoding signaling and Quality of Service (QOS) and troubleshooting and configuration of VOIP networks. (*Prerequisites: IST 202, IST 203*)
- ITP 106 LINGUISTICS OF AMERICAN SIGN LANGUAGE 3.0 Credits**  
 This course consists of a study of the structure, grammar, and syntax of American Sign Language. (*Prerequisite: ASL 102* )
- ITP 201 DEAF HISTORY AND CULTURE 3.0 Credits**  
 This course is a study of the history and culture of deaf people. The course explores language, education, community, and attitudinal changes toward deaf people as a minority. (*Prerequisites: ENG 100, RDG 100*)
- LEG 120 TORTS 3.0 Credits**  
 This course is a study of the various classifications and functions of tort law, including intentional and negligent torts, causation, proximate cause, and defenses. (*Prerequisite: LEG 135*)
- LEG 121 BUSINESS LAW I 3.0 Credits**  
 This course is a study of the basics of commercial law, with emphasis on the formation and enforcement of contracts and the rules particular to the Uniform Commercial Code (UCC) and sales of goods. (*Prerequisite: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- LEG 122 BUSINESS LAW II 3.0 Credits**  
 This course is an in-depth study of the Uniform Commercial Code, with special emphasis on the essentials of Article 3, Commercial Paper, and Article 9, Secured Transactions. Business partnerships and corporations and their formation are studied. (*Prerequisite: LEG 121*)
- LEG 132 LEGAL BIBLIOGRAPHY 3.0 Credits**  
 This course is a study of the methods of legal research, proper citation of authority, use of legal treatises, texts, reporters and digests. This course introduces students to the techniques and procedures of legal writing and analysis. (*Prerequisite: LEG 135*)
- LEG 135 INTRODUCTION TO LAW AND ETHICS 3.0 Credits**  
 This course provides a general introduction to law, including courts, legal terminology, procedures, systems, and laws of society. Emphasis is on ethics and the role of the paralegal in the legal system. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- LEG 201 CIVIL LITIGATION I 3.0 Credits**  
 This course is a study of the principles of litigation and the rules of procedure for each court in the South Carolina system, including pleading, practice and discovery procedures. (*Prerequisite: LEG 120*)
- LEG 212 WORKERS' COMPENSATION 3.0 Credits**  
 This course is a study of the history of workers' compensation, case laws, statutes, and regulations, and procedures in handling claims. (*Prerequisite: LEG 120*)

- LEG 213 FAMILY LAW 3.0 Credits**  
This course includes an examination of the laws of marriage, divorce, annulment, separation, adoption, custody, and the juvenile. (*Prerequisite: LEG 135*)
- LEG 214 PROPERTY LAW 3.0 Credits**  
This course includes an overview of South Carolina property law, including the mechanics of various commercial and private property transactions and mortgage foreclosures. Students are introduced to techniques and procedures for examining titles to real property. (*Prerequisite: LEG 135*)
- LEG 215 BANKRUPTCY LAW 3.0 Credits**  
Topics included in this course are an overview of the bankruptcy code, voluntary and involuntary petitions, bankruptcy “estate,” stays, distribution and discharge, tax implications, local rules and discovery. (*Prerequisites: LEG 121, LEG 135*)
- LEG 220 INTELLECTUAL PROPERTY LAW 3.0 Credits**  
This course is the study of the fundamental concepts involving copyright laws, trademarks, patents, and protecting intellectual property rights with emphasis placed on the typical functions performed by paralegals. (*Prerequisites: LEG 121, LEG 135*)
- LEG 230 LEGAL WRITING 3.0 Credits**  
This course includes methods, techniques, and procedures for the research and preparation of legal memoranda, trial and appellate briefs, and trial notebooks. (*Prerequisite: LEG 132*)
- LEG 231 CRIMINAL LAW 3.0 Credits**  
This course includes a study of the definition and classification of criminal offenses, criminal responsibility, and legal procedures in a criminal prosecution. (*Prerequisites: RDG 100 or ESL 100, ENG 100 or ESL 110*)
- LEG 232 LAW OFFICE MANAGEMENT 3.0 Credits**  
This course is a study of the basic principles of office management, including administrative procedures, client relations, and office operating procedures. (*Prerequisite: LEG 135*)
- LEG 233 WILLS, TRUSTS AND PROBATE 3.0 Credits**  
This course includes a detailed study of testacy and intestacy, preparation of wills and codicils, and fundamentals of trust and probate administration. Students probate a simple estate. (*Prerequisite: LEG 135*)
- LEG 234 TITLE EXAMINATION PROCEDURES I 3.0 Credits**  
This course is a study of the common law and statutory requirements related to the transfer of real property with utilization of the appropriate indexes and documents in the appropriate city and county offices. (*Prerequisite: LEG 214*)
- LEG 242 LAW PRACTICE WORKSHOP 3.0 Credits**  
This course includes the application of substantive knowledge in a practical situation as a paralegal. (*Prerequisite: LEG 135*)
- LEG 244 SPECIAL PROJECTS FOR PARALEGALS 3.0 Credits**  
This course provides specialized paralegal training with an update on changes in the laws and procedures. (*Prerequisite: Permission of Program Director*)
- MAT 012 DEVELOPMENTAL MATHEMATICS WORKSHOP 1.0 Credits**  
This course provides support for mastery of MAT 032 competencies (e.g., may include, but is not limited to, laboratory work, computerized instruction, and/or projects).
- MAT 032 DEVELOPMENTAL MATHEMATICS 3.0 Credits**  
Developmental Mathematics includes a review of arithmetic skills, and focuses on the study of measurement and geometry, basic algebra concepts, and data analysis. Application skills are emphasized. (*Prerequisite: Appropriate placement test scores*)

**MAT 100 INTRODUCTORY COLLEGE MATH****5.0 Credits**

This course includes the following topics in an algebraic context: mathematical methods, techniques, ways of thinking, and problem solving. Graphing is introduced and geometrical applications are stressed. The course also reviews arithmetic operations and develops skills in operations with algebraic expressions, polynomials, algebraic fractions and solving linear equations. (This course does not meet the requirements for an associate degree, but may meet requirements for a diploma or certificate.) (*Prerequisites: RDG 032, MAT 032 or equivalent placement test scores*)

**MAT 101 BEGINNING ALGEBRA****3.0 Credits**

This course includes the study of rational numbers and their applications, operations with algebraic expressions, linear equations and applications, linear inequalities, graphs of linear equations, operations with exponents and polynomials, and factoring. (*Prerequisites: MAT 100, RDG 032 or ESL 037 or equivalent placement test score*)

**MAT 102 INTERMEDIATE ALGEBRA****3.0 Credits**

This course includes the study of linear systems and applications; quadratic expressions, equations, functions and graphs; and rational and radical expressions and functions. (*Prerequisites: MAT 101, RDG 032 or ESL 037 or equivalent placement test score*)

**MAT 110 COLLEGE ALGEBRA****3.0 Credits**

This course includes the following topics: polynomial, rational, logarithmic, and exponential functions; inequalities; systems of equations and inequalities; matrices; determinants; and solutions of higher degree polynomials. (Graphing calculator required) (*Prerequisite: MAT 102, RDG 100 or ESL 100 or equivalent placement test score*)

**MAT 111 COLLEGE TRIGONOMETRY****3.0 Credits**

This course includes the following topics: trigonometric functions; trigonometric identities; solution of right and oblique triangles; solution of trigonometric equations; polar coordinates; complex numbers, including DeMoivre's Theorem; vectors; conic sections; and parametric equations. (Graphing calculator required) (*Prerequisite: MAT 110*)

**MAT 120 PROBABILITY AND STATISTICS****3.0 Credits**

This course includes the following topics: introductory probability and statistics, including organization of data, sample space concepts, random variables, counting problems, binomial and normal distributions, central limit theorem, confidence intervals, and test hypothesis for large and small samples; types I and II errors; linear regression; and correlation. (Graphing calculator required) (*Prerequisites: MAT 102, RDG 100 or ESL 100 or equivalent placement test score*)

**MAT 122 FINITE COLLEGE MATHEMATICS****3.0 Credits**

This course includes the following topics: logic; sets; Venn Diagrams; counting problems; probability; matrices; systems of equations; linear programming, including the simplex method and applications; graphs; and networks. (Graphing calculator required) (*Prerequisites: MAT 102, RDG 100 or ESL 100 or equivalent placement test score*)

**MAT 130 ELEMENTARY CALCULUS****3.0 Credits**

This course includes the following topics: differentiation and integration of polynomials; rational, logarithmic and exponential functions; and interpretation and application of these processes. (Graphing calculator required) (*Prerequisite: MAT 110*)

**MAT 140 ANALYTICAL GEOMETRY AND CALCULUS I****4.0 Credits**

This course includes the following topics: derivatives and integrals of polynomials; rational, logarithmic, exponential, trigonometric, and inverse trigonometric functions; curve sketching; maxima and minima of functions; related rates; work; and analytic geometry. (Graphing calculator required) (*Prerequisites: MAT 110, MAT 111*)

**MAT 141 ANALYTICAL GEOMETRY AND CALCULUS II****4.0 Credits**

This course includes the following topics: continuation of calculus of one variable, including analytic geometry, techniques of integration, volumes by integration, and other applications;

infinite series, including Taylor series and improper integrals. (Graphing calculator required) (Prerequisite: MAT 140)

**MAT 155 CONTEMPORARY MATHEMATICS 3.0 Credits**

This course includes techniques and applications of the following topics: properties of and operations with real numbers, elementary algebra, consumer mathematics, applied geometry, measurement, graph sketching and interpretations, and descriptive statistics. (Prerequisite: MAT 100, RDG 032 or ESL 037 or equivalent placement test score)

**MAT 240 ANALYTICAL GEOMETRY AND CALCULUS III 4.0 Credits**

This course includes the following topics: multivariable calculus, including vectors; partial derivatives and their applications to maximum and minimum problems with and without constraints; line integrals; multiple integrals in rectangular and other coordinates; and Stokes' and Green's theorems. (Graphing calculator required) (Prerequisite: MAT 141)

**MAT 242 DIFFERENTIAL EQUATIONS 4.0 Credits**

This course includes the following topics: solution of linear and elementary non-linear differential equations by standard methods with sufficient linear algebra to solve systems; applications; series; Laplace transform; and numerical methods. (Graphing calculator required) (Prerequisite: MAT 141)

**MAT 250 ELEMENTARY MATHEMATICS 3.0 Credits**

Course provides students with an understanding of the meaning of numbers, fundamental operations of arithmetic, structure of the real number system & its subsystems, & elementary numbers theory. Within the parameters of an approved articulation agreement, this course may transfer to an accredited Education program at a comprehensive four-year college or university. This course is recommended for students who plan to major in Early Childhood or Elementary Education. (Graphing calculator required) (Prerequisite: MAT 110)

**MAT 251 ELEMENTARY MATHEMATICS II 3.0 Credits**

This course provides students with an understanding of informal geometry and basic concepts of algebra. Within the parameters of an approved articulation agreement, this course may transfer to an accredited Education program at a comprehensive four-year college or university. This course is recommended for students who plan to major in Early Childhood or Elementary Education. (Graphing calculator required) (Prerequisite: MAT 110)

**MED 103 MEDICAL ASSISTING INTRODUCTION 3.0 Credits**

This course provides an introduction to the profession of medical assisting, including qualifications, duties, and the role of the medical assistant. It also covers law and ethics as they relate to the medical office, with emphasis on the medical assisting profession. (Prerequisites: RDG 101, ENG 100 or ESL 110 or equivalent placement test score and admission to the Medical Assisting or Medical Office Administrative Assistant program)

**MED 104 MEDICAL ASSISTING ADMINISTRATIVE PROCEDURES 4.0 Credits**

This course provides a study of receptionist duties, patient record management, insurance claims processing, IDC-9-CM, CPT and HCPCS coding, letter writing, computer applications and the use of other business machines. (Prerequisites: RDG 101, ENG 100 or ESL 110 or equivalent placement test score, AOT 105 or Keyboarding Test score 25 WPM and admission to the Medical Assisting or Medical Office Administrative Assistant programs)

**MED 109 MEDICAL BUSINESS RECORDS 3.0 Credits**

This course provides a study of record keeping procedures utilized in physicians' offices and other clinical facilities. (Prerequisites: MED 103, MED 104)

**MED 112 MEDICAL ASSISTING PHARMACOLOGY 2.0 Credits**

This course provides a study of principles of pharmacology, drug therapy and the administration of medications. (Prerequisites: MAT 101, MED 103, MED 104)

- MED 113 BASIC MEDICAL LABORATORY TECHNIQUES 3.0 Credits**  
 This course provides a study of specimen collection and techniques for related laboratory procedures routinely performed in medical offices and clinics, including hematology and procedures related to body fluids. (*Prerequisites: MED 103, MED 114*)
- MED 114 MEDICAL ASSISTING CLINICAL PROCEDURES 4.0 Credits**  
 This course covers examination room techniques, including vital signs, specialty examination, minor surgical techniques and emergency procedures. (*Prerequisites: MED 103, MED 104*)
- MED 117 CLINICAL PRACTICE 5.0 Credits**  
 This course provides practical application of administrative and clinical skills in medical facility environments. (*Prerequisites: MED 109, MED 112, MED 114*)
- MED 124 MEDICAL COMPUTER PRACTICUM 3.0 Credits**  
 This course covers the use of medical software for accounting, billing, and patient records. (*Prerequisites: CPT 170, MED 103, MED 104*)
- MED 134 MEDICAL ASSISTING FINANCIAL MANAGEMENT 2.0 Credits**  
 This course is the study of the daily financial practices, insurance coding, billing and collections, and accounting practices in the medical office environment. (*Prerequisites: MED 109, MED 124*)
- MET 213 DYNAMICS 3.0 Credits**  
 This course includes the motion of rigid bodies and the forces that produce or change their motion. Rectilinear and curvilinear motion of bodies are covered as well as the concepts of work, power, energy, impulse, momentum and impact in relation to machine and mechanisms. (*Prerequisites: EGR 110, EGR 194, EGT 106*)
- MET 216 MECHANICS FLUID SYSTEMS 3.0 Credits**  
 This course is the study of the fundamentals of incompressible fluid statics and flow dynamics based on Bernoulli's principle and the conservation of mass, energy, and momentum. These principles are taught from a fluid systems standpoint. (*Prerequisites: EGR 120, MAT 111, PHY 201*)
- MET 217 DYNAMICS AND KINEMATICS 3.0 Credits**  
 This course examines rigid body motion from applied forces and moments, displacement, velocity and acceleration versus mass, force, and momentum. Kinematics is introduced, with motion calculations of mechanical linkage points. (*Prerequisites: EGR 120, MAT 111, PHY 201*)
- MET 222 THERMODYNAMICS 4.0 Credits**  
 This course includes the study of the thermodynamic principles of heat, work, non-flow and steady flow processes and cycles. The use of thermodynamic tables and charts are stressed. (*Prerequisites: EGR 110, MAT 140*)
- MET 223 THERMODYNAMICS SYSTEMS 3.0 Credits**  
 This course is a study of energy movement in physical systems, the resulting variations in temperature, pressure, and volume. Emphasis is placed on mathematical characterization of cycles, interpretation and application of thermodynamic tables. (*Prerequisites: EGR 120, MAT 110*)
- MET 224 HYDRAULICS AND PNEUMATICS 3.0 Credits**  
 This course covers basic hydraulic and pneumatic principles and circuits. System components such as pumps, compressors, piping, valves, cylinders, fluid motors, accumulators and receivers are discussed. (*Prerequisites: EGR 120, MAT 110*)
- MET 225 FUNDAMENTALS OF HEAT TRANSFER 3.0 Credits**  
 This course studies thermal energy transfer from hot to cold bodies by conduction, convection and radiation. Thermal equilibrium and the basic governing equations for the rate of thermal energy transfer will be emphasized. Applications will span a variety of materials, geometries and environments. (*Prerequisites: EGR 120, MAT 110*)

**MET 231 MACHINE DESIGN****4.0 Credits**

This course covers the design and applications of machine elements such as shafts, couplings, springs, brakes, clutches, gears and bearings. It also covers the applications of principles of DC/AC, statics, strength of materials, engineering drawing and dynamics to the design of simple machines. *(Prerequisite: MET 213)*

**MET 245 MET SPECIAL PROJECT****1.0 Credit**

This course includes investigations, research projects, self study, and/or laboratory exercises in an area of specialization approved by the instructor. *(Prerequisite: MAT 110)*

**MGT 101 PRINCIPLES OF MANAGEMENT****3.0 Credits**

This course is a study of management theories, emphasizing the management functions of planning, decision making, organizing, leading, and controlling. *(Prerequisites: RDG 100 or ESL 100)*

**MGT 120 SMALL BUSINESS MANAGEMENT****3.0 Credits**

This course is a study of small business management and organization, forms of ownership, and the process of starting a new business. *(Prerequisite: RDG 100)*

**MGT 150 FUNDAMENTALS OF SUPERVISION****3.0 Credits**

The course is a study of supervisory principles and techniques required to effectively manage human resources in an organization. First-line management is emphasized *(Prerequisite: RDG 100)*

**MGT 201 HUMAN RESOURCE MANAGEMENT****3.0 Credits**

This course is a study of personnel administration functions within a business organization. Major areas of study include job analysis; recruitment, selection and assessment of personnel; and wage, salary and benefit administration. *(Prerequisite: RDG 100)*

**MGT 230 MANAGING INFORMATION RESOURCES****3.0 Credits**

This course is a study of the development, use and management of information resources and systems in business and industry. *(Prerequisites: CPT 101 or CPT 170, MGT 101)*

**MGT 240 MANAGEMENT DECISION MAKING****3.0 Credits**

This course is a study of various structured approaches to managerial decision making. The student will apply knowledge acquired in previous course work. *(Prerequisites: ENG 101, MGT 101, acceptance into the Management program)*

**MGT 255 ORGANIZATIONAL BEHAVIOR****3.0 Credits**

This course is a study of effective individual and group behavior in an organization to maximize productivity, and psychological and social satisfaction. *(Prerequisite: RDG 100)*

**MKT 101 MARKETING****3.0 Credits**

This course covers an introduction to the field of marketing with a detailed study of the marketing concept and the processes of product development, pricing, promotion, and marketing distribution. *(Prerequisites: RDG 100 or ESL 100)*

**MKT 110 RETAILING****3.0 Credits**

This course is a study of the importance of retailing in American business and covers the concepts of store location, layout, merchandising, display, pricing, inventory control, promotional programs and profit management. *(Prerequisite: MKT 101)*

**MKT 120 SALES PRINCIPLES****3.0 Credits**

This course is a study of the personal selling process with special emphasis on determining customer needs and developing effective communications and presentation skills. *(Prerequisite: MKT 101)*

**MKT 135 CUSTOMER SERVICE TECHNIQUES****3.0 Credits**

This course is a study of the techniques and skills required for providing customer service excellence, including illustrations to turn customer relations into high standards of customer service, satisfaction, and repeat sales. *(Prerequisite: RDG 100 or ESL 100)*

**MKT 240 ADVERTISING****3.0 Credits**

This course is a study of the role of advertising in the marketing of goods and service, including types of advertising, media, how advertising is created, agency functions, and regulatory aspects of advertising. (*Prerequisite: MKT 101*)

**MKT 260 MARKETING MANAGEMENT****3.0 Credits**

This course is a study of the marketing system from the decision-maker's view, including how marketing strategies are planned and utilized in the market place. (*Prerequisite: MKT 101, 30 semester hours of credit, acceptance into the Marketing program*)

**MKT 270 INTERNET RESEARCH AND MARKETING****3.0 Credits**

This course is a study of utilizing the internet for research and marketing. The course includes the use of analytical skills, database, searches, and organization/presentations. (*Prerequisites: CPT 101 or CPT 170*)

**MLT 102 MEDICAL LAB FUNDAMENTALS****3.0 Credits**

This course introduces basic concepts and procedures in medical laboratory technology. (*Prerequisite: acceptance into the Medical Laboratory Technology program*)

**MLT 104 BASIC MEDICAL MICROBIOLOGY****2.0 Credits**

This course introduces the study of basic concepts of medical microbiology. (*Prerequisites: BIO 211, MLT 102*)

**MLT 108 URINALYSIS AND BODY FLUIDS****3.0 Credits**

This course introduces the routine analysis and clinical significance of urine and other body fluids. (*Prerequisites: CHM 110, MLT 102*)

**MLT 110 HEMATOLOGY****4.0 Credits**

This course provides a study of the basic principles of hematology, including hemoglobins, hematocrit, white and red counts, and identification of blood cells. (*Prerequisites: BIO 210, MLT 102*)

**MLT 115 IMMUNOLOGY****3.0 Credits**

This course provides a study of the immune system, disease states, and the basic principles of immunological testing. (*Prerequisites: BIO 211, MLT 110*)

**MLT 120 IMMUNOHEMATOLOGY****4.0 Credits**

This course introduces the theory and practice of blood banking including the ABO, RH and other blood group systems, compatibility testing and HDN. (*Prerequisites: MLT 115, MLT 210*)

**MLT 130 CLINICAL CHEMISTRY****4.0 Credits**

This course focuses on the study of nutritional, functional and excretional chemicals in blood and body fluids, including testing techniques and clinical significance. (*Prerequisites: CHM 110, MLT 260*)

**MLT 205 ADVANCED MICROBIOLOGY****4.0 Credits**

This course provides a detailed study of microorganisms and the currently accepted procedures for identification of these microorganisms in the clinical laboratory. (*Prerequisites: MLT 104, MLT 260*)

**MLT 210 ADVANCED HEMATOLOGY****4.0 Credits**

This course provides a study of the diseases of blood cells and other hematologic procedures including coagulation. (*Prerequisites: BIO 211, MLT 110*)

**MLT 230 ADVANCED CLINICAL CHEMISTRY****4.0 Credits**

This course includes advanced theory, principles, and instrument techniques used in clinical chemistry. (*Prerequisite: MLT 130*)

- MLT 260 CLINICAL PRACTICUM I 3.0 Credits**  
This course provides clinical experience in a supervised setting for developing technical proficiency in routine laboratory procedures. *(Prerequisites: MLT 108, MLT 210)*
- MLT 270 CLINICAL APPLICATIONS 12.0 Credits**  
This course provides sequential practical experience in selected areas of a supervised clinical setting. *(Prerequisites: MLT 120, MLT 205, MLT 230, MLT 260)*
- MTT 105 MACHINE TOOL MATH APPLICATIONS 3.0 Credits**  
This course is a study of shop math relevant to the machine tool trade. *(Prerequisites: MAT 100, RDG 100)*
- MTT 106 MACHINE TOOL COMPUTER APPLICATIONS 3.0 Credits**  
This course is a study of basic computer applications that are used in machining industries. Topics will include word processing, ASCII text editing, spreadsheets, locating information on the internet and serial communication concepts. *(Prerequisites: MTT 120, MAT 155 with a grade of "C" or better)*
- MTT 120 MACHINE TOOL PRINT READING 3.0 Credits**  
This course is designed to develop the basic skills and terminology required for visualization and interpretation of common prints used in the machine tool trades. *(Prerequisites: MAT 100, RDG 100)*
- MTT 141 METALS AND HEAT TREATMENT 3.0 Credits**  
This course is a study of the properties, characteristics, and heat treatment procedures of metals. *(Prerequisites: ENG 160, MTT 105, MTT 154 with a grade of "C" or better)*
- MTT 151 PRECISION MACHINING I 3.0 Credits**  
This course is an introduction to basic machine shop practices with emphasis on safety, hand tools, band saws, drill presses and measuring tools. *(Prerequisites: MAT 100, RDG 100)*
- MTT 152 PRECISION MACHINING II 3.0 Credits**  
This course is an introduction to the operation of basic machine shop equipment with emphasis on milling machines and surface grinders. *(Prerequisites: MTT 151 with a grade of "C" or better)*
- MTT 153 PRECISION MACHINING III 3.0 Credits**  
This course is an introduction to the operation of basic machine shop equipment with emphasis on lathes. *(Prerequisites: MTT 152, MTT 120, MAT 155 with a grade of "C" or better)*
- MTT 154 PRECISION MACHINING IV 3.0 Credits**  
This course is a study of techniques used to produce more complex precision plant parts that require multiple machine tools. *(Prerequisites: MTT 153 with a grade of "C" or better)*
- MTT 155 PRECISION GRINDING 3.0 Credits**  
This course is a study of theoretical and practical training in cylindrical grinding, advanced surface grinding operations and cutter grinding techniques. *(Prerequisites: MTT 105, MTT 154 with a grade of "C" or better)*
- MTT 171 INDUSTRIAL QUALITY CONTROL 2.0 Credits**  
This course covers the methods and procedures of quality control. *(Prerequisites: MTT 252, SPC 209 with a grade of "C" or better)*
- MTT 212 TOOL DESIGN 4.0 Credits**  
This course is a study of the development, material selection, manufacturing and machining procedures necessary in the production of tools and tooling. *(Prerequisites: MTT 154, MTT 105, MTT 106 with a grade of "C" or better)*
- MTT 215 TOOL ROOM MACHINING I 4.0 Credits**  
This course covers advanced machine tool operations, including an introduction to basic die making. *(Prerequisites: MTT 155, MTT 141 with a grade of "C" or better)*

- MTT 216 TOOL ROOM MACHINING II** **4.0 Credits**  
This course covers advanced machine tool operations, including complex die operations. (*Prerequisite: MTT 215 with a grade of "C" or better*)
- MTT 246 PLASTIC MOLDMAKING I** **2.0 Credits**  
This course is an introduction to moldmaking and plastics. (*Prerequisites: MTT 155, MTT 250 with a grade of "C" or better*)
- MTT 250 PRINCIPLES OF CNC** **3.0 Credits**  
This course is an introduction to the coding used in CNC Programming. (*Prerequisites: MTT 105, MTT 106, MTT 154 with a grade of "C" or better*)
- MTT 251 CNC OPERATIONS** **3.0 Credits**  
This course is a study of CNC machine controls, setting tools, and machine limits, and capabilities. (*Prerequisite: MTT 143*)
- MTT 252 CNC SETUP AND OPERATIONS** **4.0 Credits**  
This course covers CNC setup and operations. (*Prerequisites: MTT 155, MTT 250, MTT 212 with a grade of "C" or better*)
- MTT 253 CNC PROGRAMMING AND OPERATIONS** **3.0 Credits**  
This course is a study of the planning, programming, selecting tooling, determining speeds and feeds, setting up, operating and testing of CNC programs on CNC machines. (*Prerequisites: MTT 252 with a grade of "C" or better*)
- MTT 258 MACHINE TOOL CAM** **3.0 Credits**  
This course is a study of computer assisted manufacturing graphics systems needed to create CNC programs. (*Prerequisites: MTT 246, MTT 252 with a grade of "C" or better*)
- MUS 105 MUSIC APPRECIATION** **3.0 Credits**  
This course is an introduction to the study of music with focus on the elements of music and their relationships, the musical characteristics of representative works and composers, common musical forms and genres of various Western and non-Western historical style periods, and appropriate listening experiences. (*Prerequisite: ESL 100 or RDG 100*)
- MUS 106 INTRODUCTION TO GUITAR** **1.0 Credit**  
This course introduces students to basic principles of guitar playing.
- MUS 110 MUSIC FUNDAMENTALS** **3.0 Credits**  
This course is an introduction to the elements of music and music notation with keyboard applications. Topics covered include intervals, scales, rhythm, meter, elementary ear training and basic keyboard harmony. (*Prerequisite: ESL 100 or RDG 100*)
- NET 112 NUCLEAR POWER PLANT COMPONENTS** **3.0 Credits**  
This course is a study of basic nuclear power plant components including valves, sensors, detectors, controllers, pumps, heat exchangers, demineralizers, ion exchangers and other related systems. (*Prerequisites: MAT 102, RDG 100*)
- NET 122 ELECTRICAL SCIENCES** **3.0 Credits**  
This course is a study of basic electricity for nuclear power plant technicians. Topics include conductors, semiconductors, insulators, voltage, current resistance, Ohm's law, Kirchoff's Voltage Law (KVL), Kirchoff's Current Law (KCL), basic circuit theory and related topics. (*Prerequisite: MAT 110*)
- NET 130 RADIOLOGICAL PROTECTION** **3.0 Credits**  
This course is a study of basic radiological protection principles. Topics include detectors, basic nuclear instrumentation, portable survey equipment and related topics in radiation protection protocols. (*Prerequisites: MAT 110, RDG 100*)

**NET 210 THERMAL SCIENCES****3.0 Credits**

This course is a study of basic thermal science for nuclear power plant operator training. Topics include monitoring and control of primary and secondary plant systems, basic concepts in heat transfer and the laws of thermodynamics. (*Prerequisites: EGR 120, MAT 110*)

**NET 225 NUCLEAR REACTOR THEORY****3.0 Credits**

This course is a study of basic reactor theory for nuclear power plant operator training. Topics include neutron kinetics, reactor period and start-up rates, fuel nuclides, the in-hour equation and the quasi equilibrium power model. (*Prerequisites: MAT 110, PHY 201*)

**NET 230 NUCLEAR PLANT CHEMISTRY****3.0 Credits**

This course is a study of basic nuclear plant chemistry including nitrogen reactions, lithium production, radio nuclides, chemical additives, filtration, ion exchange and related topics in nuclear chemistry. (*Prerequisites: CHM 110, MAT 110*)

**NET 240 NUCLEAR PRIMARY AND SECONDARY SYSTEMS****3.0 Credits**

This course is a study of the relationship between primary and secondary power plant systems. The management and control of such systems are also discussed. (*Prerequisites: NET 112, NET 122, NET 210, NET 225, MAT 110*)

**NMT 100 PREPARATION FOR CLINICAL****6.0 Credits**

This course will prepare nuclear medicine students for the clinical environment within the hospital, prior to beginning rotations. (*Prerequisite: ESL 100 or RDG 100, Permission of the Nuclear Medicine Program Director*)

**NMT 101 INTRODUCTION TO NUCLEAR MEDICINE****2.0 Credits**

This course is a study of the overall basics of nuclear medicine technology. This course includes patient care, ethics, medical-legal issues and the history of nuclear medicine. (*Prerequisite: Permission of the Nuclear Medicine Program Director*)

**NMT 102 NUCLEAR MEDICINE PROCEDURES I****2.0 Credits**

This course is a study of didactic concepts for the practice of clinical nuclear medicine. Topics include: nuclear cardiology, ventilation and perfusion lung imaging, skeletal imaging, liver and hepatobiliary imaging. (*Prerequisite: ESL 100 or RDG 100, Permission of the Nuclear Medicine Program Director*)

**NMT 103 NUCLEAR MEDICINE PHYSICS****2.0 Credits**

This course is a study of the basic math and statistical skills necessary to perform nuclear physics problems. The knowledge and application of radiation safety, radiobiology and protection will be covered. (*Prerequisite: ESL 100 or RDG 100, Permission of the Nuclear Medicine Program Director*)

**NMT 104 NUCLEAR MEDICINE PROCEDURES II****2.0 Credits**

This course is a study of background knowledge for application of nuclear medicine procedures. Topics include: endocrinology, renal imaging, infection and tumor imaging. (*Prerequisite: NMT 102 with minimum grade of "C"*)

**NMT 105 QUALITY ASSURANCE METHODOLOGY****2.0 Credits**

This course covers the information necessary to plan and implement procedures that will satisfy quality assurance standards. Topics covered include radiopharmacy and quality management. (*Prerequisite: NMT 103 with minimum grade of "C"*)

**NMT 106 NUCLEAR MEDICINE PROCEDURES III****2.0 Credits**

This course covers theory and principles of non-imaging procedures. (*Prerequisite: NMT 104 with minimum grade of "C"*)

**NMT 107 NUCLEAR MEDICINE INSTRUMENTATION****3.0 Credits**

This course covers the theory and application of radiation detection instruments. Topics include quality assurance and methodology of nuclear medicine equipment. (*Prerequisite: NMT 103 with minimum grade of "C"*)

- NMT 109 SPECIAL TOPICS IN NUCLEAR MEDICINE** **2.0 Credits**  
 This course covers a variety of special topics in nuclear medicine. This course includes registry preparation. (*Prerequisite: NMT 105 with minimum grade of "C"*)
- NMT 150 APPLIED NUCLEAR MEDICINE I** **8.0 Credits**  
 This course covers the application of nuclear medicine. (*Prerequisite: Permission of the Nuclear Medicine Program Director*)
- NMT 151 APPLIED NUCLEAR MEDICINE II** **8.0 Credits**  
 This course covers difficult and challenging clinical applications of nuclear medicine theory. (*Prerequisite: NMT 150 with minimum grade of "C"*)
- NMT 152 APPLIED NUCLEAR MEDICINE III** **6.0 Credits**  
 This course covers challenging and difficult applications of nuclear medicine theory. (*Prerequisite: NMT 151 with minimum grade of "C"*)
- NUR 100 PRE-NURSING (NON-DEGREE CREDIT)** **1.0 Credit**  
 This course covers an exploration of nursing as a possible career choice.
- NUR 101 FUNDAMENTALS OF NURSING** **6.0 Credits**  
 This course facilitates the development of beginning technical competency in the application of the nursing process to assist in meeting the needs of selected patients of varying ages. (*Prerequisites: MAT 100, RDG 100 with a minimum grade of "C," acceptance into the Nursing program*)
- NUR 105 PHARMACOLOGY FOR NURSES** **1.0 Credit**  
 This course is an introduction to the basic concepts of pharmacology related to drug administration. (*Prerequisite: BIO 210, NUR 131, with minimum grade of "C"*)
- NUR 107 NUTRITION AND DIET THERAPY** **1.0 Credit**  
 This course is a study of the basic concepts of nutrition and diet therapy. (*Prerequisites: RDG 100, ENG 100, with minimum grades of "C"*)
- NUR 115 BASIC CONCEPTS IN NURSING** **2.0 Credits**  
 This course introduces the student to the profession of nursing through both classroom and limited lab/clinical experiences. (*Prerequisites: ENG-100 or ESL-110, RDG-100 or ESL-100*)
- NUR 131 INTRODUCTION TO PHARMACOLOGY** **1.0 Credits**  
 This course is a study of drug calculations and basic concepts of pharmacology. (*Prerequisite: MAT 101*)
- NUR 162 PSYCHIATRIC AND MENTAL HEALTH NURSING** **3.0 Credits**  
 This course covers application of critical thinking skills and nursing concepts in the care of adult clients with selected mental health problems in a variety of settings. The course includes the study of dynamics of human behavior ranging from normal to extreme. (*Prerequisites: One of the following sequences with a minimum grade of "C": ENG 101, NUR 263, NUR 265 or BIO 211, MAT 120, NUR 201*) (*Corequisite: NUR 210*)
- NUR 163 NURSING ACROSS LIFE SPAN I** **2.0 Credits**  
 This course is an overview of concepts related to nursing care of clients across the life span. Communication, basic mental health, growth and development, and gerontology are included in the course. (*Prerequisites: ENG 100, RDG 100 with minimum grades of "C"*)
- NUR 165 NURSING CONCEPTS AND CLINICAL PRACTICE I** **6.0 Credits**  
 This course covers applications of critical thinking skills and nursing concepts in the care of adult clients with selected health problems in a variety of setting. (*Prerequisites: BIO 210, MAT 102 or MAT 120, NUR 101, NUR 107, NUR 131, PSY 201 with a minimum grade of "C"*)

**NUR 201 TRANSITION NURSING****3.0 Credits**

This course facilitates the transition of the Practical Nurse graduate to the role of Associate Degree Nursing student. (*Prerequisite: BIO 210, ENG 101, PSY 201 with a minimum grade of "C," acceptance into the Nursing program, active SC LPN license*)

**NUR 210 COMPLEX HEALTH PROBLEMS****5.0 Credits**

This course expands application of the nursing process in meeting the needs of patients with complex health problems. (*Prerequisites: One of the following sequences with a minimum grade of "C": ENG 101, NUR 263, NUR 265 or BIO 211, MAT 120, NUR 201*) (*Corequisite: NUR 162*)

**NUR 215 MANAGEMENT OF PATIENT CARE****5.0 Credits**

This course facilitates nursing care of small groups of patients utilizing the nursing process and concepts of management. (*Prerequisites: BIO 225, NUR 162, NUR 210 with minimum grade of "C"*) (*Corequisite: NUR 264*)

**NUR 263 NURSING ACROSS LIFE SPAN II****4.0 Credits**

This course is a study of basic concepts utilizing the nursing process and critical thinking skills in the care of women, child-bearing families, children and adolescents with acute and chronic health problems. Normal aspects of care and growth and development are covered in the course. (*Prerequisites: BIO 211, NUR 105, NUR 163, NUR 165 with a minimum grade of "C"*) (*Corequisite: NUR 265*)

**NUR 264 NURSING ACROSS LIFE SPAN III****4.0 Credits**

This course is a study of advanced concepts utilizing the nursing process and critical thinking skills in the care of high-risk women, child-bearing families, children and adolescents with acute and chronic health problems. This course includes the study of complex aspects of care, growth and development. (*Prerequisites: BIO 225, NUR 162, NUR 210 with a minimum grade of "C"*) (*Corequisite: NUR 215*)

**NUR 265 NURSING CONCEPTS AND CLINICAL PRACTICE II****6.0 Credits**

This course is a continuation of the application of critical thinking skills and nursing concepts in the care of adult clients with selected health problems in a variety of settings. (*Prerequisites: BIO 211, NUR 105, NUR 163, NUR 165 with a minimum grade of "C"*) (*Corequisite: NUR 263*)

**PHI 101 INTRODUCTION TO PHILOSOPHY****3.0 Credits**

This course includes a topical survey of the three main branches of philosophy — epistemology, metaphysics, and ethics — and the contemporary questions related to these fields. (*Prerequisites: ESL 100 or RDG 100, ENG 100*)

**PHI 105 INTRODUCTION TO LOGIC****3.0 Credits**

This course is an introduction to the structure of argument, including symbolization, proofs, formal fallacies, deductions, and inductions. (*Prerequisites: ESL 100 or RDG 100 or RDG 101, MAT 102*)

**PHI 106 LOGIC II INDUCTIVE REASONING****3.0 Credits**

This elementary logic course is an introduction to inductive reasoning. Patterns of inductive reasoning including analogical reasoning, inductive generalizations, scientific reasoning, and causal reasoning will be examined. Probability theory, decision analysis, and the criteria for the acceptability of inductive arguments will be covered also. (*Prerequisites: ESL 100 or RDG 100 or RDG 101, MAT 102*)

**PHI 115 CONTEMPORARY MORAL ISSUES****3.0 Credits**

This course examines moral issues in contemporary society, including basic principles and applications of ethics. (*Prerequisites: ESL 100 or RDG 100, ENG 100*)

**PHM 101 INTRODUCTION TO PHARMACY****3.0 Credits**

This course provides a study of and introduction to pharmacy and the role in providing patient care services. (*Prerequisites: Acceptance into the Pharmacy Technology program*)

- PHM 109 APPLIED PHARMACY PRACTICE** **2.0 Credits**  
 This course provides a study of the principles used in manipulation of data and materials in the preparing and dispensing of drugs. (*Prerequisites: PHM 101, PHM 113*)
- PHM 111 APPLIED PHARMACY PRACTICE LABORATORY** **2.0 Credits**  
 This course provides a study of laboratory based, hands-on application of principles used in manipulation of data and materials in the preparing and dispensing of drugs. (*Prerequisites: PHM 101, PHM 113*)
- PHM 113 PHARMACY TECHNICIAN MATH** **3.0 Credits**  
 This course includes a review of basic mathematics focusing on its application to common pharmaceutical calculations. (*Prerequisite: Acceptance into Pharmacy Technology program*)
- PHM 114 THERAPEUTIC AGENTS I** **3.0 Credits**  
 This course provides an introductory study of therapeutic drug categories. (*Prerequisites: AHS 102 or BIO 112, PHM 101*)
- PHM 118 COMMUNITY PHARMACY SEMINAR** **1.0 Credit**  
 This course is a study of the pharmacy issues related to the community pharmacy practice. (*Prerequisite: PHM 101*)
- PHM 124 THERAPEUTIC AGENTS II** **3.0 Credits**  
 This course includes a study of therapeutic drug categories. (*Prerequisite: PHM 114*)
- PHM 152 PHARMACY TECHNICIAN PRACTICUM I** **2.0 Credits**  
 This course provides a practical introduction to the pharmacy environment. (*Prerequisite: PHM 101, PHM 113*)
- PHM 164 PHARMACY TECHNICIAN PRACTICUM II** **4.0 Credits**  
 This course provides practical application of pharmacy skills in pharmacy environments. (*Prerequisite: PHM 152*)
- PHM 173 PHARMACY TECHNICIAN PRACTICUM III** **3.0 Credits**  
 This course includes practical experience in a working pharmacy environment. (*Prerequisite: PHM 152*)
- PHS 111 CONCEPTUAL PHYSICS I** **3.0 Credits**  
 This course is an introduction to the mechanical concepts of distance, time, mass, force, energy and power. (*Prerequisite: MAT 100*)
- PHS 115 INTEGRATED SCIENCE** **4.0 Credits**  
 This course contains topics taken from general chemistry and general physics. (*Prerequisite: MAT 102*)
- PHY 100 INTRODUCTORY PHYSICS** **3.0 Credits**  
 This is a course in general physics including introductory principles of physics for higher level physics study. (This course does not meet the requirements for an associate degree, but may meet requirements for a diploma or certificate.)
- PHY 201 PHYSICS I** **4.0 Credits**  
 This is the first in a sequence of physics courses. Topics include mechanics, wave motion, sound, heat, electromagnetism, optics, and modern physics. (*Prerequisites: ESL 100 or RDG 100, MAT 110*)
- PHY 202 PHYSICS II** **4.0 Credits**  
 This course covers physics topics, including mechanics, wave motion, sound, heat, electromagnetism, optics and modern physics. (*Prerequisite: PHY 201*)

**PHY 221 UNIVERSITY PHYSICS I****4.0 Credits**

This is the first of a sequence of courses. The course includes a calculus based treatment of the following topics: vectors, laws of motion, rotation, vibratory, and wave motion. (*Prerequisite: MAT 140*)

**PHY 222 UNIVERSITY PHYSICS II****4.0 Credits**

This course is a continuation of calculus based treatment of the following topics: thermodynamics, kinetic theory of gases, electricity and magnetism, including electrostatics, dielectrics, electric circuits, magnetic fields, and induction phenomena. (*Prerequisite: MAT 141, PHY 221*)

**PSC 201 AMERICAN GOVERNMENT****3.0 Credits**

This course is a study of national governmental institutions with emphasis on the Constitution, the functions of executive, legislative and judicial branches, civil liberties and the role of the electorate. The impact of current events on the national government and institutions is emphasized. (*Prerequisites: ESL 100 or RDG 100, ENG 100 or ESL 110*)

**PSC 205 POLITICS AND GOVERNMENT****3.0 Credits**

This course is a study of the concepts and problems involved in man's relationships with governments and political change. This course emphasizes comparative institutions of government, analysis of political behavior, and political ideology. (*Prerequisite: ESL 100 or RDG 100, ENG 032 or ESL 038*)

**PSC 206 POLITICS OF THE MIDDLE EAST****3.0 Credits**

This course examines the domestic and international politics of countries in the Middle East. Coursework compares political systems in the region and factors such as economics, religion, and societal divisions that influence both domestic politics and external relations of the countries. (*Prerequisite: ESL 100 or RDG 100, ENG 032 or ESL 038*)

**PSC 215 STATE AND LOCAL GOVERNMENT****3.0 Credits**

This course is a study of state, county and municipal government systems, including interrelationships between these systems and within the federal government. The impact of current events on the state and local governments and institutions is emphasized. (*Prerequisites: ESL 100 or RDG 100, ENG 100 or ESL 110*)

**PSC 220 INTRODUCTION TO INTERNATIONAL RELATIONS****3.0 Credits**

This course introduces the major focus and factors influencing world affairs, with emphasis on the role of the United States in the global community and the impact of growing interdependence on daily living. (*Prerequisite: ESL 100 or RDG 100, ENG 032 or ESL 038*)

**PSY 201 GENERAL PSYCHOLOGY****3.0 Credits**

This course includes the following topics and concepts in the science of behavior: scientific method, biological bases for behavior, perception, motivation, learning, memory, development, personality, abnormal behavior; therapeutic techniques and social psychology. (*Prerequisites: ESL 100 or RDG 100, ENG 032 or ESL 038*)

**PSY 203 HUMAN GROWTH AND DEVELOPMENT****3.0 Credits**

This course is a study of the physical, cognitive, and social factors affecting human growth, development, and potential. (*Prerequisites: PSY 201 with a "C" or better, ENG 100 or ESL 110*)

**PSY 212 ABNORMAL PSYCHOLOGY****3.0 Credits**

This course is a study of the nature and development of behavioral disorders, including the investigation of contemporary treatment procedures. In depth review of the etiology, diagnosis and treatment of psychological disorders; the psychological, biological and sociocultural perspectives on these disorders; and the efficacy of various treatment approaches is included. (*Prerequisites: PSY 201 with a "C" or better, ENG 100 or ESL 110*)

**PSY 218 BEHAVIOR MODIFICATION****3.0 Credits**

This course is an introduction to the terminology, methods, and procedures used in behavior modification, including the application of these procedures and techniques in specific areas of

human services. Focus of study is on the application of change techniques to human behavior across both personal and professional domains. *(Prerequisites: PSY 201 with a "C" or better, ENG 100 or ESL 110)*

**PSY 240 ETHNICITY AND MINORITY ISSUES 3.0 Credits**

This course is a study of cultural and minority characteristics influencing individual and interpersonal behaviors, with emphasis on social, educational, economic, and environmental factors. *(Prerequisites: PSY 201, SOC 101 with a "C" or better)*

**PTH 101 PHYSICAL THERAPY PROFESSIONAL PREPARATION 2.0 Credits**

This course introduces the purpose, philosophy and history of physical therapy and medical/legal documentation. *(Prerequisite: Acceptance into the Physical Therapist Assistant program)*

**PTH 202 PHYSICAL THERAPY MODALITIES 4.0 Credits**

This course introduces patient care techniques, including patient preparation and therapeutic hot/cold modalities. *(Prerequisite: PTH 205)*

**PTH 205 PHYSICAL THERAPY FUNCTIONAL ANATOMY 4.0 Credits**

This course introduces the basic concepts and principles of muscles, joints, and motion, including traditional testing procedures. *(Prerequisite: Acceptance into the Physical Therapist Assistant program)*

**PTH 206 THERAPEUTIC PROCEDURES 2.0 Credits**

This course introduces the rationale and skills for patient therapeutic procedures, including basic exercises, gait training and other skills necessary to patient treatment. *(Prerequisite: PTH 101)*

**PTH 221 PATHOLOGY I 2.0 Credits**

This course is an introduction to basic pathophysiology of the body with the emphasis on the body's reaction to disease and injury. *(Prerequisite: PTH 101)*

**PTH 222 PATHOLOGY II 2.0 Credits**

This course is a continuation of the pathologies commonly treated in physical therapy with emphasis on etiology, clinical picture, diagnosis and treatment. *(Prerequisite: PTH 101)*

**PTH 225 ELECTROTHERAPY 2.0 Credits**

This course provides a study of the rationale, contraindications, and application techniques of various electrical equipment. *(Prerequisite: PTH 205)*

**PTH 226 THERAPEUTIC EXERCISES 3.0 Credits**

This course provides a study of the rationale, contraindications and exercise skills needed to develop appropriate exercise programs. *(Prerequisite: PTH 205)*

**PTH 244 REHABILITATION 4.0 Credits**

This course introduces neurological principles, pathology, and specialized rehabilitation techniques for pediatric and adult care. *(Prerequisites: PTH 205, PTH 206)*

**PTH 252 CLINICAL PRACTICE 2.0 Credits**

This course introduces the elementary clinical procedures involved in the patient care setting. *(Prerequisite: PTH 205)*

**PTH 253 CLINICAL PRACTICE II 3.0 Credits**

This course involves the student's participation in the basic treatment techniques of physical therapy, intensified in both the clinic and classroom setting. *(Prerequisite: PTH 252)*

**PTH 266 PHYSICAL THERAPY PRACTICUM I 6.0 Credits**

This course includes patient treatments under the direct supervision of a licensed physical therapist and/or a licensed physical therapist assistant. *(Prerequisite: PTH 252)*

- PTH 276 PHYSICAL THERAPY PRACTICUM II** **6.0 Credits**  
This course includes practicum experience in a clinical setting using advanced skills under the supervision of a licensed physical therapist and/or a licensed physical therapist assistant. (*Prerequisite: PTH 252*)
- QAT 102 QUALITY CONCEPTS AND TECHNIQUES** **3.0 Credits**  
This course covers the basic theory and concepts of quality. The total quality systems, basic statistics, variable control charts, and the commitment to quality are emphasized. (*Prerequisite: MAT 101*)
- RAD 100 CLINICAL PREPARATION** **3.0 Credits**  
This course will prepare students for the actual clinical rotations required of full-time radiology students. Orientation to the hospital and radiology department will be covered. (*Prerequisite: Acceptance into Radiology Technology program*)
- RAD 101 INTRODUCTION TO RADIOGRAPHY** **2.0 Credits**  
This course provides an introduction to radiologic technology with emphasis on orientation to the radiology department, ethics, and basic radiation protection. (*Prerequisites: AHS 102, acceptance into Radiology Technology program*)
- RAD 102 RADIOLOGY PATIENT CARE PROCEDURES** **2.0 Credits**  
This course provides a study of the procedures and techniques used in the care of the diagnostic imaging patient. (*Prerequisite: Acceptance into Radiology Technology program*)
- RAD 104 INTRODUCTION TO PHYSICS** **1.0 Credit**  
This course provides an overview of mathematical applications, unit conversions, and a basic overview of theory and principles as they relate to physics. (*Prerequisite: Acceptance into Radiology Technology program*)
- RAD 105 RADIOGRAPHIC ANATOMY** **4.0 Credits**  
This course includes the study of the structures of the human body and the normal function of its systems. Special emphasis is placed on radiographic anatomy. (*Prerequisite: BIO 210 or 211; Acceptance into Radiology Technology program*)
- RAD 110 RADIOGRAPHIC IMAGING I** **3.0 Credits**  
This course provides detailed study of the parameters controlling radiation quality and quantity for radiographic tube operation and image production. (*Prerequisite: RAD 101*)
- RAD 115 RADIOGRAPHIC IMAGING II** **3.0 Credits**  
This course continues a detailed study of primary and secondary influencing factors and accessory equipment related to imaging. (*Prerequisite: RAD 110*)
- RAD 121 RADIOGRAPHIC PHYSICS** **4.0 Credits**  
This course introduces the principles of radiographic physics, incorporating theory and application of the basic principles underlying the operation and maintenance of x-ray equipment. (*Prerequisite: RAD 115*)
- RAD 130 RADIOGRAPHIC PROCEDURES I** **3.0 Credits**  
This course provides an introduction to radiographic procedures. Positioning of the chest, abdomen, and extremities are included. (*Prerequisite: RAD 102*)
- RAD 136 RADIOGRAPHIC PROCEDURES II** **3.0 Credits**  
This course is a study of radiographic procedures for visualization of the structures of the body. (*Prerequisite: RAD 130*)
- RAD 153 APPLIED RADIOGRAPHY I** **3.0 Credits**  
This course introduces the clinical environment of the hospital by providing basic use of radiographic equipment and routine radiographic procedures. (*Prerequisite: Acceptance into Radiology Technology program*)

- RAD 155 APPLIED RADIOGRAPHY I** **5.0 Credits**  
 This course introduces the clinical environment of the hospital by providing basic use of radiographic equipment and routine radiographic procedures. (*Prerequisite: RAD 101*)
- RAD 165 APPLIED RADIOGRAPHY II** **5.0 Credits**  
 This course includes the use of radiographic equipment and performance of radiographic procedures within the clinical environment of the hospital. (*Prerequisite: RAD 155*)
- RAD 220 SELECTED IMAGING TOPICS** **3.0 Credits**  
 This course is a study of advanced topics unique to the radiological sciences. Preparing an in-depth review of all didactic material is included. (*Prerequisite: RAD 235*)
- RAD 225 SELECTED RADIOGRAPHIC TOPICS** **2.0 Credits**  
 This course is a study of selected areas related to radiography. Quality assurance, mammography and pathology are also covered. (*Prerequisite: RAD 235*)
- RAD 235 RADIOGRAPHY SEMINAR I** **1.0 Credit**  
 This course is a study of selected areas of radiography that are unique or new to the field. Emphasis will be on radiology and protection. (*Prerequisite: RAD 155*)
- RAD 258 ADVANCED RADIOGRAPHY I** **8.0 Credits**  
 This course includes independently performing routine procedures in a radiology department, including involvement in advanced radiographic procedures. (*Prerequisite: RAD 165*)
- RAD 268 ADVANCED RADIOGRAPHY II** **8.0 Credits**  
 This course includes routine radiographic examinations, as well as advanced procedures, while continuing to build self-confidence in the clinical atmosphere. (*Prerequisite: RAD 258*)
- RAD 284 FLUOROSCOPIC PROCEDURES** **2.0 Credits**  
 This course provides emphasis on radiographic fluoroscopy and the equipment necessary to perform fluoroscopic procedures. (*Prerequisite: RAD 258*)
- RDG 012 DEVELOPMENTAL READING WORKSHOP** **1.0 Credit**  
 This course provides support for mastery of Reading 032 competencies.
- RDG 013 DEVELOPMENTAL READING-COMPRESSED** **1.0 Credit**  
 This course provides a review, in a compressed time frame, of the comprehension skills studied in RDG 032. Successful completion of this course allows a student to exit Developmental Reading.
- RDG 032 DEVELOPMENTAL READING** **3.0 Credits**  
 This course is an intensive review of the academic reading skills needed for success in a college-level course. Students will demonstrate their understanding of reading as a process and will apply strategies learned to expand their reading comprehension skills. Students will demonstrate the ability to integrate knowledge, use context clues, and identify supporting details. (*Prerequisite: Appropriate placement test score*)
- RDG 100 CRITICAL READING** **3.0 Credits**  
 This course covers the application of basic reading skills to improve critical comprehension and higher order thinking skills. It gives students extensive practice with analytical and interpretative skills. (This course does not meet the requirements for an associate degree, but may meet requirements for a diploma or certificate. (*Prerequisite: ESL 037 or RDG 032 or Equivalent placement test score*))
- RDG 101 COLLEGE READING** **3.0 Credits**  
 This course is designed to enhance reading efficiency by effectively processing and analyzing information. It enables students to move through more demanding levels of comprehension, confront issues, make judgements and connect ideas. (This course is required for students who do not meet the reading requirements to enter Medical Assisting program and recom-

mended for students in other Health Sciences programs.) (Prerequisites: ESL 100 or RDG 100, ENG 032 or ESL 038 or Equivalent placement test score)

**REL 101 INTRODUCTION TO RELIGION 3.0 Credits**

This course provides a study of religion and the nature of religious belief and practice. (Prerequisites: ESL 100 or RDG 100, ENG 100)

**REL 102 INTRODUCTION TO BIBLICAL STUDY 3.0 Credits**

This course is an introduction to the contemporary analysis of the Bible, including its historical background, writing and transmission, its principal persons and events, and its ideas and their significance for the present. (Prerequisites: ESL 100 or RDG 100, ENG 100)

**REL 103 COMPARATIVE RELIGION 3.0 Credits**

This course is an analysis of the religious experience of various persons and groups, East and West, in traditional and contemporary settings. It includes tribal religions, Hinduism, Buddhism, Confucianism, Taoism, Judaism, Christianity, and Islam. (Prerequisites: ESL 100 or RDG 100, ENG 100)

**REL 214 RELIGION STUDY ABROAD 3.0 Credits**

This course provides a study abroad experience for students studying religion. The course includes travel to selected region outside the United States and provides a field study of historical and contemporary religion. (Prerequisite: ESL 100 or RDG 100)

**RES 101 INTRODUCTION TO RESPIRATORY CARE 3.0 Credits**

This course includes introduction topics pertinent to entering the respiratory care profession, i.e., medical terminology, ethical issues, and legal issues. Patient assessment and pharmacology for respiratory care is discussed. (Prerequisites: If Applicable COL 103, ENG 100 or ESL 110, and/or MAT 101, accepted into the Respiratory Therapy program.) (Corequisite: RES 121)

**RES 110 CARDIOPULMONARY SCIENCE I 2.0 Credits**

This course focuses on assessment, treatment, and evaluation of patients with cardiopulmonary disease. Also, it includes pediatric respiratory care and microbiology. (Prerequisites: BIO 112, RES 101, RES 121)

**RES 111 PATHOPHYSIOLOGY 2.0 Credits**

This course is a study of the general principles and analysis of normal and diseased states. (Prerequisites: BIO 112, RES 125)

**RES 121 RESPIRATORY SKILLS I 4.0 Credits**

This course includes a study of basic respiratory therapy procedures and their administration. Administration of medical gases, humidity and aerosol, hyperinflation therapy, chest physical therapy, principles of infection control, and blood gas analysis is covered. (Prerequisites: If Applicable COL 103, ENG 100 or ESL 110, and/or MAT 101, acceptance into the Respiratory Therapy program.) (Corequisite: RES 101)

**RES 125 CARDIOPULMONARY PHYSIOLOGY 2.0 Credits**

This course is the study of the Physiology of the heart, lungs and related body systems. (Prerequisites: BIO 112 and/or BIO 210, RES 101, RES 121)

**RES 131 RESPIRATORY SKILLS II 4.0 Credits**

This course is a study of selected respiratory care procedures and applications. Airway care, pulmonary function testing and ECG are covered. (Prerequisites: BIO 112 and/or BIO 210, RES 101, RES 121)

**RES 150 CLINICAL APPLICATIONS I 4.0 Credits**

This course is the study of entry level clinical procedures in the hospital setting. (Prerequisites: BIO 112 and/or BIO 210, RES 101, RES 121)

**RES 152 CLINICAL APPLICATIONS II****3.0 Credits**

This course includes practice of respiratory care procedures in the hospital setting. Concepts and procedures are incorporated along with physician-led discussion on cardiorespiratory pathology. (An entry-level assessment exam is administered.) (*Prerequisites: RES 125, RES 131, RES 150*)

**RES 204 NEONATAL/PEDIATRIC CARE****3.0 Credits**

This course focuses on cardiopulmonary physiology, pathology, and management of the newborn and pediatric patient. (*Prerequisite: RES 110, RES 152*)

**RES 220 HEMODYNAMIC MONITORING****1.0 Credit**

This course is a study of basic hemodynamic monitoring. (*Prerequisite: RES 244*)

**RES 232 RESPIRATORY THERAPEUTICS****2.0 Credits**

This course is a study of specialty areas in respiratory care, including rehabilitation. Students are instructed in patient and family education procedures, pathophysiology of chronic lung disease, patient assessment and psychosocial aspects of dealing with chronic lung disease. (*Prerequisite: RES 152*)

**RES 235 RESPIRATORY DIAGNOSTICS****4.0 Credits**

This course is a study of diagnostic and therapeutic procedures. (*Prerequisite: RES 131*)

**RES 241 RESPIRATORY CARE TRANSITION****1.0 Credit**

This course provides a comprehensive review of respiratory care. A summative exit exam is administered. (*Prerequisites: RES 152, RES 244*)

**RES 242 ADVANCED RESPIRATORY CARE TRANSITION****1.0 Credit**

This course provides a comprehensive review of advanced respiratory care. Individual assignments on varied aspects of respiratory therapy are covered as well as a comprehensive review of theory and procedures. An exit exam is administered. (*Prerequisites: RES 235, RES 275*)

**RES 244 ADVANCED RESPIRATORY SKILLS I****4.0 Credits**

This course includes an in-depth study of mechanical ventilation and considerations for management of the critical care patient. (*Prerequisites: RES 125, RES 131*)

**RES 246 RESPIRATORY PHARMACOLOGY****2.0 Credits**

This course includes a study of pharmacologic agents used in cardiopulmonary care. An overview of general pharmacologic agents is covered, with particular emphasis on cardiopulmonary medications. (*Prerequisite: RES 255*)

**RES 255 CLINICAL PRACTICE****5.0 Credits**

This course includes clinical training with emphasis on intensive care. It includes practice in all areas of patient care, with an emphasis on intensive respiratory care and special procedures. Physician lectures and conferences, as well as the CRT Assessment Examination are required. (*Prerequisites: RES 152, RES 244*)

**RES 275 ADVANCED CLINICAL PRACTICE****5.0 Credits**

This course includes clinical practice in advanced patient care procedures. (*Prerequisites: RES 204, RES 232, RES 255*)

**RES 277 ADVANCED CLINICAL PRACTICE II****5.0 Credits**

This course is the study of the clinical practice of advanced patient care procedures. (*Prerequisites: RES 235, RES 246, RES 275*)

**RTV 140 BASIC PHOTOGRAPHY****3.0 Credits**

This course covers the basics of the photographic process.

**SAC 101 BEST PRACTICES IN SCHOOL AGE AND YOUTH CARE SKILLS 3.0 Credits**

This course introduces basic best practices of school-age and youth care skills for practitioners in out-of-school care environments.

**SOC 101 INTRODUCTION TO SOCIOLOGY 3.0 Credits**

This course emphasizes the fundamental concepts and principles of sociology, including culture, socialization, interaction, social groups and stratification, effects of population growth, and technology in society and social institutions. *(Prerequisites: ESL 100 or RDG 100, ENG 032 or ESL 038)*

**SOC 205 SOCIAL PROBLEMS 3.0 Credits**

This course is a survey of current social problems in America, stressing the importance of social change and conflicts as they influence perceptions, definitions, etiology, and possible solutions. *(Prerequisites: ENG 032 or ESL 038, RDG 100 or RDG 101)*

**SOC 210 JUVENILE DELINQUENCY 3.0 Credits**

This course presents the nature, extent, and causes of juvenile delinquency behavior, including strategies used in the prevention, intervention, and control of deviant behavior. Juvenile courts and other institutions that are responsible for treatment and after care are also explored. *(Prerequisite: SOC 101 with a "C" or better)*

**SOC 220 SOCIOLOGY OF THE FAMILY 3.0 Credits**

This course includes an application of theory and research related to family behaviors, roles and values, with emphasis on understanding family problems. *(Prerequisites: ESL 100 or RDG 100, ENG 032 or ESL 038)*

**SPA 101 ELEMENTARY SPANISH I 4.0 Credits**

This course is a study of the four basic language skills: listening, speaking, reading and writing, including an introduction to the Hispanic cultures. *(Prerequisite: ENG 100 and have never studied Spanish or placed by examination into SPA 101)*

**SPA 102 ELEMENTARY SPANISH II 4.0 Credits**

This course continues development of the basic language skills and the study of the Hispanic cultures. It stresses the grammar and vocabulary necessary for fundamental communications skills. *(Prerequisite: SPA 101 with a "C" or better or have placed by examination into SPA 102)*

**SPA 122 BASIC PROFICIENCY IN SPANISH 3.0 Credits**

This course covers the practice and further development of essential listening, reading, speaking and writing skills. *(Prerequisite: SPA 102 with a "C" or better or have placed by examination into SPA 122)*

**SPA 150 COMMUNITY SPANISH I 3.0 Credits**

This course is an introduction to speaking and understanding Spanish for professionals who work with the public. *(Prerequisite: RDG 100 or equivalent test score)*

**SPA 151 COMMUNITY SPANISH II 3.0 Credits**

This course continues the study of speaking and understanding Spanish for professionals who work with the public. *(Prerequisite: RDG 100 or equivalent test score)*

**SPA 155 TECHNICAL SPANISH I 3.0 Credits**

This course is the study of technical communication in Spanish for professionals who work with the public. *(Prerequisite: RDG 100 or RDG 101 or equivalent placement test score)*

**SPC 205 PUBLIC SPEAKING 3.0 Credits**

This course is an introduction to the principles of public speaking with application of speaking skills. Students entering this course must be able to communicate clearly with American speakers of English. *(Prerequisite: ENG 100 or equivalent test score)*

**SPC 208 INTERCULTURAL COMMUNICATION****3.0 Credits**

This course is an introduction to the theory and practice of "difference-based" communication—the study of face-to-face communication where significant cultural differences exist in values, perception, and verbal and nonverbal behavior. *(Prerequisite: ESL 100 or RDG 100, ENG 100 or ESL 110, or equivalent test score)*

**SPC 209 INTERPERSONAL COMMUNICATION****3.0 Credits**

This course is an introduction to the principles of interpersonal communication with emphasis on interpersonal theory as applied to personal and professional relationships. Students will learn to observe and analyze how these principles operate in daily interaction with others. *(Prerequisite: ESL 100 or RDG 100, ENG 100 or ESL 110, or equivalent test score)*

**SPC 215 VOICE AND DICTION****3.0 Credits**

This course includes the analysis, evaluation, and improvement of speech through a study of the anatomy of human speech production. *(Prerequisite: ESL 100 or RDG 100, ENG 032 or ESL 038, or equivalent test score)*

**SUR 101 INTRODUCTION TO SURGICAL TECHNOLOGY****5.0 Credits**

This course includes a study of the surgical environment, team concepts, aseptic technique, hospital organization, basic instrumentation and supplies, sterilization, principles of infection control and wound healing. *(Prerequisite: Acceptance into Surgical program or approval of program director)*

**SUR 102 APPLIED SURGICAL TECHNOLOGY****5.0 Credits**

This course covers the principles and application of aseptic technique, the perioperative role, and medical/legal aspects. *(Prerequisites: AHS 131, SUR 101, SUR 103) (Corequisites: SUR 104, SUR 110)*

**SUR 103 SURGICAL PROCEDURES I****4.0 Credits**

This course is a study of a system to system approach to surgical procedures and relates regional anatomy, pathology, specialty equipment, and team responsibility. Patient safety, medical/legal aspects, and drugs used in surgery are emphasized. *(Prerequisite: Acceptance into Surgical program)*

**SUR 104 SURGICAL PROCEDURES II****4.0 Credits**

This course is a study of the various specialties of surgical procedures. *(Prerequisites: SUR 101, SUR 103) (Corequisites: SUR 102, SUR 110)*

**SUR 110 INTRODUCTION TO SURGICAL PRACTICUM****5.0 Credits**

This course is an introduction to the application of surgical technique by assisting in the perioperative roles in various clinical affiliations. *(Prerequisites: SUR 101, SUR 103) (Corequisites: SUR 102, SUR 104)*

**SUR 114 SURGICAL SPECIALITY PRACTICUM****7.0 Credits**

This course includes the correlation of the principles and theories of specialized surgical procedures with clinical performance in affiliated hospitals. *(Prerequisites: SUR 104, SUR 110) (Corequisite: SUR 120)*

**SUR 120 SURGICAL SEMINAR****2.0 Credits**

This course includes the comprehensive correlation of theory and practice in the perioperative role. *(Prerequisite: SUR 102, SUR 104, SUR 110 or permission of program director) (Corequisite: SUR 113)*

**SUR 126 PRINCIPLES OF SURGICAL PHARMACOLOGY****4.0 Credits**

This course is a study of therapeutic agents and mathematical concepts in relation to the perioperative setting. *(Prerequisite: AHS 102)*

- TEL 101 FUNDAMENTALS OF TELECOMMUNICATIONS 2.0 Credits**  
 This course is a study of the telecommunications network, including an overview of network topologies, switching operations, local loop operations and telephone circuit operations. (*Prerequisite: RDG 032, MAT 100*)
- TEL110 TELECOMMUNICATIONS NETWORK PLANNING 3.0 Credits**  
 This course is a study of the telecommunications planning process. Topics include switching hierarchies, local loop and interoffice network design using the long range outside plant plan concept, F1/F2 concepts and distribution area design. (*Prerequisite: TEL 101*)
- TEL 203 FUNDAMENTALS OF WIRELESS COMMUNICATIONS 3.0 Credits**  
 This course is a study of current wireless technologies, digital, analog and PCS, as well as future directions. (*Prerequisite: IST 200*)
- TEL 240 FIBER OPTICS THEORY 2.0 Credits**  
 This course is a study of the basic theory of fiber optics transmission. Topics include o/e conversions, multiplexer design and SONET standards. (*Prerequisite: TEL 101*)
- TEL 250 TELECOMMUNICATIONS STRUCTURE DESIGN 2.0 Credits**  
 This course is a study of various structures used in the telecommunications outside plant network. (*Prerequisite: TEL 101*)
- THE 101 INTRODUCTION TO THEATRE 3.0 Credits**  
 This course includes the appreciation and analysis of theatrical literature, history, and production. (*Prerequisite: ESL 100 or RDG 100*)
- THE 105 FUNDAMENTALS OF ACTING 3.0 Credits**  
 This course includes the study of dramatic performance techniques, including improvisations and interpretation of characters. (*Prerequisites: ESL 100 or RDG 100, ENG 100 or ESL 110 or equivalent test score*)
- THE 125 ACTING FOR THE CAMERA 3.0 Credits**  
 This course is an applied study of acting techniques and skills used in television and video performance. It is intended for students who have a strong professional interest in acting for television, industrial video, and film. (*Prerequisite: THE 105*)
- THE 220 THEATRE LABORATORY I 1.0 Credit**  
 This course is supervised participation in theatrical productions. (*Prerequisite: RDG 100*)
- THE 221 THEATRE LABORATORY II 1.0 Credit**  
 This course is supervised participation in theatrical productions. (*Prerequisite: RDG 100*)
- THE 222 THEATRE LABORATORY III 1.0 Credit**  
 This course is the third in a sequence of laboratory courses offering supervised participation in a theatrical production. Students will receive practical experience in various areas tailored specifically to the needs of the assigned production. (*Prerequisite: ESL 100 or RDG 100*)
- WLD 102 INTRODUCTION TO WELDING 2.0 Credits**  
 This course covers the principles of welding, cutting, and basic procedures for safety in using welding equipment. (*Prerequisites: ENG 100, MAT 101, RDG 100*)
- WLD 103 PRINT READING I 1.0 Credit**  
 This is a basic course which includes the fundamentals of print reading, the meaning of lines, views, dimensions, notes, specifications, and structural shapes. Welding symbols and assembly drawings as used in fabrication work are also covered. (*Prerequisites: ENG 100, MAT 101, RDG 100*)
- WLD 104 GAS WELDING AND CUTTING 2.0 Credits**  
 This course covers gas welding, brazing, soldering, and cutting of metals. (*Prerequisites: ENG 100, MAT 101, RDG 100*)

**WLD 105 PRINT READING II****1.0 Credit**

This course includes print reading, including welding symbols and their applications to pipe fabrication. Basic sketching of piping symbols, single line and double line pipe drawings, material estimating, template layout and how templates are used in pipe layouts are included. (Prerequisites: WLD 102, WLD 103, WLD 104, WLD 111, WLD 140)

**WLD 111 ARC WELDING I****4.0 Credits**

This course covers the safety, equipment, and skills used in the shielded metal arc welding process. Fillet welds are made to visual criteria in several positions. (Prerequisites: ENG 100, MAT 101, RDG 100)

**WLD 113 ARC WELDING II****4.0 Credits**

This course is a study of arc welding of ferrous and/or non-ferrous metals. (Prerequisites: WLD 102, WLD 103, WLD 104, WLD 111, WLD 140)

**WLD 134 INERT GAS WELDING NON-FERROUS****3.0 Credits**

This course covers fundamental techniques for welding non-ferrous metals. (Prerequisites: WLD 102, WLD 103, WLD 104, WLD 111, WLD 140)

**WLD 136 ADVANCED INERT GAS WELDING****2.0 Credits**

This course covers the techniques for all positions of welding ferrous and non-ferrous metals. (Prerequisites: WLD 105, WLD 113, WLD 134, WLD 154)

**WLD 140 WELD TESTING****1.0 Credit**

This is an introductory course in destructive and non-destructive testing of welded joints. (Prerequisite: ENG 100, MAT 101, RDG 100)

**WLD 142 MAINTENANCE WELDING****3.0 Credits**

This course covers gas and arc welding processes used in maintenance shops. (Prerequisites: RDG 032, MAT 100 or equivalent placement test score)

**WLD 154 PIPE FITTING AND WELDING****4.0 Credits**

This is a basic course in fitting and welding pipe joints, either ferrous or non-ferrous, using standard processes. (Prerequisites: WLD 102, WLD 103, WLD 104, WLD 111, WLD 140)

**WLD 170 QUALIFICATION WELDING****4.0 Credits**

This course covers the procedures and practices used in taking welder qualification tests. (Prerequisites: WLD 105, WLD 113, WLD 134, WLD 154)

# ADMINISTRATION AND FACULTY



# ADMINISTRATION AND FACULTY OF MIDLANDS TECHNICAL COLLEGE

Midlands Technical College places a primary value on helping students succeed. All employees of the college perform services for students daily, and the college is proud of each employee. While we wish this catalog could list all employees, the purpose of the following list of names is to record the academic credentials of those faculty and administrators who hold primary responsibility for teaching and delivering other programs and services to students. Each entry contains the year when the employee began service with the college and their academic credentials, professional certifications and licensures.

## EXECUTIVE COUNCIL

White, Jr., Marshall (2006), President; Ph.D., Clemson University.

Bates, Starnell K. (1987), Vice President for Institutional Support; B.F.A., M.Ed., University of South Carolina.

Drayton, Ronald (1985), Vice President for Academic Affairs; B.S., Benedict College; M.Ed., South Carolina State College; M.M., Ph.D., University of South Carolina.

Kirk, Barrie (1995), Vice President for Corporate and Continuing Education; B.A.; M.Ed., Ed.D., University of South Carolina.

Ledbetter, James T. (2003), Associate Vice President for the Enterprise Campus; B.A., UNC-Chapel Hill; Graduate Certificate in Higher Education Leadership, University of South Carolina.

Oliver, Sandra L. (1986), Vice President for Student Development Services; B.A., M.A., University of South Carolina.

Rhames, Ronald L. (1990), Senior Vice President for Business Affairs; A.A., Midlands Technical College; B.S., Benedict College; M.S., Central Michigan University; D.B.A., Nova Southeastern University.

## FACULTY EMERITI

Frick, Theodore M. (1966-1999), Instructor, Heating, Ventilation, Air Conditioning and Refrigeration Technology; Diploma, South Carolina Area Trade School; B.A., University of South Carolina (1999).

Lowry, Beverly F. (1973-1992), Instructor, Developmental Studies English; B.A., M.A., University of New Hampshire (1994).

Sallman, John B. (1964-1989), Instructor, Mechanical Engineering Technology; B.S.M.E., University of South Carolina (1989).

Thomas, Darlene J. (1974-2005), Instructor, Developmental Studies Reading; B.A., M.Ed., University of South Carolina (1996).

Stuart, Frances C. (1966-1984), Librarian/Director, Library, B.A., University of South Carolina; BLS, Peabody, MLS, Vanderbilt University (2003).

VanSeters, Virginia (1969-1984), Instructor, Developmental Studies Mathematics; B.A., Columbia College; M.Ed., University of South Carolina (1997).

## FACULTY

Abercrombie, Wesley C. (2000), Instructor, Sociology; B.A., M.C.J., Ph.D., University of South Carolina.

Akers, Elizabeth (2004), Instructor, English; B.A., Ph.D., University of South Carolina.

Amick, Stacey C. (1993), Instructor, Nursing; B.S.N., M.N., University of South Carolina; Registered Nurse

Anderson, Barbara S. (2002), Instructor, Developmental Studies English; A.A., North Florida Junior College; B.S., M.A., Valdosta State University; Ph.D., University of South Carolina.

- Anderson, Wanda K. (1996), Instructor, Mathematics; B.S., M.S., North Carolina State University.
- Antley, Candyce F. (1988), Instructor, Nursing; B.S.N., M.N., University of South Carolina; Registered Nurse; Graduate Certificate in Higher Education Leadership, University of South Carolina.
- Bailey, Richard S. (1991), Department Chair and Instructor, Mathematics; B.S., University of Wisconsin at Madison; M.A.T., University of South Carolina.
- Baker, Laura (1998), Librarian; B.A., M.L.I.S., University of South Carolina.
- Basham, Joyce (1994), Instructor, Nursing; B.S.N., M.N., University of South Carolina; Registered Nurse.
- Beard, Holly (2006), Instructor, Psychology; B.A., University of North Texas; M.S., Clemson University.
- Beaty, Karin (1993), Instructor, Mathematics; B.S., North Carolina State University; M.A.T., Winthrop University; C.A.G.S. Curriculum and Instruction in Mathematics, Virginia Technology.
- Bellamy-Coletrain, Renee (1999), Instructor, Human Services; B.S., Lehman College; M.S.W., University of South Carolina. Graduate Certificate in Higher Education Leadership, University of South Carolina.
- Bise, Debbie (1987), Instructor, Corporate and Continuing Education; B.A., Columbia College; Microsoft Office Certified Specialist; IC3 Certified Instructor.
- Bishop, J. Eugene (1990), Program Coordinator and Instructor, Heating, Ventilation, Air Conditioning and Refrigeration Technology; Diploma, Columbia Technical Education Center; A.O.T., Midlands Technical College.
- Blackberg, Mark E. (1999), Instructor, Machine Tool Technology; Associate Degree in Industrial Technology in Machine Tool, Midlands Technical College.; Journeyman Toolmaker.
- Boan, Richard T., Jr. (1974), Pre-Health Care Certificate Program Coordinator and Instructor, Health Sciences; B.S., Augusta College; M.S., Ph.D., University of South Carolina.
- BouFawaz, Dianne (1997), Coordinator and Instructor, Nursing; A.D.N., B.S.N., M.N., University of South Carolina. Registered Nurse.
- Bottorff, Benjamin B. (2010), Instructor, Economics; B.A., Economics, University of California, Santa Cruz; M.A., International and Development Economics, University of San Francisco.
- Bouldrick, Dorothy M. (2006), Program Director and Instructor, Medical Assisting; C.H.S. Medical Assisting, Midlands Technical College; B.S., Claflin University; M.B.A., Webster University.
- Bowles, Floyd E. (1996), Instructor, Engineering Technologies and Engineering Transfer; B.S., United States Military Academy, West Point; M.S., Purdue University; Ed.D., University of South Carolina.
- Bowers, Dana C. (2012), Instructor, Nursing; B.S.N., Excelsior College; M.S.N., University of Phoenix; Registered Nurse.
- Bradwell, Terry L. (1996) Instructor, Heating, Ventilation, Air Conditioning Technology, Midlands Technical College; B.S., Baptist College; A.I.T., Midlands Technical College.
- Breazeale, Edwin T. (1993), Instructor, Business; B.S., University of South Carolina; M.B.A., Golden Gate University. Graduate Certificate in Higher Education Leadership, University of South Carolina.
- Breci, Mary (1994), Program Director and Instructor, Medical Laboratory Technology; B.S., Medical University of South Carolina; M.A.T, University of South Carolina; Graduate Certificate in Higher Education Leadership, University of South Carolina; Certified Medical Laboratory Scientist MLS (ASCP).
- Buchanan, Christina L. (1999), Program Coordinator and Instructor, Architecture Engineering Technology; B.S., M Arch Clemson University.

- Buckley, Thomas (1990), Instructor, Information Systems Technology; B.S., M.Ed., Ed.S., Graduate Certificate in Higher Education Leadership, University of South Carolina; M.B.A., Winthrop University.
- Cain, James A. (2002), Instructor, Carpentry Qualified Framer; B.A.I.S., University of South Carolina.
- Capps, Douglas (1992), Instructor, English; B.A., M.A., San Diego State University.
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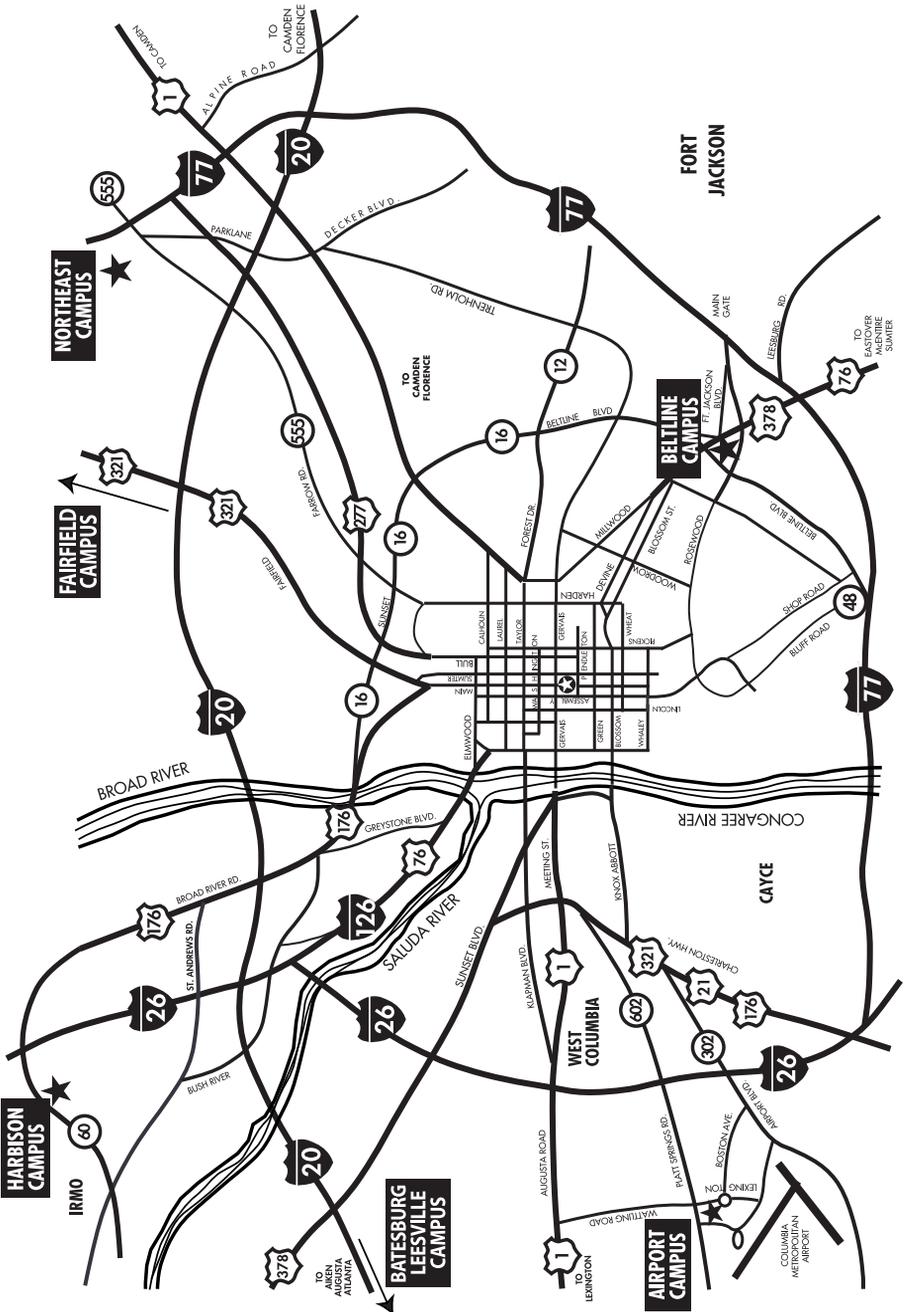
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# CAMPUS LOCATIONS

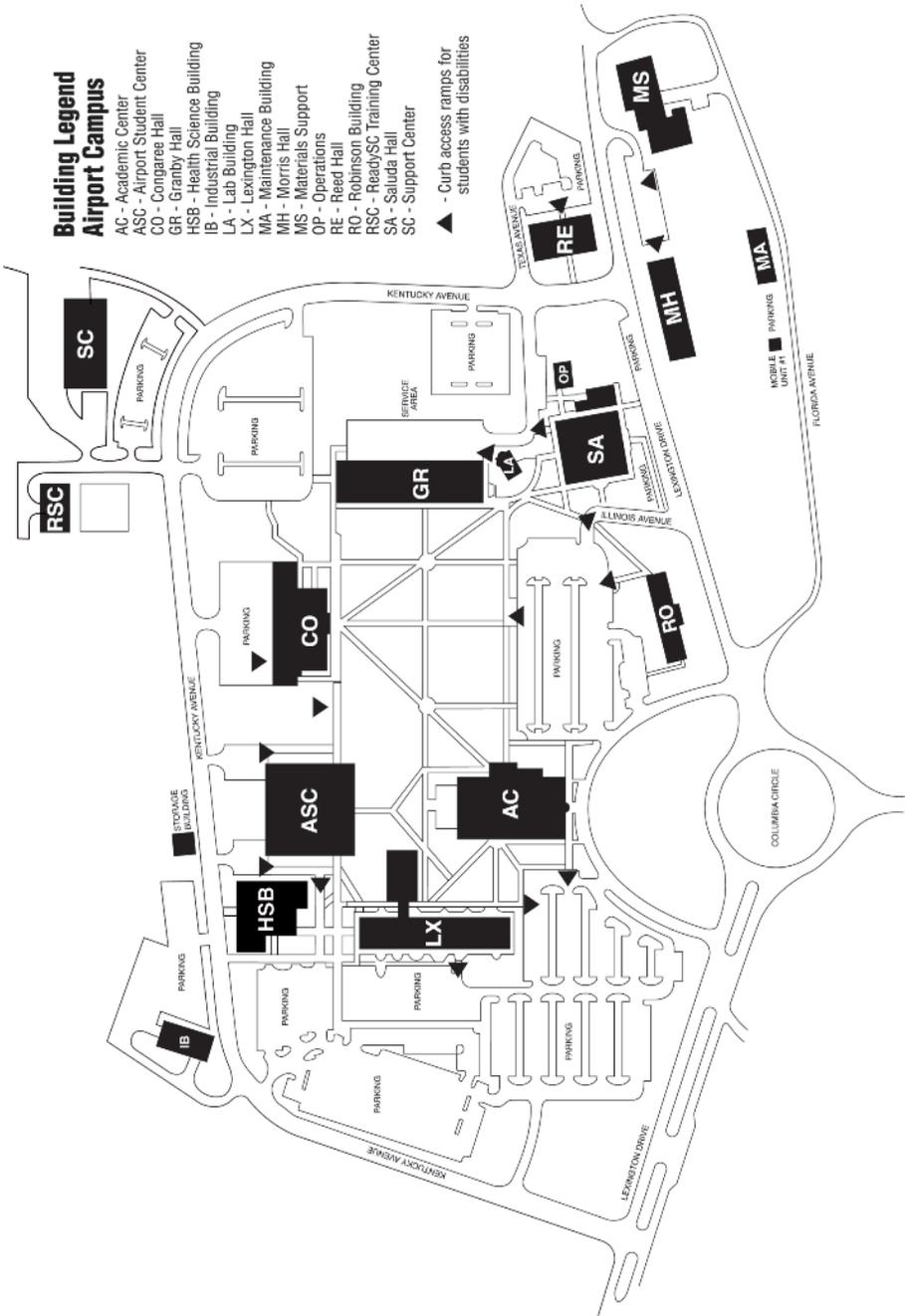


# AIRPORT CAMPUS

## Building Legend Airport Campus

- AC - Academic Center
- ASC - Airport Student Center
- CO - Compare Hall
- GR - Graebly Hall
- HSB - Health Science Building
- IB - Industrial Building
- LA - Lab Building
- LX - Lexington Hall
- MA - Maintenance Building
- MH - Morris Hall
- MS - Materials Support
- OP - Operations
- RE - Reed Hall
- RO - Robinson Building
- RSC - Ready/SC Training Center
- SA - Saluda Hall
- SC - Support Center

▲ - Curb access ramps for students with disabilities

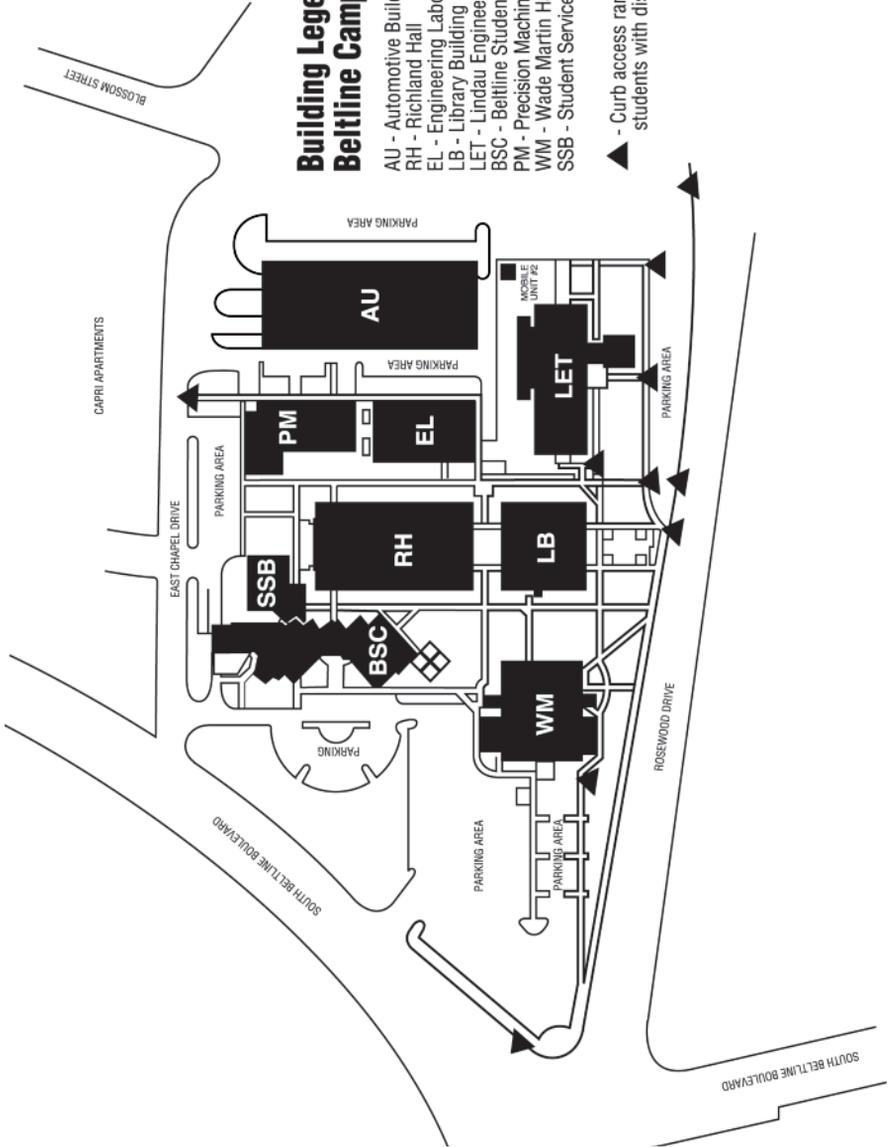


# BELTLINE CAMPUS

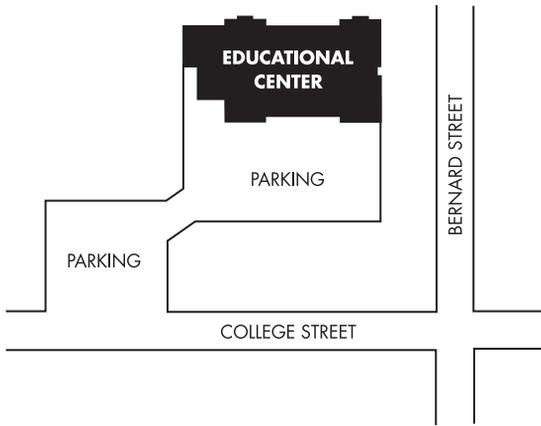
## Building Legend Beltline Campus

- AU - Automotive Building and Parking Garage
- RH - Richland Hall
- EL - Engineering Laboratory Building
- LB - Library Building
- LET - Lindau Engineering Tech. Building
- BSC - Beltline Student Center
- PM - Precision Machining Building
- WM - Wade Martin Hall
- SSB - Student Services Building

▲ - Curb access ramps for students with disabilities

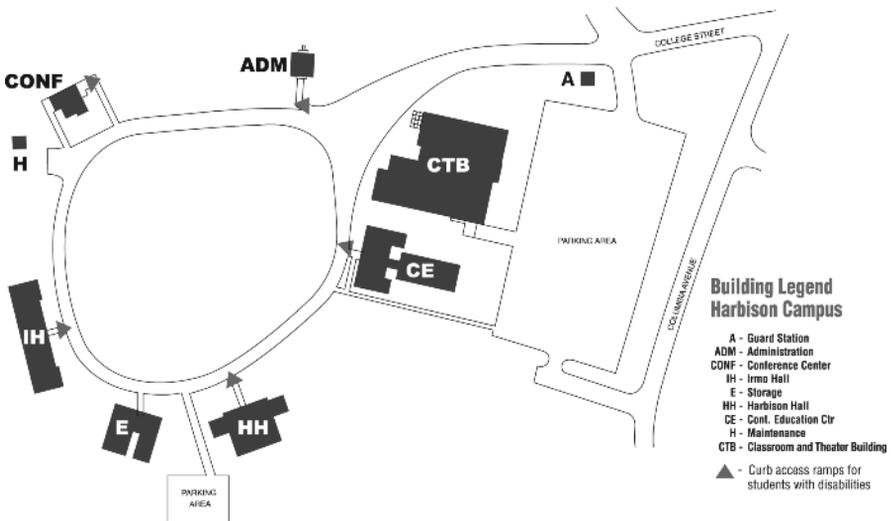


# BATESBURG-LEESVILLE CAMPUS

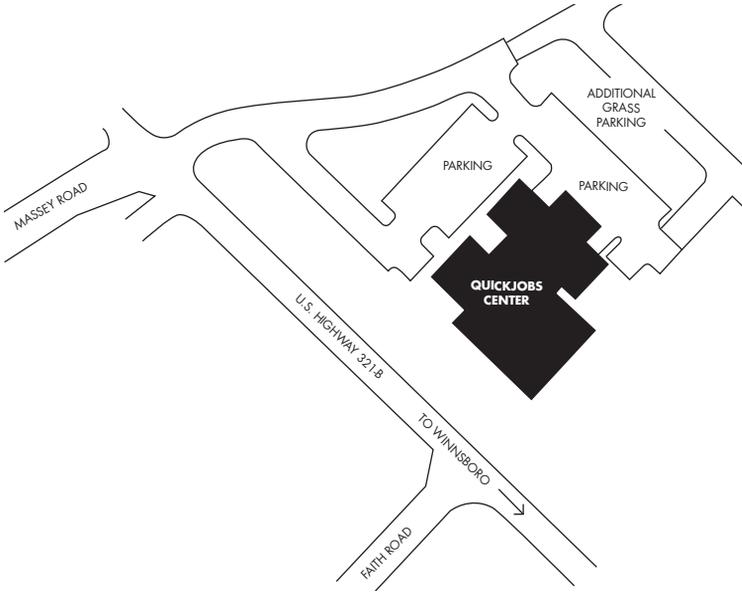


**Batesburg-Leesville Campus**

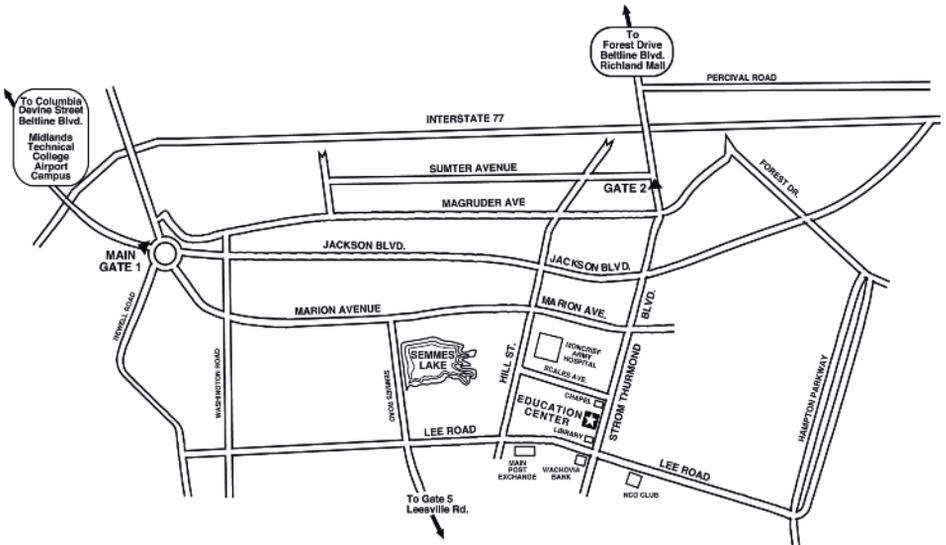
# HARBISON CAMPUS



# FAIRFIELD CAMPUS



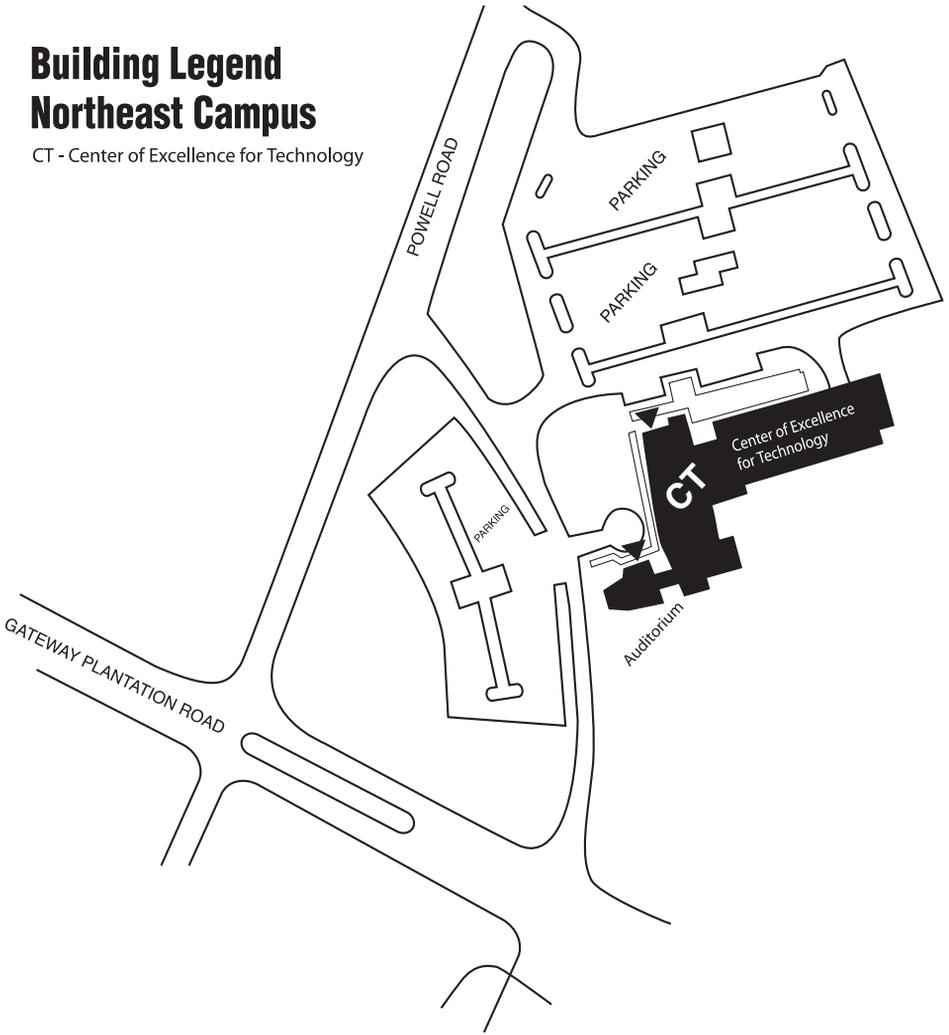
# FORT JACKSON



# NORTHEAST CAMPUS

## Building Legend Northeast Campus

CT - Center of Excellence for Technology



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