



Trenholm State
COMMUNITY COLLEGE

**COLLEGE CATALOG
AND STUDENT
HANDBOOK
2023-2024**

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Effective: Fall 2023

H. Councill Trenholm State Community College is accredited by the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) to award the associate degree. H. Councill Trenholm State Community College also may offer credentials such as certificates and diplomas at approved degree levels. Questions about the accreditation of H. Councill Trenholm State Community College may be directed in writing to the Southern Association of Colleges and Schools Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website (www.sacscoc.org).

Equal Opportunity In Education and Employment

It is the official policy of the Alabama Community College System and H. Councill Trenholm State

Community College that no person shall, on the grounds of race, color, disability, sex, religion, creed, national origin, age or any other protected class as defined by federal and state law be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program, activity, or employment.

This catalog is the official announcement of the program requirements and regulations of H. Councill Trenholm State Community College. The statements set forth in this catalog are for informational purposes only. The provisions of this document/publication are not to be regarded as an irrevocable contract between the student and the institution. The institution reserves the right to change any provision or requirement at any time within the student's term of attendance.

Message from the President

Welcome to Trenholm State Community College. As the capital city's only community college, we have a rich tradition of providing students with cutting-edge training for high-skill, high-wage, high-demand careers and transfer options to four-year institutions. This catalog is a resource for exploring and laying out a pathway to achieving your academic, career, and enrichment goals.

Trenholm State offers 33 credit programs of study as well as numerous non-credit training options. Our students can earn degree or certificates that enhance skill sets or lead to a career, and the College also offers associate degree programs that will allow for transferability to a four-year institution. Through our Dual Enrollment programs, high school students can earn college credit that can be utilized towards specific certificates or degree programs. In addition, the Adult Education program offers classes for those seeking a GED or High School Diploma, as well as English as a Second Language (ESL) classes and career training opportunities through our Career Pathways program and the Alabama Career Essentials program.

Trenholm State is a comprehensive community college that offers small class sizes, highly qualified faculty, dedicated and professional staff, and an affordable option for earning academic and professional credentials. We offer flexible day, evening, hybrid, and online course options. Our mission is to ensure that any student who walks through our doors discovers a pathway aligning their coursework and career training with their academic and career goals. We want to welcome you to Trenholm State, today's college for tomorrow's world!



Sincerely,

A handwritten signature in blue ink that reads "Kemba Chambers". The signature is fluid and cursive, written in a professional style.

Dr. Kemba Chambers President

2023-24 Academic Calendar

FALL SEMESTER 2023	
Local Professional Development	August 14
Registration and Faculty Duty Days	August 15-17
Regular Semester and Mini Term A Classes Begin	August 18
Drop/Add and Registration Ends	August 23
Labor Day Holiday – College Closed	September 4
Last Day to Withdraw (Mini Term A)	September 26
Midterm	October 12
Mini Term A Classes End	October 12
Deadline to Submit Intent to Graduate Application	October 12
Mini Term B Classes Begin	October 16
Mini Term B Drop/Add and Registration Ends	October 17
Spring 2024 Priority Registration (30 credit hours or more)	October 24
Spring 2024 Regular Registration (All Students)	October 31
Veterans Day Holiday – College Closed	November 10
Thanksgiving Holiday for Students (No Classes)	November 20-24
Thanksgiving Holiday for Faculty/Staff—College Closed	November 23-24
Last Day to Withdraw (Full Term & Mini Term B)	November 29
Final Exams	December 7-8 & 11-13
Classes End, Mini Term B Classes End	December 13
Grades Due/Faculty Duty Day	December 14
Faculty Duty Days	December 15 & 18
Christmas Holiday (No Classes)	December 14-31
College Closed	December 21-31
SPRING SEMESTER 2024	
New Year's Day—College Closed	January 1
Local Professional Development	January 2
Registration and Faculty Duty Days	January 3-5
Regular Semester and Mini Term A Classes Begin	January 8
Drop/Add and Registration End	January 11
Robert E. Lee/Martin Luther King Holiday – College Closed	January 15
Last Day to Withdraw (Mini Term A)	February 15
Mini Term A Classes End	March 1
Midterm	March 4
Deadline to Submit Intent to Graduate Application	March 4
Mini Term B Classes Begin	March 5

Mini Term B Drop/Add and Registration End	March 6
Summer & Fall 2024 Priority Registration (30 or more credit hours)	March 18
Spring Break	March 25-29
Summer & Fall 2024 Regular Registration (All Students)	April 8
Honors Convocation	April 10
Last Day to Withdraw (Full Term & Mini Term B)	April 23
Final Exams	April 30, May 1-3 & 6
Classes End, Mini-term B Classes End	May 6
Grades Due/Faculty Duty Day	May 7
Local Professional Development	May 8
Faculty Duty Days	May 9-10
Commencement Ceremony	May 9
SUMMER TERM 2024	
Registration and Faculty Duty Days	May 22-24
Memorial Day Holiday – College Closed	May 27
Classes Begin	May 28
Drop/Add and Registration End	May 31
Juneteenth Holiday—College Closed	June 19
Midterm	July 2
Deadline to Submit Intent to Graduate Application	July 2
Independence Day Holiday – College Closed	July 4
Last Day to Withdraw	July 16
Final Exams	July 31 & August 1-2, 5-6
Classes End	August 6
Grades Due/Faculty Duty Day	August 7
Faculty Duty Day	August 8

History of Trenholm State

H. Councill Trenholm State Technical College was created through the consolidation of John M. Patterson State Technical College and H. Councill Trenholm State Technical College in April 2000. The Trenholm Campus was designated as the main campus of the combined institutions. Both institutions were accredited by the Council on Occupational Education, which granted approval for the merger in March 2002.

In December 2014, Trenholm State was granted initial accreditation by the Southern Association of Colleges and Schools Commission on Colleges

(SACSCOC) to award associate degrees. Transfer credit for eligible courses is retroactive to January 1, 2014.

In May 2015, H. Council Trenholm State Technical College officially became H. Council Trenholm State Community College.

Patterson Site

The John M. Patterson State Technical School was established as a result of the 1947 passage of Regional Vocational and Trade School Act 673 by the Alabama State Legislature. The Montgomery County Board of Revenue and the City of Montgomery purchased 43 acres of land at the junction of the Southern Bypass and U.S. 231 South in 1961. The school opened on September 4, 1962. Patterson was named a technical college by action of the State Board of Education in 1974.

Trenholm Campus

H. Council Trenholm State Technical College was authorized by the Alabama State Legislature in May 1963. Construction was completed and classes began in August 1966, with the City of Montgomery and the Montgomery County Board of Revenue contributing to construction costs. The College was named for the late Dr. Harper Council Trenholm, a past president of Alabama State University.

Organization and Administration

H. Council Trenholm State Community College is a two-year public institution of higher education operating as part of the Alabama Community College System (ACCS). The organization and administration of H. Council Trenholm State Community College is under the supervision and direction of a Board of Trustees appointed by the Governor of the State of Alabama.

The ACCS Board of Trustees is composed of the Governor, who serves as chair by virtue of her elected office. There are seven board members appointed from the seven congressional districts, one state-wide member, and an ex-officio liaison from the State Board of Education.

For the purpose of assisting the ACCS Board of Trustees in carrying out its authority and responsibilities for each of the colleges, a Chancellor is appointed who also serves as the Chief Executive Officer of the Alabama Community College System (ACCS). The Chancellor serves at the pleasure of the ACCS Board of Trustees, but it is customary for the Chancellor to have a multi-year contract.

The College President is appointed by the ACCS Board of Trustees, upon the recommendation of the Chancellor, and heads the College’s organizational structure. Specific areas of operation include the following: Student Affairs and Information Services, Instructional Services, Community Engagement and Grants, and Finance and Administrative Services. Each of these areas function under the guidance of a Dean or Director who reports directly to the President. The President reports to the Chancellor and is responsible for operating the college within the ACCS Board of Trustees policies and all applicable state and federal laws. This organizational structure is in compliance with the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) as well as policies and guidelines of the ACCS Board of Trustees.

The Alabama Community College System Board of Trustees

Name	Position	Mailing Address
Governor Kay Ivey	President	Alabama State Capitol 600 Dexter Avenue Montgomery, AL 36130
Mr. J.E.B Shell	District 1	20 South Royal Street Mobile, AL 36602
Mr. John Mitchell	District 2	206 Aberdeen Avenue Enterprise, AL 36330
Ms. Valerie Gray	District 3	P.O. Box 269 Lanett, AL 36862
Mr. Britton Lightsey	District 4	3196 County Highway 55 Hamilton, AL 35570
Mr. Goodrich “Dus” Rogers Vice Chair	District 5	P.O. Box 217 Rainsville, AL 35986

Mr. Ron Houston	District 6	P.O. Box 380904 Birmingham, AL 35238
Mr. Llevelyn D. Rhone Chair	District 7	P.O. Box 33 Greensboro, AL 36744
Mr. Tim McCartnery	Member-At-Large	612 Turrentine Avenue Gadsden, AL 35901
Dr. Yvette Richardson	Ex-Officio State Board of Education	P.O. Box 302101 Montgomery, AL 36104

Alabama Community College System (ACCS)

Mr. Jimmy Baker, Chancellor
135 South Union Street
Montgomery, AL 36104

Introduction to the College

H. Councill Trenholm State Community College serves as an educational and economic asset for the state of Alabama by offering associate degrees and certificate programs that prepare students for further education, fulfilling careers, and lifelong learning. Our students reflect our diverse local and global community, and the College integrates the strengths of many cultures, age groups, lifestyles, and learning styles into the life of the institution. The College provides inclusive and affordable access to higher education, supports the success and achievements of all students, and maintains vibrant partnerships and pathways with educational institutions, community organizations, and local businesses and industries. The College is part of the Alabama Community College System (ACCS), a statewide system of postsecondary colleges governed by the ACCS Board of Trustees.

The College operates two campuses, the Patterson Site and the Trenholm Campus, and provides educational services for Montgomery, Macon, Lowndes, Bullock, and Elmore Counties.

H. Councill Trenholm State Community College is authorized by the State of Alabama to provide vocational, technical, academic, and lifelong educational opportunities; promote economic development; and enhance the quality of life for the people of central Alabama. The College, operating as

a single entity and integrating all programs and services where feasible into a single delivery system, is committed to providing comprehensive academic and technical services to its community.

Through its open door admission policy and special recruitment efforts, Trenholm State helps multitudes of students obtain real educational opportunities, offering promising students a better beginning. The college's efforts are focused by its mission and vision statements and guided by the values and goal statements developed and reviewed regularly by its employees as part of the college's annual planning process.

Vision

Through our commitment to educational excellence, students will be prepared to meet the challenges of a global society and the college will serve as the region's leading catalyst for economic and workforce development.

Mission

Our mission is to provide comprehensive and accessible educational opportunities, including academic transfer and technical programs, designed to promote economic development, enhance workforce development, and improve the quality of life for the community.

Strategic Priorities

Build a Culture that Supports Student Success

Trenholm State Community College will engage efforts to provide programs and services that enhance active learning to ensure the achievement of student's educational and career goals.

Enhance Academic Quality

Trenholm State Community College will promote excellence in the design, delivery, and support of student learning to result in graduation, employment, and transferability.

Workforce Development

Trenholm State Community College will ensure that academic, career, and technical degrees, certificates,

and credentials result in marketable student employment by strengthening career pathways, ensuring curricular relevance, and expanding partnerships.

Ensure Institutional Growth and Operational Excellence

Trenholm State Community College will maintain financial stability and expand technology to establish advanced learning environments that facilitate student success and institutional growth.

Values

Trenholm State Community College administrators, faculty and staff embody the highest academic and institutional commitment to students and the community by exhibiting the following 13 values:

1. **Academic rigor:** We are committed to standards of academic rigor that assures students a high-quality education that fosters personal and intellectual growth for productive careers and meaningful lives.
2. **Access:** We promote an accessible and affordable education designed to optimize opportunities for student participation.
3. **Accountability:** We create an accountable environment that continually builds an exceptional community college through shared governance, collaboration, and a commitment in the delivery of our mission.
4. **Communication:** We encourage dialogue and the freedom to have an open exchange of ideas for the common good.
5. **Diversity:** We recognize and value diversity in its many forms as a representation of the richness of the human experience.
6. **Excellence:** We set and model high standards for students and our faculty, staff, administrators, and community partners.
7. **Innovation:** We strive to be a creative and inquisitive community based on the pursuit of knowledge, wisdom, and discovery.
8. **Integrity:** We hold ourselves accountable to the communities we serve and seek to model personal and intellectual integrity in all we do.
9. **Leadership:** We are committed to identifying the unique strengths of our faculty and staff by

encouraging leadership and supervision that recognize individuals who utilize their talents in support of our students.

10. **Lifelong learning:** We are committed to promoting the educational growth and development of all individuals through a variety of postsecondary professional, technical, and academic programs and services.
11. **Professionalism:** We value professionalism through our clear sense of commitment, perspective, and direction.
12. **Quality-driven:** We are dedicated to a supportive learning community that uses learning outcomes to measure success and guide innovative curricular and program improvements to meet individual and group needs.
13. **Student success:** We are committed to the success of our students by adhering to the highest levels of academic and professional standards.

College Service Area

The College service area consists of primarily a five-county area located near the center of the State of Alabama. The service area includes the area of Macon County, west of a line drawn north to south through the city of Franklin; Elmore County, excluding correctional education and the Central Alabama Community College site in Tallassee; Montgomery County; the area of Bullock County, west of a line drawn north to south through the city of Union Springs; and Lowndes County, in cooperation with Wallace Community College-Selma. The area consists of urban, suburban, and rural populations.

Accreditation and Certifications

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1866 Southern Lane, Decatur, Georgia 30033-4097, by calling (404) 679-4500, or by using information available on SACSCOC's website (www.sacscoc.org).

In addition, individual programs are accredited, licensed or certified by the following agencies:

Automotive Service

National Automotive Technician Education Foundation (NATEF)
101 Blue Seal Drive – Suite 101
Leesburgh, VA 20175
(703) 669-6650
www.natef.org

Computer Information Systems

Cisco Certified Network Associate (CCNA)
CISCO Systems, Inc.
170 West Tasman Drive San Jose, CA
95134 (800) 553-6387

Culinary Arts

American Culinary Federation (ACF)
180 Center Place Way
St. Augustine, FL 32095
1-800-624-9458

Dental Assisting

American Dental Association
Commission on Dental Accreditation (ADA)
211 East Chicago Avenue
Chicago, IL 60611-2678
(312) 440-2500

Ultrasound

(Diagnostic Medical Sonography)
Commission on Accreditation of Allied Health Education Programs (CAAHEP)
25400 US Highway N, Suite 158
Clearwater, FL 33763
(727) 210-2350

Medical Assisting

Commission on Accreditation of Allied Health Education Programs (CAAHEP)
25400 US Highway N, Suite 158
Clearwater, FL 33763
(727) 210-2350

Medical Assisting Education Review Board (MAERB)
A CAAHEP Commission on Accreditation

20 North Wacker Drive Suite 1575
Chicago, IL 60606
(312) 899-1500

Medical Radiologic Technology (Radiology)

The Joint Review Committee on Education in Radiologic Technology
20 North Wacker Drive, Suite 2850
Chicago, IL 60606
(312) 704-5300

Practical Nursing

Alabama Board of Nursing RSA Plaza, Ste 250
770 Washington Avenue
Montgomery, AL 36104
(334) 293-5200

Accreditation Commission for Education in Nursing (ACEN) Formerly NLNAC, National League for Nursing Accrediting Commission, Inc.
3343 Peachtree Road NE, Suite 850
Atlanta, Georgia 30326
(404) 975-5000

Building and Facilities

Building	Office/Department
Trenholm Campus 1225 Air Base Boulevard Montgomery, AL 36108	
Building A/B	President's Office Executive Vice President's Office Business Office Human Resources Practical Nursing Registered Nursing
Building C	Health Services Simulation Lab Career Center Music Department
Building D	Student Center
Building E	Dean of Academic and Transfer Programs
Building F	Vice President of Student Affairs and Information Services Admissions Enrollment Management Records Financial Aid Student Success Center Testing
Building G	Vacant
Building H	Diagnostic Medical Sonography (Ultrasound) Medical Radiologic Technology (Radiology) Respiratory Therapy

Building I	Child and Human Development
Building J	Dental Assisting Medical Assisting Biology Dean of Health Sciences
<i>Library Tower 3086 Mobile Highway</i>	
1 st Floor	Library
2 nd Floor	Archival Display Business Administration
3 rd Floor	Accounting General Business Office Administration
4 th Floor	Information Technology Institutional Effectiveness Title III Upward Bound
<i>Joseph Dickerson Education Center 3085 Mobile Highway</i> General Education	
Patterson Site 3920 Troy Highway Montgomery, AL 36116	
Building B	General Education Student Success Center (Rm 133)
Building D	Auditorium Dean of Community Engagement and Grants Workforce Development Admissions Enrollment Management Records Financial Aid Cashier
Building E	Computer Information Systems Air Conditioning and Refrigeration Library
Building F	Student Services Precision Machining
Building G	Automotive Service
Building H	Welding
Building I	Maintenance Department
Building J	Adult Education
Building K	Graphic Design
Building L	Diesel Mechanics
Building M	Electrical/Instrumentation Robotics/Mechatronics
Building N	Automotive Collision Repair
Building Q	Automotive Manufacturing Automation Industrial Systems and Automation FAME Program Dean of Career Technical Education and FAME Coordinator

Truck Driver Training Center

5420 Troy Highway
Montgomery, AL 36116

Culinary Arts & Hospitality Management

8 Commerce Street
Montgomery, AL 36104

Student Services

The fundamental mission of the Student Services Division is to demonstrate a strong commitment to student success by providing a learning environment in which individuals from varied backgrounds, with diverse goals and needs, are afforded both the conditions and opportunities for student success, not as an aside from instruction, but in partnership with and as a compliment to the educational opportunities afforded to students. Student Affairs goals are listed below. The belief of each member of the Student Services staff at H. Councill Trenholm State Community College is that all people are provided the opportunity to reach their maximum potential. Dedicated to this belief, and in support of the educational mission of the College, the division assists students with admissions, registration and financial aid, advisement, assessment, achieving success, disabilities services, student activities, and career planning.

Coordinated by the Vice President of Student Affairs and Information Services, these functions service the student and complement classroom instruction by ensuring that each student has the opportunity for success.

- To work in concert with faculty to develop a holistic individual.
- To offer professional development opportunities that will enhance the recruitment and retention for students.
- To increase enrollment through assertive recruiting and retention strategies.
- To offer an array of social, cultural and educational activities to students to create a feeling of belonging.
- To develop an on-going comprehensive public relations campaign utilizing news releases, brochures, billboards, college website, civic speaking engagements, recruitment videos,

college view book, television and radio commercials and other printed and electronic publications.

- To accommodate students in gaining access to the College by providing admission, registration, counseling, advising, placement testing and other support services.
- To facilitate the successful movement of the student through the educational process to completion of the student's identified goal (personal enhancement, specific job skill(s) improvement, career preparation and/or development, or continuation of an undergraduate education).
- To maintain a system of accurately recording, safely maintaining and efficiently retrieving student records.
- To provide a program of financial assistance to students.
- To enhance development of the student's mind, body and character by providing a program of student activities.
- that compliment classroom instruction and/or other curricula endeavors.
- To assist in satisfying the College's and community's need for information relative to students served.
- To participate in the governing system of the College, particularly in the areas of student life, long-range planning, and due process in student discipline.

Admissions and Enrollment Management

The Office of Admissions and Enrollment Management at Trenholm State Community College maintains an admissions policy that provides access to individuals who meet the minimum requirements set forth by the Alabama Community College System (ACCS). The Office of Admissions and Enrollment Management is responsible for interpreting and implementing ACCS policy and federal, state, and local laws and policies regarding the recruitment and admission of students to the College. Admission to the College does not guarantee entrance to a particular course or program. Some programs have specific admission requirements. Requirements for admission into certain programs, such as Health programs, are in the catalog's "Degrees" section.

Required Admissions Documentation

Degree-seeking Students

- Admission application
- Official transcript - high school or GED®
- Official transcript(s) - all other colleges attended
- ACT scores (for placement purposes only)

Non-degree seeking students (who are high school graduates or GED® recipients)

- Admission application
- Official transcript - high school or GED®
- Official transcript - all other colleges (if attended)

Students who have achieved a minimum of an Associate or Baccalaureate degree are only required to submit a transcript from the granting institution. The College does require official transcripts of other undergraduate coursework earned elsewhere if that coursework is to be used toward earning a degree or fulfilling prerequisites. Students receiving VA Educational benefits may be required to submit military and all prior college transcripts.

Non-degree seeking students (who are non-high school graduate or does not have a GED)

- Admission application
- Official transcript - high school (if attended)
- Official transcript - all other colleges attended (if attended)
- Required Assessment Score (Ability-to-Benefit Test)

Ability-to-Benefit

Applicants can enter certain programs without a high school diploma or GED certificate. Applicants applying to H. Council Trenholm State Community College under this provision must pass the Ability-to-Benefit Test. The College will notify all applicants prior to enrollment each semester of the time, date, and place for the scheduled Ability-to-Benefit examination. For additional information, please contact the Office of Admissions at (334) 420-4310.

The Consolidated Appropriations Act of 2012 (Public Law 112-74) eliminated eligibility to receive Title IV student financial aid assistance to ability-to-benefit students without a high school diploma or GED, or

who have not completed secondary education in a home school setting that is treated as a home school or private school under State law and have not obtained a home school completion credential effective July 1, 2012. Therefore, new students seeking enrollment without a high school diploma or recognized equivalent (GED) or who fail to meet the home or private school requirement will no longer be eligible to receive federal financial aid as of July 1, 2012.

If testing or retesting for the Ability-to-Benefit, all three test sections must be taken in one testing session. A fee for retaking the Assessment must be paid in the Cashier's Office. Please discuss taking a retest with testing personnel before paying the fee. Retest scores will replace previous scores.

Residency Policy

For the purpose of assessing tuition, applicants for admission will be classified into one of three categories.

Resident Student

Tuition Rate – A resident student will be charged the in-state tuition rate established by the Alabama Community College System.

- Eligibility –A resident student is an applicant for admission who meets all legal requirements or is a duly registered resident in the State of Alabama for at least twelve (12) months immediately preceding application for admission or whose non-estranged spouse has resided and had a habitation, home, and permanent residence in the State of Alabama for at least twelve (12) months immediately preceding application for admission. Consequently, an out-of-state student cannot attain resident student status only by attending school for twelve (12) months in the State of Alabama.
- Dependents –In the case of minor dependents seeking admission, the parents, parent, or legal guardian of such minor dependent must have resided in the State of Alabama for at least twelve (12) months preceding application for admission. If the parents are divorced, the

residence will be determined by the parent's residency to whom the court has granted custody.

- Minor –An individual who, because of age, lacks the capacity to contract under Alabama law. Under current law, this means a single individual under nineteen (19) years of age and a married individual under eighteen (18) years of age but excludes an individual whose disabilities of non-age has been removed by a court of competent jurisdiction for a reason other than establishing a legal residence in Alabama. If the current law changes, this definition shall change accordingly.
- Supporting Person –Either or both student's parents, parents who live together, or if the parents are divorced or living separately, then either the parent having legal custody or, if different, the parent providing the greater amount of financial support. If both parents are deceased or if neither has legal custody, the supporting person will mean, in the following order: the legal custodian of the student, the guardian, and the conservator.

Determination and Certification

In determining resident student status for the purpose of assessing tuition, the burden of proof lies with the applicant for admission.

- Students who graduated from an Alabama high school or obtained a GED in the State of Alabama within three (3) years of the date of application for admission shall be considered resident students for tuition purposes.
- An individual claiming to be a resident will certify by a signed statement each of the following:
 - A specific address or location within the State of Alabama as their residence.
 - An intent to remain at this address indefinitely.
 - Possession of more substantial connections to the State of Alabama than any other state.

The certification of the applicant's address and the intent to remain in the State indefinitely will determine residency status factors. The institution will determine residency status by evaluating the

applicant's documentation as proof of connection with the State of Alabama. This evaluation will include the consideration of the following connections:

- Consideration of the location of high school graduation.
- Payment of Alabama state income taxes as a resident.
- Ownership of a residence or other real property in the State and payment of state ad valorem taxes on the residence or property.
- Full-time employment in the State.
- Residence in the State of spouse, parents, or children.
- Previous periods of residency in the State continuing for one (1) year or more.
- Voter registration and voting in the State; more significantly, continuing voter registration in the State that initially occurred at least one year prior to the initial registration of the student in Alabama at a public institution of higher education.
- Possession of state or local licenses to do business or practice a profession in the State.
- Ownership of personal property in the State, payment of state taxes on the property, and possession of state license plates.
- Continuous physical presence in the State for a purpose other than attending school, except for temporary absences for travel, military service, and temporary employment.
- Membership in religious, professional, business, civic, or social organizations in the State.
- Auxiliary services in the State of checking and savings accounts, safe deposit boxes, or investment accounts; and in-state address shown on selective service registration, drivers' license, automobile title registration, hunting and fishing licenses, insurance policies, stock and bond registrations, last will and testament, annuities, or retirement plans.

Students determined to be eligible for resident tuition will maintain that eligibility upon re-enrollment within one (1) full academic year of their most recent previous enrollment unless there is evidence the student subsequently has abandoned resident status, for example: registering to vote in another state.

Students failing to re-enroll within one (1) full academic year must establish eligibility upon re-enrollment.

Non-Resident Student

- A non-resident student is one who does not meet the standard of having resided in the State of Alabama for at least twelve (12) months immediately preceding application for admission.
- A non-resident student will be charged the in-state tuition rate established by the Alabama Community College System under the following circumstances, provided the student is a citizen of the United States.

Dependent student

- Whose supporting person is a full-time permanent employee of the institution at which the student is registering; or
- Whose supporting person can verify full-time permanent employment in Alabama and will commence said employment within ninety (90) days of registration; or
- Whose supporting person is a member of the United States military on full-time active duty stationed in Alabama under orders for duties other than attending school; or
- Whose supporting person is an accredited member of a consular state assigned to duties in Alabama.

Non-Dependent student (as defined by Internal Revenue Codes)

- Full-time permanent employee of the institution at which the student is registering or is the spouse of such an employee; or
- can verify full-time permanent employment within the State of Alabama or is the spouse of such an employee and will commence said employment within ninety (90) days of registration with the institution; or
- is a member of or the spouse of a member of the United States military on full-time active duty stationed in Alabama under orders for duties other than attending school; or

- is an accredited member of, or the spouse of, an accredited member of a consular staff assigned to duties in Alabama.

In determining non-resident student status for the purpose of assessing tuition costs, the burden of proof lies with the applicant for admission. The College may request proof that the applicant meets the stipulations noted above prior to admission.

Out-of-State Student

- Any out-of-state applicant for admission who does not fall into the Non-Resident Student category above shall be charged a minimum tuition of two (2) times the resident tuition rate charged by the institution.
- Students initially classified as ineligible for resident tuition will retain that classification for tuition purposes until documentation is provided verifying eligibility for resident tuition.

Residency Policy for Veterans, Dependents, and Spouses

For the purpose of assessing tuition costs, students who are veterans, dependents, and spouses will receive in-state tuition rates if classified as one of the following:

- The student is a member or spouse of a United States military member on full-time active duty stationed in Alabama under orders other than attending school.
- Effective May 22, 2012, if the student has been a member of the Alabama National Guard for a period of at least two years immediately preceding qualification for resident tuition and continues to be a member of the Alabama National Guard while enrolled at the public institution of higher education.

VA Certificate of Compliance

It is hereby resolved that Trenholm State Community College in the State of Alabama is compliant with Public Law 114-315, which modified title 38 of the United States Code (USC) 3679(c). As amended, 38 USC 3679© requires that the following individuals be charged the resident rate:

- A Veteran using educational assistance under either chapter 30 (Montgomery GI Bill® – Active

Duty Program) or chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, who lives in the State in which the institution is located (regardless of their formal State of residence) and enrolls in the institution within three years of discharge or release from a period of active duty service of 90 days or more.

- Anyone using transferred Post-9/11 GI Bill® benefits (38 USC § 3319) who lives in the State in which the institution is located (regardless of his/her formal State of residence) and enrolls in the institution within three years of the transferor's discharge or release from a period of active duty service of 90 days or more.
- Anyone described above while remaining continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same institution. The person so described must have enrolled in the institution prior to the expiration of the three-year period following discharge or release as described above and must be using educational benefits under either chapter 30 or chapter 33 of title 38, United States Code.
- Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C.
- § 3311(b)(9)) who lives in the State in which the institution is located (regardless of their formal State of residence).
- Anyone using transferred Post-9/11 GI Bill® benefits (38 USC § 3319) who lives in the State in which the institution is located (regardless of their formal State of residence) and the transferor is a member of the uniformed service who is serving on active duty.
- Anyone using educational assistance under chapter 31, Vocational Rehabilitation and Employment (VR&E).
- Anyone using educational assistance under chapter 35, Survivors' and Dependents' Educational Assistance (DEA) program.

**GI Bill® is a registered trademark of the US Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official US government Web site at www.benefits.va.gov/gibill.*

Name Change

Students who desire to change their name must complete the Change of Information Form found on the Student Information webpage and submit legal documentation reflecting the requested name change.

- Acceptable Legal Documentation:
- Driver's License
- Social Security Card
- Marriage License
- Divorce Documents
- Naturalization Papers
- Passport
- Court Order
- Birth Certificate

Admissions Status Type

Unconditional

Students who have submitted all required documentation may be admitted as unconditional status. An applicant who has completed the baccalaureate degree will be required to submit only the transcript from the institution granting the baccalaureate degree.

Conditional

Students not submitting all required documentation may be admitted as conditional status. Failure to provide documentation by the end of the first semester, as determined by institutional calendars, will prevent a student from future registration and release of an official transcript.

Admissions Classifications and Requirements

First Time

Applicants who have not previously attended any regionally or nationally accredited College will be considered first-time college applicants or "native" applicants. A student who has no prior postsecondary experience and attends any institution for the first time must apply for

admission, submit an appropriate identification, and submit an official high school transcript or an official GED transcript.

Transfer

An applicant who has previously attended another duly accredited postsecondary institution will be considered a transfer student. To be classified as degree eligible, a transfer student must apply for admission and submit official transcripts from all duly accredited postsecondary institutions attended.

An applicant who has completed an associate or baccalaureate degree will be required to submit only the transcript from the granting institution. Even though transcripts from non-duly accredited institutions may not be required for admission to the College, transcripts from all institutions should be submitted if requesting an evaluation for transfer of credit.

A duly accredited institution is accredited by one of the six regional accrediting bodies recognized by the US Department of Education. The student may transfer with or without credit. Acceptance of transfer credits is based upon Trenholm State Community College policy.

Readmit/Returning Students

Applicants previously admitted for a specific term, who did not attend, will be required to complete a new application form for admissions. Former students who have not attended for three or more consecutive terms will be required to complete a new application. If these students have attended other duly accredited postsecondary institutions during this period, official transcripts must be sent to the Office of Admissions and Enrollment Management.

Readmitted students are strongly encouraged to schedule appointments with an advisor prior to registration. Readmitted and returning students are required to complete the degree plan for the catalog year in which they are readmitted to the College.

Transient

A student enrolled at another college or university while also enrolled to take classes at Trenholm State for the express purpose of transferring credit back

to the home college or university is considered a transient student. Students must apply for admission and submit a transient letter from the parent institution to certify that the credits earned at the College will be accepted as part of their academic program. The official letter or Transient Authorization Form must be appropriately signed by the Dean of Students, College Registrar, or advisor at the parent college and must identify the specific college course(s) students have been approved to take. Transient students are not required to file transcripts of their previously earned credits at other colleges/ universities. Transient students are not eligible for federal financial aid.

Accelerated High School Program

The Accelerated High School program allows high school students the opportunity to earn college credits while enrolled in high school. College students may enroll in academic, career and technical, or health profession courses/programs in accordance with guidelines issued by the Alabama Community College System. Accelerated High School Students are not eligible for financial aid. College credits earned with the Accelerated Program cannot be substituted for high school credits.

Accelerated High School Program Eligibility

A student is eligible for admission as an accelerated student if they meet all of the following criteria:

- The student has completed the 10th grade.
- Students must have the written approval of a secondary school official. Accelerated students enrolled in private, homeschool/private tutor, parochial, or church/religious secondary educational entities must be documented in writing by an appropriate secondary official. Approval from secondary school officials indicates that the student has demonstrated both academic readiness and social maturity.
- The student has completed the high school prerequisites for the courses in which they want to enroll.

The Chancellor may grant exceptions for a student documented as gifted and talented in accordance with Alabama Administrative Code §290-8-9-12. Exceptions apply only to requirements 1 and 3 above.

Dual Enrollment and Dual Credit for High School Students

The Dual Enrollment program allows eligible high school students to simultaneously enroll in college courses with high school classes to earn both College and high school credit. Alabama Community College System institutions are authorized to establish dual enrollment/dual credit programs with local boards of education in the College service area. Courses offered by Trenholm State shall be of postsecondary level or as stipulated in a contract for services between the two levels. Dual enrollment credit may be applied toward a high school diploma or a technical or health certificate.

Dual Enrollment Eligibility

- Students must be rising 10th, 11th, or 12th graders.
- Students must satisfy the requirements for general admission, with the exception of proof of high school graduation or GED completion.
- Students seeking enrollment in Dual Enrollment for Dual Credit coursework must have a minimum cumulative (unweighted) high school grade point average of 2.5 on a 4.0 scale.
- Students must have the written approval of a secondary school official. Dual Enrollment for Dual Credit eligibility for students enrolled in private, homeschool/private tutor, parochial, or church/religious secondary educational entities must be documented in writing by an appropriate secondary official.

Continuous Eligibility for Dual Enrollment

Students who meet the criteria for initial admission to the Dual Enrollment Program as specified in the Alabama Community College System Procedure for Dual Enrollment High School Students will remain eligible as long as a grade of "C" or better in all attempted college courses is earned. Students who fail to meet this minimum grade requirement or who withdraw from a course will be suspended from the program for a minimum of one term. The summer semester term may not be used as the one-term suspension; only a fall and spring semester may be used as the one-term suspension. The student may not re-enroll until the suspension has been served.

For re-entry, the student must re-apply to the program and meet the minimum (unweighted) grade point average of 2.5 on a 4.0 scale.

College Orientation for Dual-Enrolled Students

Dual-enrolled students are required to attend an orientation session prior to their first semester of enrollment. Through attendance and participation, dual enrolled students are informed of the College's policies and procedures and the resources offered by the College. This is a non-credit orientation and does not substitute for ORI-101.

International

A student who is a citizen of another country is considered an international student. International applicants are individuals who hold or will need to obtain a non-immigrant visa, including students who hold or who intend to hold F-1 visa/status. All F-1 students who study at Trenholm State need a Form I-20 Certificate of Eligibility for Non-immigrant Student Status. International students will be considered out-of- State for tuition residency purposes. An international applicant must provide the documentation listed below prior to the issuance of Form I-20.

Required documentation for International Admissions

- Completed Trenholm State Community College International Student Application for admission.
- Copy of student's US Visa and Passport with a current photo. Current and valid passport or other official documentation verifies lawful presence.
- An official translated copy of the student's high school transcript and college transcript(s), if applicable; all foreign transcripts and credentials must be evaluated by World Education Services (WES). The website is www.wes.org. International students must request that their previous high school and college(s), if applicable, mail all official transcripts to WES. Once credentials are evaluated, WES will send the students' official transcripts to Trenholm State Community College.
- A minimum score ranging from 5.5 on the IELTS International English Language Testing System)

as determined by the College, or a total score of 61 on the Internet-based TOEFL, a 2A on the Step EIKEN Test in Practical English Proficiency, or a total score of 500 on the paper-based TOEFL. Institutions may admit students to an established ESL program in preparation for the English Language Exam. However, students may not enroll in regular college courses until the English Language requirement is met. The English as a Second Language exam may be waived for students from all English-speaking countries, including but not limited to Anguilla, Antigua, and Barbuda, Australia (Australian English), the Bahamas, Barbados, Bermuda, Belize (Belizean Kriol), British Indian Ocean Territory, the STUDENT SERVICES 161 British Virgin Islands, Canada (Canadian English), the Cayman Islands, Dominica, the Falkland Islands, Gibraltar, Grenada, Guam, Guernsey (Channel Island English), Guyana, Ireland (Hiberno-English), Isle of Man (Manx English), Jamaica (Jamaican English), Jersey, Montserrat, Nauru, New Zealand (New Zealand English), Nigeria, Pitcairn Islands, Saint Helena, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Tanzania, Singapore, South Georgia and the South Sandwich Islands, Trinidad and Tobago, the Turks and Caicos Islands, The Gambia, the United Kingdom, the US Virgin Islands, and the United States. Other waivers, with substantial documentation, must be submitted to the Chancellor for approval.

- A signed, notarized Affidavit of Financial Support that verifies financial support of the student from the sponsor indicating their full responsibility for the international student's financial obligations while attending Trenholm State. The affidavit must include an original official bank letter or statement from the sponsor's financial institution showing sufficient funds to support the student's educational expenses. Please note that Trenholm State Community College offers no financial assistance or scholarships for international students.
- Receipt of payment of I-901, Student Exchange Visitor Information System (SEVIS) Fee.
- Completed Medical History and Immunization form that demonstrates adequate health.

- Proof of health and life insurance that includes evacuation repatriation. International students must maintain insurance during all periods of enrollment.
- Transient or transfer international students must submit a Transient or Transfer Clearance Form signed by the international student advisor at the institution from which the prospective student comes. Transient or transfer international students must submit a copy of Form I-20 from the institution from which the student transfers
- All required forms and documents for international students are published on the College's website <https://www.trenholmstate.edu/future-students/office-of-records-and-registrar/international-students/>
- An international student applicant who fails to provide the required documentation will not be admitted to any Alabama Community College System institution. Other non-immigrant students must meet all ACCS admission requirements and provide documentation of immigration status determined by the College.
- For the protection of the public and to assist in maintaining State and local security, persons who are not citizens of the United States may not be admitted to any Alabama Community College System institution for the purpose of enrolling in flight training or any segment or portion of a flight training program, until appropriate certification and approval have been received from the office of the Attorney General of the United States, pursuant to the section 113 of the Aviation Transportation and Security Act, regulations of the Immigration and Naturalization Service, and all other applicable directives. Applicants who fail to satisfy the forms of identification requirement will not be admitted to any ACCS institution.

Senior Citizen Admission

Alabama residents 60 years or older may attend classes tuition-free on a space-available basis. Such persons must follow standard admissions procedures and meet all course prerequisites as stated in the College Catalog. The tuition waiver covers tuition only in college-credit courses. A college-credit course is defined as a course

measured in both credit hours and scheduled weekly contact hours that is part of an organized and specified program leading to an associate degree, certificate, or short-term certificate. The Senior Adult Waiver does not cover books, fees, supplies, tools, or repeated courses. Persons who qualify must register for courses on the first day of class each semester.

Admission Requirements for Allied Health Programs

Individuals seeking admission to selective Allied Health programs (Diagnostic Medical Sonography, Medical Radiologic Technology, Practical Nursing, Registered Nursing, Respiratory Therapy) must meet all admissions requirements of the College. In addition, these programs have a separate admissions application and several admissions requirements that must be met by a publicized application deadline. Advisors in those programs are available to answer questions and help students understand these requirements; however, meeting all program admissions requirements is the student's sole responsibility.

Selective admissions programs are highly competitive. Meeting minimum admissions requirements ensures that students' applications will be considered but does not guarantee program acceptance. Students are selected based on an objective scoring system for each program; students selected for admission to selected programs generally exceed minimum admissions requirements. Prospective students should contact program faculty or staff or visit the College website's program section for up-to-date information.

Audit Students

Applicants may apply for admission to credit courses on a non-credit or audit basis. Students must meet all applicable admissions requirements. The individual instructor will define standards of performance for each class. A grade of "AU" will be given to denote an audit. Students must declare their intention to audit a class at the time of registration. A course may be changed from CREDIT to AUDIT or from AUDIT to CREDIT only during each semester's official drop/add period.

Non-Credit Students

An applicant enrolling exclusively in non-credit courses may be granted admission to the College via the Continuing Education Department or the Workforce Development Division.

Records and Registration

Registration and Course Information

The Office of Student Records provides information and services to meet the needs of the Trenholm State faculty, staff, students, and community. The department maintains student academic records, facilitates advising and registration each semester for credit classes, and verifies and certifies student enrollment status. In addition to planning the Commencement Ceremony, the department is responsible for the processing of grade changes, transfer credits, awarding of certificates and degrees, curriculum updates, degree plans, and change of majors. To this end, the Office has the responsibility to maintain timely and accurate records of the academic progress and accomplishments of Trenholm students, while maintaining the privacy and security of those records.

Advising

Academic advising is a critical part for students seeking a degree or certificate or planning to take courses prior to transferring to a four-year institution from Trenholm State. Its primary purpose is to assist students in the development of meaningful educational plans which are compatible with their life goals. Every student enrolled is assigned a faculty advisor.

Faculty advisors are available in each program to advise students regarding courses, programs, and career planning along guided pathways to ensure success in their respective programs of study. Advisors are available during advising days and regular office hours throughout the semester. Prior to each semester, students are ultimately responsible for consulting with their faculty advisor to plan their course of study and review their degree plan for a timely graduation.

The Faculty Advisor Directory is published on the College's website

<https://www.trenholmstate.edu/programs/faculty-advisor/>.

Students who experience academic difficulty or consider withdrawal from the College for any reason are encouraged to contact their advisor or the Student Success Center.

Registration

Registration dates are listed in the calendar section of the College Catalog. During the scheduled registration, Trenholm State students must consult with their faculty advisor to select courses appropriate for their major. Students must complete the registration process by registering online via their "My Trenholm" Portal.

Specific registration information is contained in instructions distributed to students before each semester begins. Registration is held each semester according to scheduled dates, and procedures are published on the College's website www.trenholmstate.edu and the College Calendar. A schedule of courses is published on the College's website (www.trenholmstate.edu) each semester. Students are responsible for registering each semester.

Trenholm State may withhold the privilege of a student's registration for the following reasons:

- Unpaid Fees
- Unreturned Library Books
- Incomplete Admissions Records

Time and Location of Courses

Trenholm State Community College offers most courses and instructional programs with day, evening, and online schedules. Courses are offered at the Trenholm Campus, the Patterson Site, Culinary Arts, and online. All courses meet the same standards and have the same requirements regardless of the time, place, or method of delivery.

Prerequisites

A student who fails a course in a sequence cannot take the succeeding course before making up the failure. Prerequisites for a course must be met before the requisite course is taken.

Course Load

The maximum course load is nineteen (19) semester credit hours. A student may take more than nineteen (19) semester credit hours only with special permission from the Program Coordinator and the appropriate Dean. The Course Overload form is located on the College's website <https://trenholmstate.edu/current-students/student-forms/>. An absolute maximum of twenty-four (24) semester credit hours exists for all students. The student must have a cumulative grade point average of 2.5 to request over 19 hours. The minimum load for a regular full-time student is twelve (12) semester credit hours. Students who are enrolled in developmental courses are strongly encouraged to enroll in 12 hours or less each term until all developmental courses have been completed.

Schedule Changes/Drop and Add

All student schedule changes must be made during the official schedule change period. Students may change their schedules by accessing their "My Trenholm" Portal.

Student Classification

Students who have earned less than 30 credit hours are classified as freshmen. Students who enroll for less than twelve (12) credit hours in a semester are classified as part-time students. Part-time students' programs of study should conform to the general curriculum requirements of all students. Students registered at the College for twelve (12) credit hours or more in a semester are classified as full-time students.

Academic Freedom

Trenholm State Community College seeks to provide an atmosphere where students can make open and honest intellectual inquiry into any college matter appropriate for student participation. The student is free to express dissent to any college matter within the limits of good taste. Any student who believes his or her rights to academic freedom have been

suppressed should follow the procedures outlined in the Grievance Appeals Procedures listed in the Student Handbook section of the Catalog.

Course Substitution

Generally, completion of the curriculum, as defined by program faculty, is required to be awarded a degree or certificate. It may be acceptable, on occasion, to substitute a different course/s for a course required in the curriculum.

Course substitutions will be made when the resulting substitution is relevant to the course it replaces and maintains the integrity of the academic program. No more than 25% of the total credit hours required in a degree or certificate program may be substituted. Credit for course substitutions required for a degree or certificate must be recommended by the program coordinator and approved by the Division Chair, Registrar, and the appropriate Dean.

The Program Coordinator must submit a Course Substitution Request form listing the required course(s) and the requested Substitution course(s) to the appropriate Division Chair. Upon completion, the Division Chair forwards the request to the Registrar and the appropriate Dean for review. The Course Substitution form is located on the College's website <https://www.trenholmstate.edu/current-students/student-forms/>

Assignment of Course Instructor

The College reserves the right to change instructors listed to teach courses due to class cancellations, splits, or other conditions which might necessitate the reassignment of instructors. Students should be cautioned that the listing of an instructor's name to teach a course in the schedule of classes is no guarantee that the instructor will teach the course.

Course Cancellation

If the course is canceled, the class will be deleted, and no grade will be assigned.

Independent Study Courses

In certain unusual circumstances, the appropriate Dean, upon recommendation of the Division Director and instructor, may permit a student to take a course by independent study. Permission will be

based on such factors as future course availability, completion for graduation, and the student's academic record. The student's grade point average will be considered before approval to take a course by independent study is granted. A student will not be allowed to take more than one independent study course per semester. Transient students and other students whose GPAs are unknown will not be allowed to take any courses by independent study.

Change of Major

A student accepted and enrolled in a program and seeks to pursue a different program must meet the requirements for admission to the new program. A student who changes their program will follow the College Catalog's curriculum requirements for that current academic year. Students are cautioned that changing a program may impact the student's financial aid status. Students who desire to change their major must complete the Change of Major Form found on the Student Information webpage.

Withdrawal Procedures

Withdrawal Policy

A grade of "W" is assigned to a student who officially withdraws from the College. Students may withdraw from their classes prior to the last two weeks of the semester. The date a student may withdraw from a course is included in the Student Calendar for each term and is listed as the "Last Day to Withdraw." It is the student's responsibility to become familiar with the Student Calendar to know the exact date to withdraw. A student who officially withdraws from the College will receive a grade of "W." A grade of "W" earns zero quality points. If a student never attended or the class is canceled, the class will be deleted, and no grade will be assigned. However, a grade of "F" will be assigned to students who fail to satisfactorily complete the requirements of a course or who voluntarily discontinue class attendance and fail to follow the College's official withdrawal procedure.

Students considering withdrawing from classes after receiving Title IV Aid should contact the financial aid department prior to withdrawing in order to discuss their withdrawal options. Additionally, financial aid

recipients who completely withdraw from all classes before 60% of the semester has passed are subject to repaying a portion of any grant funds received.

*** Official Withdrawal is defined as a student who completes the official withdrawal form located on the Student Forms page of the Trenholm State website at <https://www.trenholmstate.edu/current-students/student-forms/>.*

Withdrawal Process

Students withdrawing from a course after registration ends must withdraw from a course by the published last date to withdraw from classes as noted on the College calendar. A grade of "W" will be assigned for withdrawals submitted before the published deadline.

Students withdrawing from the College must complete a withdrawal form to drop all courses for which they are registered. A grade of "W" will be assigned for withdrawals submitted before the published deadline.

Withdrawal Prior to the Start of Classes

A student who withdraws from classes prior to the first day of class will be refunded the total tuition and other institutional charges. The first-class day is not the first day of the student's class, it is the first day of the semester.

Official Withdrawal – Total Withdrawal

Students who wish to totally withdraw from the College must complete the official withdrawal form located on the Student Forms page of the Trenholm State website (<https://www.trenholmstate.edu/current-students/student-forms/>). Students who submit the form prior to the first day of classes for the semester/term will be refunded the total amount of tuition and other refundable fees. The "first day of class" is the first day classes are offered within any term configuration, including, but not limited to, full terms, split terms, mini-terms, and weekend terms. Students who submit the form on or after the first day of classes, but prior to the end of the third week of classes will be refunded according to the withdrawal date, as follows:

Total Withdrawal before the official first day of class
100% refund

- Total Withdrawal during the first week
75% refund
- Total Withdrawal during the second week
50% refund
- Total Withdrawal during the third week
25% refund
- Total Withdrawal after the end of the third week
NO REFUND

An administrative fee not to exceed 5% of tuition and other refundable institutional charges shall be assessed for each withdrawal within the period beginning the first day of class and ending at the end of the third week of class. The first official day of classes is indicated on the College calendar as the day that classes begin. There is only one first day of class. This day may not be the first day on which all individual classes begin. The calendar also indicates the last day to drop/add. For calculating refunds during the fall and spring sixteen-week terms, a "week" is defined as seven calendar days, i.e., the first day of class running seven calendar days (inclusive of Saturday and Sunday). Refunds of shorter than sixteen weeks, such as summer semesters and mini terms will reflect a prorated week based on the number of days in the term.

Example:

Classes begin June 14; the student withdraws on June 17.
Fourth day = 75% Refund Due.

Tuition/fees paid:	\$648.00
	X .75
	\$486.00
Administrative Fee	<u>-\$32.40</u>
Round to nearest dollar:	\$453.60
Refund amount:	\$454.00
(round to nearest dollar)	

Once the withdrawal has been processed, the student will not be allowed to register again during the term of withdrawal.

The withdrawn grade of "W" will be assigned for classes in which students officially withdraw from the end of the drop/add period to the withdrawal deadline.

A grade of "W" means official withdrawal from a course or from the College within a period designated by Trenholm State. Credit hours will not be calculated into the grade-point average.

If a student stops attending or participating in class assignments without officially withdrawing from the class or the College, a failing grade of "F" will be assigned.

Statewide Transfer and Articulation Reporting System (STARS) – Now *Alabama Transfers*

Alabama Transfers (formerly STARS) is a web-accessible database system that provides guidance and direction for prospective transfer students in the State of Alabama.

The Alabama Transfers system allows students, advisors, faculty, and administrators to obtain the most current and approved transfer information from the Alabama Articulation and General Studies Committee (AGSC). Prospective transfer students can log onto the Alabama Transfers system and obtain a transfer guide for their chosen major that prescribes the coursework needed in the first 60-64 semester hours (SH) of their degree program. If a student follows the guide and does not change majors, they should receive degree credit upon transfer to the receiving institution.

The Alabama Transfers system allows public two-year students in Alabama to obtain a transfer guide/agreement for the major of their choice. This guide/agreement, if used correctly, guides the student through their first two years of coursework and prevents loss of credit hours upon transfer to the appropriate public four-year university in Alabama. Although transfer guides/agreements can only be generated for two-year to four-year transfers, the Alabama Transfers system can still provide guidance and direction to transfer students who have a different transfer situation.

The information that students receive from the Alabama Transfers system has been approved by the AGSC.

General Principles of Transfer Credit

Coursework transferred or accepted for credit toward a certificate or a degree must represent collegiate coursework relevant to the student's degree plan. In assessing and documenting equivalent learning and qualified faculty, Trenholm State uses recognized guides that aid in the evaluation for credit. Such guides include those published by the American Council on Education, The American Association of Collegiate Registrars and Admissions Officers, and the National Association of Foreign Student Affairs.

The Registrar is charged with the initial evaluation of transcripts for potential transfer of credit. The Registrar has the authority to approve transfer credit applicable to a student's degree plan when (a) the transferred course meets the General Principles for Transfer of Credit as previously outlined and (b) the course name, level, description, and learning outcomes substantially match that of the course for which credit is awarded in the student's degree plan. In addition, the Registrar may grant transfer credit for a specific course in a student's degree plan when the transferred course is of a higher level and has the specific course (or one with substantially similar learning outcomes) as a prerequisite. For example, the Registrar may grant credit for MTH 100 (Intermediate Algebra) if the student earned a grade of C or better in MTH 112 (Pre-Calculus Algebra) for which MTH 100 is a prerequisite.

Other potentially transferable courses are evaluated for credit toward the student's degree plan cooperatively by the Registrar and designated faculty member. For general education courses, the designated faculty member is the lead academic instructor credentialed in the discipline. For technical courses in the student's major, the designated faculty member is the corresponding Program Coordinator. In determining whether the credit is awarded, the Registrar and designated faculty member consider evidence such as the course description, the credentials of the instructor who taught the course, and the curriculum and learning outcomes detailed in the course syllabus. Credit is awarded when the evidence affirms that the student has achieved the knowledge, skills, and experiences comparable to those attained by students who successfully complete the required course at Trenholm State.

The College will accept courses completed at other duly accredited colleges for transfer credit only when the student earned a passing grade of "C" or higher in the course and the course is part of the student's degree plan at Trenholm. Higher grades may be required by the College for selected courses provided the higher grades are also required in courses for native students.

- Transfer credit accepted for coursework completed at another institution will reflect the letter grade earned and is not included in Trenholm State's GPA calculation.
- Transfer credit(s) will be evaluated during the first term of enrollment, only if transferrable grades are "C" or better. College transcripts will only be evaluated when all transcripts are received.
- Awarding of transfer credit to fulfill graduation requirements will be based on the applicability of the credits to the requirements of the degree pursued.
- Credit may be extended based on a comprehensive evaluation of demonstrated and documented competencies and previous formal training. (See section on Alternative Sources of Credit).

Courses completed at Trenholm State may transfer to other duly accredited colleges and to the technical divisions of community colleges. Credits may transfer to the academic divisions of community colleges or to four-year colleges/universities. However, the decision on the acceptance of transfer credits always rests with the receiving college. All requests concerning transfer courses should be directed to the college/university to which a student plans to transfer.

Credit for Prior Learning

It is the philosophy of Trenholm State Community College that a student should not be required to repeat a learning experience for knowledge or skills currently possessed by the applicant. Therefore, if prior learning can be appropriately documented, the applicant may be awarded credit or advanced placement.

Prior Learning Assessment (PLA) is a means for a student to receive college-level credit for learning that took place in a non-traditional learning

environment, such as on-the-job training, military training, professional development seminars, volunteerism, and in-field experience. PLA relies heavily on aligning learning gained through experience with outcomes found in traditional courses of higher education. A maximum of 25% of non-traditional credit may be awarded and applied toward graduation. Non-traditional credit is not posted to the student's transcript until the student is enrolled. Non-traditional credit may not count toward the 25% of TSCC work needed to satisfy residency for graduation. Students may not earn credit, through non-traditional academic work, for any course in which a grade has previously been received. PLA applies only to non-academic, non-transfer courses.

Military Credit

Military credit may be granted for any military service school or for any United States Armed Forces Institute/Defense Activity for Non-Traditional Education Services (USAFI/DANTES). Subject tests that have been satisfactorily completed and are determined to have a course equivalent in the student's degree plan will be accepted.

Credit awarded through nontraditional means for academic transfer courses may be awarded by examination or nationally recognized guidelines (AP, CLEP, ACT/ PEP, DSST, Challenge Exams, ACE PONSI/ CREDIT, ACE/MILITARY) or through other statewide programs identified by the Alabama Community College System.

Advanced Placement

Trenholm State recognizes a number of Advanced Placement (AP) courses that are taken in high school and supplemented by satisfactory scores on National Examinations of the College Entrance Examination Board Advanced Placement Program. With a score of 3 or higher, students receive credit for a minimum of one course in the subject area corresponding to the test. Credit is awarded based on students' majors. Trenholm State is not currently a testing center for Advanced Placement examinations but will evaluate and accept credits for AP examinations for courses listed in the college catalog. Students who apply for AP credit should contact the Records Office.

Industry-Recognized Credentials

Credit(s) may be awarded for prior learning that has been verified and assessed through an industry-recognized credentialing process. Individual departments may identify specific licensure and/or certification that will be accepted for course credit. The departmental faculty and the appropriate Dean will establish specific course credits to be awarded for specific industry credentials. The department must verify the credentials of the applicant requesting credit and attach supporting documentation for review by the appropriate Deans. There is no fee for the evaluation of industry-recognized credentials.

College Level Examination Program (CLEP)

Trenholm State welcomes students from a wide variety of backgrounds. The College recognizes students' prior learning by accepting credits earned from the College Level Examination Program (CLEP) if there is a course equivalent in the student's degree plan. Credit for CLEP subject examinations is granted based on 50th percentile scores with courses awarded for credit listed in the College Catalog. Trenholm State is not currently a testing center for CLEP examinations but will evaluate and accept credits for CLEP examinations for courses listed in the college catalog. The College may grant up to 25% of the total credits required for degree completion. Students will be responsible for scheduling and paying for CLEP examinations. For information on testing centers, examinations, fees and other details, please visit the College Board website <https://clep.collegeboard.org/about-clep>.

Advanced Placement Table

Advanced Placement Test	AP Minimum Score Required	Credit Hours Granted	Equivalent Course
Biology	3	4	BIO 101 or BIO 103
Calculus AB	3	4	MTH 125
Calculus BC	3	8	MTH 125 and MTH 126
Chemistry	3	4	CHM 104
Comparative Government and Politics	3	3	POL 200

English Language and Composition	3	3	ENG 101
English Literature and Composition	3	3	ENG 101
European History	3	3	HIS 101
Macroeconomics	3	3	ECO 231
Microeconomics	3	3	ECO 232
Music Theory	3	4	MUS 111
Precalculus	3	8	MTH 112 and MTH 113
Psychology	3	3	PSY 200
Statistics	3	3	MTH 265
Spanish Language and Culture	3	6	SPA 101 and SPA 102
Spanish Literature and Culture	3	6	SPA 101 and SPA 102
United States Government and Politics	3	3	POL 211
United States History	3	3	HIS 201
World History: Modern	3	3	HIS 122

CLEP Table

CLEP Test Topic	CLEP Standardized Minimum Score	Credit Hours Granted	Equivalent Course
History and Social Sciences			
American Government	50	3	POL 211
History of the United States I: Early Colonization to 1877	50	3	HIS 201
History of the United States II: 1865 to Present	50	3	HIS 202
Human Growth and Development	50	3	PSY 210
Introductory Psychology	50	3	PSY 200
Introductory Sociology	50	3	SOC 200
Principles of Macroeconomics	50	3	ECO 231
Principles of Microeconomics	50	3	ECO 232

Western Civilization I: Ancient Near East to 1648	50	3	HIS 101
Western Civilization II: 1648 to Present	50	3	HIS 102
Composition and Literature			
American Literature	50	6	ENG 251 and ENG 252
Analyzing and Interpreting Literature	50	3	ENG 102
College Composition	50	3	ENG 101
English Literature	50	6	ENG 261 and ENG 262
Science and Mathematics			
Biology	50	8	BIO 101 and BIO 102 or BIO 103 and BIO 104
Calculus	50	4	MTH 125
Chemistry	50	4	CHM 104
College Algebra	50	3	MTH 100
College Mathematics	50	3	MTH 110
Precalculus	50	6	MTH 112 and MTH 113
Business			
Introductory Business Law	50	3	BUS 263
Principles of Management	50	3	BUS 275
World Languages			
Spanish Language: Levels 1 and 2	50	8	SPA 101 and SPA 102
Spanish with Writing: Levels 1 and 2	50	8	SPA 101 and SPA 102

Grades

Letter grades are assigned according to the following system for all courses for which students have registered:

Grade	Description	Numerical Range	Quality Points
A	Excellent	90-100	4
B	Good	80-89	3
C	Average	70-79	2
D	Poor	60-69	1
F	Failure	Less than 60	0

I	Incomplete	Must be removed during the following term or the grade of F will be assigned	0
AU	Audit	Must be declared prior to the end of the Drop/Add Period	
W	Withdrawal	Must be prior to the 70% date.	0

Satisfactory grades are "A", "B", "C" and "D." However, a grade of "D" is NOT considered a passing grade in a developmental course or in some programs of study. A student must earn a minimum final course average of 70, a grade of "C", to pass a developmental course. Some programs may have a more stringent grading system due to external agencies/accreditation requirements.

If a student withdraws from courses by the published withdrawal date identified in the Student Calendar, a grade of "W" will be assigned. If a student withdraws from a class or the College after the withdrawal date and the student is failing the course or courses, the instructor will provide the student's last date of attendance, and a grade of "F" will be assigned. If a student never attended or the class is canceled, the class will be deleted, and no grade will be assigned.

Grade Point Average (GPA)

To obtain a numerical measure of the quality of a student's work, quality points are assigned to grades as indicated below:

A - 4 Quality Points

3 semester hours of "A" = $3 \times 4 = 12$ quality points

B - 3 Quality Points

3 semester hours of "B" = $3 \times 3 = 9$ quality points

C - 2 Quality Points

3 semester hours of "C" = $3 \times 2 = 6$ quality points

D - 1 Quality Points

3 semester hours of "D" = $3 \times 1 = 3$ quality points

F - 0 Quality Points

3 semester hours of "F" = $3 \times 0 = 0$ quality points

The grade point average (GPA) of a student is determined by multiplying the number of quality points for each grade received by the number of credit hours for that course. The total number of quality points is divided by the total number of credit hours attempted, excluding courses with W, I, and AU designations. Example: 30 quality points divided by 12 semester hours attempted = 2.5 GPA.

Incomplete (I) Grade

With the permission of the instructor and appropriate Dean, an "I" may be assigned when a student's work in a course is incomplete because of circumstances beyond the student's control but is otherwise of passing quality. Unless the deficiency is made up within the following term, the "I" automatically becomes an "F". If circumstances prevent the deficiency from being made up within the following term, the College reserves the right to extend the make-up period for up to two semesters after the "I" is awarded. An "Incomplete Grade Contract" form must be signed by the student, instructor, program coordinator, and the appropriate Dean. The instructor is responsible for securing all signatures required on this form before submitting it to the Office of Records. Students are not allowed to secure these signatures.

An incomplete grade ("I") does not count toward coursework completed but is counted as coursework attempted. However, the grade that replaces the "I" is counted in hours attempted and hours earned once the "I" grade is removed. An "I" grade is intended to be only an interim course grade. Unless the deficiency is made up within the following term, the "I" automatically becomes an "F."

Earned "F" Verification Procedure

If a student receives the final grade of "F", the instructor is required to enter the last date of attendance on the course roster.

Grade Changes

If a student has reason to believe that the letter grade earned in a course is incorrect, the student must make an informal effort to correct the error with the instructor who issued the grade. If the informal efforts of the student and faculty member have not produced a satisfactory resolution, a formal appeal is in order. See the Formal Grade Appeal Process below. The grade change must be made within one semester after the grade was initially earned. Grade changes after one semester must be done through the Formal Grade Appeal Process.

Grade Report

Students may access their grade reports and view their academic status via "My Trenholm" on the College website, <https://trenholmstate.edu>, at the end of each term. The grade report becomes a part of the student's official transcript. The grade report will be withheld if there is an outstanding financial obligation to the College. If any student suspects that a grade may have been recorded in error, the student should schedule a conference with the instructor of that course. This must be done by the last day of the next term. If an error has been made, it will be corrected and reflected on the student's transcript. If resolution is not attained, a formal appeal is in order. See the Formal Grade Appeal Process below.

Formal Grade Appeal Process

If the informal efforts of the student and faculty member have not produced a satisfactory resolution, a formal appeal is in order. A written appeal should be initiated by the student prior to the last day of classes of the semester following the semester in which the grade was issued. After this deadline, the appeals will not be considered. The following procedures should be followed for formally appealing a grade:

1. The student should first contact the instructor and request verification of the grade and how it was determined.
2. If the student does not receive satisfaction from the instructor, the student may confer with the program coordinator and the faculty member in an attempt to reach closure. If the appeal is resolved at this point, a "memorandum of record" should be prepared by the program coordinator and retained on file.
3. If closure is not reached, the student may file a formal grade appeal to the appropriate Dean. This must be done in writing and dated prior to the one-semester time limit. The appeal must state the name of the course, the reasons for the request, the dates involved, and the name of the instructor who issued the grade, including all previous attempts to resolve the situation.

The Dean will assign an Ad Hoc Grade Appeals Committee for deliberation. The Department Chair or the Program Coordinator will Chair the Committee. The Committee shall consist of two full-

time faculty members, one faculty member from the discipline and one faculty member from outside the Division, and a Student Services designee. The Committee will review the student's appeal letter, transcript, instructor's roll book, tests, papers, reports, projects, and any other documentation as appropriate. A vote will be taken by the committee to attempt a resolution. If no resolution is achieved, a formal hearing will be scheduled where the student and faculty member will be requested to present their sides of the matter. After deliberating, the Committee will make a recommendation to the appropriate Dean to either support the grade as awarded or to change the grade. The Dean will notify the student of the decision and/or action within 3-5 days following the hearing.

Standard of Academic Progress

Required Credit Hours, Grade-Point Averages (GPAs), and Required Pace of Completion

A student enrolled in an Associate Degree or Certificate Program requiring more than 26 credit hours must meet the following standards:

- After attempting 0-21 credit hours, must earn a 1.50 GPA
- After attempting 22-32 credit hours, must earn a 1.75 GPA
- After attempting 33 or more credit hours, must earn a 2.00 GPA

Students enrolled in Certificate Programs with 26 credit hours or less must meet the following standards:

- After attempting 1-17 credit hours, must earn a 1.50 GPA
- After attempting 18 or more credit hours, must earn a 2.00 GPA

Exceptions to Standards of Academic Progress

Standards of academic progress shall apply to all students unless otherwise noted:

Exemptions: Programs that are subject to external licensure, certification, and/or accreditation or which are fewer than four semesters in length may have higher academic standards.

- Transfer students on Academic Probation must adhere to these standards of academic progress.
- Special standards of academic progress have been established for students enrolled in institutional credit courses (developmental courses) and for students who wish to remain eligible to receive Title IV Financial Aid. (See Satisfactory Academic Progress Detailed in the Financial Aid Section).

Intervention for Student Success

When a student is placed on academic probation, one-term academic suspension, or one-year academic suspension, the College may advise the student to take the minimum course load and refer the student to the Student Success Center for intervention in study skills and tutorials. Other services may be available on a case-by-case basis. For assistance or more information from the Student Success Center, please email mrobinson@trenholmstate.edu.

Application of Standards of Progress for Institutional Credit Courses

Institutional credit courses are those which are not creditable toward a formal degree and include Training for Existing Business and Industry, Continuing Education, and courses numbered below the 100 series.

Standards of Academic Progress for Transfer Student

A transfer student who is admitted on CLEAR academic status is subject to the same standards of academic progress as “native” students. Grades accrued at other regionally accredited colleges and universities are not included in the grade point average calculation.

A transfer student admitted on ACADEMIC PROBATION retains that status until the student has attempted at least 12 credit hours. If, at the conclusion of the semester in which the student has attempted a total of 12 or more credit hours and the Cumulative GPA is below 2.0, the student is suspended for one semester. The transcript will read SUSPENDED ONE SEMESTER.

At the conclusion of the semester in which the transfer student was admitted on ACADEMIC PROBATION, has attempted a total of 12 or more credit hours, and the Cumulative GPA at the College is 2.0 or above, the student’s status is CLEAR. For additional information regarding transfer credit see the “Records and Registration” section of this catalog.

Academic Bankruptcy

A student must complete a request for Academic Bankruptcy listing the courses he/she wishes to bankrupt. This form which is located on the College’s website at <https://trenholmstate.edu> must be signed by the Registrar and a Financial Aid Official. A student may declare academic bankruptcy only once. Implementation of academic bankruptcy at the College does not guarantee that other colleges/universities will approve such action. This determination will be made by the respective transfer college/university. A student may declare academic bankruptcy under the following conditions:

- If fewer than three (3) calendar years have elapsed since the term for which the student wishes to declare bankruptcy, the student may declare academic bankruptcy on all coursework taken during the one semester, provided he/she has taken a minimum of 12 semester credit hours since the bankruptcy term occurred. All coursework taken, even hours completed satisfactorily during the term for which academic bankruptcy is declared, will be disregarded in the cumulative grade point average.
- If three (3) or more calendar years have elapsed since the most recent semester for which the student wishes to declare bankruptcy, he/she may declare academic bankruptcy on all coursework taken prior to 12 semester credit hours of coursework since the bankruptcy term occurred. All coursework taken, even hours completed satisfactorily, during the semester(s) for which academic bankruptcy is declared will be disregarded in the cumulative grade point average.
- When academic bankruptcy is declared, the term “ACADEMIC BANKRUPTCY” will be reflected on the transcript for each semester affected. All individual courses and grades will remain on the permanent transcript. Academic

Bankruptcy cannot be considered by the Financial Aid Office when calculating Satisfactory Academic Progress.

Course Forgiveness Policy

Students may repeat courses for which they have previously registered. Courses completed at Trenholm State may be repeated at Trenholm State. The last grade earned excluding W, and AU will be the grade used for graduation audits. Courses may not be repeated at another college and used as a component of Trenholm State's Course Forgiveness Policy.

- If a student repeats a course once, the second grade (excluding grades of W, or AU) replaces the first grade in his/her cumulative grade point average if the student files a written request with the Office of Records. For example, if a student repeats a course, the second grade earned (excluding grades of "W") will replace the first grade in the calculation of the cumulative grade point average. If the second grade is a non-satisfactory grade (F), the F will replace the first grade, even if the first grade is passing.
- When a course is repeated more than once, all grades for the course, excluding the first grade, will be employed in the computation of the cumulative grade point average provided the student has requested the course repeat as noted in the first bullet above.
- Transcripts will list all courses and the grades earned. A repeat symbol, 'R,' may denote a course repeat. Zero credit hours can also indicate a course repeat. See the financial aid section in the Catalog regarding eligibility. A transfer institution may choose to average all coursework regardless of Trenholm State's institutional policy.
- A student must request, by submission of the appropriate form, that the Registrar implement the "Course Forgiveness" policy after a course has been repeated.

Some sources of financial aid will not pay tuition for repeated courses. See the Financial Aid section in Catalog regarding repeat courses and repeat developmental courses eligibility.

Application of Standards of Progress

- When the cumulative GPA of a student is at or above the GPA required for the total number of credit hours attempted, the student's status is CLEAR.
- When the cumulative GPA of a student is below the GPA required for the number of credit hours attempted, the student is placed on Academic Probation.
- When the cumulative GPA of a student on Academic Probation remains below the GPA required for the total number of credit hours attempted, but the semester GPA is 2.0 or above, the student remains on Academic Probation.
- When the cumulative GPA of a student on Academic Probation remains below the GPA required for the total number of credit hours attempted, and the semester GPA is below 2.0, the student is suspended for one term. The transcript will read SUSPENDED- ONE SEMESTER.
- The student suspended for one term may appeal. If, after appeal, the student is readmitted without serving the one-semester suspension, the transcript will read SUSPENDED-ONE SEMESTER/READMITTED ON APPEAL.
- The student readmitted on appeal will remain on Academic Probation until a 2.0 grade point average is earned.
- A student on Academic Probation after being suspended for one semester (whether the student has served the suspension or has been readmitted on appeal) without having since achieved Clear academic status and whose Cumulative GPA falls below the level required for the total number of hours attempted, but whose semester GPA is 2.0 or above, will remain on Academic Probation until the student achieves the required GPA for the total number of hours attempted. Readmission to the College does not mean that a student is automatically eligible to receive financial assistance.
- A student returning from one semester or one-year suspension and, while on academic probation, fails to obtain the required GPA for the number of hours attempted and fails to maintain a semester GPA of 2.0, will be placed on one year's suspension.

- The student may appeal a one-term or one-year suspension.
- The permanent student record will reflect the student's status (except when the status is "clear"). When appropriate, the record will reflect ACADEMIC PROBATION, SUSPENDED ONE SEMESTER, ACADEMIC SUSPENSION ONE YEAR, SUSPENDED ONE SEMESTER/ READMITTED ON APPEAL, OR ONE YEAR SUSPENSION READMITTED ON APPEAL.
- All applicable academic designations except "CLEAR" will appear on the student's transcript.

Process for Appeal for Readmission

If a student declares no contest to the facts leading to suspension but wishes to request consideration for readmission, the student may submit a request in writing for an "appeal for readmission" to the Admissions Committee within 3-5 days of notice of suspension. The Admissions Committee shall not be considered a "due process" hearing, but rather a petition for readmission. The student shall be given an opportunity to present a rationale and/or statement of circumstances in support of immediate readmission. The decision of the Admissions Committee, along with the materials presented by the student, shall be placed in the student's official records. Additionally, a copy of the written decision shall be provided to the student.

Repeating Courses

Students may repeat courses for which they have previously registered. If a course is repeated, only the last grade awarded for the course will be used in the calculation of the cumulative grade point average (GPA) for the purpose of fulfilling graduation requirements. A course may be considered in the calculation only once to satisfy the credit hours required for graduation. Some sources of financial aid will not pay tuition for repeated courses.

Degrees and Graduation - Commencement

A student is responsible for completing the online Application for Graduation at least one term prior to the planned term of graduation. Students must complete the application for graduation via their My Trenholm portal.

To apply for graduation, students must complete the steps listed below.

1. Go to My Trenholm Portal
2. Click on the Students Tab
3. Under the Student Section, click on Student Records
4. Under the Student Records Section, click on Apply to Graduate

Associate in Arts

College Transfer - Coursework leading to the Associate in Arts (AA) is designed to prepare students to transfer to a four-year college or university to pursue a Bachelor of Arts or a Bachelor of Science degree. Students are assigned advisors in the General Education Division. Degree plans have been outlined in the catalog to guide students in the choice and sequence of courses.

A student shall be awarded the Associate in Arts upon satisfactory completion of the requirements of a specific program in accordance with policies of the Alabama Community College System. A student must:

- Satisfactorily complete an approved major, including prescribed general education courses.
- Earn a 2.0 cumulative grade point average in all courses attempted. The calculation of the grade point average for graduation shall not include grades earned for developmental courses. All grades earned in courses that have been repeated will be calculated into the cumulative grade point average.
- However, only the last grade awarded in a course will be used in calculating the cumulative grade point average for graduation purposes.
- Complete at least 25% of the total semester hours at the College.
- Must satisfy all requirements for graduation within one calendar year from the last term of attendance. This timeframe includes credits earned at other colleges.
- Fulfill all financial, academic, and admissions obligations to the College.
- Apply for graduation and pay the graduation fee online at the time of registration for the final semester of enrollment.

Associate in Science

College Transfer - Coursework leading to the Associate in Science (AS) is designed to prepare students to transfer to a four-year college or university to pursue a Bachelor of Arts or a Bachelor of Science degree. Students are assigned advisors in the General Education Division. Degree plans have been outlined in the catalog to guide students in the choice and sequence of courses.

A student shall be awarded the Associate in Science upon satisfactory completion of the requirements of a specific program in accordance with policies of the Alabama Community College System. A student must:

- Satisfactorily complete an approved major, including prescribed general education courses.
- Earn a 2.0 cumulative grade point average in all courses attempted. The calculation of the grade point average for graduation shall not include grades earned for developmental courses. All grades earned in courses that have been repeated will be calculated into the cumulative grade point average. However, only the last grade awarded in a course will be used in calculating the cumulative grade point average for graduation purposes.
- Complete at least 25% of the total semester hours at the College.
- Must satisfy all requirements for graduation within one calendar year from the last term of attendance. This timeframe includes credits earned at other colleges.
- Fulfill all financial, academic, and admissions obligations to the College.
- Apply for graduation and pay the graduation fee online at the time of registration for the final semester of enrollment.

Associate in Applied Science

The Associate in Applied Science is a specialized degree in a specific technical field. The degree is awarded based on the completion of an approved Degree Plan which includes specific technical courses from the technical area plus designated general education requirements. Requirements are listed in the program descriptions.

Since general education courses provide students with a solid understanding of a wide variety of

subjects and methods of learning, general education courses are required of all students seeking an Associate of Applied Science (AAS) Degree. General education courses also provide students with exposure to broader and more varied intellectual concepts, thereby impacting each program by providing more quality and enhancing the marketability of graduates.

To ensure the preparedness of all students seeking an AAS, the College has developed the following general education competencies which are assessed throughout the year in identified general education courses: computer literacy skills, computational skills, oral communication skills, and written communication skills.

A student shall be awarded the Associate in Applied Science upon satisfactory completion of the requirements of a specific program in accordance with policies of the Alabama Community College System. A student must:

- Satisfactorily complete an approved major, including prescribed general education courses.
- Earn a 2.0 cumulative grade point average in all courses attempted. The calculation of the grade point average for graduation shall not include grades earned for developmental courses. All grades earned in courses that have been repeated will be calculated into the cumulative grade point average. However, only the last grade awarded in a course will be used in calculating the cumulative grade point average for graduation purposes.
- Complete at least 25% of the total semester hours at the College.
- Must satisfy all requirements for graduation within one calendar year from the last term of attendance. This timeframe includes credits earned at other colleges.
- Fulfill all financial, academic, and admissions obligations to the College.
- Apply for graduation and pay the graduation fee online at the time of registration for the final semester of enrollment.

Certificate

Each Certificate program is designed to prepare the student for employment in one of several technical or skilled jobs in a specific occupational area. Each

program requires in-depth technical preparation supported by related general education courses. The award is based on the completion of an approved Degree Plan.

Certificate (CER) 30 to 60 Credit Hours

A student may be granted a Certificate upon satisfactory completion of the requirements of the specific program in accordance with the Alabama Community College System policies. To earn a Certificate a student must:

- Satisfactorily complete an approved major.
- Earn a 2.0 or above cumulative grade point average in all courses attempted. The calculation of the grade point average for graduation shall not include grades earned in developmental courses. All grades earned in courses repeated will be calculated into the grade point average. However, the last grade earned in a course will be used in calculating the cumulative grade point average for graduation purposes.
- Complete at least 25% of the total semester credit hours required in the program at Trenholm State Community College.
- Must satisfy all requirements for graduation within one calendar year from the last term of attendance.
- Fulfill all financial, academic, and admissions obligations to the College.
- Apply for graduation and pay the graduation fee online at the time of registration for the final semester of enrollment.

Short-Term Certificate (STC) 9 to 29 Credit Hours

Each Short-Term Certificate program is designed to provide specialized preparation in a specific technical skill. The program requires several closely-related technical courses. The Short-Term Certificate is appropriate for an individual who plans to enter a job requiring specific technical skills or for a currently employed individual who needs to develop a new skill or to upgrade an existing skill. The award is based on the completion of an approved Degree Plan.

To earn a Short-Term Certificate a student must:

- Satisfactorily complete an approved major.

- Earn a 2.0 or above cumulative grade point average in all courses attempted. The calculation of the grade point average for graduation shall not include grades earned in developmental courses. All grades earned in courses that have been repeated will be calculated into the grade point average. However, the last grade earned in a course will be used in calculating the cumulative grade point average for graduation purposes.
- Complete all credit hours required in the program at Trenholm State Community College.
- Fulfill all financial, academic, and admission obligations to the College.
- Apply for graduation and pay the graduation fee online at the time of registration for the final semester of enrollment.

Multiple Degrees

To receive a second Associate Degree from Trenholm State Community College, a student must earn a minimum of twenty (20) semester credit hours beyond the requirements for the first degree and which are a part of the program requirements for the second degree. Also, a student must meet all other graduation requirements.

Teach-out and Closing a Degree Program or Certificate Program

If Trenholm State Community College should decide to close a degree program or a certificate program, the College will make every effort to teach out currently enrolled students. The College will inform the community that no additional students will be accepted into the program. Students who have not completed their programs will be advised by faculty regarding suitable options including transfer to comparable programs. The College may offer the courses required for graduation by students enrolled in the program at the time of closure until all those students have had an opportunity to complete their degrees.

Honors and Awards

Dean's List - A Dean's List shall be compiled at the end of each semester. The requirements for the Dean's List shall be:

- A grade point average for the term of 3.5 to 3.99 on a 4.00 scale.
- Completion of 12 credit hours of college-level work for the semester. Developmental courses do not count toward the minimum course load requirement.

President's List - A President's List shall be compiled at the end of each semester. The requirements for the President's List shall be:

- A grade point average for the term of 4.0 on a 4.0 scale.
- Completion of 12 credit hours of college-level work for the semester. Developmental courses do not count toward the minimum course load requirement.

Definition of Academic Major/Area of Concentration

A "major" refers to the student's selected field of concentration.

Commencement Honors

Candidates for commencement will be recognized in the printed program for academic achievement. Recognition will be given according to the following designations:

Associate in Applied Science (AAS), Associate in Arts (AA), or Associate in Science (AS)
Graduation with Honors
 (3.50 - 3.69 cumulative GPA)

Graduation with High Honors
 (3.70 - 3.89 cumulative GPA)

Graduation with Highest Honors
 (3.90 - 4.00 cumulative GPA)

Certificate
Graduation with Distinction
 (3.50 - 4.00 cumulative GPA)

In order to be eligible for any academic honor, a candidate must have completed a minimum of thirty (30) semester hours of credit at Trenholm State.

Annual Notification of Family Educational Rights and Privacy Act (FERPA)

The College is required by the provisions of the Family Educational Rights and Privacy Act (FERPA) to provide students annual notification of their FERPA rights. Students will be notified by the publication of the regulations in the College Catalog/Student Handbook. FERPA information is available on the College's website. A student who believes his or her FERPA rights have been violated can file a complaint with the Family Policy Compliance Office at the U.S. Department of Education.

Family Policy Compliance Office
 U.S. Department of Education 400 Maryland Avenue, SW
 Washington, D.C. 20202-5920
 Phone: 1-800-USA-LEARN (1-800-872-5327)

Transcripts

The transcript policy of the College includes the following:

In compliance with the Family Educational Rights and Privacy Act (FERPA), the College does not release transcripts of a student's work except upon the student's written request. Official transcripts are sent to institutions, companies, agencies, etc. after the student's written release is received by the Office of Student Records. Transcripts will not be faxed to an individual or a receiving institution. Official transcripts will be accepted when delivered "by hand" in an unbroken sealed envelope. Upon receipt, the transcript must be official and in a sealed envelope. The College reserves the right to deny hand-delivered transcripts if foul play is detected. Transcripts are available to former and current students.

Trenholm State Community College has partnered with Credentials Solutions to accept online transcript orders. Students and alumni can order their official transcripts 24 hours a day, 7 days a week. Name, dates of attendance, social security number, fee (if any), and the address to which the transcript is to be sent are to be included in the request. Students with name changes should include ALL former names.

Transcripts can be sent electronically or mailed in hard copy, depending on the receiving institution or destination. Requests for transcripts of work where the student previously attended must be directed to those institutions.

Students will be charged a \$5.00 fee for each transcript requested, which can be paid online using credit or debit cards such as a Visa, MasterCard Discover, and American Express. More information can be found on the transcript ordering page <https://www.trenholmstate.edu/request-transcript/>.

Enrollment Verification

Trenholm State Community College has authorized the National Student Clearinghouse to act as the agent for all verifications of student enrollment and provide verification of degrees. Requestors should use www.studentclearinghouse.org for enrollment verification and www.degreeverify.org for degree verification. The telephone number is (703) 742-4200, Monday – Friday, from 9:00 a.m. to 7:00 p.m., Eastern Standard Time. The fax number is (703) 742-4239. The email address is enrollmentverify@studentclearinghouse.org.

The mailing address is:

National Student Clearinghouse
2300 Dulles Station Blvd., Suite 300
Herndon, VA 20171

Through Enrollment Verify, the National Student Clearinghouse will process enrollment verifications, on your behalf, for the following types of companies:

- Credit Issuers: verification for students who have applied for student cards.
- Travel Companies: verification for students who have applied for discounted student travel.
- Housing Providers: verification for students who have applied to rent a property.
- Scholarship Providers: verification for students who have been awarded scholarships.
- Consumer Product Companies: verification for students who have applied for student discounts when purchasing computers, books, etc.
- Requests by Students and Parents: many companies, including health insurers, ask students directly to provide proof of current

enrollment. Students and parents can use the National Student Clearinghouse Enrollment Verify website to download or print certifications.

Definition of Educational Records

Student educational records are defined as those records, files, documents, and other materials which contain information directly related to a student and are maintained by the College or by a person acting for the College. Specifically excluded from the definition of “educational records” and not open to student inspection are the following materials:

- Records of instructional, supervisory, and administrative personnel that are in the sole possession of the maker and accessible only to the maker or a designated assistant to the maker;
- Records of campus security, except in those instances where they have been transmitted within the College for administrative purposes;
- Records which are created or maintained by a physician, psychiatrist, psychologist, or other recognized professional or paraprofessional acting in capacity or assisting in that capacity;
- Records created, maintained, or used only in connection with the provision of treatment to the student will not be available to anyone other than persons providing such treatment or who could not be involved officially within the College, but such records are available to a physician or appropriate professional of the student’s choice.

Definition of Student

The purpose of this policy, a “student” is defined as any person who is or has been officially enrolled in and is attending or has attended any course offered at the College. This definition does not include prospective students.

Access of Student Records to Students

The student is accorded the right to inspect and review, in the presence of the appropriate College staff member, any records, files, and data directly related to the student. To inspect a personal folder or file, a student shall submit a written request signed by the student to the appropriate records

official, and if not personally submitted by the student, then the student's signature shall be acknowledged by the affidavit of a Notary Public. The request for inspection shall be acted upon within forty-five (45) days from the date the request is received. If, in the opinion of the appropriate records official, inspection can reasonably be accomplished by providing copies of said documents, such copies shall be made and provided to the student. The Request to Inspect-Review Academic Records is located on the College's website <https://www.trenholmstate.edu/current-students/student-forms/>.

Limitations of Access

The right of inspection of personal information described in the above paragraph does not include:

- Financial records of the parent(s) of the student or any information contained therein,
- Confidential letters and statements of recommendation which were placed in the education records prior to January 1, 1975, if such letters or statements are not used for purposes other than those for which they were specifically intended, or
- Other confidential records, access to which has been waived by the student in accordance with policy concerning waivers.

Waiver of Access

A person applying for admission may waive the right of access to confidential statements concerning his/her application for admissions, financial aid, employment, honorary recognition(s), or any other benefit made available by the College. No such application shall be denied because of the student's failure or refusal to sign such waiver.

Amendment of Educational Records

After inspecting his/her record, a student may request an explanation to challenge any part of the contents of such record. The student shall submit a written request for a hearing in the same manner and under the same procedures as provided within the section titled, "Location of Records."

The request for hearing should identify the item or items in the file to be challenged and state the

grounds for the challenge, e.g., inaccuracy, misleading information or inappropriateness, etc. The records official shall examine the contested item, shall hear the person responsible for placing the item in the file, if appropriate and possible, and shall examine any documents or hear any testimony the student wishes to present. The records official may decide that the contested item should be retained, deleted, or revised or the records official may refer the matter.

Directory Information

The following categories of information with respect to each student have been designated by the College as directory information that may be made available to the public, absent a student's request that any such information should not be released without the student's prior consent:

- Student's name, address, telephone number
- Date and place of birth
- Dates of attendance
- Educational agencies or institutions most recently attended by the student
- Major, degree desired and classification
- Participation in officially recognized clubs, organizations, and activities
- Degrees and awards received.

If a student has an objection to any of the aforementioned information being released during a given semester or academic year, the student should notify, in writing, the Dean of Student Affairs and Information Services during the first three weeks of the semester or academic year. The Request to Prevent Disclosure Information form is located on the College's website <https://trenholmstate.edu/current-students/student-forms/>.

Release of Student Records

Federal law governs how colleges and universities supervise student educational records. Trenholm State Community College adheres to the Family Educational Rights and Privacy Act (FERPA) of 1974. This act is designed to protect the privacy of students' educational records. FERPA also establishes the rights of students to inspect and review their educational records; it provides guidelines for the correction of inaccurate or misleading data through informal and formal

hearings; and establishes the rights of students to file complaints with the FERPA Office. Students will be notified by the publication of the regulations in the College Catalog/Student Handbook. The College shall not permit access to or allow the release of education records or personally identifiable information contained therein, other than directory information as defined within the paragraph titled 'Directory Information,' without the written consent of the student, to any party other than the following:

- Other school officials and teachers of the College who have been determined by the College to have legitimate educational interests;
- Officials of schools or school systems in which the student seeks or intends to enroll, upon the condition that the student may receive a copy of the record, if desired, and have an opportunity for a hearing to challenge the content of the record;
- Certain authorized representatives of federal departments/agencies or state educational authorities for purposes of audits, evaluative studies, etc. Data collected will be protected in a way that prevents personal identification except when specifically authorized by federal law;
- State and local officials or authorities to which such information is specifically required to be reported or disclosed pursuant to State statute adopted prior to November 19, 1974;
- Organizations conducting studies for, or on behalf of, educational agencies or institutions for the purpose of developing, validating, or administering predictive tests, administering student aid programs, and improving instruction, if such studies are conducted in such a manner as will not permit the personal identification of students by persons other than representatives of such organizations and such information will be destroyed when no longer needed for the purpose for which it is conducted;
- Accrediting organizations in order to carry out their accrediting functions;
- Parents of a student who is a dependent for income tax purposes;
- A lawful subpoena or court order;
- Other appropriate persons in an emergency to protect the health or safety of the student or others. Students shall have access to all such

information in accordance with the procedures outlined in this statement with the exceptions specified within the following paragraph.

Location of Records

The College has designated the following officials as responsible for student records within their respective areas of responsibility:

Type of Records	Office Location	Director Responsible
Permanent	Records	Records/Registrar
Admissions	Enrollment Management	Enrollment Management
Financial	Business Office	Regional Chief Financial Officer
Financial Aid	Financial Aid	Financial Aid
ADA/504	Student Services	Student Success

These officials shall hereinafter be referred to as "records officials." Each official is responsible for maintaining a listing of student records. The listing shall indicate the location and general content of the records. A student's request concerning his/her records or files, including requests that information not be disclosed to the public, requests for disclosure to third parties, and requests for access by the student shall be directed to the appropriate records official listed above. Forms for all such requests may be obtained from these officials. The appropriate records official will also attempt to resolve any challenges to the records at an informal hearing with the student. If an agreeable solution is not reached, the records officials will refer the student and his/her challenge to the College Hearing Officer, who shall set a hearing within ten (10) days for the final decision.

Providing Records to Third Parties

The general policy of Trenholm State Community College is to refuse access to student records to third parties without the written consent of the individual student. Should a student wish to have such records released, a written request must be directed to the proper records official specifying the records to be released, the person and address to whom records are to be released, and a request for copies to the student, if desired. Trenholm will then transfer or grant access to the information. A record of requests of access, the legitimate interest

involved, and action taken will be placed in the student's file for all requests of the file, except those from school officials as noted in paragraph one.

The Registrar will supervise the inspection of individual student records, and the student's record file shall not be taken from the designated records office. The student may obtain one unofficial copy of his/her academic record in writing. An unofficial copy is defined as copy that does not bear the official seal of the College embossed on the record, but otherwise, an official copy when released by the College's records official.

The Registrar, or designee, is the only person authorized to reproduce copies of official transcripts. Transcripts of records received from other colleges or universities become the property of Trenholm State Community College. Records of documents received from third parties will not be reproduced.

Records Retention and Disposal

All records are safely secured at the College and are retained and disposed of in accordance with policies established by the Alabama Department of Archives and History and the Alabama Community College System.

Financial Aid

Financial Aid

The Office of Financial Aid is committed to assisting students who have financial need fund the cost of their educational goals. Trenholm State believes that no individual should be denied an education because of inadequate financial aid resources. Consequently, financial aid is available at the College for those students who apply and qualify. Trenholm State participates in federal and state student aid programs.

Applying for Financial Aid

To determine a student's eligibility for Federal Student Aid Programs, the student must file the Free Application for Federal Student Aid (FAFSA). The fastest and easiest way to apply is online at www.studentaid.gov. When completing the FAFSA, the student should list the Trenholm Federal School Code 005734. Students may check the status of their financial aid via their MyTrenholm portal. It is the

student's responsibility to contact the financial aid department if there are any questions regarding his/her financial aid status.

Recipients must reapply for Federal Student Aid (FSA) by completing a FAFSA on or after October 1 of each year for the upcoming Fall semester.

Student Eligibility

To receive federal financial aid, a student must:

- Have a high school diploma or GED certificate or completed a high school education in a homeschooled setting approved under state law;
- Be enrolled as a regular student in an eligible program;
- Be a U. S. Citizen or eligible noncitizen with a valid Social Security Number;
- Demonstrate financial need;
- Maintain Satisfactory Academic Progress (SAP) once enrolled at the College;
- Sign a statement of educational purpose/ certification statement on the FAFSA;
- Not be in default on any loan or owe a repayment on any grant made at any institution under Title IV of the Higher Education Act of 1965, as amended (Title IV, HEA Program).

The amount of Federal Student Aid (FSA) a student is eligible to receive is based on the Expected Family Contribution (EFC) assigned by the Central Processing System (CPS), the Cost of Attendance at the College, and the enrollment status of the student.

Students' Rights and Responsibilities

- Students have the right to obtain information about financial assistance programs available at the College.
- Students have the right to discuss financial aid decisions with personnel in the Office of Student Financial Aid.
- Students have the right to appeal financial aid decisions.
- Students receiving financial aid are responsible for registering only for courses that are in their degree plan.
- Students are responsible for following application and/or reapplication procedures.

- Students are responsible for informing the Office of Financial Aid of any changes in their enrollment status.
- Students are responsible for understanding the Federal Financial Aid Satisfactory Academic Progress Policy.

Additional information may be obtained by contacting the Financial Aid Office at (334) 420-4322.

Financial Aid Programs

The College participates in the following Federal Student Aid (FSA) Programs as authorized by Title IV of the Higher Education Act of 1965, as amended (Title IV, HEA Program):

- Federal Pell Grant;
- Federal Supplemental Educational Opportunity Grant (FSEOG)
- Federal Work-Study Program (FWSP)

Federal Pell Grant

The Federal Pell Grant program is the largest grant program available. A Federal Pell Grant, unlike a loan, does not have to be repaid. Federal Pell Grants are awarded usually to eligible undergraduate students who have not earned a bachelor's degree or professional degree and who are enrolled in an eligible program. Federal Pell Grant award amounts can vary yearly. Additional information about the Federal Pell Grant may be obtained from the Financial Aid Office at (334) 420- 4317.

Pell Lifetime Eligibility Usage: Effective Fall 2012, Pell Lifetime Eligibility Usage (LEU) limits the number of years or semesters that a student can receive Pell funds. Full-time students can only receive Title IV aid for a total of 6 years or 12 semesters. This timeframe is increased for part-time students.

Federal Supplemental Educational Opportunity Grant (FSEOG)

Federal Supplemental Educational Opportunity Grant (FSEOG) is a federally-funded program that is provided by the U.S. Department of Education for the purpose of assisting undergraduate students with exceptional financial need meet the cost of a postsecondary education. The FSEOG funds are

awarded to the College and are administered by the Financial Aid Office at Trenholm State Community College.

At Trenholm State, FSEOG funds are awarded to eligible students with demonstrated exceptional financial need. FSEOG recipients must be undergraduates enrolled in an eligible program leading to a degree or certificate at the College. Students with the lowest Expected Family Contributions (EFCs) who will also receive Federal Pell Grant during the school year are eligible to be selected for FSEOG awards.

Applicants must complete the Free Application for Federal Student Aid (FAFSA) to apply for assistance through the FSEOG Program based on the availability of this fund at the College. If funds are available, students may receive FSEOG and ASAP funds in the same semester/term. Additional information about the Federal SEOG Program may be obtained from the Financial Aid Office at (334) 420-4317.

Federal Work-Study Program (FWSP)

The Federal Work-Study Program (FWSP) provides part-time employment primarily on campus. This Program allows students the opportunity to work and earn a portion of the money they need to finance their education. The Federal Work-Study Program is available to eligible students enrolled full time or part time. In addition, the Program provides meaningful job experience while students matriculate at the College. Students must complete the Free Application for Federal Student Aid (FAFSA) to apply. Additional information about this program may be obtained from the Financial Aid Office at (334) 420-4322.

Federal Student Loan Program

Trenholm State Community College does not participate in the Federal Direct Subsidized, Unsubsidized and Direct Plus Loan Programs. However, student borrowers who transfer to Trenholm may qualify for in-school deferments if enrolled at least as a half-time student. An in-school deferment is a temporary suspension of student loans payments.

Trenholm State Community College has authorized the National Student Clearinghouse to act as the

agent for all verifications of student enrollment. In order to receive an in-school deferment, requesters should use www.studentclearinghouse.org.

The telephone number for the National Student Clearinghouse is (703) 742-4200, Monday – Friday, from 9 a.m. to 7 p.m. (EST).

The FAX number is (703) 742-4239.

The email address is enrollmentverify@studentclearinghouse.org.

The mailing address is:

National Student Clearinghouse
2300 Dulles Station Blvd., Suite 300
Herndon, VA 20171

Transfer students who participated in the Student Loan Program at another college are encouraged to continue to communicate with their lenders. Student loan lenders cannot help the student borrowers without knowing the nature of their problems, and keeping in contact with previous lenders may prevent student borrowers from defaulting on their student loans. Additional information on deferments can be obtained from the Financial Aid Office at (334) 420-4322.

The College also participates in the Alabama Student Assistance Program (ASAP).

Alabama Student Assistance Program (ASAP)

The Alabama Student Assistance Program (ASAP) provides a limited amount of State grant funds to eligible Alabama residents with the lowest Expected Family Contributions (EFCs) who demonstrate need and who are enrolled at least half time.

Applicants must complete the Free Application for Federal Student Aid (FAFSA) to apply for assistance through the ASAP Program based on the availability of this fund at the College. If funds are available, students may receive FSEOG and ASAP funds in the same semester/term. Additional information about ASAP may be obtained from the Financial Aid Office at (334) 420- 4322.

Return of Title IV Funds

Financial Aid recipients who are awarded Federal Student Aid (FSA) funds and completely withdraw, dropout or otherwise fail to complete the semester

will be subject to the Return of Title IV Funds Refund Policy (R2T4). The term “Title IV Funds” refers to the Federal Student Aid (FSA) Programs authorized under the Higher Education Act of 1965, as amended (Title IV, HEA Program) which includes Federal Pell Grant and Federal Supplemental Educational Opportunity Grant (FSEOG).

The percentage of Title IV aid earned is found by dividing the number of calendar days completed by the student, at the time of withdrawal, by the number of calendar days in the semester. If more than 60% of the semester is completed, the student is considered to have earned 100% of the Title IV aid disbursed. The amount of Title IV aid earned is found by multiplying the amount of aid disbursed for the semester by the percentage of Title IV aid earned. If the amount earned is less than the amount of aid disbursed, the difference must be returned to the appropriate Title IV Program. If the student earned more than what was disbursed, a late disbursement may be due to the student. If the amount earned equals the amount disbursed, no further action is required. Effective July 1, 2021, withdrawals during a semester/term containing modules may be subject to R2T4 exemptions. The responsibility to return amounts unearned to the Financial Aid Programs may be shared by both the College and the student. The College is required to return to the Department of Education the lesser of the total amount of unearned Title IV funds or an amount equal to the student’s institutional charges multiplied by the percentage of Title IV aid unearned, no later than 45 days after it is determined that the student withdrew. If the College returns less than the amount of unearned aid, the student must return the difference. If the student is required to return unearned aid, this is considered an overpayment and the amount is reduced by 50%.

Within 45 days of determining the student’s date of withdrawal, the College will send notification to the student of any overpayment. After receiving the written notification, the student is permitted 45 days to make satisfactory payment arrangements with the United States Department of Education. While the overpayment is due, the student will remain eligible for financial aid for 45 days.

Partial Withdrawal

Students who do not completely withdraw from the College but drop a class during the regular drop/add period will be refunded the difference in the tuition paid and the tuition rate applicable to the reduced number of hours, including fees appropriate to the classes dropped. There is no refund due to a student who partially withdraws after the official drop/add period. The last day to drop/add is published as part of the College calendar and conforms to the guidelines issued from the Alabama Community College System.

Complete Withdrawal

Students who officially withdraw from all classes for which they are registered before the first day of class for the semester/term will be refunded the total amount of tuition and other refundable fees. The “first day of class” is the first day classes are offered within any term configuration, including, but not limited to, full terms, split terms, mini-terms and weekend terms. Students who officially withdraw completely on or after the first day of class, but prior to the end of the third week of class will be refunded according to the withdrawal date, as follows:

Total Withdrawal before the official first day of class	100% refund
Total Withdrawal during the first week	75% refund
Total Withdrawal during the second week	50% refund
Total Withdrawal during the third week	25% refund
Total Withdrawal after the end of the third week	0% REFUND

An administrative fee not to exceed 5% of tuition and other refundable institutional charges shall be assessed for each withdrawal within the period beginning the first day of class and ending at the end of the third week of class. The first official day of class is indicated on the College calendar as the day that classes begin. There is only one first day of class. This day may not be the first day on which all classes begin. The calendar also indicates the last day to drop/add. For calculating refunds during the fall and spring sixteen-week terms, a “week” is defined as seven calendar days, i.e. the first day of class running seven calendar days (inclusive of Saturday and Sunday). Refunds of shorter than sixteen weeks, such as summer terms, mini-terms, split terms and weekend terms, will reflect a prorated week based on the number of days in the term.

Example:

Classes begin June 14; student withdraws June 17.
Fourth day = 75% Refund due.

Tuition/fees paid:	\$648.00
	— x .75
	\$486.00
Administrative Fee	—32.40
Round to nearest dollar	\$453.60
Refund amount	\$454.00

Students should be aware that a withdrawal from any or all courses during their enrollment will affect their Satisfactory Academic Progress and impact future financial aid eligibility.

Ineligibility for Refund

Students who are withdrawn by Trenholm State Community College for disciplinary reasons, for non-payment of tuition and fees, or for other similar reasons are not eligible for a refund.

Tuition Assistance (TA) Refund Policy (Funds to be returned to the Department of Defense (DoD))

Complete Withdrawal before and during weeks 1-2 = 100% return
 Refund during week 3-4 = 75% return
 Refund during weeks 5 = 50% return
 Refund during week 9 = 30% return
 (60% of the course is completed at 9.6 weeks)
 Refund during week 10 or more = No Refund is due

Revision and Cancellation of Financial Aid

The College reserves the right to review, revise, or cancel a financial aid award at any time due to changes in financial or academic status or the student’s failure to comply with applicable Federal and/or State laws and/or Regulations or College policies. In addition, a financial aid award is subject to revision should the annual allocation of funds from the Federal government be reduced below the anticipated funding level for a program(s) or should budget limitations be placed upon funds which are intended for student financial aid purposes. In addition, students cannot receive need-based assistance in excess of their determined financial need.

Financial Aid Satisfactory Progress (SAP) Policy

Students who receive assistance from the Federal Pell Grant Program, Federal Work-Study Program (FWSP), Federal Supplemental Educational Opportunity Grant (FSEOG) Program, Alabama Student Assistance Programs (ASAP) and Veterans Educational Benefits are required to make Satisfactory Academic Progress toward the goal of completing either their declared degree or certificate programs.

Satisfactory Academic Progress (SAP) will be checked at the end of each semester/term. In addition, Satisfactory Academic Progress (SAP) is also checked when students complete a warning period. The progress of students who received federal and state financial aid funds will be measured against the following Satisfactory Academic Progress Standards and will be subject to the following policies:

Required Credit Hours, Grade-Point Averages (GPAs) and Required Pace of Completion

Students who are enrolled in an Associate Degree or Certificate Program requiring more than 26 credit hours must meet the following standards:

- After attempting 0-21 credit hours, must earn a 1.50 GPA and complete 58% of the enrolled hours
- After attempting 22-32 credit hours, must earn a 1.75 GPA and complete 62% of the enrolled hours.
- After attempting 33 or more credit hours, must earn a 2.00 GPA and complete 67% of the enrolled hours

Students who are enrolled in Certificate Programs with 26 credit hours or less must meet the following standards:

- After attempting 1-17 credit hours, must earn a 1.50 GPA and complete 58% of the enrolled hours.
- After attempting 18 or more credit hours, must earn a 2.00 GPA and complete 67% of the enrolled hours

*All hours attempted, including those in which the student withdrew, will be included in this calculation, even if financial aid was not received.

Grades with Title IV

The following information is considered when evaluating a student's satisfactory academic progress:

- Withdrawals (W) and failures (F) are considered attempted but not earned hours.

Withdrawals – A grade of W is assigned to a student who officially withdraws from the College or from a course prior to 70 percent of the term being completed. Students who officially withdraw from courses after the 70% of the semester will receive the grades that they have earned at the time of withdrawal. The hours attempted for these courses are included in the Financial Aid Satisfactory Academic Progress calculations.

Incompletes - With the permission of the appropriate Dean, a grade of Incomplete ("I") may be assigned when a student's work in a course is incomplete because of circumstances beyond the student's control but is otherwise of passing quality. An Incomplete ("I") grade does not count toward course work completed but counts as course work attempted. Although the Incomplete ("I") grade is NOT counted in hours earned, the grade that replaces the "I" is counted in both hours earned and attempted, once the "I" is removed and affects the Satisfactory Academic Progress calculation.

Earned F - The grade of "F" is counted in hours attempted and results in zero hours earned.

Financial Aid Warning

According to the Satisfactory Academic Progress Policy, if a student is not making satisfactory academic progress at the end of an academic semester, he/she may be granted a one semester Financial Aid Warning Period and awarded financial assistance during this Period. At the end of the Financial Aid Warning Period, the student must meet the Satisfactory Academic Progress requirements for the Financial Aid Warning status to be lifted and to be eligible to continue receiving financial aid.

Financial Aid Suspension (Termination of Aid)

Students who do not successfully establish Satisfactory Academic Progress after the Financial Aid Warning Period will be placed on Financial Aid Suspension and become ineligible for any additional financial aid at that point. Students may regain financial aid eligibility based one of the following criteria:

- The student may enroll in and pass classes while paying tuition and fees out of pocket in order to meet the Financial Aid SAP requirements or
- The student presents to the Financial Aid Appeals Committee evidence of extenuating circumstances deemed, by this Committee, to be sufficient to justify an exception to the SAP Policy. As a result, the student will be placed on Financial Aid Probation and financial aid will be reinstated for this period.

If a student is re-admitted to the College upon academic appeal, financial aid will remain suspended until one of the above criteria is met. The student must bring his/ her academic record into compliance with the Financial Aid Satisfactory Academic Progress requirements before financial aid can be reinstated.

Appeal Process and Extenuating Circumstances

Any student placed on Financial Aid Suspension may appeal his/her status by completing and submitting the Financial Aid Appeal form located on the homepage of the College's Website in the financial aid box including a letter stating any unusual circumstances that had a bearing on his/her academic performance along with supporting documentation. Some examples of extenuating circumstances and supporting documentation may include death of an immediate love one – copy of the death certificate or the obituary; auto accident – copy of police report and/or note from a physician; prolonged illness – documentation from the attending physician. The Financial Aid Appeal request should also address what has changed in the student's situation that will now allow him/her to meet the Satisfactory Academic Progress by the end of the subsequent payment period. All appeals must be addressed to the Financial Aid Appeals Committee and submitted to the Director of Financial Aid. This written appeal should explain reasons for non-compliance with the Satisfactory

Academic Progress Standards, may also include an academic plan of study developed with her/his major advisor for bringing her/his grades into compliance with the policy, and steps that will be taken to prevent a reoccurrence of failure to meet SAP. If an appeal is approved, the student will be placed on Financial Aid Probation and awarded financial assistance for this period. Only one appeal per academic year may be submitted. Financial Aid Appeals must be submitted two weeks before the start of each semester. Financial Aid Appeals submitted after the deadline cannot be guaranteed for review and will be considered for the following semester.

Repeating Courses

A student receiving Title IV aid may repeat courses; however, the repeated hours will be included in the Financial Aid SAP calculations as hours attempted and hours earned. A federal financial aid recipient cannot repeat a previously passed course more than one (1) time either as a single course or in a block of courses. For this purpose, "passed" means any grade higher than an "F" regardless of any program policy requiring a higher grade to be considered passed for the course.

Developmental Courses

A Title IV recipient who has enrolled in a developmental course and failed may not enroll in the same course more than three (3) times and continue to receive financial assistance. If the Title IV recipient enrolls in the same developmental course more than three (3) times, financial aid will not pay for this subsequent enrollment in this course. A Title IV recipient may not be paid for more than 30-semester credit hours of developmental work. Developmental courses are counted in the hours attempted and hours earned.

Maximum Time Frame

The maximum time frame allowed to complete a program of study without financial aid penalty cannot exceed 150% of the published length of a specific program as measured in credit hours attempted in credit-hour programs.

Transfer or Readmitted Students

Students who transfer to Trenholm are required to submit an official copy of their academic transcript(s) from all previously attended postsecondary institution(s). After the Registrar evaluates all transcripts, transfer credits that apply to the student's program at the College will be included in the hours attempted and hours earned for future Satisfactory Academic Progress evaluations. Please be advised that transfer students' GPAs are not included in the Satisfactory Academic Progress evaluations.

Change of Program of Study

All periods of a students' enrollment will be counted when determining Satisfactory Academic Progress (SAP), which include periods in which the student did not receive Federal Student Aid (FSA). A change of program of study is allowed if the student continues to make Satisfactory Academic Progress.

All credit hours attempted by the student in their previous programs and transfer credits will be included and a student may only receive aid up to 150% of the normal timeframe of the new program of study. Students who have reached maximum timeframe for their current program of study may file a Financial Aid Appeal to be considered for an extension of additional hours to complete their program of study due to mitigating circumstances.

Class Attendance Policy for Financial Aid

Class attendance is essential to the educational process at Trenholm State Community College. The College subscribes to the philosophy that students will achieve academic success in direct proportion to class attendance. We also subscribe to the belief that the ability to manage one's own attendance and punctuality is a critical component of job readiness that each student must master. Therefore, students are responsible for attending all classes, being punctual and performing assignments as prescribed by the instructor and appropriate course syllabus.

The attendance policy applicable to a specific instructional program may be more restrictive than the College policy and therefore has precedence. These policies may be influenced by the requirements of external agencies and will be noted in individual course syllabus. Faculty are required to verify attendance at a requested time in order to

complete reporting data as required to comply with federal financial aid regulations to include: VA, WIOA, Title IV, Scholarship Recipients and others. Additionally, it is essential that registered students who discontinue attending class before the last official withdrawal day, which is the beginning of academic penalty, must be reported to the Office of Records.

College Financial Plan

Trenholm State Community College has agreed to comply with the principles of Executive Order 13607, Establishing Principles of Excellence for Educational Institutions Serving Service Members, Veterans, Spouses, and Other Family Members (E.O. 13607), of their commitment to use the College Financial Plan Form to provide each of their prospective veteran and service member students with a personalized form that contains standardized information describing the cost of the educational program and the amount of that cost that may be covered by available Federal educational benefits and financial aid. Please log on to <https://www.trenholmstate.edu/future-students/financial-aid/college-financing-plan/> to view a personalized College Financial Plan Form.

Certificate Programs

Certificate programs offered at the College that are Title IV eligible are subject to a clock-to-credit hour conversion. For students enrolled in these Title IV eligible certificate programs, the clock-to-credit hour conversion may result in reducing their Federal Pell Grant awards each semester/term. Short-term Certificate Programs are Title IV eligible.

Scholarships

The College offers a limited number of scholarships to qualified students including Veterans. A scholarship application may be obtained from Trenholm State's website at <https://www.trenholmstate.edu/future-students/financial-aid/scholarships/>. Properly completed applications should be submitted to the Financial Aid office by the announced deadline. Scholarships are awarded annually based upon availability. The scholarships awarded by the College cover the cost of tuition and mandatory fees only. Additional information about scholarships can be obtained

from the Financial Aid Office at (334) 420-4317. The following types of scholarships are offered at the College:

Educational Advancement Scholarship

A limited number of Educational Advancement Scholarships are awarded to first-time Trenholm students who are either high school graduates or GED recipients. To be eligible for consideration, prospective students must have a Cumulative Grade-Point Average (CGPA) of 2.5 or better, complete the College's Application for Admissions, the Scholarship Application form and the Free Application for Federal Student Aid (FAFSA). Specific application procedures and guidelines are available on the College's Website and in the Financial Aid office. The completed scholarship application must be submitted to the Financial Aid office, with the required documentation, by the specified deadline dates. All Educational Advancement Scholarship recipients must maintain a 2.5 Cumulative Grade-Point Average (CGPA) throughout their enrollment at the College and complete the Free Application for Federal Student Aid (FAFSA) annually. For additional information, contact the Financial Aid Office at (334) 420-4317.

Achievement Scholarships

Achievement scholarships are awarded to interested students currently enrolled at the College who have earned a minimum of 12-credit hours with a Cumulative Grade-Point Average (CGPA) of 3.50 or better. Specific application procedures and guidelines are available on the College's website at: <https://www.trenholmstate.edu/future-students/financial-aid/scholarships/>. The completed scholarship application must be submitted to the Financial Aid Office, with the required documentation, by the specified deadline date. Achievement Scholarship recipients are required to maintain a 3.50 Cumulative Grade-Point Average (CGPA) throughout their enrollment at the College and complete the Free Application for Federal Student Aid (FAFSA) annually. For additional information, contact the Financial Aid Office at (334) 420-4317.

Career Technical Scholarships

Career Technical scholarships are available to students through recommendation of a career technical center director. The director will have the authority to approve one scholarship on an annual basis during the months of April and May of each year. In order to be eligible for consideration, students must have a Cumulative Grade-Point Average (CGPA) of 2.5 or better, complete the College's Application for Admissions, Scholarship Application form and the Free Application for Federal Student Aid (FAFSA). These documents and any other required documents are due by the specified deadlines. All Career Technical Scholarship recipients must maintain a 2.5 Cumulative Grade-Point Average (CGPA) throughout their enrollment at the College and complete the Free Application for Federal Student Aid (FAFSA) annually. For additional information, contact the Financial Aid Office at (334) 420-4317.

Trenholm State Foundation Scholarships

The Trenholm State Foundation annually awards periodically scholarships to help students achieve their goals of becoming highly trained competitors in the workforce. Applicants must meet the following criteria:

- Must be a U. S. citizen or eligible noncitizen
- Must be a full-time student (12-credit hours or more per semester) at Trenholm State Community College
- Must have a minimum Cumulative Grade-Point Average (CGPA) of 2.5 or better
- Must submit a 500-word essay (typed) to include his/ her career goals, why he/she should be considered for a scholarship and the need for a scholarship

The following types of scholarships are available through the Foundation:

- Dr. H. Councill Trenholm Scholarship (Financial Need)
- Jerry Joyce First-Generation College Student Memorial Scholarship
- Samuel Munnerlyn Student Leadership Scholarship
- Dr. Anthony L. Molina Memorial Academic Excellence Scholarship
- Mary and Marshall Anderson Health Services Technology Memorial Scholarship

- Mary and Marshall Anderson Academic Excellence in Health Services Technology Memorial Scholarship
- Beverly D. Ross Special Needs/Hardship Scholarship

Individuals may contact the Foundation's office at (334) 420-4453 for additional information.

Senior Adult Waiver Program

Alabama residents 60 years of age or older may attend classes tuition free on a space-available basis. Seniors who wish to apply for the Senior Adult Waiver Program must follow standard admissions procedures and meet all course prerequisites as stated in the College Catalog. This waiver covers tuition only in college-credit courses. A college-credit course is defined as a course measured in both credit hours and scheduled weekly contact hours that is part of an organized and specified program leading to a formal award at the College, i.e., associate degree, certificate or short-term certificate. The Senior Adult Waiver does not cover books, fees, supplies, tools or repeated courses. Seniors who qualify can register for courses on the official day that classes begin each semester/term. For additional information, please contact the Financial Aid office at (334) 420-4317.

Federal Veteran Educational Assistance Programs

- Post 9/11 GI Bill® (Chapter 33)
- Montgomery GI Bill®/Active (Chapter 30)
- Montgomery GI Bill®/Selected Reserve (Chapter 1606)
- Survivors' and Dependents' Educational Assistance Program (Chapter 35)
- Veterans Vocational Rehabilitation (Chapter 31)

Veterans Educational Benefits are available to qualified Veterans, dependents of Veterans, National Guard members and Reserve members. To receive VA Educational Benefits, all recipients must be enrolled in an approved course of study and submit all transcripts (high school, GED, college and/or military) to the Admissions Office.

Certification of Educational Benefits

Students receiving Federal VA Educational Benefits must submit the VA Enrollment Certification Form to the VA School Certifying Official each semester that he/she wishes to have enrollment sent to the VA. Certifications will not be submitted to the VA until this form has been received. Students using Chapter 1606 must verify their enrollment the last calendar day of each month by using the Automated Verification of Enrollment (WAVE) at <https://www.gibill.va.gov/wave> or by calling 1-877-823- 2378. Students receiving VA Educational Benefits are responsible for registering only for courses that are included on their respective degree plan. Veterans' benefits will not be certified for courses previously passed, unless a grade higher than the earned grade is required, or for auditing courses. Veteran students and dependents will not be paid for courses in which an "I" (Incomplete) was previously received or for courses which are not a part of the declared major unless approved as a substitution for a required course by the appropriate Dean. All VA students are responsible to pay tuition and fees at the time of registration with the exception of students receiving Chapter 31 (Disabled Veterans) and Chapter 33 (Post 9/11) benefits. Please note that if you are a Post 9/11 student and your benefits level is less than 100%, you must pay the difference the VA does not cover at the time of registration.

Students utilizing VA education benefits shall not be charged a penalty, including assessment of late fees, denial of access to classes, libraries, or other institutional facilities, or be required to borrow additional funds because of the individual's inability to meet their financial obligations due to the delayed disbursement of a payment to be provided by the Department of Veterans Affairs.

All Veterans and Dependents receiving educational benefits should contact the VA Certifying Official prior to registration to complete the proper documents for VA certification. If the enrollment period is temporarily interrupted, the VA Certifying Official will recertify when notification of re-enrollment is received from the Veteran.

For more information regarding any Veteran educational benefits, students may contact the VA Certifying Official at (334) 420-4292. Additionally, students may contact the Department of Veterans Affairs by calling at 1-888- 442-4551.

Veterans Withdrawing from Courses

Students receiving VA Educational Benefits must promptly notify the VA Certifying Official when withdrawing from a class or all classes. Failure to do so may result in an overpayment from the Department of Veterans Affairs. For additional information, please contact the Financial Aid office at (334) 420-4292.

State VA Educational Programs

Alabama G.I. Dependent Scholarship Program

The Alabama Department of Veterans Affairs offers financial assistance to eligible dependents of disabled Veterans (child, stepchild, spouse or unremarried widow or widower) who are living or deceased. Qualifying veterans must have been permanent civilian residents of Alabama prior to entry into military service. Other qualifying veterans' categories are former Prisoners of War (POW), declared Missing in Action (MIA) and those who died in service.

The Alabama G. I. Dependent Scholarship Program does not pay for non-credit courses, developmental courses and facility and special building fees. In addition, the

G. I. Dependent Scholarship Program does not cover supplies or textbooks for non-credit and/or developmental (remedial) courses. The student is responsible for paying these charges.

Students approved for the Alabama G.I. Dependent Scholarship program after July 31, 2017, must adhere to the following:

- Completion of the Free Application for Federal Student Aid (FAFSA) each year covered under the Alabama G.I. Dependent Scholarship Program.
- Compliance with TSCC's Standards of Satisfactory Academic Progress (SAP) to receive the Alabama
- G.I. Dependent Scholarship. Students not making SAP are subject to losing Alabama G.I. Dependent Scholarship Program eligibility.
- Application of the Alabama G.I. Dependent Scholarship AFTER Federal Pell Grant and other scholarships for any applicable remaining charges. If ALL tuition, fees and books are

covered by other funding sources such as Federal Pell grant or scholarships, the Alabama G.I. Dependent Scholarship will not be applied for the current semester.

Veterans Service Officers of the Alabama Department of Veterans Affairs maintain an office in each county of the State. They can provide information and assist in completing the required forms for Alabama G. I. Dependent Scholarship Program. Their offices are located usually in the county courthouse. The Alabama Department of Veterans Affairs may be contacted directly at the following address: Alabama G. I. Dependent Scholarship Program, Department of Veterans Affairs, Post Office Box 1509, Montgomery, Alabama 36102- 1509. The telephone number is (334) 242-5077.

Tuition Assistance (TA)

Tuition Assistance is a Department of Defense (DOD) program. The Veteran's Administration does not administer the Tuition Assistance Program. Tuition Assistance rules vary by branch of service and can even vary between units depending on whether the unit is active, reserve or National Guard. If a service member receives TA funds and withdraws during the semester, the Tuition Assistance Refund Policy will be applied to determine if TA funds need to be returned to the Department of Defense. For additional assistance, TA recipients should contact their Education Services Officer.

Alabama National Guard Education Assistance Program (ANGEAP)

The Alabama National Guard Education Assistance Program (ANGEAP) is designed to provide financial assistance to Alabama National Guard members. For additional information and applications, the National Guard member should contact his/her National Guard Unit. Completed ANGEAP applications must be submitted to the VA School Certifying Official in the Financial Aid Office.

Military Spouse Career Advancement Accounts (MyCAA)

MyCAA is a Department of Defense program that provides up to \$4,000 of financial assistance for

military spouses who are pursuing degree programs, licenses, or credentials leading to employment in portable career fields.

Operation Family Shield

Operation Family Shield Scholarship Program was established in 2003 for spouses and dependents of the Alabama National Guard or reservists called to active duty. The Scholarship has been expanded in support of Operation Noble Eagle, Operation Iraqi Freedom, and the Global War on Terrorism.

Purple Heart Waiver

The Purple Heart Waiver is a waiver of undergraduate tuition and fees for Purple Heart recipients.

A public institution of higher education may waive undergraduate tuition and fees for each veteran who is the recipient of the Purple Heart and who satisfies all the following:

- Enroll as a full-time, part-time, or summer school student in an undergraduate program that culminates in a degree or certificate.
- Is currently and was at the time of the military action that resulted in the awarding of the Purple Heart, a resident of this state.
- Submits to the public institution of higher education the DD-214 form issued at the time of separation from service as documentation that he or she has received the Purple Heart.

Entitlement to Benefits

Trenholm State Community College certifies the veterans and dependents enrollment status, programs and academic progress. All questions concerning payment are to be referred to the Department of Veterans Affairs at 1(888) 442-4551 or by sending an electronic inquiry to (https://gibill.custhelp.com/app/utills/login_form/redirect/ask).

VA Educational Benefits Standards of Academic Progress

All students receiving Federal VA Educational Benefits must be in Good Standing with the College.

VA Certificate of Compliance

It is hereby resolved that Trenholm State Community College in the State of Alabama is compliant with Public Law 114-315, which modified title 38 of the United States Code (U.S.C.) 3679(c). As amended, 38 U.S.C. 3679(c)

requires that the following individuals be charged the resident rate:

- A Veteran using educational assistance under either chapter 30 (Montgomery GI Bill® – Active Duty Program) or chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, who lives in the state in which the institution is located (regardless of his/ her formal State of residence) and enrolls in the institution within three years of discharge or release from a period of active duty service of 90 days or more.
- Anyone using transferred Post-9/11 GI Bill® benefits (38 U.S.C. § 3319) who lives in the state in which the institution is located (regardless of his/her formal State of residence) and enrolls in the institution within three years of the transferor's discharge or release from a period of active duty service of 90 days or more.
- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same institution. The person so described must have enrolled in the institution prior to the expiration of the three-year period following discharge or release as described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States Code.
- Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the state in which the institution is located (regardless of his/her formal State of residence).
- Anyone using transferred Post-9/11 GI Bill® benefits (38 U.S.C. § 3319) who lives in the state in which the institution is located (regardless of his/her formal state of residence) and the transferor is a member the uniformed service who is serving on active duty.
- Anyone using educational assistance under chapter 31, Vocational Rehabilitation and Employment (VR&E).

- Anyone using educational assistance under chapter 35, Survivors' and Dependents' Educational Assistance (DEA) program.

**GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at www.benefits.va.gov/gibill.*

Title 38 United States Code Section 3679(e)

Trenholm State Community College complies with Title 38 United States Code Section 3679(e) under which covered individuals (i.e. any individual who is entitled to educational assistance under Chapter 31, Vocational Rehabilitation and Employment, or Chapter 33, Post-9/11 GI Bill® benefits) can attend or participate in the course of education providing the individual submits a certificate of eligibility for entitlement to educational assistance under Chapters 31 or 33 (a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website - benefits, or a Chapter 31 authorization).

Trenholm State Community College will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries or the requirement that a covered individual borrow additional funds due to the delayed disbursement of funding from VA under Chapters 31 or 33.

Covered individuals wanting to use their educational benefits at Trenholm State Community College are required to submit a VA Enrollment Certification Form. Additionally, covered individuals may be required to provide additional information as necessary to properly certify enrollment.

VA Complaint Policy

Any complaint against the school should be routed through the VA GI Bill® Feedback System by following the link: <https://www.va.gov/education/submit-school-feedback/introduction> The VA will then follow up through the appropriate channels to investigate the complaint and resolve it satisfactory.

Workforce Innovation & Opportunity Act (WIOA)

The Workforce Innovation and Opportunity Act (WIOA) is a federally-funded program which provides training/ retraining to eligible individuals who are unemployed, underemployed, unskilled or recently dislocated from a job because of a layoff or plant closing. Additional information on the WIOA Program may be obtained by contacting the Career Center Office in your respective county.

Trade Adjustment Assistance or Trade Readjustment Allowance (TRA/TAA)

The TAA/TRA Program aids workers in companies affected by imports from foreign countries, shifts in production to certain foreign countries and to certain secondary workers. The program provides affected workers with both rapid and early assistance and the opportunity to engage in long-term training while receiving income support. Approved workers apply for individual services and benefits through their local One-Stop Career Centers to determine individual TAA/ TRA eligibility for services and benefits. Those who are qualified and seek training are then referred to local training institutions. Additional information may be obtained by contacting the Career Center Office in your respective county.

Alabama Department of Rehabilitation Services

Students who have learning, physical or mental disabilities which interfere with their ability to work or attend college may be eligible for assistance through the Alabama Department of Rehabilitation Services. Rehabilitation services may provide assistance with all, or part of the costs associated with college attendance. For additional information, contact Rehabilitation Services at the following address: Alabama Department of Rehabilitation Services, 602 South Lawrence Street, Montgomery, Alabama 36116, or by contacting the Alabama Rehabilitation Services at (334) 293-7500.

Taxpayer Relief Act of 1997

The Taxpayer Relief Act of 1997 provides tax relief for qualified taxpayers or for the qualified parent or guardian taxpayer of a qualified student dependent.

Certain eligible expenses that are incurred for studying at Trenholm State Community College may result in a credit against tax liability. There are three tax credits available to help you offset the costs of higher education by reducing the amount of your income tax: The Hope Credit, American Opportunity Credit and the Lifetime Learning Credit, also referred to as education credits. The Hope and Lifetime Learning Credits may not be claimed at the same time for the same student. For additional information, see Internal Revenue Service (IRS) Publication 970, Tax Benefits for Education at www.irs.gov. For those who have made tuition payments to the College, a Tuition Statement (IRS Form 1098-T) will be mailed to them by January 31 of the following year. The Tuition Statement reports the

amounts paid to the College, during the previous year, for tuition and related fees and provides the name and the telephone number of the Trenholm State contact person.

Disclaimer: *Programs with the Financial Aid department are mandated by federal and state guidelines and regulations. Be advised that the information contained in this section of the College Catalog is subject to change.*

**GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at www.benefits.va.gov/gibill.*

Tuition and Fee Schedule

The following tuition and fee schedule is in effect for H. Councill Trenholm State Community College. The amount of tuition and fees is based on the number of scheduled credit hours each term. This schedule is **subject to change at any time** resulting from action by the Alabama Community College System Board of Trustees.

Credit Hours	Tuition Rate	Bond Fee	Facility Fee	Technology Fee	Building Fee	ACCS Enrollment Fee	Tuition & Fees
1	127.00	1.00	9.00	9.00	7.00	10.00	163.00
2	254.00	2.00	18.00	18.00	14.00	20.00	326.00
3	381.00	3.00	27.00	27.00	21.00	30.00	489.00
4	508.00	4.00	36.00	36.00	28.00	40.00	652.00
5	635.00	5.00	45.00	45.00	35.00	50.00	815.00
6	762.00	6.00	54.00	54.00	42.00	60.00	978.00
7	889.00	7.00	63.00	63.00	49.00	70.00	1,141.00
8	1,016.00	8.00	72.00	72.00	56.00	80.00	1,304.00
9	1,143.00	9.00	81.00	81.00	63.00	90.00	1,467.00
10	1,270.00	10.00	90.00	90.00	70.00	100.00	1,630.00
11	1,397.00	11.00	99.00	99.00	77.00	110.00	1,793.00
12	1,524.00	12.00	108.00	108.00	84.00	120.00	1,956.00
13	1,651.00	13.00	117.00	117.00	91.00	130.00	2,119.00
14	1,778.00	14.00	126.00	126.00	98.00	140.00	2,282.00
15	1,905.00	15.00	135.00	135.00	105.00	150.00	2,445.00
16	2,032.00	16.00	144.00	144.00	112.00	160.00	2,608.00
17	2,159.00	17.00	153.00	153.00	119.00	170.00	2,771.00
18	2,286.00	18.00	162.00	162.00	126.00	180.00	2,934.00
19	2,413.00	19.00	171.00	171.00	133.00	190.00	3,097.00
20	2,540.00	20.00	180.00	180.00	140.00	200.00	3,260.00
21	2,667.00	21.00	189.00	189.00	147.00	210.00	3,423.00
22	2,794.00	22.00	198.00	198.00	154.00	220.00	3,586.00
23	2,921.00	23.00	207.00	207.00	161.00	230.00	3,749.00
24	3,048.00	24.00	216.00	216.00	168.00	240.00	3,912.00

Out-of-State Rate: 2.0 times that of In-State tuition rate. (Effective: Fall Semester **2023**)

Credit Hours:

6- 8 hours - Half-time Student Status

9 - 11 hours - Three-quarter time Student Status

12 - above - Full-time Student Status

Financial Services

In-State Tuition Rates

For the purpose of assessing tuition, applicants for admission will be classified into one of three categories.

I. Resident Student

- A resident student will be charged the in-state tuition rate established by the Alabama Community College System.
- A resident student is an applicant for admission who meets all legal requirements or is a duly registered resident in the state of Alabama for at least twelve
- (12) months immediately preceding application for admission, or whose non-estranged spouse has resided and had a habitation, home, and permanent residence in the state of Alabama for at least twelve
- (12) months immediately preceding application for admission. Consequently, an out-of-state student cannot attain resident student status only by attending school for twelve (12) months in the state of Alabama.
- In the case of minor dependents seeking admission, the parents, parent, or legal guardian of such minor dependent must have resided in the state of Alabama for at least twelve (12) months preceding application for admission. If the parents are divorced, the residence will be determined by the parent's residency to whom the court has granted custody.
- Minor: An individual who, because of age, lacks the capacity to contract under Alabama law. Under current law, this means a single individual under nineteen (19) years of age and a married individual under eighteen (18) years of age but excludes an individual whose disabilities of non-age has been removed by a court of competent jurisdiction for a reason other than establishing a legal residence in Alabama. If current law changes, this definition shall change accordingly.
- Supporting Person: Either or both of the student's parents, parents who live together, or if the parents are divorced or living separately, then either the parent having legal custody or, if different, the parent providing the greater

amount of financial support. If both parents are deceased or if neither has legal custody, the supporting person will mean, in the following order: the legal custodian of the student, the guardian, and the conservator.

In determining resident student status for the purpose of charging tuition, the burden of proof lies with the applicant for admission.

1. Students having graduated from an Alabama high school or having obtained a GED in the state of Alabama within three (3) years of the date of application for admission shall be considered resident students for tuition purposes.
2. An individual claiming to be a resident will certify by a signed statement each of the following:
 - a. a specific address or location within the state of Alabama as his or her residence;
 - b. an intent to remain at this address indefinitely; and
 - c. possession of more substantial connections to the state of Alabama than with any other state.

The certification of the applicant's address and the intent to remain in the state indefinitely will determine residency status factors. The institution will determine residency status by evaluating the applicant's documentation as proof of connection with the state of Alabama. This evaluation will include the consideration of the following connections:

- consideration of the location of high school graduation;
- payment of Alabama state income taxes as a resident;
- ownership of a residence or other real property in the state and payment of state ad valorem taxes on the residence or property;
- full-time employment in the state;
- residence in the state of spouse, parents, or children;
- previous periods of residency in the state continuing for one (1) year or more;
- voter registration and voting in the state; more significantly, continuing voter registration in the state that initially occurred least one year one

- year prior to the initial registration of the student in Alabama at a public institution of higher education;
- possession of state or local licenses to do business or practice a profession in the State;
- ownership of personal property in the state, payment of state taxes on the property, and possession of state license plates;
- continuous physical presence in the state for a purpose other than attending school, except for temporary absences for travel, military service, and temporary employment;
- membership in religious, professional, business, civic, or social organizations in the State;
- auxiliary services in the state of checking and savings ac- counts, safe deposit boxes, or investment accounts; and in-state address shown on selective service registration, drivers' license, automobile title registration, hunting and fishing licenses, insurance policies, stock and bond registrations, last will and testament, annuities, or retirement plans;
- Students determined to be eligible for resident tuition will maintain that eligibility upon re-enrollment within one (1) full academic year of their most recent previous enrollment unless there is evidence the student subsequently has abandoned resident status, for example: registering to vote in another state;
- Students failing to re-enroll within one (1) full academic year must establish eligibility upon re-enrollment.

II. Non-Resident Student

- A non-resident student is one who does not meet the standard of having resided in the state of Alabama for at least twelve (12) months immediately preceding application for admission.
 - A non-resident student will be charged the in-state tuition rate established by the Alabama Community College System under the following circumstances, provided such student is a citizen of the United States.
1. The dependent student is one:
 - a. whose supporting person is a full-time permanent employee of the institution at which the student is registering; or

- b. whose supporting person can verify full-time permanent employment in Alabama and will commence said employment within ninety (90) days of registration; or
 - c. whose supporting person is a member of the United States military on full-time active duty stationed in Alabama under orders for duties other than attending school; or
 - d. whose supporting person is an accredited member of a consular staff assigned to duties in Alabama.
2. The student is not a dependent (as defined by Internal Revenue Codes) who:
 - a. is a full-time permanent employee of the institution at which the student is registering or is the spouse of such an employee; or
 - b. can verify full-time permanent employment within the state of Alabama or is the spouse of such an employee and will commence said employment within ninety (90) days of registration with the institution; or
 - c. is a member of or the spouse of a member of the United States military on full-time active duty stationed in Alabama under orders for duties other than attending school; or
 - d. is an accredited member of, or the spouse of, an accredited member of a consular staff assigned to duties in Alabama.

In determining non-resident student status for the purpose of charging tuition, the burden of proof lies with the applicant for admission. The College may request proof that the applicant meets the stipulations noted above prior to admission.

III. Out-of-State Student

- Any applicant for admission who does not fall into Section II (Non-Resident Student) above shall be charged minimum tuition of two (2) times the resident tuition rate charged by that institution.
- Students initially classified as ineligible for resident tuition will retain that classification for tuition purposes until documentation is provided verifying eligibility for resident tuition.

IV. Residency Policy for Veterans, Dependents, and Spouses

For the purpose of assessing tuition, students who are veterans, dependents, and spouses will receive in-state tuition rates if classified as one of the following:

1. The student is a member or spouse of a member of the United States military on full-time active duty stationed in Alabama under orders other than attending school.
2. Commencing on May 22, 2012, the student has been a member of the Alabama National Guard for a period of at least two years immediately preceding qualification for resident tuition and continues to be a member of the Alabama National Guard while enrolled at the public institution of higher education.

VA Certificate of Compliance

It is hereby resolved that Trenholm State Community College in the State of Alabama is compliant with Public Law 114-315, which modified title 38 of the United States Code (U.S.C.) 3679(c). As amended, 38 U.S.C. 3679(c) requires that the following individuals be charged the resident rate:

- A Veteran using educational assistance under either chapter 30 (Montgomery GI Bill® – Active Duty Program) or chapter 33 (Post-9/11 GI Bill®), of title 38, United States Code, who lives in the state in which the institution is located (regardless of his/ her formal State of residence) and enrolls in the institution within three years of discharge or release from a period of active duty service of 90 days or more.
- Anyone using transferred Post-9/11 GI Bill® benefits (38 U.S.C. § 3319) who lives in the state in which the institution is located (regardless of his/her formal State of residence) and enrolls in the institution within three years of the transferor's discharge or release from a period of active duty service of 90 days or more.
- Anyone described above while he or she remains continuously enrolled (other than during regularly scheduled breaks between courses, semesters, or terms) at the same institution. The person so described must have enrolled in the institution prior to the expiration of the three-year period following discharge or

release as described above and must be using educational benefits under either chapter 30 or chapter 33, of title 38, United States Code.

- Anyone using benefits under the Marine Gunnery Sergeant John David Fry Scholarship (38 U.S.C. § 3311(b)(9)) who lives in the state in which the institution is located (regardless of his/her formal State of Residence)
- Anyone using transferred Post-9/11 GI Bill® benefits (38 U.S.C. § 3319) who lives in the state in which the institution is located (regardless of his/ her formal state of residence) and the transferor is a member of the uniformed service who is serving on active duty.
- Anyone using educational assistance under chapter 31, Vocational Rehabilitation and Employment (VR&E).
- Anyone using educational assistance under chapter 35, Survivors' and Dependents' Educational Assistance (DEA) program.

Title 38 United States Code Section 3679(e)

Trenholm State Community College complies with Title 38 United States Code Section 3679(e) under which covered individuals (i.e. any individual who is entitled to educational assistance under Chapter 31, Vocational Rehabilitation and Employment, or Chapter 33, Post- 9/11 GI Bill® benefits) can attend or participate in the course of education providing the individual submits a certificate of eligibility for entitlement to educational assistance under Chapters 31 or 33 (a "certificate of eligibility" can also include a "Statement of Benefits" obtained from the Department of Veterans Affairs' (VA) website - benefits, or a Chapter 31 authorization).

Trenholm State Community College will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries or the requirement that a covered individual borrow additional funds due to the delayed disbursement of funding from VA under Chapters 31 or 33.

Covered individuals wanting to use their educational benefits at Trenholm State Community College are required to submit a VA Enrollment Certification Form. Additionally, covered individuals may be required to provide additional information as necessary to properly certify enrollment.

**GI Bill® is a registered trademark of the U.S. Department of Veterans Affairs (VA). More information about education benefits offered by VA is available at the official U.S. government Web site at www.benefits.va.gov/gibill.*

Public Law 115-407 Section 103

The College will not impose any penalty for VA students if unable to meet financial obligations due to delayed disbursements for either Chapter 31 or 33 by the Veterans Administration.

Graduation Fee

A \$25.00 non-refundable Graduation Fee is due at the time the Graduation Application is submitted during registration for the last term of attendance.

Library Card / ID Fee

Each student is issued one Library Card/ID the first semester of enrollment at no cost. Students must wear their ID at all times while on campus. Loss of an ID must be reported to the College Library at 420-4455. There will be a \$30.00 charge for a replacement ID.

Liability Insurance Fee

The Liability Insurance Fee for all Health Services Programs and the Early Child Care and Education Program is \$16.25 per year. The insurance fee for the Emergency Medical Technician/Paramedic Program is

\$34.40 per clinical course. The insurance fee for the Culinary Arts Program is \$6.00 per course or year.

Payment

All students, except sponsored students, are required to pay the full amount of tuition and fees at the time of registration. Sponsored students whose expenses are paid by agencies such as Vocational Rehabilitation Service, Alabama Veterans Affairs, employers, etc. must have written authorization from the appropriate agency on file in the Financial Aid Office in order to register for classes without personally paying the tuition and fees.

Students not completing payment at the time of registration will have that registration voided and will

have to repeat the full registration process. Students may not attend classes until all tuition and fees have been paid.

H. Council Trenholm State Community College accepts cash, Visa, MasterCard or Discover for payment.

Refund Policy

Partial Withdrawal

Students who do not completely withdraw from the College but drop a class during the regular drop/add period will be refunded the difference in the tuition paid and the tuition rate applicable to the reduced number of hours, including fees appropriate to the classes dropped. There is no refund due to a student who partially withdraws after the official drop/add period. The last day to drop/add is published as part of the College calendar and conforms to the guidelines issued from the Alabama Community College System.

Complete Withdrawal

Students who officially withdraw from all classes for which they are registered before the first day of class for the semester/term will be refunded the total amount of tuition and other refundable fees. The "first day of class" is the first day classes are offered within any term configuration, including, but not limited to, full terms, split terms, mini-terms and weekend terms. Students who officially withdraw completely on or after the first day of class, but prior to the end of the third week of class will be refunded according to the withdrawal date, as follows:

Total Withdrawal before the official first day of class	100% refund
Total Withdrawal during the first week	75% refund
Total Withdrawal during the second week	50% refund
Total Withdrawal during the third week	25% refund
Total Withdrawal after the end of the third week	0% REFUND

An administrative fee not to exceed 5% of tuition and other refundable institutional charges shall be assessed for each withdrawal within the period beginning the first day of class and ending at the end of the third week of class. The first official day of class is indicated on the College calendar as the day that classes begin. There is only one first day of class. This day may not be the first day on which all

classes begin. The calendar also indicates the last day to drop/add. For calculating refunds during the fall and spring sixteen-week terms, a “week” is defined as seven calendar days, i.e. the first day of class running seven calendar days (inclusive of Saturday and Sunday). Refunds of shorter than sixteen weeks, such as summer terms, mini-terms, split terms and weekend terms, will reflect a prorated week based on the number of days in the term.

Example:

Classes begin June 14; student withdraws June 17.
Fourth day = 75% Refund due.

Tuition/fees paid:	\$648.00
	— x .75
	\$486.00
Administrative Fee	—32.40
Round to nearest dollar	\$453.60
Refund amount	\$454.00

Students should be aware that a withdrawal from any or all courses during their enrollment will affect their Satisfactory Academic Progress and impact future financial aid eligibility.

Ineligibility for Refund

Students who are withdrawn by Trenholm State Community College for disciplinary reasons, for non-payment of tuition and fees, or for other similar reasons, are not eligible for a refund.

Tuition Assistance (TA) Refund Policy (Funds to be returned to the Department of Defense (DoD))

Complete Withdrawal before and during weeks 1-2
= 100% return

Refund during weeks 3-4 = 75% return

Refund during weeks 5 = 50% return

Refund during week 9 = 30% return (60% of the course is completed at 9.6 weeks)

Refund during week 10 or more = No Refund is due

Refund Payment

Refunds are processed after the drop/add period. Students paying tuition and fees by cash will be issued a refund check. The check will be mailed to the home address of the student. Students paying tuition and fees by credit card will have the amount of the refund credited to their account. **Students should allow 30 days for refund processing to complete.**

Refund for Alabama National Guard and Reservists Called to Active Duty

Students who are active members of the Alabama National Guard or reservists or who are active duty military who are called to active duty by executive order of the President of the United States or a State Governor in the time of national crisis may receive a refund of tuition and other appropriate institutional charges at the time of withdrawal. If a National Guard Student is receiving Title IV funding, a recalculation must be performed as required by Federal Title IV regulations, which could result in less than a 100% refund.

Exceptions to Refund Policy

The President has the authority to make exceptions to the refund policy in the event of the death of a student or of a family member or other catastrophic event requiring the student to leave the institution.

Returned Checks

Two-year colleges have been authorized by the Alabama Community College System Board of Trustees to charge for each check that is issued to the institution and is returned for insufficient funds or other reasons. A fee will be charged for any check written to the College, which is returned. The current amount of the returned check fee allowed by state law is \$30.00, which is the maximum allowed by state law. The College utilizes a third-party to collect and process returned checks. Students with returned checks will be placed on processing hold until all charges have been paid and will remain on a “cash only” basis thereafter.

Failure to Receive Financial Aid Disbursement Check

All students are required to maintain current mailing address information through the Office of Admissions. If a student fails to receive a financial aid disbursement check which has been mailed, a 21-day waiting period will be in effect from the date the check was mailed before the replacement process will be initiated.

Students are encouraged to enroll in eRefunds via their My Trenholm student account. Verification of correct and current account information is the sole responsibility of the student. Account information should include the student's Trenholm email address for deposit notification(s). It is important to note that the bank account may only be in the student's name.

Bookstore

Trenholm State's Bookstore is available online only. Trenholm State has partnered with e-Campus.com for student book needs. Students must order their books through their "My Trenholm" portal. Many classes have the option to buy new or used books, rent textbooks, or rent digital eBooks. Students will be personally responsible for all unallowable charges to financial aid, such as duplicate book purchases. Disabled Veterans using benefits under the Chapter 31 Program and Workforce Innovation and Opportunity Act (WIOA) funded students are eligible to order their books online but will need to submit their signed book receipts to the appropriate individual in the Business Office. Failure to submit book receipts will result in the student being responsible for all books purchased and their account placed on hold until it is cleared. Orders will be delivered directly to the student's home. Detailed ordering instructions can be found on the Trenholm

State website under the Bookstore section or by following this link http://www.trenholmstate.edu/uploads/files/e-Campus_detailed_ordering_instructions.pdf. Items purchased from the online bookstore may be returned in accordance to e-Campus.com Return and Refund Policies. Students are responsible for shipping books back to e-Campus. Return and Refund Policies can be found on <http://trenholmstate.ecampus.com/help/topic/after-you-order/2>.

Bookstore Return Policy

Items purchased from the online bookstore may be returned in accordance to e-Campus.com Return and Refund Policies. Students are responsible for shipping books back to e-Campus. Return and Refund Policies can be found on <http://trenholmstate.ecampus.com/help/topic/after-you-order/2>.

Cashiers Office

The Cashier is available at both the Trenholm and Patterson campuses according to the schedule below. For assistance or to inquire about hours of operation, please call (334) 420-4272.

Trenholm Campus:

Monday & Tuesday 1:00 - 5:00 p.m.
Wednesday & Thursday 7:30 - 5:00 p.m.
Friday 8:00 - 1:00 p.m.

Patterson Campus:

Monday, Tuesday, and Wednesday 7:30 - 12:00 p.m.

Support Programs

Adult Education

H. Council Trenholm State Community College offers GED preparation, Non-Traditional High School Diploma, and career preparation services in Bullock, Elmore, Macon, and Montgomery counties. In addition, Trenholm State offers flexible class times, including distance education, to meet the needs of the College's service area.

Adult Education classes are available at no charge to persons who did not complete high school or who function below a high-school level. Individuals interested in adult education must be at least 17 years of age and not enrolled in high school. The program provides services to lower-level learners and higher-level learners preparing to take the General Education Development (GED) exam for high school equivalence. Trenholm's program offers students opportunities to enhance their basic language, math, science, social studies, reading, writing, and computer literacy skills. The program also provides services for non-English speaking adults through English as a Second Language (ESL) classes.

The program also offers Family Literacy activities and the WorkKeys® Assessment. WorkKeys® is a system that measures "real-world" skills critical to job success. Persons interested in adult education programs or services should contact the administrative office at 334-420-4348 or 334-420-4351 and speak with a staff member about classes and other opportunities.

GED Testing

H. Council Trenholm State Community College is an official GED State Test Center. Examinees must present two forms of identification: a state-issued picture I.D. and a social security card to sit for the exam. The minimum age to take the GED Test is 17. AN APPOINTMENT IS REQUIRED TO TAKE THE GED TEST. To schedule a GED test date, please go online to www.ged.com to register, pay and select a test date that is convenient for you.

Disability Services (ADA Accommodations)

The Office of Disability Services at Trenholm State Community College is a student-centered, nurturing unit serving as the central campus resource for students with disabilities who wish to request academic accommodations. In collaboration with students and instructors, our staff coordinate accommodations and support to ensure that students have equal access to an education, campus resources and activities. Trenholm State Community College ensures compliance with the Americans with Disabilities Act of 1990 and the Rehabilitation Act of 1973, and students seeking accommodations on the basis of disability are required to submit documentation of their disability to the Office of Disability Services. The Office of Disability Services is responsible for determining the acceptability of documentation and reserves the right to require additional information.

Students with disabilities may be eligible for services such as extended time to complete tests, use of assistive technology, tutoring, and individualized registration assistance. The College also has an ongoing partnership with state and private rehabilitation agencies, as well as with a variety of counseling service and outreach agencies to assist students with disability support services.

For information about accommodations and assistive technologies available to students with disabilities, please contact the ADA Coordinator by email at ada@trenholmstate.edu or by phone at (334) 420-4418. Additional information regarding the policy and documents required to obtain academic accommodations is provided on the College's Students with Disabilities website.

Student Success Center

The Student Success Center (SSC) is a comprehensive one-stop shop for academic support services on campus. It is designed to provide a wide range of support services and resources which include tutoring, counseling, mentoring, advising, success coaching, academic success workshops and events, testing, student retention planning and monitoring, faculty/staff awareness activities, career

services, collaboration and resource sharing, and other academic support services that improve academic success and to meet our students' needs.

The mission of the Student Success Center (SSC) is to provide a consolidated and integrated center to enhance the academic development of students and reinforce the student-centered learning environment at Trenholm State. With an emphasis on academic readiness skills and best practices, the SSC is committed to student persistence, retention, and graduation from the institution. Furthermore, through proactive, intrusive, and innovative solutions, the Student Success Center provides opportunities for students to achieve learning goals and develop as life-long learners. For more information, contact the SSC office by email at ssc@trenholmstate.edu, or visit our website at www.trenholmstate.edu/ssc.

ACCUPLACER Testing

Trenholm State offers placement testing services to support students' academic endeavors. Students not meeting the college readiness criteria must complete the ACCUPLACER Placement Test before enrolling in English or mathematics courses. The ACCUPLACER Test is a computerized assessment of the subjects of Math and English used to ensure proper enrollment in courses. Students who are required to take the ACCUPLACER Placement Test will be contacted via email by the Student Success Center Testing Services, informing the student of their testing requirements and how to register for the test.

The ACCUPLACER Test is free of charge to students who will take the test for the first time, but students who retest must pay a \$10 fee per section and will need to complete remediation. Retesting fees must be paid in the Business Office prior to retesting. For more information on the ACCUPLACER Test, visit our website at www.trenholmstate.edu/ssc, or email testingservices@trenholmstate.edu.

Policy on Placement Testing

No tests are required for general admission to Trenholm State Community College but may be required for placement in college-level courses. However, students must have applied for enrollment to the Admissions Office and must present photo identification at the time of testing.

First-time college students may have ACT, SAT or GED (2014 series) scores considered for placement in college-level English and math if those scores have been earned within 5 years. If test scores are not available or not at the appropriate level, then students who have graduated high school within 5 years with a 2.75-grade point average (GPA) may have their grades in English IV (senior English) and Algebra II considered for placement in college-level English and math. Students must have the results of their ACT, SAT or GED and high school transcripts forwarded to Trenholm State to be used for placement purposes.

First-time students without proof of appropriate ACT, SAT or GED scores, those with scores below the established guidelines, or those without proof of a 2.75-grade point average or higher on their final high school transcript, must register online to take the ACCUPLACER Placement Assessment in writing and mathematics prior to meeting with an advisor to enroll in Math and English courses.

Students who transfer from a regionally accredited college without a C or better in a degree-creditable English composition and college-level algebra course and without exemptions as listed below, will be required to take one or both parts of the placement test.

All entering students who enroll in associate degree or certificate programs will be assessed at the appropriate level as indicated by the assessment results.

The following students are exempt from the placement test:

- Any student with acceptable ACT scores, final high school GPA and/or course grades, within five years of enrollment. However, students who wish to improve their course placement may take the state placement test
- Any student who has an associate degree or higher
- Any student who transfers degree-creditable, college-level English or mathematics courses with a grade of "C" or better from an accredited institution
- Any student who has successfully completed required developmental coursework at another Alabama Community College System college or

an accredited college. Course descriptions from institutions outside of the Alabama Community College System must be reviewed

- Any student who scores 165 or higher on the Mathematical Reasoning or Reasoning Through Language Arts subject tests of the 2014 series GED
- Any transient student with documentation
- Any student who is enrolling for personal enrichment purposes only
- Any student who is enrolling in short-term certificate programs having no English, Reading, or Math requirements

Click on the link https://www.trenholmstate.edu/uploads/files/ACCUPLACER_Exemptions.pdf. for more details on exemptions.

Ability-to-Benefit Testing

An applicant can enter certain programs without a high school diploma or GED certificate. Applicants applying to H. Councill Trenholm State Community College under this provision must pass the Ability-to-Benefit Test. The College will notify all applicants prior to enrollment each semester of the time, date, and place for the scheduled Ability-to-Benefit examination. For additional information, please contact the Office of Admissions at (334) 420-4310.

If testing or retesting for the Ability to Benefit, all three sections of the test must be taken in one testing session. The fee for retaking the Assessment is \$24.00 and must be paid in the Cashier's Office. Please discuss taking a retest with testing personnel before paying the fee. Retest scores will replace previous scores.

Testing Services

The following testing services are available at H. Councill Trenholm State Community College. Please call the numbers listed below for additional information.

Commercial Driver's License	(334) 420-4411
Road Test	
Certified Electronic Technician (CET)	(334) 420-4284
High School ACT Exams	(334) 420-4254

National Radio and Telecommunication Engineers	(334) 420-4284
Class I, II, III & IV Electronic Technician Testing	(334) 420-4284
Federal Communications Commission (FCC) GRE License Testing	(334) 420-4284
EPA Refrigerant Recovery Exam	(334) 420-4361
ACCUPLACER Testing	(334) 420-4418
ACT WorkKeys Testing	(334) 420-4418

Guidance and Counseling

When personal difficulties interfere with academic success, students are encouraged to utilize services of the Student Services department. Trenholm State staff are available to provide counseling, guidance and referrals for outside agencies when needed. Staff are available in the Student Services Building (Building F) on the Trenholm Campus and on the Patterson site by appointment. Assistance can be obtained through the Retention/Advising Specialist at (334) 420-4463.

Career Planning and Job Placement

Career Services provides guidance to all students and alumni through opportunities to explore and choose career paths that are of interest to them, along with helping prepare students for the workforce through training and enhance job search skills.

Additionally, the Career Services Office provides students with direct access to work-study, internships, externships, co-op, part-time and full-time employment opportunities through an online student job board, messaging through student notifications and via email. An attempt is made to refer students to positions that will benefit them financially and educationally. Other services include resume and cover letter development assistance, interview preparation, mock interviews, career fairs, internship and co-op opportunities, business dress advice, career and employer literature, on-campus interviews, and employability skills workshops. Students and alumni in need of assistance should contact the College's Career Services Office by phone at (334) 420-4499 or by email at careers@trenholmstate.edu.

Upward Bound

Upward Bound is a federally funded program sponsored by the U.S. Department of Education. The goal of Upward Bound is to increase the rate at which participants complete secondary education and matriculate to institutions of postsecondary education. Upward Bound provides virtual and in-person support to high school students from low-income families and families in which neither parent holds a bachelor's degree. Participants in the program are provided access to academic instruction in mathematics, science, English, literature, and foreign language. In addition, students are provided access to student support resources such as tutoring, counseling, mentoring, cultural enrichment college tours, career exploration, financial literacy and ACT boot camps during the regular academic year and summer sessions. For more information, contact Upward Bound at 334-420-4330 or 420-4239.

Ready-to-Work

The Ready-to-Work Program provides participants with the basic skills and competencies required for quality employment with most businesses and industries in Alabama. Successful completion of this program results in the award of an Alabama Certified Worker Certificate. Participants in the program must meet certain eligibility requirements. For information, call (334) 420-4299.

Work Ethics

Trenholm State adopted the Work Ethics Program to expose its students to current practices in work ethics. The program supplements a strong Community and business curriculum to assist in placing Trenholm State graduates among the model employees sought by local, national, and global businesses and other organizations.

The Work Ethics Program addresses ten key areas: attendance, character, teamwork, appearance, attitude, productivity, organization, communication, cooperation, and respect. Students complete various modules and workshops that help demonstrate the behaviors sought. Also, each focus area is presented to students on both campuses through electronic messages, media screen reminders, and freshman class sessions where students engage in exercises and discussions.

Trenholm State adopted this Program from the Georgia Department of Community and Adult Education but tailored it to fit its own culture and environment. To ensure a thorough assessment of the program outcomes, an inter-departmental team has been assigned to work with the Work Ethics Program to evaluate the target goals, critical success factors, total involvement, and continuous improvement mechanisms.

Title III Program

The Title III, Part B, Strengthening Historically Black

Colleges and Universities (HBCU) program is funded by the U. S. Department of Education and is one of many initiatives funded by the federal government as part of a mission to ensure equal access to education and to promote educational excellence for all Americans. The purpose of the program is to provide financial assistance to strengthen the physical plants, financial management, academic resources, and endowment-building capacity. The Title III Program is specifically designed to assist HBCUs in funding activities that will help the College to fulfill its mission and continue to fulfill the goal of quality in educational opportunity.

The United States House of Representatives unanimously passed H.R. 2486, the Fostering Undergraduate Talent by Unlocking Resources for Education (FUTURE) Act on December 10, 2019. The H.R. 2486 amends Higher Education Act (HEA), Title III, Part F to permanently reauthorize funding for minority-serving institutions of higher education and increases the authorization of appropriations for Pell Grants.

Continuing Education

The mission of the Office of Workforce Development at Trenholm State Community College is to meet the workforce development needs of business, industry, local governments, and individuals by providing skills training for in-demand careers and lifelong learning opportunities through professional development. As an integral component of the Office of Workforce Development, Continuing Education plays a vital role in achieving this mission.

The vision of Continuing Education is to be recognized as the preferred provider for excellence in workforce development training,

entrepreneurship enhancement, and community service. This vision is accomplished by delivering quality and relevant workforce education. Continuing Education is designed to extend the resources of Trenholm State Community College to the community-at-large by providing programs and services with an emphasis on work skills upgrade, work-related training, or personal development.

Non-Credit Continuing Education programs are designated as Fast-Track Career Training and typically lead to a certification for successful completers. Features of these programs include:

- Offered during the day, evening, and weekends
- Course can be completed in short time spans, in as few as 6 weeks up to 6 months
- May require high school diploma or GED equivalent
- Open to all age groups
- Workforce Innovation Opportunity Act (WIOA) funding and scholarships opportunities may be available

For more information, visit www.trenholmstate.edu or call (334) 420-4400

Directory of Majors

Divisions/Majors	Major Location	High School Diploma or GED Required	Degree	Certificate	Short Term Certificate
Academic Division					
Associate in Arts (AA)	JDEC	Y	X		X
Associate in Science (AS)	JDEC	Y	X		X
Accounting	Patterson	Y	X		
Entrepreneurship	Patterson	Y	X		
General Business	Patterson	Y	X		
Management	Patterson	Y	X		
Computer Information Systems	Patterson	Y	X		
Child and Human Development	Trenholm	Y	X	X	X
Logistics and Supply Chain Management	Patterson	Y	X		
Career Technical Education					
Automotive Manufacturing and Automation	Patterson	Y	X	X	X
Electrical	Patterson	Y	X		X
Industrial Systems and Automation	Patterson	Y	X	X	X
Robotics/Mechatronics	Patterson	Y	X	X	X
Welding	Patterson	Y	X	X	X
Automotive Service	Patterson	Y	X	X	X
Diesel Mechanics	Patterson	N		X	X
Air Conditioning and Refrigeration	Patterson	Y	X	X	X
Culinary Arts/Hospitality Management	8 Commerce St	Y	X	X	X
Graphic Design	Patterson	Y	X	X	X
Health Sciences					
Dental Assisting	Trenholm	Y	X	X	
Medical Assisting Technology	Trenholm	Y	X		X
Practical Nursing *	Trenholm	Y		X	
Radiology* (Medical Radiologic Technology)	Trenholm	Y	X		
Registered Nursing*	Trenholm	Y	X		
Respiratory Care Therapy*	Trenholm	Y	X		
Ultrasound* (Diagnostic Medical Sonography)	Trenholm	Y	X		X
Workforce Development (Non-Credit)					
Certified Nursing Assistant (CNA) #	Trenholm	N		CNA Certification	
Line Worker Training #	Patterson	Y		Pre-Apprenticeship	
Medication Assistant #	Trenholm	N		MACE Certification	

Truck Driver Training #	TD	N	Certificate
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Not Pell Grant eligible

* Selective admissions program; specific program requirements apply

Trenholm (1225 Air Base Blvd)

Patterson (3920 Troy Hwy.)

TD (5420 Troy Hwy)

Culinary Arts/Hospitality Management (8 Commerce St)

JDEC - Joseph Dickerson Education Center (3085 Mobile Hwy)

Workforce Development Division

The Workforce Development Division at Trenholm State Community College offers training to give you the tools you need to succeed! We are building occupational bridges to tomorrow's jobs through custom designed curricula, targeted coursework, and valuable industry certifications. So whether you are seeking to enter the job market, pursue a new profession, or take your present career to the next level, we can help fast forward you to success.

Workforce Development non-credit training serves as a catalyst to deliver up-to-date workforce development programs for students and incumbent workers in need of educational upgrading and skills training that meet the current and future economic development needs in the River Region.

Certified Nursing Assistant (CNA) Program Information

The Certified Nursing Assistant (CNA) course is designed to prepare students to be Nursing Assisting/Home Health Aides. CNA's are trained to perform routine tasks under the supervision of nursing and medical staff. They maintain a safe environment and perform selected tasks related to the personal hygiene and comfort of patients in private homes, nursing homes, hospitals, and long-term facilities. Nursing assistants observe patients' physical, mental, and emotional conditions and report any changes to the nursing or medical staff.

Upon completion, students are eligible to take the Certification Examination for Nursing Assisting given by the National Nurse Aide Assessment Program (NNAAP).

Occupational Choices

Employment of nursing assistants is projected to grow 8 percent from 2019 to 2029, much faster than the average for all occupations. Employment of orderlies is projected to grow 5 percent from 2019 to 2029, faster as the average for all occupations.

As the baby-boom population ages, nursing assistants and orderlies will be needed to help care for an increasing number of older patients in nursing and residential care facilities. Older people are more

likely than younger people to have disorders such as dementia, or to live with chronic diseases such as heart disease and diabetes. More nursing assistants will be needed to care for patients with these conditions.

Demand for nursing assistants may be constrained by the fact that many nursing homes rely on government funding. Cuts to programs such as Medicare and Medicaid may affect patients' ability to pay for nursing home care. In addition, patient preferences and shifts in federal and state funding are increasing the demand for home and community-based long-term care, which should lead to increased opportunities for nursing assistants working in home health and community rehabilitation services.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Modified February 18, 2021.

Average Full-Time Wage

The median annual wage for nursing assistants was \$29,660 in May 2019. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$21,960, and the highest 10 percent earned more than \$40,620.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Modified February 18, 2021.

Additional Requirements

- Students entering the CNA program must be at least eighteen (18) years of age.
- Applicants not currently employed by a healthcare agency will be required to complete a background check and drug screen which will be an additional expense.

Duration

8 hours per day
Five (5) days per week
2-week course
(59 classroom hours; 16 clinical hours)

Financial Assistance

Financial assistance may be available for those who qualify through the Workforce Innovation and Opportunity Act (WIOA).

Location

Training will be held in Building B at the Trenholm Campus located at 1225 Air Base Blvd., Montgomery. Clinicals will be held at a location to be determined.

Estimated Program Length & Cost

Award	Length	Tuition/Fees	Books
Certificate	2 Weeks	\$800	\$0

Award Available

Certificate

Certified Nursing Assistant

Program Contact

334-420-4400

workforcedev@trenholmstate.edu

Classes Required for CNA Certificate (This award is non-credit and is not Pell Grant eligible)

Understanding Healthcare Systems
Human Needs & Human Development
Preventing Infection
The Healthy Human Body
The Resident's
Special Care

All CNA Information can be found on the Trenholm State website at:

<https://www.trenholmstate.edu/workforce-development/certified-nursing-assistant/>

Certified Nursing Assistant

Course Descriptions

Understanding Healthcare Systems

This course provides students with the knowledge of the requirements of a nursing assistant and the care team, an understanding of legal & ethical issues, as well as communication and cultural diversity.

Human Needs & Human Development

This course provides a basic understanding of personal care, basic nursing skills, confusion, dementia, Alzheimer's disease, mental health & mental illness, as well as dying, death & hospice.

Preventing Infection

This course provides students an overview of infection prevention, safety in the home, body mechanics, positioning, transfers, ambulation, emergency care, and disaster preparation.

The Healthy Human Body

This course provides students the knowledge of common chronic & acute conditions and urinary & bowel elimination.

The Resident's

This course provides instruction in rehabilitation & restorative care, nutrition, hydration, meal planning, shopping, preparation, and storage.

Special Care

This course will provide the student with knowledge of new mothers, infants & children, managing time, energy & money in the home, as well as caring for your career and yourself.

Line Worker Training Program Information

Line workers, also known as line installers or repairers, install or repair electrical power systems and telecommunications cables, including fiber optics. Complex networks of physical power lines and cables provide consumers with electricity, landline telephone communication, cable television, and Internet access. Line workers are responsible for installing and maintaining these networks.

Line installers and repairers can specialize in different areas depending on the type of network and industry in which they work:

Electrical power-line installers and repairers install and maintain the power grid—the network of power lines that moves electricity from generating plants to customers. They routinely work with high-voltage electricity, which requires extreme caution.

Telecommunications line installers and repairers install and maintain the lines and cables used by network communications companies. Depending on the service provided—local and long-distance telephone, cable television, or Internet—telecommunications companies use different types of cables, including fiber optic cables.

Because these systems are complicated, many line workers also specialize by duty:

Line installers install new cable. They may work for construction contractors, utilities, or telecommunications companies. Workers generally start a new job by digging underground trenches or erecting utility poles and towers to carry the wires and cables. They use a variety of construction equipment, including digger derricks, which are trucks equipped with augers and cranes used to dig holes and set poles in place.

Line repairers are employed by utilities and telecommunications companies that maintain existing power and telecommunications lines. Maintenance needs may be identified in a variety of ways, including remote monitoring, aerial inspections, and by customer reports of service outages.

Occupational Choices

Overall employment of line installers and repairers is projected to grow 6 percent from 2021 to 2031, about as fast as the average for all occupations.

Electrical power-line installers and repairers held about 126,600 jobs in 2021 and there are 130,700 projected for 2031.

Telecommunications line installers and repairers held about 103,800 jobs in 2021 and there are 113,400 projected for 2031.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Modified May 2021.

Average Full-Time Wage

The median annual wage for electrical power-line installers and repairers was \$78,310 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that

amount and half earned less. The lowest 10 percent earned less than \$46,200, and the highest 10 percent earned more than \$107,110.

The median annual wage for telecommunications line installers and repairers was \$60,109 in May 2021. The lowest 10 percent earned less than \$37,140, and the highest 10 percent earned more than \$98,320.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Modified May 2021

Additional Requirements

Minimum age of 18 years old.

Duration

10 hours per day
5 days per week
10-week course

Financial Assistance

100% funding is available through the Alabama Career Center. For information regarding eligibility and application for the Workforce Innovation and Opportunity Act (WIOA), please contact an Alabama Career Center.

Montgomery Career Center
334-286-1746

The Veteran's Administration has approved this program for funding of qualified individuals

Location

Portions of the training program will be offered at Trenholm State's Patterson Site (3920 Troy Highway)

Awards Available

Certification
Line Worker

Program Contact

334-420-4385
careertech@trenholmstate.edu

Classes Required

(This award is non-credit and is not Pell Grant eligible)

OSHA 10
Construction and Skills Trades (CAST) Test Prep
Basic Pole Climbing
CPR/First Aid
Truck Driving Overview
Material Familiarization
Basic Electricity
Interpersonal Skills
Ladder Safety/Post Hole Diggers
Knots, Sledgehammer
Rigging Switches; Use and care of Hand Line
Resume writing/Mock Interviews
Climbing and Working Aloft
Mechanized Equipment
Basic Line Construction/Pole top Rescue
Traffic Control
Chainsaw
Class B CDL Driver Training

All Line Worker Information

can be found on the Trenholm State website at:
<https://www.trenholmstate.edu/programs/technical/line-worker-training/>

Estimated Program Length & Cost

Award	Length	Tuition/Fees	Books
Certificate	10 Weeks	\$4,150	\$0

Medication Assistant Program Information

The Medication Assistant Certification training program at Trenholm State Community College is designed to prepare the student to safely dispense and manage medication(s) to residents of nursing homes, hospitals, long-term care & assisted living facilities; obtain the knowledge and skills to avoid problems; as well as correctly & accurately document the medication pass to avoid errors.

Upon completion, students are eligible to take the Medication Assistant Certification Exam (MACE).

Occupational Choices

Employment of medication assistants is projected to grow faster than average from 2019 - 2029.

As the baby-boom population ages, medication assistants will be needed to help care for an increasing number of older patients in nursing and residential care facilities. Older people are more likely than younger people to have disorders such as dementia, or to live with chronic diseases such as heart disease and diabetes. Medication assistants will be needed to care for patients and dispense medications according to doctor's orders.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Modified September 1, 2020.

Average Full-Time Wage

According to May 2019 reports, most medication assistants earned a mean annual wage of \$30,720 per year.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Modified September 1, 2020.

Additional Requirements

- Minimum age of 18 years old.
- Applicants not currently employed by a healthcare agency will be required to complete a background check and drug screen which will be an additional expense.

Duration

8 hours per day
5 days per week
4-week course
(60 classroom hours; 40 clinical hours)

Financial Assistance

Funding may be available for those who qualify through the Alabama Career Center. Must be CNA (Certified Nursing Assistant) certified.

For information regarding eligibility and application for the Workforce Innovation and Opportunity Act (WIOA), please contact an Alabama Career Center.

Montgomery Career Center
334-286-1746

Location

Training will be held in Building B at the Trenholm Campus located at 1225 Air Base Blvd., Montgomery. Clinicals will be held at a location to be determined.

Awards Available

Certificate

Medication Assistant

Program Contact

334-420-4400

workforcedev@trenholmstate.edu

Classes Required

(This award is non-credit and is not Pell Grant eligible)

Medication Fundamentals
Safety In Medication Administration
Communication & Documentation
Medication Administration
Ethical and Legal Considerations

Medication Assistant

Course Descriptions

Medication Fundamentals

This course will provide a basic understanding of the requirements and scope of the practice of professional nursing assistants and home health care providers for delegation and medication administration.

Safety In Medication Administration

This course will provide students with the knowledge of safely administering medications, as well as how to demonstrate effective infection control techniques.

Communication & Documentation

This course will provide students with the knowledge of effective communication skills.

Medication Administration

This course will provide instruction on how to describe the relationship of medications on various body systems, as well as explain the structure and function of the body.

Ethical and Legal Considerations In Medication Administration

This course will introduce the student to comprehending the requirements and scope of practice concerning the medication assistant.

All Medication Assistant Information can be found on the Trenholm State website at:

<https://www.trenholmstate.edu/workforce-development/medication-assistant/>

Estimated Program Length & Cost

Award	Length	Tuition/Fees	Books
Certificate	4 Weeks	\$1,000	\$0

Truck Driving Program Information

The Truck Driving program at H. Councill Trenholm State Community College is designed to prepare the student to operate vehicles requiring a commercial driver's license. A six-week, non-credit Truck Driving program is offered that utilizes the U.S. Department of Transportation (DOT) model curriculum as the foundation for training and takes the student from basic through advanced operation of a tractor/trailer. Additionally, courses taught include safe operation practices and non-vehicle activities which are not directly related to the vehicle but which must be performed by the operator. Information is presented in an intensive question and answer format to provide the most efficient and cost-effective method for preparing a student for a commercial driver's license.

Occupational Choices

Employment of heavy and tractor-trailer truck drivers is projected to grow 4 percent from 2021 to 2031, about as fast as the average for all occupations.

The economy depends on truck drivers to transport freight and keep supply chains moving. As the demand for goods increases, more truck drivers will

be needed. Trucks transport most of the freight in the United States, so, as households and businesses increase their spending, the trucking industry should grow.

Technological advancements should result in trucks that are more fuel efficient and easier to drive. For example, automatic transmissions, blind spot monitoring, braking assistance, and variable cruise control are all recently developed features that may become more standard throughout the trucking industries within the next decade. In addition, technological advances may lead to further developments in platooning, which is a method of transport where several trucks form a line and automatically mimic the speed, braking, and steering behaviors of the lead truck. These technologies can help ease driver burden and create a safer driving environment for all vehicles.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Heavy and Tractor-trailer Truck Drivers, at <https://www.bls.gov/ooh/transportation-and-material-moving/heavy-and-tractor-trailer-truck-drivers.htm> (visited February 7, 2023).

Average Full-Time Wage

The median annual wage for heavy and tractor-trailer truck drivers was \$48,310 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$30,710, and the highest 10 percent earned more than \$72,730.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Heavy and Tractor-trailer Truck Drivers, at <https://www.bls.gov/ooh/transportation-and-material-moving/heavy-and-tractor-trailer-truck-drivers.htm> (visited February 7, 2023).

Additional Requirements

Students entering the Truck Driving Program must have a valid driver's license, be at least eighteen (18) years of age for a class "A" CDL and successfully pass a DOT physical which includes a drug screen, and present a current Motor Vehicle Report (MVR). Prior to being enrolled, students must obtain the Alabama Commercial Drivers Learner's License and are

subject to DOT random drug testing rules. This program does not accept any "English as a second language" applicants.

Duration

Class A (180 Hours)

Five (5) days per week
34 hours per week for six (6) weeks

Class B (76 Hours)

Three (3) days per week
3 days (19 hours) per week for four (4) weeks

Financial Assistance

100% funding is available through the Alabama Career Center. For information regarding eligibility and application for the Workforce Innovation and Opportunity Act (WIOA), please contact an Alabama Career Center.

Montgomery Career Center
334-286-1746

Location

Truck Driving Training Center is located at 5420 Troy Highway, Montgomery, AL 36116

Awards Available

Certificate

Truck Driving Certificate

Program Contact

Dean Faust
Program Coordinator/Instructor
334-420-4406
dfaust@trenholmstate.edu
Location: 5420 Troy Highway

Estimated Program Length & Cost *

Award	Length	Tuition/Fees	Books
Certificate - Class A	6 Weeks (180 Hours)	\$3,175	\$0
Certificate - Class B	4 Weeks (76 Hours)	\$1,425	\$0

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. The length of the program is based on full-time status of 12-15 credit

hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Registration Steps

1. Complete Workforce Development Application
2. Turn in required documents

Payment Options

- MasterCard, Visa or Discover
- Cash Payment (check, money order, or cash)
- WIOA funding to cover the cost of this program,
- Please contact your local Alabama Career Center at 334-286-1746

Required Documents for the Truck Driving Program

- Proof of Negative Drug Testing
- DOT Physical with no restrictions
- Motor Vehicle Report
- Current Valid Driver's License
- CDL Driver's Permit

Courses Required for Truck Driving Certificate

(This award is non-credit and is not Pell Grant eligible)

Basic Truck Driving
Advanced Truck Driving
Non-Vehicle Activities
Vehicle Maintenance
Safe Operating Practices

Total Clock Hours: 180

All Truck Driving Information can be found on the Trenholm State website at:
www.trenholmstate.edu/workforce-development/cdl-truck-driving/

Course Descriptions

Basic Truck Driving

This course introduces students the fundamentals of becoming a professional commercial motor vehicle driver. Topics include orientation, control systems, vehicle inspections and reporting, basic control, shifting, backing, coupling and uncoupling, proficiency development, and special rigs. Upon

completion, the student should demonstrate proficiency in skill field tasks and pre-trip inspections to Commercial Drivers License standards.

Advanced Truck Driving

This course offers proper defensive driving techniques applicable to the commercial motor vehicle driver and involves the interaction between the student/vehicle and the highway traffic environment. Topics include visual search, communication, speed and space management, night operation, extreme driving conditions, and proficiency development. Upon completion, the student should demonstrate basic operating skills that ensure safety of the driver and other vehicle operators to Commercial Drivers License standards.

Non-Vehicle Activities

This course focuses on activities not directly related to the vehicle itself, but that are related to the potential job performance of the commercial motor vehicle driver. Topics include preparation for CDL permit, entry level CMV drivers basics (qualification, wellness, hours of service, whistleblower protection), handling cargo, cargo documentation, hours of service requirements, accident procedures, personal health and safety, trip planning, employability skills, and public and employer relations. Upon completion, the student will demonstrate performance of these activities to Commercial Drivers License standards to ensure safety to the driver, vehicle, cargo, and other motorists.

Vehicle Maintenance

This course introduces students to the various components of the vehicle and how they work in order that malfunctions and safety hazards may be recognized before serious damages or accidents occur. Topics include vehicle systems, preventive maintenance and servicing, and diagnosing and reporting malfunctions. Upon completion, the student should be able to perform routine service functions and simple maintenance tasks and recognize when a vehicle needs repairs.

Safe Operation Practices

This course is designed for extended high level skills training for coping with hazards of the roadway

traffic environment. Topics include hazard perception, emergency maneuvers, and skid control and recovery. Upon completion, the student should demonstrate perceptual skills for recognition of potential hazards as well as the manipulative skills needed to handle the vehicle in an emergency.

Degrees

Accounting

The Associate of Applied Science Degree in Business Administration, Accounting option at Trenholm State Community College provides students with the fundamentals of accounting principles and procedures. These principles and procedures facilitate careers in public and private accounting, including both State and Federal government entities.

The major areas studied in the Accounting program include the following: business functions, basic and advanced accounting principles, managerial accounting, advanced accounting application on microcomputer (computerized managerial); payroll accounting applications, income tax accounting principles and procedures, intermediate accounting, computerized QuickBooks accounting, governmental & not-for-profit accounting; electronic calculations, and more.

Accounting, Bookkeeping, Payroll, Financial and Auditing Clerks held more than 1,673,600 million jobs in 2019 and are employed in every industry. Trenholm State offers a complete program to prepare students for entry level positions in the business community as an accounting apprentice, assistant or accountant trainee.

Occupational Choices

Accounting, bookkeeping, payroll, and auditing clerks work with financial records. Other clerks in the accounting field who perform similar duties include: a bookkeeper; accounts receivables, payable, inventory control personnel; and account collectors; billing and posting clerks and machine operators; brokerage clerks; credit authorizers, checkers, and clerks; payroll and timekeeping clerks; procurement clerks; and tellers in the banks and credit unions.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021 Survey

Average Full-Time Wage

In the median wage and salary annual earnings of accounting, bookkeeping, payroll, financial and

auditing clerks were \$19.82 per hour. Salaries ranged from \$29,120 to \$61,980. Employment opportunities are expected to decline by 5% and earnings can range from entry level positions to much higher incomes for certified and experienced individuals.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021 Survey

Awards Available

Associate of Applied Science

Business Administration Accounting

Short Term Certificate

Business Administration Accounting

Program Contact

Brittany Foster
Division Chair - Professional Transfer
334-420-4424

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	62	\$10,106	\$2,500	\$100	\$200
Short Term Certificate	3 Terms	28	\$4,564	\$1,500	\$100	\$200

*Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Business Administration, Accounting

Degree Type
AAS

Area I: Written Communication (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Note: Must complete ENG-101 and ENG-102

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-103	Principles of Biology I	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
ACT-254	Business Income Tax	3
BUS-248	Managerial Accounting	3
BUS-100	Introduction to Business	3
BUS-147	Introduction to Finance	3
BUS-241	Principles of Accounting I	3
BUS-242	Principles of Accounting II	3
BUS-246	Computerized Accounting	3
BUS-249	Payroll Accounting	3
BUS-253	Individual Income Tax	3
BUS-271	Business Statistics I	3
BUS-296	Business Internship	3
ECO-231	Principles of Macroeconomics	3
ECO-232	Principles of Microeconomics	3
BUS-263	The Legal and Social Environment of Business	3

Technical Electives:

Course Code	Title	Credits
ACT-257	Govt & Not for Profit Accounting	3
BUS-252	Accounting Case Studies	3
CIS-207	Web Development	3
CIS-203	Intro to the Information Highway	3
OAD-103	Intermediate Keyboarding	3
OAD-243	Spreadsheet Applications	3
OAD-244	Database Applications	3
OAD-125	Word Processing	3
OAD-230	Desktop Publishing	3
OAD-246	Office Graphics & Presentation	3
Total Credits		68

Business Administration, Accounting

Degree Type
STC

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-103	Principles of Biology I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives).

College Requirements:

Course Code	Title	Credits
CIS-146	Computer Applications	3
BUS-100	Introduction to Business	3
BUS-241	Principles of Accounting I	3
BUS-242	Principles of Accounting II	3
BUS-248	Managerial Accounting	3
BUS-246	Computerized Accounting	3
BUS-253	Individual Income Tax	3

Air Conditioning and Refrigeration

Air conditioning and refrigeration systems are an intricate part of the success of almost every business. Air conditioning systems are responsible for controlling the temperature, humidity, and the total air quality in residential, commercial, and industrial buildings. Refrigeration systems make it possible to store and transport food, medicine, and other perishable items. This is a skilled occupation that requires qualified technicians to install, maintain, and repair such systems.

The Air Conditioning and Refrigeration program at Trenholm State Community College is designed to teach a student the basic principles involved in the installation, maintenance, and repair of heating, air conditioning, and refrigeration systems. Through the various courses, a student will gain technical knowledge and practical hands-on experience in servicing, troubleshooting, and maintaining these systems.

Occupational Choices

Employment of heating, air conditioning, and refrigeration mechanics and installers is projected to grow 5 percent from 2021 to 2031, about as fast as the average for all occupations.

Commercial and residential building construction is expected to drive employment growth. The growing number of sophisticated climate-control systems is also expected to increase demand for qualified HVACR technicians.

Repair and replacement of HVACR systems is a large part of what technicians do. The growing emphasis on energy efficiency and pollution reduction is likely to increase the demand for HVACR technicians as climate-control systems are retrofitted, upgraded, or replaced entirely.

Job opportunities for HVACR technicians are expected to be good. Candidates familiar with tablet

computers and electronics, as well as those who have developed troubleshooting skills, will have the best job prospects.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Heating, Air Conditioning, and Refrigeration Mechanics and Installers, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm> (visited March 03, 2023)

Average Full-Time Wage

The average full-time annual wage for an air conditioning and refrigeration technician is \$48,630. These technicians enjoy a variety of employer-sponsored benefits such as health insurance and pension plans. Some employers may also pay for work-related training and provide uniforms, company vans, and tools.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Heating, Air Conditioning, and Refrigeration Mechanics and Installers, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/heating-air-conditioning-and-refrigeration-mechanics-and-installers.htm> (visited March 03, 2023)

Awards Available

Associate in Applied Science Degree

Air Conditioning and Refrigeration

Air Conditioning and Refrigeration
Refrigeration

Certificate

Air Conditioning and Refrigeration
HVAC Technician III
HVAC Technician IV

Short Term Certificates

Air Conditioning and Refrigeration
HVAC Technician I
HVAC Technician II
Advanced A/C & Refrigeration

Program Contact

Jaime Junco
Program Coordinator/Instructor
334-420-4276
Location: Patterson Site - Bldg. E

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree 1	6 Terms	69	\$11,247	\$500	\$970	\$300
Associate Degree 2	6 Terms	60	\$9,780	\$500	\$970	\$300
Certificate	4 Terms	43	\$7,009	\$500	\$970	\$300
Certificate	4 Terms	55	\$8,965	\$500	\$970	\$300
Short Term Certificate	1 Term	13	\$2,119	\$500	\$970	\$300
Short Term Certificate	2 Terms	25	\$4,075	\$500	\$970	\$300
Short Term Certificate	2 Terms	28	\$4,564	\$500	\$970	\$300

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term.

Enrollment in transitional level general education courses will alter the length of the program.

Air Conditioning and Refrigeration

Degree Type

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ACR-111	Principles of Refrigeration	3
ACR-112	HVACR Service Procedures	3
ACR-113	Refrigeration Piping Practices	3
ACR-121	Principles of Electricity for HVACR	3
ACR-122	HVACR Electrical Circuits	3
ACR-123	HVACR Electrical Components	3
ACR-125	Fund of Gas & Electrical Heating Systems	6
ACR-128	Heat Load Calculations	3
ACR-132	Residential Air Conditioning	3
ACR-147	Refrigeration Transition and Recovery	3
ACR-152	Heat Pump Systems	6
ACR-193	Co-Op	1
ACR-205	System Sizing and Air Distribution	3
ACR-209	Commercial Air Conditioning Systems	3
ACR-210	Troubleshooting HVACR Systems	3

* ACR-205 has a prerequisite requirement of ACR-128

Electives:

Course Code	Title	Credits
ACR-127	HVACR Electric Motors	3
ACR-135	Mechanical/Gas Safety Codes	3
ACR-141	Environmental Systems	4
CIS-146	Computer Applications	3
Total Credits		69

Air Conditioning and Refrigeration, Refrigeration

Degree Type

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ACR-111	Principles of Refrigeration	3
ACR-112	HVACR Service Procedures	3
ACR-113	Refrigeration Piping Practices	3
ACR-121	Principles of Electricity for HVACR	3
ACR-122	HVACR Electrical Circuits	3
ACR-123	HVACR Electrical Components	3
ACR-133	Domestic Refrigeration	3
ACR-134	Ice Machines	3
ACR-147	Refrigeration Transition and Recovery	3
ACR-193	Co-Op	1
ACR-203	Commercial Refrigeration	3
ACR-210	Troubleshooting HVACR Systems	3

Electives:

Course Code	Title	Credits
ACR-127	HVACR Electric Motors	3
ACR-135	Mechanical/Gas Safety Codes	3
ACR-141	Environmental Systems	4
CIS-146	Computer Applications	3
Total Credits		60

Air Conditioning and Refrigeration, HVAC Tech III

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ACR-111	Principles of Refrigeration	3
ACR-112	HVACR Service Procedures	3
ACR-113	Refrigeration Piping Practices	3
ACR-121	Principles of Electricity for HVACR	3
ACR-122	HVACR Electrical Circuits	3
ACR-123	HVACR Electrical Components	3
ACR-128	Heat Load Calculations	3
ACR-132	Residential Air Conditioning	3
ACR-147	Refrigeration Transition and Recovery	3
ACR-205	System Sizing and Air Distribution	3
ACR-209	Commercial Air Conditioning Systems	3
ACR-210	Troubleshooting HVACR Systems	3
* ACR-205 has a prerequisite requirement of ACR-128		
Total Credits		43

Air Conditioning and Refrigeration, HVAC Tech IV

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ACR-111	Principles of Refrigeration	3
ACR-112	HVACR Service Procedures	3
ACR-113	Refrigeration Piping Practices	3
ACR-121	Principles of Electricity for HVACR	3
ACR-122	HVACR Electrical Circuits	3
ACR-123	HVACR Electrical Components	3
ACR-125	Fund of Gas & Electrical Heating Systems	6
ACR-128	Heat Load Calculations	3
ACR-132	Residential Air Conditioning	3
ACR-147	Refrigeration Transition and Recovery	3
ACR-152	Heat Pump Systems	6
ACR-205	System Sizing and Air Distribution	3
ACR-209	Commercial Air Conditioning Systems	3
ACR-210	Troubleshooting HVACR Systems	3

* ACR-205 has a prerequisite requirement of ACR-128

Total Credits **55**

Air Conditioning and Refrigeration, Advanced Air Conditioning and Refrigeration

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ACR-128	Heat Load Calculations	3
ACR-152	Heat Pump Systems	6
ACR-203	Commercial Refrigeration	3
ACR-205	System Sizing and Air Distribution	3
ACR-209	Commercial Air Conditioning Systems	3
ACR-210	Troubleshooting HVACR Systems	3

* ACR-205 has a prerequisite requirement of ACR-128

Electives:

Course Code	Title	Credits
ACR-125	Fund of Gas & Electrical Heating Systems	6
ACR-127	HVACR Electric Motors	3
ACR-135	Mechanical/Gas Safety Codes	3
ACR-141	Environmental Systems	4
CIS-146	Computer Applications	3
Total Credits		27

Air Conditioning and Refrigeration HVAC Technician I

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ACR-111	Principles of Refrigeration	3
ACR-121	Principles of Electricity for HVACR	3
ACR-128	Heat Load Calculations	3
ACR-147	Refrigeration Transition and Recovery	3
Total Credits		12

Air Conditioning and Refrigeration HVAC Technician II

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ACR-111	Principles of Refrigeration	3
ACR-112	HVACR Service Procedures	3
ACR-113	Refrigeration Piping Practices	3
ACR-121	Principles of Electricity for HVACR	3
ACR-122	HVACR Electrical Circuits	3
ACR-123	HVACR Electrical Components	3
ACR-128	Heat Load Calculations	3
ACR-147	Refrigeration Transition and Recovery	3
Total Credits		24

Automotive Manufacturing & Automation

Program Information

Competitive business models, engineering designs, and integrated manufacturing systems are creating

great career and employment opportunities for well-prepared students. New ideas for products require new systems that integrate mechanics, electronics, electrical, information technology, and outstanding people. Socio-technical processes are constantly increasing in complexity, efficiency, and effectiveness delivering continuously improved products.

Manufacturing & Automation is a rapidly growing industry with high demand for skilled workers. Trenholm State offers leading-edge programs to prepare students to become the Multi-Craft Technicians that the diverse and dynamic manufacturing industry is seeking. Students may choose from critical technology programs such as metrology, welding, electrical, programmable logic controllers, machine tool, troubleshooting assembly lines, and robotics maintenance. Our instructors are well-prepared and know how to address the diverse learning styles of today's students. Our lab facilities include relevant, up-to-date modern equipment, enriching the student learning environment. The students work on specific lab projects that enhance their lectures and reading assignments, ensuring a total learning experience.

The Multi-Craft Technician is responsible for setup, installation, preventive maintenance, troubleshooting, as well as test and repair of complex electro-mechanical equipment, including automatic machines and process controls, motor control systems, computer control systems, human/machine interface systems, and basic plant electrical equipment systems. At Trenholm State, the Manufacturing & Automation program equips students with the skills and technical knowledge needed for success in this interesting and growing field.

Occupational Choices

Manufacturing & Automation graduates should find exceptional job opportunities in this field. As the economy grows, the demand for skilled and qualified Multi-Craft employees will increase. Demand for technicians will grow as the number of vehicles in operation increases, reflecting continued growth in the number of multi-car families. Growth in demand will be offset somewhat by slowing population growth and the continuing increase in the quality and durability of automobiles, which will require less

frequent service. Additional job openings will be due to the need to replace a growing number of retiring technicians, who tend to be the most experienced workers.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2019-2029 Edition, 2021 Survey.

Program Contact

Danny Carden

334-420-4385

Location: Patterson Site - Bldg. Q

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools Supplies
Associate Degree 1	6 Terms	69	\$11,109	\$1000	\$500 \$0
Associate Degree 2	6 Terms	71	\$11,431	\$1000	\$500 \$0
Certificate 1	5 Terms	53	\$8,533	\$850	\$500 \$0
Certificate 2	5 Terms	56	\$9,016	\$850	\$500 \$0
Short Term Certificate (2)	3 Terms	12	\$1,956	\$600	\$500 \$0
Short Term Certificate (2)	3 Terms	18	\$2,898	\$600	\$500 \$0

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Automotive/Advanced Manufacturing - Automotive Manufacturing and Automation AAS

Degree Type

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours):

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-101	Precision Measurement	3
ADM-105	Fluid Systems	3
ADM-110	Blueprint Reading	3
ADM-111	Manufacturing Safety Practices	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ADM-291	MSSC Safety Course	3
ADM-292	MSSC Quality Practices/ Measurements	3
ADM-293	MSSC Manufacturing Processes/Practices	3
ADM-294	MSSC Maintenance Awareness Course	3
AUT-114	Programmable Logic Controllers	3
AUT-116	Introduction to Robotics	3
AUT-186	Principles of Industrial Maintenance Welding & Metal Cutting Techniques	3
AUT-221	Advanced Programmable Logic Controllers	3
AUT-230	Preventive Maintenance	3
AUT-234	Industrial Motor Controls I	3
AUT-278	Robotic Programming and Welding	3
AUT-286	Co-Op	1
Total Credits		68

Automotive Manufacturing and Automation – Maintenance Technician AAS

Degree Type
AAS

General Education Requirements (15 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours):

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-105	Fluid Systems	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ADM-291	MSSC Safety Course	3
ADM-292	MSSC Quality Practices/ Measurements	3
ADM-293	MSSC Manufacturing Processes/Practices	3
ADM-294	MSSC Maintenance Awareness Course	3
AUT-114	Programmable Logic Controllers	3
AUT-116	Introduction to Robotics	3
AUT-138	Principles of Industrial Mechanics	3
AUT-150	Introduction to Machine Shop I3	
AUT-151	Introduction to Machine Shop I3 Lab	
AUT-186	Principles of Ind Maintenance Wdt & Metal Cutting Techniques	3
AUT-208	Auto Systems Diagnosis & Troubleshooting	3
AUT-234	Industrial Motor Controls I	3
AUT-235	Industrial Motor Controls II	3
AUT-251	Intro to Variable Frequency Drives & Servo Controls	3
AUT-278	Robotic Programming and Welding	3
AUT-286	Co-Op	1
Total Credits		71

Automotive Manufacturing and Automation - Certificate

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-101	Precision Measurement	3
ADM-105	Fluid Systems	3
ADM-110	Blueprint Reading	3
ADM-111	Manufacturing Safety Practices	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ADM-291	MSSC Safety Course	3
ADM-292	MSSC Quality Practices/ Measurements	3
AUT-114	Programmable Logic Controllers	3
AUT-116	Introduction to Robotics	3
AUT-178	Gas Tungsten Arc Welding	3
AUT-180	Gas Tungsten Arc Welding Lab	3
AUT-221	Advanced Programmable Logic Controllers	3
AUT-230	Preventive Maintenance	3
AUT-234	Industrial Motor Controls I	3
AUT-286	Co-Op	1
Total Credits		53

Automotive Manufacturing and Automation – Maintenance Technician Certificate

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-101	Precision Measurement	3
ADM-105	Fluid Systems	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ADM-291	MSSC Safety Course	3
ADM-292	MSSC Quality Practices/ Measurements	3
ADM-293	MSSC Manufacturing Processes/Practices	3
ADM-294	MSSC Maintenance Awareness Course	3
AUT-114	Programmable Logic Controllers	3
AUT-116	Introduction to Robotics	3
AUT-138	Principles of Industrial Mechanics	3
AUT-208	Auto Systems Diagnosis & Troubleshooting	3
AUT-234	Industrial Motor Controls I	3
AUT-235	Industrial Motor Controls II	3
AUT-251	Intro to Variable Frequency Drives & Servo Controls	3
AUT-278	Robotic Programming and Welding	3
AUT-286	Co-Op	1
Total Credits		56

Automotive Manufacturing and Automation - Manufacturing Maintenance Technician II STC

Degree Type
STC

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ADM-292	MSSC Quality Practices/ Measurements	3
AUT-116	Introduction to Robotics	3
AUT-138	Principles of Industrial Mechanics	3
AUT-208	Auto Systems Diagnosis & Troubleshooting	3
AUT-235	Industrial Motor Controls II	3
AUT-278	Robotic Programming and Welding	3
Total Credits		18

Automotive Manufacturing and Automation - Manufacturing Maintenance Technician I STC

Degree Type
STC

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ADM-105	Fluid Systems	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
AUT-114	Programmable Logic Controllers	3
AUT-234	Industrial Motor Controls I	3
AUT-251	Intro to Variable Frequency Drives & Servo Controls	3
Total Credits		18

Automotive Manufacturing and Automation - Manufacturing Technician STC

Degree Type
STC

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ADM-101	Precision Measurement	3
ADM-106	Quality Control Concepts	3
ADM-111	Manufacturing Safety Practices	3
ADM-155	Manufacturing Projects	3
Total Credits		12

Automotive Manufacturing and Automation – Certified Production Technician STC

Degree Type

STC

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ADM-291	MSSC Safety Course	3
ADM-292	MSSC Quality Practices/ Measurements	3
ADM-293	MSSC Manufacturing Processes/Practices	3
ADM-294	MSSC Maintenance Awareness Course	3
Total Credits		12

Automotive Service

Program Information

Automotive Service consists of testing, diagnosing, repairing, and maintaining the mechanical, hydraulic, and electrical systems of the modern automobile.

The Automotive Service program at Trenholm State Community College is designed to teach a student the basic principles of all eight areas of the National Automotive Technicians Education Foundation certifications (engine repair, automatic

transmissions/transaxle, manual drive train and axles, suspension and steering, brakes, electrical/electronic systems, heating and air conditioning, and engine performance) as required by industry today.

Occupational Choices

Employment of automotive service technicians and mechanics is projected to show little or no change from 2021 to 2031.

The number of vehicles already in use is expected to continue to rise, and some service technicians will still be needed to perform basic maintenance and repair tasks, such as replacing brake pads and changing oil. Increasingly, however, new vehicles are being built with interconnected sensors, cameras, and instruments that allow for predictive maintenance and remote diagnosis, thus reducing maintenance workhours.

The graduates of the Automotive Service Technology Program have technical skills and knowledge that prepares them to enter varied fields. They can go into parts distribution, retail parts sales, tractor mechanics, truck repair, automotive manufacturing plants and the related suppliers.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Automotive Service Technicians and Mechanics, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/automotive-service-technicians-and-mechanics.htm> (visited March 03, 2023).

Average Full-Time Wage

The median annual wage for automotive service technicians and mechanics was \$46,880 in 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$24,400, and the highest 10 percent earned more than \$68,880.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Automotive Service Technicians and Mechanics, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/automotive-service-technicians-and-mechanics.htm> (visited March 03, 2023).

Awards Available

Associate of Applied Science

Automotive Service

Certificate

Automotive Service

Short Term Certificate

Automotive Service

Brakes/Steering/Suspension

Engine Performance

Transmission

Electrical/Electronic

Engines

Air Conditioning and Heating

Program Contact

Reuben Buice

Program Coordinator/Instructor

334-420-4362

Location: Patterson Site - Bldg. G

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	68	\$11,084	\$350	\$750	\$0
Certificate	5 Terms	52	\$8,476	\$350	\$750	\$0
Short Term Certificates (3)	2 Terms	13	\$2,119	\$350	\$750	\$0
Short Term Certificates (3)	2 Terms	10	\$1,630	\$350	\$750	\$0

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Automotive Service

Degree Type

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ASE-101	Fundamentals Of Automotive Technology	3
ASE-112	Electrical Fundamentals	3
ASE-121	Braking Systems	3
ASE-122	Steering and Suspension	3
ASE-124	Automotive Engines	3
ASE-130	Drive Train And Axles	3
ASE-133	Motor Vehicle Air Conditioning	3
ASE-162	Electrical and Electronic Systems	3
ASE-212	Advanced Electrical And Electronic Systems	3
ASE-220	Advanced Automotive Engines	3
ASE-221	Light Diesel For Automotive	3
ASE-224	Manual Transmission/Transaxle	3
ASE-230	Automatic Transmission/Transaxle	3
ASE-239	Engine Performance	3
ASE-244	Engine Performance and Diagnostics	3
ASE-246	Automotive Emissions	3
ASE-251	Dealership Work Experience	3
ASE-261	Dealership Work Experience	3
ASE-263	Hybrid & Electric Vehicles	3
	ASE Elective	3
	Total Credits	71

Automotive Service

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ASE-101	Fundamentals Of Automotive Technology	3
ASE-112	Electrical Fundamentals	3
ASE-121	Braking Systems	3
ASE-122	Steering and Suspension	3
ASE-124	Automotive Engines	3
ASE-130	Drive Train And Axles	3
ASE-133	Motor Vehicle Air Conditioning	3
ASE-162	Electrical and Electronic Systems	3
ASE-212	Advanced Electrical And Electronic Systems	3
ASE-220	Advanced Automotive Engines	3
ASE-221	Light Diesel For Automotive	3
ASE-224	Manual Transmission/Transaxle	3
ASE-230	Automatic Transmission/Transaxle	3
ASE-239	Engine Performance	3
ASE-244	Engine Performance and Diagnostics	3
ASE-246	Automotive Emissions	3
Electives:		
Course Code	Title	Credits
CIS-146	Computer Applications	3
Total Credits		55

Automotive Service, Air Conditioning & Heating

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ASE-101	Fundamentals Of Automotive Technology	3
ASE-133	Motor Vehicle Air Conditioning	3
ASE-212	Advanced Electrical And Electronic Systems	3
Total Credits		9

Automotive Service, Brakes/Steering/Suspension

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ASE-101	Fundamentals Of Automotive Technology	3
ASE-121	Braking Systems	3
ASE-122	Steering and Suspension	3
Total Credits		9

Automotive Service, Electrical/Electronic

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ASE-101	Fundamentals Of Automotive Technology	3
ASE-112	Electrical Fundamentals	3
ASE-162	Electrical and Electronic Systems	3
ASE-212	Advanced Electrical And Electronic Systems	3
Total Credits		12

Automotive Service, Engine Performance

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ASE-101	Fundamentals Of Automotive Technology	3
ASE-239	Engine Performance	3
ASE-244	Engine Performance and Diagnostics	3
ASE-246	Automotive Emissions	3
Total Credits		12

Automotive Service, Engines

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ASE-101	Fundamentals Of Automotive Technology	3
ASE-124	Automotive Engines	3
ASE-220	Advanced Automotive Engines	3
Total Credits		9

Automotive Service, Transmission

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ASE-101	Fundamentals Of Automotive Technology	3
ASE-130	Drive Train And Axles	3
ASE-224	Manual Transmission/Transaxle	3
ASE-230	Automatic Transmission/Transaxle	3
Total Credits		12

Business

Program Information

The Associate of Applied Science Degree in Business Administration General Business option at Trenholm State Community College provides the knowledge and skills necessary to prepare graduates for a career in business administration that will ultimately create career pathways enabling students to transfer to baccalaureate degree programs. Furthermore, it will provide concentrations in general business, management, and entrepreneurship.

The Business Administration program will also translate for seamless articulations to the Bachelor of Science in Business Administration programs at partnering universities. Graduates and program completers will be academically prepared to advance their vocations, but also prepare for matriculation to higher education. This program will provide students with a robust program that provides academic rigor. The program will provide not only associate degrees but also short certificates. These options will provide multiple career pathways that will be tailored to meet the needs of the student. The general business option is designed to prepare students for a variety of careers within business.

Occupational Choices

The general business option will prepare students for a variety of careers within business organizations. These career options include business analysts, budget analysts, real estate appraisers and assessors, insurance (claims adjusters, appraisers, examiners, and investigators), compensation specialists, benefits specialists, job analysis specialists, cost estimators, fundraisers, Human Resource specialists, insurance underwriters, loan officers, meeting and event planners, training and development specialists, purchasing managers, purchasing buyers and purchasing agents. Other job titles and career options may fall under the general business opportunities as well.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021 Survey

Average Full-Time Wage

For the general business option after continuing and completing a bachelor degree, the median pays for the above listed career options considering all levels of the careers vary from \$49,470 to \$95,570 annually. The Bureau of Labor Statistics projects that "Employment of business and financial operations occupations is projected to grow 7 percent from 2021 to 2031, faster than the average for all occupations, adding about 715,100 new jobs."

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021 Survey

Awards Available

Associate of Applied Science

Business Administration

General Business

Short Term Certificate

Business Administration

General Business

Program Contact

Brittany Foster

Division Chair - Professional Transfer

334-420-4424

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	62	\$10,106	\$2,500	\$100	\$500
Short Term Certificate	3 Terms	25	\$4,075	\$1,500	\$100	\$250

*Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Business Administration, General Business

Degree Type

AAS

General Education Requirements (18-19 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-103	Principles of Biology I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
ACT-254	Business Income Tax	3
BUS-100	Introduction to Business	3
BUS-241	Principles of Accounting I	3
BUS-242	Principles of Accounting II	3
BUS-263	The Legal and Social Environment of Business	3
BUS-271	Business Statistics I	3
BUS-276	Human Resource Management	3
BUS-296	Business Internship	3
BUS-275	Principles of Management	3
ECO-231	Principles of Macroeconomics	3
ECO-232	Principles of Microeconomics	3
	OAD-133 or BUS-215	3
BUS-279	Small Business Management	3

Technical Electives:

Course Code	Title	Credits
ACT-201	Entrepreneurism	3
ACT-257	Govt & Not for Profit Accounting	3
BUS-252	Accounting Case Studies	3
BUS-263	The Legal and Social Environment of Business	3
CIS-203	Intro to the Information Highway	3
CIS-207	Web Development	3
OAD-103	Intermediate Keyboarding	3
OAD-125	Word Processing	3
OAD-230	Desktop Publishing	3
OAD-243	Spreadsheet Applications	3
OAD-244	Database Applications	3
OAD-246	Office Graphics & Presentation	3
Total Credits		62

Business Administration, General Business

Degree Type

STC

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-146	Computer Applications	3
BUS-100	Introduction to Business	3
BUS-241	Principles of Accounting I	3
BUS-242	Principles of Accounting II	3
BUS-263	The Legal and Social Environment of Business	3
BUS-275	Principles of Management	3
Total Credits		24

Business Administration, Office Administration

Degree Type

STC

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
OAD-103	Intermediate Keyboarding	3
OAD-125	Word Processing	3
	OAD-133 or BUS-215	3
OAD-138	Record Information Management	3
OAD-218	Office Procedures	3
OAD-246	Office Graphics & Presentation	3
	Total Credits	28

Child and Human Development

Program Information

The Child and Human Development program is designed to prepare students for employment in early childhood care and education programs. Graduates are employed as aides, teachers, directors, and owners of private programs.

The program focuses on the comprehensive care and education of children from birth to age 5 with varied electives to explore school-aged childcare and program planning. Students are also introduced to effective communication strategies. The primary focus of the program is the integration of developmentally and culturally appropriate practice for young children. Completion of this program does not directly lead to teacher certification.

Mission Statement

The mission of the Trenholm State Community College's Child and Human Development Program: Early Care and Education is to prepare early care and education as well as human service professionals. The program represents a comprehensive interdisciplinary field of study with the assumption that development takes place across the lifespan in relation to child development, family, community, public policy, and advocacy in support of the educational mission of Trenholm State Community College.

Occupational Choices

Program completers have become child development teachers, teacher assistants, program assistants, directors, assistant directors, social workers, public school teacher's assistants, state administrators and managers as well as continuing their educational goals in higher education.

Average Full-Time Wage

Pay depends on the educational attainment of the worker and the type of establishment. More education usually means higher earnings. Median hourly wages of childcare workers, preschool

teachers, and teacher’s assistants range from \$11.43 - \$22.00. The median annual wage of preschool and childcare Teacher assistants was \$28,900 yearly.

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Childcare Workers, at <https://www.bls.gov/ooh/personal-care-and-service/childcare-workers.htm> (visited February 14, 2023).

Additional Requirements

Child and Human Development Program participants must meet the following criteria:

- Program Participant must have obtained high school diploma or GED credential.
- Provide documentation of a completed tuberculosis (TB) test
- **Program Participants must be at least 18 19 years of age to participate unsupervised in laboratory experiences through the College upon completion of a Alabama State Department of Human Resources Mandatory Criminal Background Check and Alabama Child Abuse and Neglect Registry Clearance.**
- **Program participants who are at least 18 years of age may participate in laboratory experiences through the College with approved supervision.**
- Program Participants must meet all criteria of the Alabama State Department of Human Resources for persons working with children to include:
 - Suitability determination documentation provided (issued by Alabama DHR & Alabama Bureau of Investigations (\$54.95) by completing the Mandatory Criminal History Check. *** (Suitability Determination documentation must be submitted by the final semester before graduation. Fingerprint Clearance (\$5.00))

Estimated Program Length & Cost*

Award	Length	Credit Hours	Tuition/ Fees	Books	Tools	Supplies
Associate Degree	6 Terms	62	\$10,106	\$1,300	\$120	\$300
Certificate	4 Terms	41	\$6,683	\$1,100	\$120	\$300

Short Term Certificate	1 Term	19	\$3,097	\$250	\$50	\$105
Short Term Certificate	1 Term	16	\$2,608	\$250	\$50	\$105
Short Term Certificate	1 Term	11	\$1,793	\$200	\$50	\$105
Short Term Certificate	1 Term	10	\$1,630	\$200	\$50	\$105
Short Term Certificate	1 Term	9	\$1,467	\$200	\$50	\$105
CDA Certificate	1 Term	12	\$1,956	\$200	\$50	\$105

CDA Application Fee \$425**

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

**This application fee is paid directly to the Council for Professional Recognition.

- Ability to stoop, bend, and lift up to 50 pounds.
- Required written medical examination report to include TB skin test results.
- Program participants must be at least 19 years of age to complete the required laboratory experiences.
- Program participants must complete field experience hours (laboratory, observation, professional development and community service hours) to meet graduation requirements.
- Program participants should be Pediatric CPR/ First Aid certified by graduation.
- Program participants must be able to provide valid photo identification.

*** Program participants must complete the Alabama Child Abuse and Neglect Clearance with no substantiated reports before being placed in cooperating laboratory sites.

Awards Available

Associate of Applied Science
Child and Human Development

Certificate

Child and Human Development

Short Term Certificate

Child and Human Development
 CDA General Credential Concentration
 CDA Preschool Credential Concentration
 CDA Family Child Care Credential Concentration
 CDA Infant/Toddler Credential Concentration
 Families and Communities Concentration
 Child Growth and Development Concentration
 Child Development Center Administration
 Concentration

Program Contact

Doris Pinkston Program Coordinator/Instructor
 334-420-4325

Location: Trenholm Campus - Bldg. I

As part of ongoing planning and evaluation, the
 College regularly evaluates student learning
 outcomes for each program.

Child and Human Development

Degree Type

AAS

General Education Requirements (18-19 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III-Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
CHD-100	Intro of Early Care & Education of Children	3
CHD-201	Child Growth and Development Principles	3
CHD-202	Children's Creative Experiences	3
CHD-203	Children's Literature & Language Development	3
CHD-204	Methods and Materials for Teaching Children	3
CHD-205	Program Planning for Educating Young Children	3
CHD-206	Children's Health and Safety	3
CHD-210	Educating Exceptional Children	3
CHD-211	Child Development Seminar	1
CHD-214	Families & Communities in Early Care & Ed Progs	3
CHD-215	Supervised Practical Experience in Child Dev	3
	Approved Technical Electives	9

*Courses designed to prepare students for Child Development Association (CDA) certification: [CHD-100](#), [CHD-204](#), [CHD-206](#), [CHD-211](#).

Total Credits 62-63

Child and Human Development

Degree Type

CER

General Education Requirements (9 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
CHD-100	Intro of Early Care & Education of Children	3
CHD-201	Child Growth and Development Principles	3
CHD-203	Children's Literature & Language Development	3
CHD-204	Methods and Materials for Teaching Children	3
CHD-206	Children's Health and Safety	3
CHD-211	Child Development Seminar	1
CHD-215	Supervised Practical Experience in Child Dev	3
CHD-217	Math and Science for Young Children	3
	Technical Elective	3

* Courses designed to prepare students for Child Development Association (CDA) certification: [CHD-100](#), [CHD-204](#), [CHD-206](#), [CHD-211](#).

Total Credits **38**

Child and Human Development, CDA Family Child Care Credential

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CHD-201	Child Growth and Development Principles	3
CHD-204	Methods and Materials for Teaching Children	3
CHD-205	Program Planning for Educating Young Children	3
CHD-226	Child Development Seminar – Family Child Care	1

Courses designed to prepare students for Child Development Association (CDA) certification:

[CHD-204](#)

Total Credits **10**

Child and Human Development, CDA General Credential

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CHD-100	Intro of Early Care & Education of Children	3
CHD-204	Methods and Materials for Teaching Children	3
CHD-205	Program Planning for Educating Young Children	3
CHD-206	Children's Health and Safety	3
CHD-211	Child Development Seminar	1
CHD-219	Supervised Practical Experience	2

Courses designed to prepare students for Child Development Association (CDA) certification: [CHD-100](#), [CHD-204](#), [CHD-206](#), [CHD-211](#), [CHD-219](#).

Total Credits **15**

Child and Human Development, CDA Infant/Toddler Credential

Degree Type

STC

Area V: Pre-Professional/College Requirement

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CHD-201	Child Growth and Development Principles	3
CHD-204	Methods and Materials for Teaching Children	3
CHD-205	Program Planning for Educating Young Children	3
CHD-227	Child Development Seminar – Infant/Toddler Care	1
Total Credits		10

Child and Human Development, CDA Preschool Credential

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CHD-201	Child Growth and Development Principles	3
CHD-204	Methods and Materials for Teaching Children	3
CHD-205	Program Planning for Educating Young Children	3
CHD-225	Child Development Seminar – Preschool	1

Courses designed to prepare students for Child Development Association (CDA) certification: [CHD-204](#)

Total Credits **10**

Child and Human Development, Child Development Center Administration

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CHD-201	Child Growth and Development Principles	3
CHD-204	Methods and Materials for Teaching Children	3
CHD-206	Children's Health and Safety	3
CHD-208	Administration of Child Development Programs	3
CHD-210	Educating Exceptional Children	3
CHD-214	Families & Communities in Early Care & Ed Progs	3

These students may then choose to complete the requirements of the Child and Human Development Certificate (additional general education courses, etc.) or complete the requirements of the Associate of Applied Science Degree (including additional general education courses).

Total Credits **18**

Child and Human Development, Child Growth and Development

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CHD-201	Child Growth and Development Principles	3
CHD-206	Children's Health and Safety	3
CHD-210	Educating Exceptional Children	3

These students may then choose to complete the requirements of the Child and Human Development Certificate (additional general education courses, etc.) or complete the requirements of the Associate in Applied Science Degree (including additional general education courses).

Total Credits **9**

Child and Human Development, Families and Communities

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CHD-100	Intro of Early Care & Education of Children	3
CHD-213	Child Development Trends Seminar	3
CHD-214	Families & Communities in Early Care & Ed Progs	3

These students may then choose to complete the requirements of the Child and Human Development Certificate (additional general education courses, etc.) or complete the requirements of the Associate of Applied Science Degree (including additional general education courses).

Total Credits **9**

Computer Information Systems

Program Information

The Computer Information Systems Program at H. Councill Trenholm State Community College is progressive and innovative in its approach to remain viable and current with the trends of computer technology and applications. Students enrolled in the CIS Curriculum will gain knowledge and skills that are valuable to a dynamically, changing workforce, including—but not limited to—soft skills and preparation for industry recognized certifications.

Trenholm State will meet student needs for Information Systems Technology training while providing students with effective and personalized instructional methods in a variety of technical concentrations. The CIS program also emphasizes leadership and teamwork, within and throughout the Plan of Study.

Occupational Choices

At Trenholm State, we teach skills needed by: programmers; computer system analysts; database designers; network designers; Microsoft Certified Desktop Technicians; A+, Security+ and Linux+ Technicians; Cisco CCNA certified networkers; and, Office Technology Specialists with MS Office skills. We also offer others education and training, as well as a full spectrum of soft-skills. Job prospects should be best for college graduates who are up to date with the latest skills and technologies, particularly if they have supplemented their formal education with some relevant work experience and industry recognized certifications. Employers will continue to seek computer specialists who possess a strong background in fundamental computer skills combined with good interpersonal and communication skills. Due to the demand for computer support specialists and systems administrators over the next decade, those who have strong computer skills but do not have a bachelor's degree should continue to qualify for some entry-level positions. However, certifications and practical experience are essential for persons without degrees.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2018-2028 Edition, 2019 Survey

Average Full-Time Wage

Employment opportunities are expected to grow and earnings can range from entry level positions to much higher incomes for certified and experienced individuals. The average full-time annual wage of a CIS trained IT employee is \$57,910 (Computer Support Specialist) to \$133,490 (Computer and Information Research Scientist), based on skill level, experience, and field of work. Other job titles include: Computer Network Architect \$120,500; Computer Programmers \$93,000; Computer Systems Analysts \$99,270; Database Administrators 101,000; Information Security Analysts \$102,000 Network and Computer System Administrators \$90,000; Software Developers \$109,120; and, Web Developers \$78,300. Other titles and skills also are within these job categories, depending on skills, degree, certifications, experience, availability, relocation, and variable factors of employment.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2018-2028 Edition, 2019 Survey

Program Contact

Omekia Harrison Program Coordinator/Instructor
334-420-4291

Location: Patterson Site - Bldg. E

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length and Cost*

Award	Length	Credit Hours	Tuition Fees	Books	Tools	Supplies
Associate Degree	6 Terms	76	\$12,388	\$4,555	0	\$250
Short Term Certificate	2-3 Terms	28	\$4,564	\$1,438	0	\$75
Short Term Certificate	2-3 Terms	25	\$4,075	\$450	0	\$75

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed

above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Awards Available

Associate in Applied Science

Computer Information Systems
 Networking (Cisco Networking)
 System Support (Microsoft Desktop/Server Support)
 Programming (Object Oriented Programming)
 Cyber Security
 Program Coding
 AWS Cloud Computing

Short Term Certificate Computer Information Systems

Cisco Networking System Support
 (Microsoft Desktop/Server Support)
 Web and Database Applications
 Object Oriented Programming
 Cyber Security
 Program Coding
 AWS Cloud Computing

*You must earn a final grade of a 70 ("C") or above to receive credit for CIS courses. Any final grade of 69 or below will constitute failure (F) in the course, and you will have to repeat the course to attempt to earn the appropriate credit. (This does not include CIS-149 or CIS-146).

Computer Information Systems

Degree Type

AAS

General Education Requirements (18-19 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-103	Principles of Biology I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
ECO-231	Principles of Macroeconomics	3
ECO-232	Principles of Microeconomics	3
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
CIS-117	Database Mgmt Software Applications	3
CIS-149	Introduction to Computers	3
CIS-157	Introduction to App Development with Swift	3
CIS-171	Linux I	3
CIS-201	Intro to Computer Programming Concepts	3
CIS-207	Web Development	3
CIS-209	Advanced Web Development	3
CIS-238	Cloud Computing: Infrastructure and Services	3
CIS-101 (A-B)	Computer Applications Lab	1
CIS-268	Software Support	3
CIS-269	Hardware Support	3
CIS-101 (A-B)	Computer Applications Lab	1
CIS-270	CISCO/CCNA I	3
CIS-280	Network Security	3
CIS-165	Network Lab	1
CIS-281	System Analysis & Design	3
	CIS-284 or CIS-182	3

Please Note:

If completing a general Associate degree in CIS, then choose any nine credit hours from a combination of the various areas of study in order to fulfill the 76-credit hour graduation requirement.

Also, please note that some courses listed in the "Course Descriptions" may be offered as needed and may be used as an elective and substituted on a case-by-case basis.

Networking (Cisco Networking)

Course Code	Title	Credits
CIS-272	CISCO CCNA III	3
CIS-271	CISCO/CCNA II	3
CIS-172	Linux II	3

System Support (Microsoft Desktop/ Server Support):

Course Code	Title	Credits
CIS-275	Workstation Administration	3
CIS-276	Server Administration	3
CIS-265	End User and Desktop Applications Support I	3

Programming (Object Oriented Programming):

Course Code	Title	Credits
CIS-251	C++ Programming	3
CIS-255	Java Programming	3
CIS-285	Object Oriented Programming	3

Cyber Security:

Course Code	Title	Credits
CIS-245	Cyber Defense	3
CIS-246	Ethical Hacking	3
CIS-282	Computer Forensics	3

Program Coding:

Course Code	Title	Credits
	CIS-155 or CIS-159	3
CIS-220	App Development with Swift I	3
CIS-227	App Development with Swift II	3

AWS Cloud Computing:

Course Code	Title	Credits
CIS-200	Software Design	3
CIS-237	Virtual Infrastructure: Installation and Configuration	3
CIS-239	Information Storage & Management	3

Cross-Reference of Courses-to-Certifications:

CIS171/172: Linux+
 CIS207/208: Certified Internet Webmaster CIS268/269: A+
 CIS270/271: CCNA
 CIS280: Security+
 CIS214: Security Testing (Pen Testing) -> Pentest+
 CIS245: Cyber Defense Certification -> CYSA+CIS246: Ethical Hacking Certification -> Certified Ethical Hacking
 CIS238: Cloud Computing: Infrastructure/Svc -> Cloud Practitioner
 CIS200: Software Design -> AWS Certified Developer – Associate
 CIS237: Virtual Infrastructure: Installation & Configuration -> AWS Certified Solutions Architect Assoc.
 CIS239: Information Storage & Management -> AWS Certified SysOps Administrator – Associate

Total Credits	76
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Computer Information Systems, AWS Cloud Computing

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-117	Database Mgmt Software Applications	3
CIS-171	Linux I	3
CIS-200	Software Design	3
CIS-222	Database Management Systems	3
CIS-238	Cloud Computing: Infrastructure and Services	3
CIS-101 (A-B)	Computer Applications Lab	1
CIS-237	Virtual Infrastructure: Installation and Configuration	3
CIS-239	Information Storage & Management	3
CIS-270	CISCO/CCNA I	3
CIS-280	Network Security	3
CIS-165	Network Lab	1

Suggested Sequence: Semester 1: 117, 270, 171; Semester 2: 222, 237, 239, 280, 165; Semester 3: 200, 238, 101B.

Total Credits **29**

Computer Information Systems, CISCO Networking

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-149	Introduction to Computers	3
CIS-171	Linux I	3
CIS-172	Linux II	3
CIS-268	Software Support	3
CIS-269	Hardware Support	3
CIS-101 (A-B)	Computer Applications Lab	1
CIS-270	CISCO/CCNA I	3
CIS-271	CISCO/CCNA II	3
CIS-272	CISCO CCNA III	3

Suggested Sequence: Semester 1: , 149, 171, 268, 270, Semester 2: 172, 269, 101B, 271, 272.

This certificate as listed may require additional pre-requisites or co-requisites

Total Credits **25**

Computer Information Systems, Cyber Security

Degree Type
STC

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-149	Introduction to Computers	3
CIS-171	Linux I	3
CIS-211	Principles of Information Assurance	3
CIS-214	Security Analysis (Pen Testing)	3
CIS-245	Cyber Defense	3
CIS-246	Ethical Hacking	3
CIS-280	Network Security	3
CIS-165	Network Lab	1
CIS-282	Computer Forensics	3
	CIS-270 or CIS-284	3

Suggested Sequence: Semester 1: 149, 171, 270, 280, 165; Semester 2: 211, 214, 245; Semester 3: 246, 282

This certificate as listed may require additional pre-requisites or co-requisites.

Total Credits	28
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Computer Information Systems, Development, Security, and Operations

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-149	Introduction to Computers	3
CIS-201	Intro to Computer Programming Concepts	3
CIS-212	Visual Basic Programming	3
CIS-238	Cloud Computing: Infrastructure and Services	3
CIS-101 (A-B)	Computer Applications Lab	1
CIS-255	Java Programming	3
CIS-270	CISCO/CCNA I	3
CIS-271	CISCO/CCNA II	3
CIS-280	Network Security	3
CIS-165	Network Lab	1
Total Credits		26

Computer Information Systems, Object Oriented Programming

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-149	Introduction to Computers	3
CIS-201	Intro to Computer Programming Concepts	3
CIS-207	Web Development	3
CIS-209	Advanced Web Development	3
CIS-212	Visual Basic Programming	3
CIS-213	Advanced Visual Basic Programming	3
CIS-255	Java Programming	3
CIS-256	Advanced Java	3
CIS-285	Object Oriented Programming	3

Suggested Sequence: Semester 1: 149, 201, 212, 255; Semester 2: 207, 213, 256, 285; Semester 3: 209. Recommend CIS-281 Systems Analysis & Design.

This certificate as listed may require additional pre-requisites or co-requisites

Total Credits	27
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Computer Information Systems, Program Coding

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-149	Introduction to Computers	3
CIS-157	Introduction to App Development with Swift	3
	CIS-155 or CIS-159	3
CIS-201	Intro to Computer Programming Concepts	3
CIS-212	Visual Basic Programming	3
CIS-220	App Development with Swift I	3
CIS-227	App Development with Swift II	3

Suggested Sequence: Semester 1: 149, 157, 201; Semester 2: 212, 220, 159; Semester 3: 227

This certificate as listed may require additional pre-requisites or co-requisites.

Total Credits	21
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Computer Information Systems, System Support

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-149	Introduction to Computers	3
CIS-171	Linux I	3
CIS-182	Help Desk Applications	3
CIS-265	End User and Desktop Applications Support I	3
CIS-268	Software Support	3
CIS-269	Hardware Support	3
CIS-101 (A-B)	Computer Applications Lab	1
CIS-275	Workstation Administration	3
CIS-276	Server Administration	3
CIS-280	Network Security	3
CIS-165	Network Lab	1

Suggested Sequence: Semester 1: 149, 171, 268, 275; Semester 2: 276, 280, 165, 265, 269, 1011B; Semester 3: 182.

This certificate as listed may require additional pre-requisites or co-requisites

Total Credits	29
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Computer Information Systems, Web and Database Applications

Degree Type

STC

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-117	Database Mgmt Software Applications	3
CIS-171	Linux I	3
CIS-207	Web Development	3
CIS-208	Web Authoring Software	3
CIS-209	Advanced Web Development	3
CIS-222	Database Management Systems	3
CIS-250	E-Commerce	3
CIS-285	Object Oriented Programming	3
CIS-287	SQL Server	3

Suggested Sequence: Semester 1: 101, 117, 171, 207, 285; Semester 2: 209, 222, 250, 287; Semester 3: 208.

This certificate as listed may require additional pre-requisites or co-requisites

Total Credits	27
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Culinary Arts

Program Information

Trenholm State Community College's Culinary Arts program is one of the finest culinary arts programs in the State of Alabama. Established in 1980, the program is nationally accredited by the American Culinary Federation Foundation Accrediting Commission. Students enrolling in the program have the option of obtaining an Associate of Applied Science in Culinary Arts or with an emphasis in Hospitality Management.

Our program has drawn students from several countries and states. Student opportunities include career training, job advancement, entrepreneurial skills, and personal development. The Culinary Arts/ Hospitality Management program is diverse and available to meet a variety of needs.

Upon completion, students will be prepared to enter the workforce in positions such as restaurants, health care institutions, commercial foodservice operations, hotel and lodging operations, and entrepreneurial ventures.

One of our many honors was being named one of twenty-two programs recognized nationwide and internationally by the ACFFAC as an Exemplary Program.

Occupational Choices

The Culinary Arts/Hospitality Management Program prepares graduates for virtually unlimited career opportunities that include executive chef, culinary instructors/administrators, food and restaurant critic, food and beverage director, equipment chef, banquet manager/chef, sous chef, research chef, and food sales person. Culinary Arts/Food Service is one of the fastest growing industries in the United States. The U.S. Bureau of Labor Statistics reports Employment of food preparation and serving related occupations is projected to grow 15 percent from 2021 to 2031, faster than average for all occupations, from about 12.5 million jobs to about 13.3 million jobs. Population growth will increase demand for food preparation and serving related occupations as more people are expected to dine out in the future.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Chefs and Head Cooks, at <https://www.bls.gov/ooh/food-preparation-and-serving/chefs-and-head-cooks.htm> (visited March 03, 2023).

Average Full-Time Wage

The median annual wage for chefs and head cooks was \$50,160 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$30,910, and the highest 10 percent earned more than \$84,570.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Chefs and Head Cooks,

at <https://www.bls.gov/ooh/food-preparation-and-serving/chefs-and-head-cooks.htm> (visited March 03, 2023).

Awards Available

Associate of Applied Science

Culinary Arts

Associate of Applied Science

Culinary Arts

Hospitality Management Concentration

Certificate

Culinary Arts

Short Term Certificate

Culinary Arts

Fundamental Cook Concentration

Culinarian Concentration

Program Contact

Brittany Foster

Program Coordinator

334-420-4424

Location: 8 Commerce Street

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degrees	6 Terms	67	\$10,921	\$1,000	\$500	\$200
Certificate	6 Terms	54	\$8,802	\$1,000	\$500	\$200
Short Term Certificate	2 Terms	11	\$1,793	\$1,000	\$500	\$200
Short Term Certificate	3 Terms	28	\$4,564	\$1,000	\$500	\$200

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Culinary Arts

Degree Type

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CUA-101	Orientation to the Hospitality Profession	3
CUA-102	Catering	3
CUA-110	Basic Food Preparation	3
CUA-111	Foundations in Nutrition	3
CUA-112	Sanitation, Safety and Food Service	2
CUA-115	Advanced Food Preparation	3
CUA-120	Basic Food Preparation Lab	2
CUA-173	Culinary Arts Apprenticeship	3
CUA-201	Meat Preparation and Processing	3
CUA-204	Foundations of Baking	3
CUA-206	Advanced Garde Manger	2
CUA-208	Advanced Baking	3
CUA-210	Beverage Management	2
CUA-213	Food Purchasing and Cost Control	3
CUA-251	Menu Design	3
CUA-262	Restaurant Management and Supervision	3
CUA-281	Apprenticeship/Qualifying Dinner	3
HSM-112	Law and Hospitality Industry	3
Total Credits		67

Culinary Arts, Hospitality Management

Degree Type

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CUA-101	Orientation to the Hospitality Profession	3
CUA-102	Catering	3
CUA-110	Basic Food Preparation	3
CUA-111	Foundations in Nutrition	3
CUA-112	Sanitation, Safety and Food Service	2
CUA-115	Advanced Food Preparation	3
CUA-120	Basic Food Preparation Lab	2
CUA-201	Meat Preparation and Processing	3
CUA-204	Foundations of Baking	3
CUA-206	Advanced Garde Manger	2
CUA-208	Advanced Baking	3
CUA-210	Beverage Management	2
CUA-251	Menu Design	3
HSM-112	Law and Hospitality Industry	3
HSM-123	Hospitality Field Experience I	3
HSM-181	Special Topics	3
HSM-250	Hospitality Marketing	3
HSM-281	Special Topics	3
Total Credits		67

Culinary Arts

Degree Type
CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CUA-101	Orientation to the Hospitality Profession	3
CUA-102	Catering	3
CUA-110	Basic Food Preparation	3
CUA-111	Foundations in Nutrition	3
CUA-112	Sanitation, Safety and Food Service	2
CUA-115	Advanced Food Preparation	3
CUA-120	Basic Food Preparation Lab	2
CUA-173	Culinary Arts Apprenticeship	3
CUA-201	Meat Preparation and Processing	3
CUA-204	Foundations of Baking	3
CUA-206	Advanced Garde Manger	2
CUA-208	Advanced Baking	3
CUA-210	Beverage Management	2
CUA-213	Food Purchasing and Cost Control	3
CUA-251	Menu Design	3
CUA-262	Restaurant Management and Supervision	3
CUA-281	Apprenticeship/Qualifying Dinner	3

Electives:

Course Code	Title	Credits
CIS-146	Computer Applications	3
ENG-102	English Composition II	3
Total Credits		54

Culinary Arts, Culinarian

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CUA-101	Orientation to the Hospitality Profession	3
CUA-110	Basic Food Preparation	3
CUA-111	Foundations in Nutrition	3
CUA-112	Sanitation, Safety and Food Service	2
CUA-115	Advanced Food Preparation	3
CUA-120	Basic Food Preparation Lab	2
CUA-201	Meat Preparation and Processing	3
CUA-204	Foundations of Baking	3
CUA-210	Beverage Management	2
CUA-213	Food Purchasing and Cost Control	3
Total Credits		27

Culinary Arts, Fundamental Cook

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CUA-110	Basic Food Preparation	3
CUA-111	Foundations in Nutrition	3
CUA-112	Sanitation, Safety and Food Service	2
CUA-120	Basic Food Preparation Lab	2
Total Credits		10

Dental Assisting

Program Information

The Dental Assisting program is designed to prepare the student for a career in the dental assisting field of dentistry. This program provides students with the theoretical, practical, and clinical skills necessary to get an entry level position in a dental office. Dental Assistants are versatile members of the dental team who work alongside the dentist in providing patient care. The varying roles of a dental assistant includes chairside assisting, front office management, laboratory duties and assisting in a dental specialty office. One class is admitted each August.

Accreditation

The program is accredited by the Commission on Dental Accreditation of the American Dental Association and has been granted the status of "approval" without reporting requirements. The Commission is a specialized accrediting body recognized by the United States Department of Education.

The Certifying Board of the American Dental Association gives special recognition to those who have achieved a high degree of competence and ability in the dental assisting field. The Program is approved by the Board of Dental Examiners of Alabama. Trenholm State Community College is also accredited by the Southern Association of Colleges and Schools (SACSCOC) and all credits are transferrable to four-year college institutions.

Occupational Choices

Employment of dental assistants is projected to grow 8 percent from 2021 to 2031, much faster than the average for all occupations. Ongoing research linking oral health and general health will continue to increase the demand for preventive dental services. Dentists will continue to hire dental assistants to complete routine tasks, allowing the dentist to work more efficiently. As dental practices grow, more dental assistants will be needed. About 56,400 openings are projected each year, on average, over the decade.

Sources: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Dental Assistants, <https://www.bls.gov/ooh/healthcare/dental-assistants.htm>.

Average Full-Time Wage

The median annual wage for dental assistants was \$38,660 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount, and half earned less. The lowest 10 percent earned less than \$29,580, and the highest 10 percent earned more than \$59,540.

Sources: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook

Additional Requirements

Dental Assisting courses begin in the fall and must be taken in sequence with each course in each term being a co-requisite. Students beginning the spring or summer term will be enrolled in general education courses until fall semester begins.

Requirements for the program include but are not limited to: (1) Physical and dental exams by the end of the 2nd week in September and (2) Program uniforms by the end of the 2nd week in October. (3) CPR certification will need to be obtained by the end of September. Once you are enrolled in Program courses, CPR is offered for a cost by the Program before this date. Student must pass all DAT courses with at least a "C" to continue in the Program.

Awards Available

Associate of Applied Science

Dental Assisting

Certificate

Dental Assisting

Program Contact

Kimberly White

Program Coordinator/Instructor

334-420-4427

Location: Trenholm Campus - Bldg. J

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	64	\$10,432	\$1,250	\$500	\$20
Certificate	3 Terms	49	\$7,987	\$800	\$500	\$20

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Dental Assisting

Degree Type

AAS

General Education Requirements (18-19 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-149	Introduction to Computers	3
DAT-100	Introduction to Dental Assisting	2
DAT-101	Pre-Clinical Procedures I	3
DAT-102	Dental Materials	3
DAT-103	Anatomy & Physiology for Dental Asstg	3
DAT-112	Dental Radiology	3
DAT-104	Basic Sciences for Dental Assisting	2
DAT-105	Pre-Clinical Procedure and Practicum	3
DAT-113	Dental Health Education	2
DAT-115	Clinical Practicum I	5
DAT-124	Clinically Applied Infection Control and Osha Standards	1
DAT-120	Office Administration for Dental Assisting	3
DAT-122	Clinical Practice II	4
DAT-123	Dental Assisting Seminar	4
DAT-205	Dental Field Practice	1

* These courses are co-requisites and are offered only in the fall term: [DAT-100](#), [DAT-101](#), [DAT-102](#), [DAT-103](#), [DAT-112](#)

+ These courses are co-requisites and are offered only in the spring term: [DAT-104](#), [DAT-105](#), [DAT-113](#), [DAT-115](#), [DAT-124](#)

o These courses are co-requisites and are offered only in the summer term: [DAT-120](#), [DAT-122](#), [DAT-123](#), [DAT-205](#)

Total Credits

61

Dental Assisting

Degree Type

CER

General Education Requirements (9 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-149	Introduction to Computers	3
DAT-100	Introduction to Dental Assisting	2
DAT-101	Pre-Clinical Procedures I	3
DAT-102	Dental Materials	3
DAT-103	Anatomy & Physiology for Dental Asstg	3
DAT-112	Dental Radiology	3
DAT-104	Basic Sciences for Dental Assisting	2
DAT-105	Pre-Clinical Procedure and Practicum	3
DAT-113	Dental Health Education	2
DAT-115	Clinical Practicum I	5
DAT-124	Clinically Applied Infection Control and Osha Standards	1
DAT-120	Office Administration for Dental Assisting	3
DAT-122	Clinical Practice II	4
DAT-123	Dental Assisting Seminar	4
DAT-205	Dental Field Practice	1

* These courses are co-requisites and are offered only in the fall term: [DAT-100](#), [DAT-101](#), [DAT-102](#), [DAT-103](#), [DAT-112](#)

+ These courses are co-requisites and are offered only in the spring term: [DAT-104](#), [DAT-105](#), [DAT-113](#), [DAT-115](#), [DAT-124](#)

o These courses are co-requisites and are offered only in the summer term: [DAT-120](#), [DAT-122](#), [DAT-123](#), [DAT-205](#)

Total Credits	49
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Diagnostic Medical Sonography

Program Information

This program of study is designed to provide academic and clinical training in the field of general (OB/GYN and Abdominal/Superficial Structures) ultrasound (diagnostic medical sonography). The Associate of Applied Science degree awarded at program completion is a four-semester, competency-based curriculum that includes practical experience in regional health institutions. The ultrasound program at Trenholm State is currently accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) based on the recommendation of accreditation made by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS). By attending a program accredited by CAAHEP, you will be able to apply to take the national certification examinations offered by the ARDMS/ARRT. By successfully completing the certification exams, you will be awarded the credential 'registered sonographer'.

Occupational Choices

Employment of diagnostic medical sonographers is projected to grow 10 percent from 2021 to 2031, much faster than the average for all occupations. *Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021-2031 Edition, 2022 Survey*

Average Full-Time Wage

The median annual wage for cardiovascular technologists and technicians was \$57,720 in May 2019. The median wage is the wage at which half the workers in an occupation earned more than that amount, and half earned less. The lowest 10 percent earned less than \$29,710, and the highest 10 percent earned more than \$94,370. The median annual wage for diagnostic medical sonographers was \$77,740 in May 2021. The highest 10 percent earned more than \$101,650 annually, with the lowest 10 percent earning \$59,640 a year.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021-2031 Edition, 2022 Survey

Admission Criteria and Requirements

Program applications and deadline for application submission will be posted to the Ultrasound (Diagnostic Medical Sonography) webpage.

Applicants must:

- Meet all general admission requirements of Trenholm State Community College and be in good standing.
- Complete all general required courses (prerequisites) courses with a minimum grade of "C" in each course (see program webpage).
- Have a minimum ACT score of 20 on the national ACT exam (writing section not required).
- Have a minimum cumulative GPA of 2.5 or greater on a 4.0 scale with a grade of "C" or better on all general required prerequisite courses. Math/Sciences courses must have been completed within seven (7) years of the date of expected entry into the DMS-program.
- Submit a completed DMS-program application by the application deadline to include all the following documents:
 1. Completed DMS-Program Application. The program application can be found on the website. For application deadline information please visit DMS webpage, Select Programs> Health Sciences Division>Ultrasound.
 2. Copies of transcripts from ALL colleges previously attended
 3. A copy of your Trenholm State transcript showing completion and transfer of ALL prerequisite courses
 4. A copy of your ACT score showing 20 or higher. All applicants will be ranked according to his/her ACT score. Applicants with the highest ACT scores will be issued acceptance letters. Average ACT score for the past three years is 21.8.

Essential Eligibility Criteria. Student must be able to, with or without reasonable accommodation:

- access and accurately understand or analyze requisitions, orders, charts, directions, and other job-related documentation and communications;

- independently travel through the sonography department and to other departments and floors of the hospital;
- remain in a stationary position either sitting or standing for an extended time, equal to or greater than 30 minutes;
- assist patients to transfer from beds, wheelchairs, and stretchers to the sonography table and back;
- independently be able to perform CPR, first aid and general patient care;
- give clear commands to patients and communicate effectively with patients and professional staff; including with individuals wearing masks;
- independently access, adjust, and operate sonography equipment;
- independently assess the ongoing functioning of the sonography machine and other equipment;
- independently assess sonographic images, controls, labels, and observe patients; and
- work in a sterile environment, prepare sterile fields, and fill sterile syringes.

Admission to the Ultrasound (Diagnostic Medical Sonography) Program is competitive, and the number of students is limited by the number of faculty and clinical facilities available. Meeting minimal requirements does not guarantee acceptance.

Awards Available

Associate of Applied Science

Diagnostic Medical Sonography

Short Term Certificates

Vascular Sonography Concentration
Cardiac Sonography/Echocardiography

Program Contact

April Fricks

Program Director/Instructor

334-420-4334

Location: Trenholm Campus - Bldg. H

LaTonya Caudle

Clinical Coordinator/Instructor

334-420-4358

Location: Trenholm Campus - Bldg. H

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree (w/ prereqs)	6 Terms	76	\$12,388	\$1,250	0	\$350
(Not including prerequisites)	4 Terms	54	\$8,802	\$1,250	0	\$350
Short Term Certificates (2)	1 Term	14	\$2,282	\$350	0	\$200

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Diagnostic Medical Sonography (Ultrasound)

Degree Type

AAS

General Education Requirements (21 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If SPH-106, SPH-107, SPA-101 or SPA-102 has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II. Students may choose any humanities course from the list below – the **Ultrasound Program requires only one (3-hour) humanities course as a prerequisite. ***

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (12 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-120	Medical Terminology	3
BIO-201	Human Anatomy and Physiology I	4
PHY-112	Principle of Physics	2

Area IV - History, Social & Behavioral Sciences (3 hours)

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1

Program Requirements:

Course Code	Title	Credits
DMS-202	Foundations of Sonography	3
DMS-205	Abdominal Sonography I with Lab	4
DMS-206	Gynecologic Sonography with Lab	4
DMS-207	Abdominal Pathology	3
DMS-215	Intro to Sonographic Prin/Instr.	2
DMS-216	Sonographic Princpls/Instr. I	3
DMS-217	Sonographic Principles and Instr. II	2
DMS-220	Obstetrical Sonography I	3
DMS-221	Obstetrical Sonography II	3
DMS-225	Superficial Sonography	1
DMS-229	Sonography Preceptorship I	2
DMS-230	Sonography Preceptorship II	3
DMS-231	Sonography Preceptorship III	4
DMS-232	Sonography Preceptorship IV	5
DMS-233	Sonographic Lab I	1
DMS-234	Sonography Lab II	1
DMS-235	Sonographic Lab III	1
DMS-240	Sonographic Priciples & Instrumentation Seminar	2
DMS-241	Abdominal & OBGYN Seminar	3
DMS-245	Sonography Case Presentations	1
DMS-250	Intro to Advanced Sonography	3

Note: Although a CIS course is not required, all DMS-students will be required to demonstrate computer literacy through online assignment, presentations, and other computer-based activities. Students must also complete computer literacy competency assignment.

Required General Education * (21 credit hours): [ENG-101](#), [MTH-100](#), [BIO-120](#), [BIO-201](#), [PHY-112](#), [PSY-200](#)

Please Note: The above courses must be completed prior to applying to the Diagnostic Medical Sonography program. All courses are offered at Trenholm State Community College. Transferability of courses from other education institutions will be assessed upon submission of a complete College application.

Total Credits **76**

Diagnostic Medical Sonography, Cardiac Sonography/ Echocardiography

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
DMS-270	Introduction to Cardiac Sonography	3
DMS-271	Echocardiographic Technology	3
DMS-273	Pathology of Cardiovascular System	3
DMS-274	Echo Clinical	5

Online: [DMS-270](#), [DMS-273](#)

Hybrid: [DMS-271](#)

Total Credits **14**

Diagnostic Medical Sonography, Vascular Sonography

Degree Type
STC

****Eligible students must have completed a general sonography program and be registered with American Registry of Diagnostic Medical Sonographers (ARDMS) or American Registry of Radiologic Technologists (ARRT) in Sonography**

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
DMS-260	Introduction to Vascular Sonography	3
DMS-261	Vascular Sonography Techniques	3
DMS-263	Pathology of Vascular Systems	3
DMS-264	Vascular Sonographic Clinical	5

Online: [DMS-260](#), [DMS-263](#)

Hybrid: [DMS-261](#)

Total Credits **14**

Diesel Mechanics

Program Information

The Diesel Mechanics Program at Trenholm State Community College is designed to teach a student the basic principles required in the repair and maintenance of components in the trucking, equipment, and farm related industries. The student will gain hands-on experience repairing, troubleshooting, and rebuilding various components in these areas.

Occupational Choices

Employment of diesel service technicians and mechanics is projected to grow 4 percent from 2021 to 2031, about as fast as the average for all occupations.

As more freight is shipped across the country, additional diesel-powered trucks will be needed to carry freight wherever trains and pipelines are not available or economical. In addition, diesel cars and light trucks are becoming more popular, and more diesel technicians will be needed to maintain and repair these vehicles.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Diesel Service Technicians and Mechanics, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/diesel-service-technicians-and-mechanics.htm> (visited *March 03, 2023*).

Average Full-Time Wage

The median annual wage for diesel service technicians and mechanics was \$48,690 in 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount, and half earned less. The lowest 10 percent earned less than \$35,730, and the highest 10 percent earned more than \$76,150.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Diesel Service Technicians and Mechanics, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/diesel-service-technicians-and-mechanics.htm> (visited *March 03, 2023*).

Awards Available

Certificate

Diesel Mechanics

Short Term Certificate

Diesel Mechanics

Drive Train

Electrical/Electronics

Engine Rebuild

Program Contact

Robert "Sam" Warren
Program Coordinator/Instructor
334-420-4365
Location: Patterson Site - Bldg. L

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Certificate	3 Terms	44	\$7,172	\$176	\$600	\$0

Short Term Certificates (3)	1 Term	13	\$2,119	\$176	\$600	\$0
Estimated cost of books (CDX Online Annual Subscription) for total program will be \$176.						

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Diesel Mechanics

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-100	Vocational Technical English	3
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
DEM-119	Bearings and Lubricants	3
DEM-122	Heavy Vehicle Brakes	3
DEM-123	Pneumatics and Hydraulics	3
DEM-125	Heavy Vehicle Drive Trains	3
DEM-128	Heavy Vehicle Drive Train Lab	3
DEM-129	Diesel Engine Lab	3
DEM-130	Electrical / Electronic Fundamentals	3
DEM-145	Electrical Schematics and Symbols	3
DEM-146	Engine Fundamentals	3
DEM-147	Fuel and Ignition Systems	3
DEM-181	Special Topics in Electrical	3
DEM-191	Special Projects in Diesel Mechanics	3
DEM-262	Co-Op	1

Electives:

Course Code	Title	Credits
CIS-103	Introductory Computer Skills II	3
CIS-146	Computer Applications	3
CIS-149	Introduction to Computers	3
Total Credits		44

Diesel Mechanics, Drive Train

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
DEM-122	Heavy Vehicle Brakes	3
DEM-123	Pneumatics and Hydraulics	3
DEM-125	Heavy Vehicle Drive Trains	3
DEM-128	Heavy Vehicle Drive Train Lab	3
Total Credits		12

Diesel Mechanics, Electrical/ Electronics

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
DEM-130	Electrical / Electronic Fundamentals	3
DEM-145	Electrical Schematics and Symbols	3
DEM-181	Special Topics in Electrical	3
DEM-191	Special Projects in Diesel Mechanics	3
Total Credits		12

Diesel Mechanics, Engine Rebuild

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
DEM-119	Bearings and Lubricants	3
DEM-129	Diesel Engine Lab	3
DEM-146	Engine Fundamentals	3
DEM-147	Fuel and Ignition Systems	3
Total Credits		12

Electrical

Program Information

Electrical wiring is an integral part of industry, commercial enterprises, and residential homes. The Electrical curriculum integrates basic electrical skills and high-tech instrumentation for a wide range of industrial employment. The term “instrumentation” refers to instruments used to measure and control manufacturing conversions or treating processes. Knowledge of electricity and process control gives a person a more marketable skill to offer all industries. These fields expand into SMART instruments, PLC/DCS interface and AC variable frequency motor controls. The Electrical Technology program is designed to teach the basic principles of electricity, the National Electric Code, and the safe installation of electrical wiring and equipment. Electrical/Instrumentation Technology is designed to teach basic instrumentation for measurement and control in manufacturing. Through the various courses, a student will gain knowledge and practical hands-on experience in both technologies for servicing, troubleshooting and monitoring these systems and equipment.

Occupational Choices

Employment of electrical and electronics installers and repairers of commercial and industrial equipment, which represents about half of this profile’s 2021 employment, is projected to grow by seven percent from 2021 to 2031, slower than the

average for all occupations. As the industrial sectors of the economy expand, these workers will be needed to service and repair equipment.

Employment of powerhouse, substation, and relay electrical and electronics installers and repairers is projected to grow 4 percent from 2016 to 2026, slower than the average for all occupations. Although the installation of new, energy-efficient technologies will likely spur demand for some new workers, slow employment growth in the utilities industries is expected to temper demand for these workers.

Employment of electric motor, power tool, and related repairers is projected to decline 1% from 2021 to 2031, about as fast as the average for all occupations. Improvements in electrical and electronic equipment design, as well as the increased use of disposable tool parts, are expected to result in slow employment growth. Overall job opportunities should be good for qualified workers who are familiar with electronics, especially those with an associate’s degree in electronics.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Electricians, at <https://www.bls.gov/ooh/construction-and-extraction/electricians.htm> (visited March 03, 2023).

Average Full-Time Wage

The median annual wage for electricians was \$60,040 in May2021. The median wage is the wage at which half the workers in an occupation earned more than that amount, and half earned less. The lowest 10 percent earned less than \$33,730 and the highest 10 percent earned more than \$93,650.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Electricians, at <https://www.bls.gov/ooh/construction-and-extraction/electricians.htm> (visited March 03, 2023).

Additional Requirements

- Student must be at least 16 years of age.
- Student must have an official copy of high school transcript or GED certificate and transcript from other colleges on file in the admissions office.
- Student must take the ACCUPLACER test.

- Student must be able to perform simple mathematical computations correctly.

Awards Available

Associate of Applied Science

Automotive/Advanced Manufacturing
Electrical

Electrician
Instrumentation

Short Term Certificate

Automotive/Advanced Manufacturing
Electrical

Entry Level Technician Concentration
Instrumentation Concentration

Program Contact

Edward Abrasley
Program Coordinator/Instructor
334-420-4369

Location: Patterson Site - Bldg. M

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	74	\$12,062	\$1,920	\$600	\$300
Associate Degree	6 Terms	73	\$11,899	\$1,920	\$600	\$300
Short Term Certificate	3 Terms	26	\$4,238	\$1,000	\$600	\$200
Short Term Certificate	3 Terms	29	\$4,727	\$1,000	\$600	\$200

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Automotive/Advanced Manufacturing Electrical, Electrician

Degree Type

AAS

General Education Requirements (15 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-103	Intro to Technical Mathematics	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

***These courses are required for this program:**
[MTH-100](#), [MTH-104](#).

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ELT-104	Distribution Systems	3
	ELT-108 or INT-101 or ADM-120	3
ELT-110	Wiring Methods	3
	ELT-112 or INT-122	5
ELT-114	Residential Wiring Methods	3
ELT-117	Ac/DC Machines	3
ELT-118	Commercial/Industrial Wiring I	3
	ELT-119 or INT-123	5
ELT-121	Concepts of Digital Electronics	5
	ELT-206 or ADM-111	3
	ELT-209 or INT-113	3
ELT-212	Motor Controls II	3
	ELT-231 or INT-184	3
	ELT-232 or INT-284	3
ELT-234	PLC Applications	3
ELT-241	National Electric Code	3
ELT-286	Co-Op	1
	MTT-147 or ADM-101	3
	Total Credits	74

Automotive/Advanced Manufacturing Electrical, Instrumentation

Degree Type

AAS

General Education Requirements (15 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-103	Intro to Technical Mathematics	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

***These courses are required for this program:**

[MTH-100](#), [MTH-104](#).

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
AUT-211	Industrial Robotics Lab	2
ELT-108	DC Fundamentals	3
ELT-110	Wiring Methods	3
ELT-112	Concepts of Alternating Current	5
ELT-121	Concepts of Digital Electronics	5
ELT-119	Concepts of Solid-State Electronics	5
	ELT-206 or ADM-111	3
ELT-209	Motor Controls I	3
ELT-212	Motor Controls II	3
ELT-219	Fluid Power Systems	3
ELT-231	Introduction to Programmable Controllers	3
ELT-232	Advanced Programmable Controllers	3
ELT-234	PLC Applications	3
ILT-108	Introduction to Instruments and Process Control	3
ILT-110	Advanced Industrial Process Control Technology	3
ILT-114	Instrumentation Operation and Calibration	3
ELT-286	Co-Op	1
	MTT-147 or ADM-101	3
	Total Credits	73

Automotive/Advanced Manufacturing Electrical, Entry Level Technician

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ELT-108	DC Fundamentals	3
ELT-110	Wiring Methods	3
ELT-112	Concepts of Alternating Current	5
ELT-119	Concepts of Solid-State Electronics	5
	ELT-206 or ADM-111	3
ELT-209	Motor Controls I	3
	Total Credits	22

Automotive/Advanced Manufacturing Electrical, Instrumentation

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ELT-108	DC Fundamentals	3
ELT-112	Concepts of Alternating Current	5
ELT-119	Concepts of Solid-State Electronics	5
	ELT-206 or ADM-111	3
ELT-219	Fluid Power Systems	3
ILT-108	Introduction to Instruments and Process Control	3
ILT-110	Advanced Industrial Process Control Technology	3
ILT-114	Instrumentation Operation and Calibration	3
	Total Credits	28

Entrepreneurship

The Associate of Applied Science Degree in Business Administration, Entrepreneurship Option at Trenholm State Community College provides the knowledge and skills necessary to prepare graduates for a career in business administration that will ultimately create career pathways enabling students to transfer to baccalaureate degree programs. Furthermore, it will provide a concentration in entrepreneurship.

The Business Administration program will also translate for seamless articulations to the Bachelor of Science in Business Administration programs at partnering universities. Graduates and program completers will be academically prepared to advance their vocations, but also prepare for matriculation to higher education. This program will provide students with a robust program that provides academic rigor. The program will provide not only an associate degree but also a short certificate. The entrepreneur-ship options will provide students with the skills necessary to take a business idea from conception through funding and development. Entrepreneurs are more than just business owners or CEOs; they create a tangible product or an intangible service to help the people they have defined as their target market. Entrepreneurs who take their own ideas and run with them might end up as business owners, CEOs, managers or consultants.

Occupational Choices

The entrepreneurship option prepares students for startup of a new small business from the beginning. The Business Employment Dynamics section of Bureau of Labor Statistics website states, "Entrepreneurship plays a vital role in the growth of the U.S. economy. New business establishments make an important contribution to the economy". Small businesses are typically the entry point for entrepreneurs as they develop ideas and build a customer base before deciding whether to expand.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021 Survey

Average Full-Time Wage

Project salary for Entrepreneurs can range depending the business venture. the Bureau of Labor Statistics. The Bureau of Labor Statistics projects, "Employment of entrepreneurship occupations is projected to grow 7.9 percent from 2018 to 2028, about as fast as the average for all occupations, which will result in about 254,000 new jobs".

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021 Survey

Awards Available

Associate of Applied Science

Business Administration
Entrepreneurship

Short Term Certificate

Business Administration
Entrepreneurship

Program Contact

Brittany Foster
Division Chair - Professional Transfer
334-420-4424

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	68	\$11,084	\$2,500	\$100	\$500
Short Term Certificate	3 Terms	28	\$4,564	\$1,500	\$100	\$250

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Business Administration, Entrepreneurship

Degree Type

AAS

General Education Requirements (18-19 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If SPH-106, SPH-107, SPA-101 or SPA-102 has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-103	Principles of Biology I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours):

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
ECO-232	Principles of Microeconomics	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3
PSY-200	General Psychology	3
SOC-200	Introduction to Sociology	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
ACT-201	Entrepreneurism	3
BUS-100	Introduction to Business	3
BUS-186	Elements of Supervision	3
BUS-241	Principles of Accounting I	3
BUS-242	Principles of Accounting II	3
BUS-275	Principles of Management	3
BUS-276	Human Resource Management	3
BUS-279	Small Business Management	3
BUS-296	Business Internship	3
ECO-231	Principles of Macroeconomics	3
ETP-265	Entrepreneurial Marketing	3
ETP-266	Entrepreneurial Finance	3
ETP-267	Innovation and Creativity	3
ETP-268	Business Planning	3
	OAD-133 or BUS-215	3

Technical Electives:

Course Code	Title	Credits
ACT-257	Govt & Not for Profit Accounting	3
BUS-252	Accounting Case Studies	3
BUS-263	The Legal and Social Environment of Business	3
CIS-203	Intro to the Information Highway	3
CIS-207	Web Development	3
OAD-103	Intermediate Keyboarding	3
OAD-125	Word Processing	3
OAD-230	Desktop Publishing	3
OAD-243	Spreadsheet Applications	3
OAD-244	Database Applications	3
OAD-246	Office Graphics & Presentation	3
Total Credits		68

**Business Administration,
Entrepreneurship**

Degree Type

STC

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-146	Computer Applications	3
ACT-201	Entrepreneurism	3
BUS-100	Introduction to Business	3
BUS-241	Principles of Accounting I	3
BUS-275	Principles of Management	3
BUS-279	Small Business Management	3
ETP-265	Entrepreneurial Marketing	3
ETP-266	Entrepreneurial Finance	3
	OAD-133 or BUS-215	3
	Total Credits	27

General Education

H. Councill Trenholm State Community College's General Education program provides the courses necessary for the completion of the associate of arts and associate of science degrees designed for transfer. General Education also supports all other programs at Trenholm State by providing students with the critical values and range of knowledge and skills in the arts and sciences. Trenholm State graduates will demonstrate competency in basic mathematics, writing, oral communication, and basic computer usage. Students also discover certain basic principles, concepts, and methodologies both unique to and shared by the various disciplines. In addition, students learn the modes of inquiry of the major disciplines, and General Education leads them through learning activities in experiencing and appreciating the creative arts, in understanding multicultural and diverse perspectives, and in achieving insights gained through experiences involving ethical and social issues. Through these learning experiences, students develop self-understanding and become life-long learners.

General Education competencies expected and measured by the College include the following:

Scientific Effectiveness

Students will demonstrate an understanding of scientific concepts through the ability to use processes, procedures, data, or evidence. (BIO 101, 103, PHS 111, PHS 112, PSY 200)

Cultural Awareness

Students will develop the knowledge and skills to evaluate diverse cultures and forms of art. (ART 100, MUS 101)

Oral Communication

Students will demonstrate the ability to transmit ideas clearly and information orally in a way that is appropriate to the topic, purpose, and audience. (SPH 106, SPH 107)

Computational Skills

Students will accurately analyze and solve mathematical problems. (MTH 100, MTH 110, MTH 112)

Written Communication Skills

Students will create documents that are unified, coherent, well-supported, and error-free. (ENG 101)

Developmental education courses are offered to meet three types of needs. First, they prepare individuals for admission to occupational/technical programs. Second, they assist students who have begun coursework but are now experiencing difficulties or would like to improve efficiency. Finally, developmental courses provide an opportunity for individuals who are interested in improving their skills in particular areas but are not necessarily enrolled in a program. Students can enroll in courses to meet these three needs both during the regular school year and during the summer term.

Developmental courses are the first step toward a successful college experience for many students. Students who enroll in these courses learn to become independent and successful learners so they will meet their personal, educational, and professional goals. Additionally, developmental education is designed to improve academic skills, such as critical thinking, and essentials such as reading, writing, and mathematics. These courses also aim to help students achieve the following:

- develop academic survival skills;

- set personal, educational, and career goals;
- use technology in academic and workplace settings; and
- learn the academic culture of the college.

Estimated Program Length and Cost *

Award	Length	Credit Hours	Tuition Fees	Books	Tools	Supplies
Associate Degree	6 Terms	63	\$10,269	\$1750	0	\$250
Short Term Certificate	1-2 Terms	29	\$4,727	\$1400	0	\$250

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional-level general education courses will alter the length of the program.

Awards Available

Associate of Arts

Associate of Science

Short Term Certificate

General Studies

Program Contact

Ronica Thomas Division Director/Instructor
334-420-4271

rtthomas@trenholmstate.edu Location: Bldg. J -
Trenholm Campus

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Degree Requirements

Students in the Associate of Arts degree program usually transfer to a four-year institution in such fields as Art, Elementary or Secondary Education, Health, Physical Education and Recreation, Music, or Theater.

Students in the Associate of Science degree program usually transfer to a four-year institution in the

Natural Sciences, the Professional Sciences, Mathematics, Computer Science, Business Administration, or Nursing fields.

As part of a transfer degree, students will take freshman- and sophomore-level general education courses in a wide range of disciplines.

All students enrolled at the institution are required to complete a specific number of semester hours in English Composition (Area I); Humanities and Fine Arts (Area II); Natural Sciences and Mathematics (Area III); and History, Social, and Behavioral Sciences (Area IV). These courses are referred to as CORE courses.

In addition to CORE courses, students will choose Electives (Area V), which will more specifically prepare them for transfer in their particular fields of interest.

Area I: Written Communication (6 hours)

- English Composition I and English Composition II

Area II: Humanities and Fine Arts (*12 credit hours)

- Must complete at least three semester hours in Literature.
- Must complete at least three semester hours in Arts.
- Must complete a six-hour sequence in Literature or History

Area III: Natural Science & Mathematics (*11 credit hours)

- Must complete three semester hours in Mathematics at the Pre-Calculus Algebra (MTH-112) or Finite Math (MTH-110) level or above. (Prerequisites and/or developmental courses may be required for some students before enrolling in these courses).
- Must complete eight semester hours in the Natural Sciences, which must include laboratory experiences.

Area IV: History, Social, and Behavioral Sciences (*12 credit hours)

- Must complete at least three semester hours in History.

- Must complete a six-hour sequence in Literature or History.
- The remaining semester hours should be selected from disciplines in Social and Behavioral Sciences.

Areas I-IV: Minimum general education requirements (41 credit hours)

The Alabama Articulation and General Studies Committee (AGSC) approved CORE courses, including courses not offered by Trenholm State, transferred from another college will meet requirements for Areas I-IV.

Area V: Pre-professional, Pre-major, and Elective Courses (**19-23 credit hours)

For additional courses, students must consult with their advisors to obtain Articulation Degree Plans for their specific areas of concentration. The Articulation Degree Plan will list specific course requirements for transfer. However, since acceptance of transfer credits is ultimately determined by the senior institution, a student planning to transfer must consult with his/her advisor as well as the catalog of the institution to which he/she plans to transfer to ensure transfer credit. For additional course information of professional/pre-major courses, the Alabama Articulation and General Studies Committee / STARS may be utilized to determine course transferability.

Additional degree requirements:

ORI-101 (one credit hour) is required of all new students to Trenholm State.

Areas I-V: General studies curricula (60 credit hours)
 *** Maximum program semester credit hours (64)
 Semester credit-hour range by award (64)***

Students must complete a six-hour sequence in Literature or History

** See the Articulation Degree Plan for specific course requirements for Areas II, III, and IV.

*** Respective programs of study for baccalaureate degrees at Alabama public universities range from 120 to 128 semester credit hours in length. Depending on the total hours allocated for the

bachelor's degrees, institutions in the Alabama Community College System are authorized to provide 50 percent of the total (60-64).

Associate of Arts

Degree Type

AA

General Education Requirements (18-19 hours)

Area I: Written Communication (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (12 hours)

(Humanities and Arts disciplines include but are not limited to Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: Must complete at least 3 semester hours in Literature* and at least 3 semester hours in the Arts.

The remaining semester hours are to be selected from Humanities and/or Fine Arts.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (11 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: Must complete at least 3 semester hours in Mathematics at the Pre-Calculus Algebra or Finite Math level or higher. Must complete at least 8 semester hours in the Natural Sciences which must include laboratory experiences.

Mathematics:

Course Code	Title	Credits
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
CHM-104	Introduction to Chemistry I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (12 hours)

(Social and Behavioral Sciences include, but are not limited to Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete at least 3 semester hours in History* and at least 6 semester hours in other disciplines in the Social and Behavioral Sciences.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
ECO-231	Principles of Macroeconomics	3
ECO-232	Principles of Microeconomics	3
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
	Electives (18 credits)	18

Students must meet with an academic advisor to determine remaining courses in Area V to satisfy 18 credit hour requirement.

Must complete at least three semester hours in Arts; must complete at least three semester hours in Literature; must complete a six-hour sequence in Literature or History.

Students in the Associate of Arts degree program usually transfer to a four-year institution in such fields as Art, Elementary or Secondary Education, Health, Physical Education and Recreation, Music, or Theater.

Total Credits	63
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Associate of Science

Degree Type

AS

General Education Requirements (18-19 hours)

Area I: Written Communication (6 hours)

Note: Must complete ENG-101 and ENG-102

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (12 hours)

(Humanities and Arts disciplines include but are not limited to Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: Must complete at least 3 semester hours in Literature* and at least 3 semester hours in the Arts.

The remaining semester hours are to be selected from Humanities and/or Fine Arts.

Arts

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (11 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: Must complete at least 3 semester hours in Mathematics at the Pre-Calculus Algebra or Finite Math level or higher. Must complete at least 8 semester hours in the Natural Sciences which must include laboratory experiences.

Mathematics:

Course Code	Title	Credits
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
CHM-104	Introduction to Chemistry I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (12 hours)

(Social and Behavioral Sciences include, but are not limited to Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete at least 3 semester hours in History* and at least 6 semester hours in other disciplines in the Social and Behavioral Sciences.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
ECO-231	Principles of Macroeconomics	3
ECO-232	Principles of Microeconomics	3
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
Electives (18 credits)		18

Students must meet with an academic advisor to determine remaining courses in Area V to satisfy 18 credit hour requirement.

Students must complete at least three semester hours in Arts; must complete at least three semester hours in Literature; must complete a six-hour sequence in Literature or History.

Students in the Associate of Science degree program usually transfer to a four-year institution in such fields as Art, Elementary or Secondary Education, Health, Physical Education and Recreation, Music, or Theater.

Total Credits

63

General Studies

Degree Type

STC

Area I: Written Communication (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (9 hours)

(Humanities and Arts disciplines include but are not limited to Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: Must complete at least 3 semester hours in Literature* and at least 3 semester hours in the Arts.

The remaining semester hours are to be selected from Humanities and/or Fine Arts.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: Must complete at least 3 semester hours in Mathematics at the Pre-Calculus Algebra or Finite Math level or higher. Must complete at least 8 semester hours in the Natural Sciences which must include laboratory experiences.

Mathematics:

Course Code	Title	Credits
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
CHM-104	Introduction to Chemistry I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (6 hours)

(Social and Behavioral Sciences include, but are not limited to Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete at least 3 semester hours in History* and at least 6 semester hours in other disciplines in the Social and Behavioral Sciences.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
ECO-231	Principles of Macroeconomics	3
ECO-232	Principles of Microeconomics	3
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Total Credits	28
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Graphic Design

Program Information

Graphic Design is a vital component of the communications people receive each day. Personal, professional, business, and industry transactions could not exist without visual images. Today, graphic design has become a “high-tech” field and the technical skills and knowledge base necessary to produce visually rich products has grown astronomically. Graphic designers create visual concepts, by hand and use computer software, to communicate ideas that inspire, inform, or captivate consumers. They help to make an organization recognizable by selecting color, images, or logo designs that represent a particular idea or identity to be used in advertising and promotions.

In the Graphic Design program at Trenholm State Community College, students receive instruction in graphic design, illustration, 3D design, print design, web design, photography, video and new media, graphic image generation, and various other areas of study to stay abreast of the rapidly advancing technology in the Graphic Design industry. With dedication and commitment to this program, a

student will be able to achieve a degree of skill enabling him or her to graduate and obtain employment in the Graphic Design industry.

Occupational Choices

Employment of graphic designers is projected to grow 3 percent from 2021 to 2031.

While overall employment in this occupation is expected to go down, specific projections vary by industry. For example, employment of graphic designers in newspaper, periodical, book, and directory publishers is projected to decline significantly. In contrast, employment of graphic designers in computer systems design and related services is projected to grow. Companies are continuing to increase their digital presence, which sometimes requires graphic designers to help create visually appealing and effective layouts of websites.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Graphic Designers, at <https://www.bls.gov/ooh/arts-and-design/graphic-designers.htm> (visited March 03, 2023).

Average Full-Time Wage

The median annual wage for graphic designers was \$50,710 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$31,310, and the highest 10 percent earned more than \$98,260.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Graphic Designers, at <https://www.bls.gov/ooh/arts-and-design/graphic-designers.htm> (visited March 03, 2023).

Awards Available

Associate of Applied Science

Graphic Design

Certificate

Graphic Design

Short Term Certificate

Graphic Design

Design Concentration

Layout Concentration

Visual Design Concentration

Program Contact

Spencer Arington
 Program Coordinator/Instructor
 334-420-4223
 Location: Patterson Site - Bldg. K

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	76	\$12,388	\$300	\$35	\$75
Certificate	4 Term	37	\$6,031	\$300	\$35	\$75
Short Term Certificate	2 Terms	13	\$2,119	\$300	\$35	\$75

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Graphic Design

Degree Type

AAS

General Education Requirements (18 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
GRD-101	Introduction to Graphics	3
GRD-112	Layout and Design	3
GRD-114	Illustration Graphics	3
GRD-116	Photoshop	3
GRD-118	Graphic Design Techniques	3
GRD-150	Web Design	3
GRD-190	Portfolio Preparation	3
GRD-212	Publication Design	3
GRD-214	Illustration Design Techniques	3
GRD-216	Photoshop Techniques	3
GRD-290	Portfolio Presentation	3

Electives:

Course Code	Title	Credits
GRD-121	Digital Photography Foundation	3
GRD-137	3-D Fundamentals	3
GRD-143	Digital Video Foundation	3
GRD-160	Production Procedures	3
GRD-164	Illustration Design	3
GRD-170	Production Processes	3
GRD-171	Digital Photography Techniques	3
GRD-175	Web Graphics	3
GRD-183	Digital Video Production	3
GRD-187	3-D Animation	3
GRD-219	Photoshop Imaging	3
GRD-221	Conceptual Digital Photography	3
GRD-225	Publication Studio	3
GRD-230	Basic Multimedia Presentation	3
GRD-235	Advanced Multimedia Production	3
GRD-237	3-D Graphics and Animation	3
GRD-240	Graphic Software Exploration	3
GRD-243	Digital Video Effects	3
GRD-250	Web Media	3
GRD-261	Design Studio I	3
GRD-262	Design Studio II	3
GRD-263	Design Studio III	3
GRD-264	Illustration Design Studio	3
GRD-265	Package Design Studio	3
GRD-271	Digital Photography Studio	3
GRD-275	Web Design Studio	3
GRD-283	Digital Video Studio	3
GRD-287	3-D Studio	3
GRD-292	Practicum / Coop	3
GRD-294	Practicum / Coop	3
GRD-295	Graphic Trends	3
GRD-298	Graphic Trends	3
Total Credits		76

Graphic Design

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
GRD-101	Introduction to Graphics	3
GRD-112	Layout and Design	3
GRD-114	Illustration Graphics	3
GRD-116	Photoshop	3
GRD-118	Graphic Design Techniques	3
GRD-150	Web Design	3
GRD-190	Portfolio Preparation	3
GRD-212	Publication Design	3
GRD-214	Illustration Design Techniques	3
GRD-216	Photoshop Techniques	3
Total Credits		37

Graphic Design, Design

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
GRD-101	Introduction to Graphics	3
GRD-114	Illustration Graphics	3
GRD-116	Photoshop	3
	GRD Elective	3
Total Credits		12

Graphic Design, Visual Design

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
GRD-150	Web Design	3
GRD-190	Portfolio Preparation	3
GRD-212	Publication Design	3
	GRD Elective	3
Total Credits		12

Graphic Design, Layout

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
GRD-112	Layout and Design	3
GRD-118	Graphic Design Techniques	3
GRD-214	Illustration Design Techniques	3
GRD-216	Photoshop Techniques	3
Total Credits		12

Industrial Systems & Automation

Program Information

Industrial machinery mechanics keep machines in working order by detecting and correcting errors before the machine or the products it produces are damaged. Many of these machines are increasingly run by computers. Industrial machinery mechanics use technical manuals, their understanding of industrial equipment, and observation to determine the cause of a problem. For example, after detecting a vibration from a machine, they must decide whether it is the result of worn belts, weak motor bearings, or some other problem. They may use

computerized diagnostic systems and vibration analysis techniques to help figure out the source of problems. Examples of machines they may work with are robotic welding arms, automobile assembly line conveyor belts, and hydraulic lifts. After diagnosing a problem, the industrial machinery mechanic may take the equipment apart to repair or replace the necessary parts. Once a repair is made, mechanics test a machine to ensure that it is operating correctly.

Occupational Choices

Overall employment of industrial machinery mechanics, machinery maintenance workers, and millwrights is projected to grow 14 percent from 2021 to 2031, much faster than the average for all occupations. Employment growth will vary by occupation. The increased adoption of sophisticated manufacturing machinery will require more mechanics and millwrights to keep machines in good working order. Increased automation, including the use of many computer-controlled machines in factories and manufacturing plants, should raise the demand for machinery maintenance workers in order to keep the machines functioning properly. The increased use of machinery in manufacturing will require millwrights to install and disassemble this equipment, as well as perform some repair work on it. Job prospects will be good, particularly for applicants with a broad range of skills in machine repair as older workers retire or otherwise leave the occupation.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Industrial Machinery Mechanics, Machinery Maintenance Workers, and Millwrights, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/industrial-machinery-mechanics-and-maintenance-workers-and-millwrights.htm> (visited *March 03, 2023*).

Average Full-Time Wage

The median annual wage for industrial machinery mechanics, machinery maintenance workers, and millwrights was \$59,380 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount and half

earned less. The lowest 10 percent earned less than \$37,260, and the highest 10 percent earned more than \$78,900.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Industrial Machinery Mechanics, Machinery Maintenance Workers, and Millwrights, at <https://www.bls.gov/ooh/installation-maintenance-and-repair/industrial-machinery-mechanics-and-maintenance-workers-and-millwrights.htm> (visited *March 03, 2023*).

Awards Available

Associate of Applied Science

Automotive/Advanced Manufacturing
Industrial Systems & Automation

Mechanical FAME
Mechanical Non-FAME
Instrumentation

Certificate

Automotive/Advanced Manufacturing
Industrial Systems & Automation

Mechanical
Instrumentation

Short Term Certificate

Automotive/Advanced Manufacturing
Industrial Systems & Automation

Mechanical Technician
Instrumentation Technician

Program Contact

Location: Patterson Site - Bldg. Q

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	73	\$11,899	\$800	\$650	0
Associate Degree	6 Terms	65	\$10,595	\$800	\$650	0

Certificate	5 Terms	55	\$8,965	\$600	0	0
Certificate	5 Terms	58	\$9,454	\$600	0	0
Short Term Certificate	2 Terms	25	\$4,075	\$600	0	0
Short Term Certificate	2 Terms	27	\$4,401	\$600	0	0

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Automotive/Advanced Manufacturing Industrial Systems and Automation, Mechanical FAME

Degree Type

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 -7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Recommended Courses: [PSY-200](#)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-101	Precision Measurement	3
ADM-105	Fluid Systems	3
ADM-110	Blueprint Reading	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ADM-291	MSSC Safety Course	3
ADM-294	MSSC Maintenance Awareness Course	3
INT-113	Industrial Motor Control I	3
INT-118	Fundamentals of Industrial Hydraulics & Pneumatics	3
INT-127	Principles of Industrial Pumps and Piping Systems	3
INT-134	Principles of Industrial Maintenance Weld Cutting Techniques	3
INT-140	FAME Manufacturing Core Exercise 1, Safety Culture	1
INT-142	FAME Manufacturing Core Exercise 2, Workplace Visual Organizations	1
INT-144	FAME Manufacturing Core Exercise 3, LEAN Manufacturing	1
INT-146	FAME Manufacturing Core Exercise 4, Problem Solving	1
INT-148	FAME Manufacturing Core Exercise 5, Machine Reliability	1
INT-184	Intro to Programmable Logic Controllers	3
INT-206	Industrial Motors I	3
INT-215	Troubleshooting Techniques	3
INT-288	Applied Prin of Programmable Controllers	3
MTT-147	Introduction to Machine Shop I3	
MTT-148	Introduction to Machine Shop I3 Lab	
Total Credits		73

Industrial Systems and Automation - Instrumentation AAS

Degree Type

AAS

General Education Requirements (15 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours):

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-101	Precision Measurement	3
ADM-105	Fluid Systems	3
ADM-110	Blueprint Reading	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ADM-291	MSSC Safety Course	3
ADM-294	MSSC Maintenance Awareness Course	3
ELT-119	Concepts of Solid-State Electronics	5
ILT-110	Advanced Industrial Process Control Technology	3
ILT-114	Instrumentation Operation and Calibration	3
INT-105	Introduction to Process Technology	3
INT-113	Industrial Motor Control I	3
INT-184	Intro to Programmable Logic Controllers	3
INT-206	Industrial Motors I	3
INT-215	Troubleshooting Techniques	3
INT-288	Applied Prin of Programmable Controllers	3
INT-296	Co-Op	1
Total Credits		67

Industrial Systems and Automation Mechanical (Non-FAME)**Degree Type**

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 -7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

***Recommended Courses:** [MTH-116](#), [PHY-120](#)

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

***Recommended Courses:** [PSY-200](#)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-105	Fluid Systems	3
	ADM-120 or ELT-111	3
ADM-291	MSSC Safety Course	3
ADM-294	MSSC Maintenance Awareness Course	3
	ELT-209 or INT-113	3
INT-117	Principles of Industrial Mechanics	3
INT-118	Fundamentals of Industrial Hydraulics & Pneumatics	3
INT-126	Preventive Maintenance	3
	ELT-112 or INT-122	5
INT-127	Principles of Industrial Pumps and Piping Systems	3
	INT-134 or WDT-122	3
	ELT-231 or INT-184	3
INT-215	Troubleshooting Techniques	3
INT-296	Co-Op	1
MTT-147	Introduction to Machine Shop I/3	
MTT-148	Introduction to Machine Shop I/3 Lab	
ADM-110	Blueprint Reading	3
	Total Credits	68

Automotive/Advanced Manufacturing Industrial Systems and Automation, Mechanical

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-149	Introduction to Computers	3
ADM-101	Precision Measurement	3
ADM-105	Fluid Systems	3
ADM-110	Blueprint Reading	3
ADM-111	Manufacturing Safety Practices	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ADM-291	MSSC Safety Course	3
ADM-294	MSSC Maintenance Awareness Course	3
INT-117	Principles of Industrial Mechanics	3
INT-118	Fundamentals of Industrial Hydraulics & Pneumatics	3
INT-126	Preventive Maintenance	3
INT-127	Principles of Industrial Pumps and Piping Systems	3
INT-215	Troubleshooting Techniques	3
INT-296	Co-Op	1
MTT-147	Introduction to Machine Shop I	3
MTT-148	Introduction to Machine Shop I Lab	3
Total Credits		56

Industrial Systems and Automation - Instrumentation Certificate

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-101	Precision Measurement	3
ADM-105	Fluid Systems	3
ADM-110	Blueprint Reading	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ADM-291	MSSC Safety Course	3
ADM-294	MSSC Maintenance Awareness Course	3
ELT-119	Concepts of Solid-State Electronics	5
ILT-110	Advanced Industrial Process Control Technology	3
ILT-114	Instrumentation Operation and Calibration	3
INT-105	Introduction to Process Technology	3
INT-113	Industrial Motor Control I	3
INT-184	Intro to Programmable Logic Controllers	3
INT-206	Industrial Motors I	3
INT-215	Troubleshooting Techniques	3
INT-288	Applied Prin of Programmable Controllers	3
INT-296	Co-Op	1
Total Credits		58

Advanced Manufacturing Industrial Machinery Mechanic, Certified Production Technician

Degree Type

STC

(This award is not Pell Grant Eligible)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ADM-291	MSSC Safety Course	3
ADM-292	MSSC Quality Practices/ Measurements	3
ADM-293	MSSC Manufacturing Processes/Practices	3
ADM-294	MSSC Maintenance Awareness Course	3
Total Credits		12

Advanced Manufacturing Industrial Machinery Mechanic, Manufacturing Maintenance Technician I

Degree Type

STC

(This award is not Pell Grant Eligible)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ADM-105	Fluid Systems	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
	AUT-114 or INT-184 or ELT-231	3
	AUT-234 or INT-113 or ELT-209	3
AUT-251	Intro to Variable Frequency Drives & Servo Controls	3
Total Credits		18

Advanced Manufacturing Industrial Machinery Mechanic, Manufacturing Maintenance Technician II

Degree Type

STC

(This award is not Pell Grant Eligible)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ADM-292	MSSC Quality Practices/ Measurements	3
AUT-116	Introduction to Robotics	3
AUT-138	Principles of Industrial Mechanics	3
AUT-208	Auto Systems Diagnosis & Troubleshooting	3
AUT-235	Industrial Motor Controls II	3
AUT-278	Robotic Programming and Welding	3
Total Credits		18

Advanced Manufacturing Industrial Machinery Mechanic, Mechanical Technician

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ADM-105	Fluid Systems	3
	ADM-120 or ELT-111	3
ADM-291	MSSC Safety Course	3
ADM-294	MSSC Maintenance Awareness Course	3
INT-117	Principles of Industrial Mechanics	3
	ELT-112 or INT-122	5
INT-215	Troubleshooting Techniques	3
Total Credits		23

Automotive/Advanced Manufacturing Industrial Systems and Automation – Instrumentation Technician STC

Degree Type

STC

Course Code	Title	Credits
ADM-105	Fluid Systems	3
ADM-111	Manufacturing Safety Practices	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ELT-119	Concepts of Solid-State Electronics	5
ILT-110	Advanced Industrial Process Control Technology	3
ILT-114	Instrumentation Operation and Calibration	3
INT-105	Introduction to Process Technology	3
Total Credits		26

Automotive/Advanced Manufacturing Industrial Systems and Automation – Mechanical Technician STC

Degree Type

STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

Course Code	Title	Credits
ADM-101	Precision Measurement	3
ADM-105	Fluid Systems	3
ADM-110	Blueprint Reading	3
ADM-111	Manufacturing Safety Practices	3
ADM-120	DC Fundamentals	3
ADM-121	AC Fundamentals	3
ILT-114	Instrumentation Operation and Calibration	3
INT-215	Troubleshooting Techniques	3
Total Credits		24

Logistics and Supply Chain Management

Program Description

The Associate of Applied Science in Logistics and Supply Chain Management program is a two-year degree program that provides students with the knowledge and skills required to succeed in the field of logistics and supply chain management. The program covers a wide range of topics including inventory management, procurement, warehousing, and distribution. Students will learn how to manage the flow of goods and services from the point of origin to the point of consumption. Additional knowledge and skills students will obtain include how to manage supply chain operations, analyze data, and make informed decisions that impact the bottom line. The development of important soft skills, such as leadership, communication, and critical thinking will also be a priority.

Occupational Choices

Graduates will be prepared for entry-level positions in a variety of industries, including manufacturing, retail, transportation, and logistics. The job outlook for graduates of the Associate of Applied Science in

Logistics and Supply Chain Management program is promising. This growth is driven by the continued globalization of business and the increasing complexity of supply chain operations.

Average Full-Time Wage

According to the Bureau of Labor Statistics, employment in logistics and supply chain management is expected to grow at a rate of 6% in the next seven years. The median annual wage for logisticians, which includes those with an associate degree in logistics and supply chain management is on average \$76,270 or about \$36.67 per hour.

Awards Available

Associate of Applied Science

Business Administration

Logistics and Supply Chain Management

Program Contact

Brittany Foster

Division Chair - Professional Transfer
334-420-4424

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program

Estimated Program Length & Cost

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	65	10,465	\$2,500	\$100	\$500

Business Administration, Logistics and Supply Chain Management

Degree Type

AAS

General Education Requirements (18-19 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-103	Principles of Biology I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours):

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
ECO-232	Principles of Microeconomics	3
PSY-200	General Psychology	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
ACT-201	Entrepreneurism	3
BUS-100	Introduction to Business	3
BUS-186	Elements of Supervision	3
BUS-241	Principles of Accounting I	3
BUS-242	Principles of Accounting II	3
BUS-275	Principles of Management	3
BUS-296	Business Internship	3
ECO-231	Principles of Macroeconomics	3
LGT 108	Introduction to Logistics	3
LGT 114	Supply Chain Fundamentals and Management	3
LGT 115	Purchasing in Logistics	3
LGT 137	Warehouse and Inventory Management	3
LGT 271	Supply Chain Analytics	3
	LGT 106 or BUS 215	3
Total Credits		64-65

Management

Program Information

The Associate of Applied Science Degree in Business Administration Management option at Trenholm State Community College provides the knowledge and skills necessary to prepare graduates for a career in business administration that will ultimately create career pathways enabling students to transfer to baccalaureate degree programs. Furthermore, it will provide concentrations in general business, management, and entrepreneurship.

The Business Administration program will also translate for seamless articulations to the Bachelor of Science in Business Administration programs at partnering universities. Graduates and program completers will be academically prepared to advance their vocations but also prepare for matriculation to higher education. This program will provide students with a robust program that provides academic rigor. The program will provide not only associate degrees but also short certificates. This option will provide

multiple career pathways that will be tailored to meet the needs of the student. The management option prepares students to hold supervisory and management positions.

Occupational Choices

The management option will prepare students for supervisory and management career options in a variety of business organizations. Management career options include opportunities in the business areas of agriculture, food service, lodging, property and real estate, administrative services, compensation and benefits, construction, Human Resources, industrial production, sales, and training and development. Other business areas may fall under management opportunities as well.

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021 Survey

Average Full-Time Wage

For the management option after continuing and completing a bachelor's degree, the median pays for the above listed career options considering all levels of the careers vary from \$47,310 to

\$159,010 annually. The Bureau of Labor Statistics projects, "Employment of management occupations is projected to grow 8 percent from 2021 to 2031, about as fast as the average for all occupations, which will result in about 71,300 new jobs".

Source: Bureau of Labor and Statistics Occupational Outlook Handbook, 2021 Survey

Awards Available

Associate of Applied Science

*Business Administration
Management*

Short Term Certificate

*Business Administration
Management*

Program Contact

Brittany Foster
Division Chair - Professional Transfer
334-420-4424

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	67	\$10,921	\$2,500	\$100	\$500
Short Term Certificate	3 Terms	28	\$4,564	\$1,500	\$100	\$250

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Business Administration, Management

Degree Type

AAS

General Education Requirements (18-19 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-103	Principles of Biology I	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
CIS-146	Computer Applications	3
BUS-100	Introduction to Business	3
BUS-241	Principles of Accounting I	3
BUS-242	Principles of Accounting II	3
BUS-248	Managerial Accounting	3
BUS-263	The Legal and Social Environment of Business	3
BUS-271	Business Statistics I	3
BUS-275	Principles of Management	3
BUS-276	Human Resource Management	3
BUS-279	Small Business Management	3
BUS-296	Business Internship	3
ECO-231	Principles of Macroeconomics	3
ECO-232	Principles of Microeconomics	3
	OAD-133 or BUS-215	3
BUS-186	Elements of Supervision	3

Technical Electives:

Students must choose a three-hour credit elective to satisfy Area V credit hour requirement. Choose from the listing below.

Course Code	Title	Credits
ACT-257	Govt & Not for Profit Accounting	3
BUS-252	Accounting Case Studies	3
BUS-263	The Legal and Social Environment of Business	3
CIS-203	Intro to the Information Highway	3
CIS-207	Web Development	3
OAD-103	Intermediate Keyboarding	3
OAD-125	Word Processing	3
OAD-230	Desktop Publishing	3
OAD-243	Spreadsheet Applications	3
OAD-244	Database Applications	3
OAD-246	Office Graphics & Presentation	3
Total Credits		68

Business Administration, Management

Degree Type

STC

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (0 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
ECO-231	Principles of Macroeconomics	3
ECO-232	Principles of Microeconomics	3
PSY-200	General Psychology	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements:

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
CIS-146	Computer Applications	3
BUS-263	The Legal and Social Environment of Business	3
BUS-275	Principles of Management	3
BUS-186	Elements of Supervision	3
BUS-279	Small Business Management	3
BUS-276	Human Resource Management	3
Total Credits		27

Medical Assisting

Program Information

The Medical Assisting Program at H. Council Trenholm State Community College is accredited by the Committee on Accreditation of Allied Health Education Programs (CAAHEP). The Medical Assisting Education Review Board (MAERB) is a Committee on Accreditation (CoA) of CAAHEP that makes accreditation recommendations for the status of accreditation of medical assisting programs.

The curriculum is designed to provide students with theoretical instruction as well as practical application. Various methodologies are utilized to meet the needs of students with diverse learning styles. Some of the clinical skills covered include

taking medical histories, taking, and recording vital signs, assisting with examinations and treatments, providing patient teaching and performing specialized tests such as electrocardiograms (EKGs) and diagnostic laboratory testing. Administrative skills include scheduling appointments, performing manual and computerized billing, and filing insurance claims.

All graduates of the Medical Assisting Program are academically eligible to take the American Association of Medical Assistants National Certification Examination, American Medical Technologist Examination and the National Health career Association Examination. Upon successful completion of this examination, the graduate will earn the title of Certified Medical Assistant or Registered Medical Assistant or Certified Clinical Medical Assistant. The American Association of Medical Assistants stipulates that individuals found guilty of a felony or individuals who have pleaded guilty to a felony are ineligible to sit for the National Certification Exam. The certifying board may grant a waiver based upon mitigating circumstances. Applicants who have been convicted of a felony or who have pleaded guilty to a felony may be accepted to the Medical Assisting Program. However, admission to the Program does not guarantee in any way that the applicant will be eligible to sit for the American Association of Medical Assistants National Certification Examination, the American Medical Technologist Examination or the National Health career Association Examination.

Program Mission

Medical Assistant Program Mission is to prepare medical assistants who are competent in the cognitive, psychomotor, and affective learning domain to enter the profession as effective members of the health care team.

Program Competencies

Upon successful completion of this program, the student should be able to:

1. Acquire necessary skills to assist a physician by performing functions related to both business administration and clinical duties of a medical office.

2. Acquire knowledge and familiarity with insurance, accounts, reports, medical records, and medical transcription.
3. Develop skills and knowledge in the proper procedures of patient preparation for examination.
4. Assess vital signs and to assist the physician with patient examinations and treatment.
5. Perform routine office laboratory procedures such as phlebotomy, urinalysis, and diagnostic cultures.
6. Develop a thorough knowledge of medical office emergency situations, including CPR and the proper procedures for its application.
7. Develop skills in the use of the electrocardiography machine.
8. Describe the legal and ethical issues governing the practice of medicine related to the medical office setting.
9. Demonstrate a safe level of knowledge using pharmaceutical principles of medication preparation and administration.
10. File alphabetically, geographically, and numerically sign color coded methodologies as dictated within the office setting.

Occupational Choices

According to the U.S. Department of Labor, employment of medical assistants is expected to grow 19 percent from 2019 to 2029, much faster than the average for all occupations. As the healthcare industry expands because of technological advances in medicine and the growth and aging of the population, there will be an increased need for all healthcare workers. The increasing prevalence of certain conditions, such as obesity and diabetes, also will increase demand for healthcare services and medical assistants. Increasing use of medical assistants to allow doctors to care for more patients will further stimulate job growth. Job placement opportunities are numerous in the Montgomery area. Most employers prefer to hire individuals who have completed a formal program in Medical Assisting. Physicians' offices, laboratories, hospitals and ambulatory care centers are just a few of the current job opportunities.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2019-2029 Edition, Survey 2019

Average Full-Time Wage

The median annual wage for medical assistants was \$34,800 in May 2019. The median wage is the wage at which half the workers in an occupation earned more than that amount, and half earned less. The lowest 10 percent earned less than \$25,820, and the highest 10 percent earned more than \$48,720.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2019-2029 Edition, Survey 2019

Additional Requirements

Students are admitted to the Medical Assisting Program each semester. Individuals who are interested in enrolling in the program must:

1. Meet all the general admission requirements of Trenholm State.
2. Schedule an appointment prior to the beginning of the anticipated date of enrollment, with the program coordinator or designee, to validate a keying speed of 30 words per minute. Individuals not meeting this requirement must enroll in MAT 100 - Introduction to Document Production. Appointments will not be scheduled once the semester begins.
3. Students must submit health information and have a complete physical examination by a licensed physician, physician assistant, or nurse practitioner prior to participation in learning experiences in any clinical facility. (Required before starting MAT-230 - Medical Assisting Preceptorship and MAT 239-Phlebotomy Preceptorship)
4. Students must provide documentation of required drug-screen & immunizations (Hepatitis B, Tetanus, MMR, and TB) prior to preceptorship. Documentation of a negative drug-screen & TB skin test should be submitted within three months prior to the anticipated semester of enrollment and no later than 30 days after enrollment in the preceptor course. Students who have a positive drug-screen, retesting should be complete 30 days following positive examination. Students who have a positive TB skin test result must submit documentation of a negative chest x-ray within 30 days following positive examination. Students must have the TB skin test repeated

yearly until completion of the program.
(Required before starting MAT-230 - Medical Assisting Preceptorship and MAT 239-Phlebotomy Preceptorship)

5. Students must have current CPR certification to participate in learning experiences in any clinical facility. The certification must remain valid throughout the learning experience.
(Required before starting MAT-230 - Medical Assisting Preceptorship and MAT 239-Phlebotomy Preceptorship)
6. Student must have liability insurance prior to participating in learning experiences in any clinical facility. The insurance is available through the college. The cost of the liability insurance is the student's responsibility.
7. Students are required to adhere to the program's dress code when participating in laboratory and clinical activities on campus as well as off campus.

Awards Available

Associate of Applied Science

Medical Assisting

Short Term Certificate

Medical Assisting

Program Contact

Dr. Chandrika McQueen
Program Coordinator/Instructor
334-420-4422
Location: Trenholm Campus - Bldg. J

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	74	\$12,062	\$1,330	0	\$700
Short Term Certificate	2 Terms	25	\$4,075	\$1,330	0	\$700

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Medical Assisting

Degree Type

AAS

Program Prerequisite: MAT-100

(Must be able to key 30 words per minute or take MAT-100 Introduction to Medical Document Production)

General Education Requirements (18 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
	CIS-146 or CIS-149	3
MAT-100	Intro to Medical Document Production	3
MAT-101	Medical Terminology	3
MAT-102	Medical Assisting Theory I	3
MAT-103	Medical Assisting Theory II	3
MAT-111	Clinical Proc I for the Medical Assistant	3
MAT-120	Medical Administrative Procedures I	3
MAT-121	Medical Administrative Procedures II	3
MAT-122	Basic Concepts of Interpersonal Relationships	3
MAT-125	Lab Procedures I for the Medical Assistant	3
MAT-128	Med Law & Ethics for the Medical Assistant	3
MAT-200	Management of Office Emergencies	2
MAT-211	Clinical Proc II for the Medical Assistant	3
MAT-215	Lab Procedures II for the Medical Assistant	3
MAT-216	Pharmacology for the Medical Office	4
MAT-220	Medical Office Insurance	3
MAT-228	Medical Assistant Review Course	1
MAT-230	Medical Assisting Preceptorship	3

Electives: (select 3 credit hours)

Course Code	Title	Credits
BIO-103	Principles of Biology I	4
BIO-112	Human Reproduction & Inheritance	3
BIO-211	Human Anatomy and Physiology for Health Occupations I	4
	CIS-146 or CIS-149	3
CIS-203	Intro to the Information Highway	3
MAT-222	Medical Transcription I (Elective)	2
MAT-227	Special Topics in Medical Assisting (Elective)	1
MAT-239	Phlebotomy Preceptorship	3
	Total Credits	74

Medical Assisting Technology

Degree Type

STC

Program Prerequisite: MAT-100

(Must be able to key 30 words per minute or take MAT-100 Introduction to Medical Document Production)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
MAT-100	Intro to Medical Document Production	3
MAT-101	Medical Terminology	3
MAT-102	Medical Assisting Theory I	3
MAT-122	Basic Concepts of Interpersonal Relationships	3
MAT-125	Lab Procedures I for the Medical Assistant	3
MAT-128	Med Law & Ethics for the Medical Assistant	3
MAT-215	Lab Procedures II for the Medical Assistant	3
MAT-239	Phlebotomy Preceptorship	3

Medical Radiologic Technology

Program Information

The Radiology program at Trenholm State provides students with the necessary education to gain entry-level positions in the field of medical imaging as diagnostic radiologic technologists. Students will receive didactic, laboratory, and clinical education in preparation for the American Registry of Radiologic Technologists (ARRT) certification examination.

Radiologic technologists produce medical images of parts of the human anatomy for use in diagnosing medical problems. Radiologic technologists must follow physicians' orders and conform to regulations concerning the use of radiation to protect themselves, their patients, and their coworkers from unnecessary exposure. The program has a competitive admissions process.

Occupational Choices

Employment is projected to grow faster than average and job opportunities are expected to be favorable. Although hospitals and medical centers still remain the primary employers, a number of new jobs will be found in physician's offices and diagnostic centers. Health facilities such as these are growing due to the shift toward outpatient care. Radiologic Technologists experienced in more than one diagnostic imaging modality, such as CT, MR, and mammography, will have the best employment opportunities.

With experience and additional training, staff technologists may qualify for advanced certification in CT, angiography, and MRI. Experienced technologists also may be promoted to supervisor, chief radiologic technologist, and, ultimately, department administrator or director.

Source: U. S. Department of Labor Occupational Outlook Handbook, 2019-2029 Edition, September 2022

Average Full-Time Wage

The median annual wage for radiologic technologists was \$61,370 in May 2021. The lowest 10 percent earned less than \$46,850, and the highest 10 percent earned more than \$94,880. The median annual wage for magnetic resonance imaging technologists was \$77,360 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount, and half earned less. The lowest 10 percent earned less than \$59,110, and the highest 10 percent earned more than \$100,870.

Source: U. S. Department of Labor Occupational Outlook Handbook, 2019-2029 Edition, September 2022

Admission Criteria

Applicants should complete and submit a Radiology program application and have official copies of all college, high school and ACT transcripts sent directly to the College's Admissions Office.

Minimum admission standards include:

- A Trenholm State Community College application
- A Radiology Program application
- Official transcripts from high school and all colleges attended; official GED scores if applicable. A minimum of 2.5 high school GPA (for students without previous college courses) or a cumulative GPA over the last 24 credit hours (for students with previous college courses) is required.
- Eligibility for placement into the following course: English 101, Math 100 and Biology 201.
- ACT test score greater than or equal to 18.
- Applicants must be at least 18 years of age.
- A completed essential eligibility criteria form.
- Incomplete application packages submitted will not be considered. See Program Application Packet on the program web page at: <https://www.trenholmstate.edu/programs/allied-health-division/radiology-medical-radiologic-technology/>

NOTE: It is highly recommended that students successfully complete BIO-103 (General Biology) or its equivalent in preparation for BIO-201 (Human Anatomy & Physiology I).

Students in the Radiology program must meet the following requirements which will be completed at the student's expense prior to and throughout enrollment in the program:

- Verification of absence of drug and alcohol use by participation in random and scheduled drug/alcohol testing at the student's expense.
- Undergo a background screening.
- Provide proof of all vaccinations designated by the program.
- Submit proof of completed CPR for Healthcare Providers course.
- Undergo a student physical administered by a physician.
- Adhere to policies of affiliated clinical affiliates.

Admission to the Radiology Program is competitive, and the number of students is limited by the number of faculty and clinical facilities available. Meeting the minimum requirements does not guarantee acceptance.

If the number of eligible applicants exceeds the space available to new enrollees, applicants are rank ordered using a point system based on: ACT Exam scores with additional points given for required general education classes completed with a "C" or higher. See Ranking Form on the program webpage at: https://www.trenholmstate.edu/uploads/files/Radiology_Program_Ranking_Form.pdf.

Awards Available

Associate of Applied Science
Medical Radiologic Technology

Program Contact

Laurie Burnett
Program Coordinator/Instructor
334-420-4342
Location: Trenholm Campus - Bldg. H

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
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Associate Degree	5 Terms	76	\$12,388	\$1,197	0	\$750
Co-requisite Courses	5 Terms	24	\$3,912	\$547	0	0
Radiology Courses	5 Terms	52	\$8,476	\$650	0	\$750

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Medical Radiologic Technology

Degree Type

AAS

General Education Requirements (24 hours)

Area I - Written Composition (6 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (6 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: The 3 hours shown as required in Area II is a Humanities/Arts elective. An additional 3 hours must be taken to include either: SPH-106, SPH-107, or ENG-102.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (11 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
RAD-111	Introduction to Radiology	2
RAD-112	Radiologic Procedures I	4
RAD-113	Patient Care	2
RAD-114	Clinical Education I	2
RAD-122	Radiologic Procedures	4
RAD-124	Clinical Education II	5
RAD-125	Imaging Equipment	3
RAD-134	Clinical Education III	5
RAD-135	Exposure Principles	3
RAD-136	Radiation Protection & Biology	2
RAD-212	Image Evaluation & Pathology	2
RAD-214	Clinical Education IV	8
RAD-224	Clinical Education V	8
RAD-227	Review Seminar	2

*These are co-requisite requirements but may be completed prior to the start of the program. The student must be eligible for placement into the following courses: English 101, Math 100 and Biology 201 to apply.

Students must successfully complete all required co-requisite general education courses listed above prior to completion of the Radiology Program.

Total Credits	79
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Nursing

Program Information

The Associate of Applied Science Registered Nursing program prepares graduates to sit for the licensure exam for registered nurses. It is a concept-based curriculum, including both nursing and general education courses that prepares individuals in the knowledge, techniques and procedures for promoting health, providing care for sick, disabled, infirmed, or other individuals or groups. Course content includes the role of the registered nurse,

healthcare concepts, and technical observations and skills which includes instruction in the administration of medication and treatments, assisting a physician during treatments and examinations, and planning education for health maintenance. Supervised clinical laboratory experiences are planned to focus on the care of patients with well-defined health problems where probable outcomes of nursing interventions are predictable. Clinical experiences are provided at area hospitals and health care agencies.

Bureau of Labor Statistics reported that registered nurses (RNs) provide and coordinate patient care, educate patients and the public about various health conditions, and provide advice and emotional support to patients and their family members.

Upon completion of the Associate of Applied Science Registered Nursing, the graduate will make application to the Alabama Board of Nursing to sit for the National Council Licensure Examination for Register Nurses (NCLEX- RN®). When licensure is granted, the licensed registered nurse will be able to carry out the responsibilities and duties relative to the education and training received under the guidelines of the Alabama Board of Nursing. Graduates may be employed in long-term care, out-patient care, home healthcare, public health departments, dialysis, hospitals, hospice, mental health clinics, physician offices, correctional facilities, and ambulatory clinics. The program has a competitive admissions process.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2018-2019 Edition

Occupational Choices

The Bureau of Labor Statistics published the following prediction: "Employment of registered nurses is projected to grow 16 percent from 2014 to 2024." There were 3.13 million registered nurses employed in the U.S. in 2016. That number will grow to 3.19 million by 2024. The largest employers of registered nurses were 61 percent worked in hospitals, 18 percent in ambulatory healthcare services, 7 percent in nursing and residential care facilities, 5 percent in government and 3 percent in state, local, and private educational services.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, September 8, 2022

Average Full-Time Wage

In May 2021, the median annual wage for registered nurses was \$77,600. Consequently, the highest 10 percent earned approximately \$120,250, with the lowest 10 percent earned less than \$59,450.

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, September 8, 2022

Admission Criteria

Applicants should complete and submit an Associate of Applied Science Registered Nursing Program application and request for copies of college and high school transcripts sent directly to the College's Admission Office.

Minimum admission standards include:

1. Complete and submit a college application to Trenholm State Community College (must have unconditional admission to the college)
2. Receipt of completed application for the nursing program by the indicated deadline.
3. A minimum 2.5 GPA is required on nursing academic core classes inclusive of: ENG-101 English Composition I, MTH-100 Intermediate College Algebra (or higher-level math - Pre-Cal, Finite Math) BIO-201/202 Anatomy & Physiology I & II, BIO-220 Microbiology, PSY-210 Human Growth & Development, SPH-106 or 107 Fundamentals of Oral Communication or Public Speaking, Humanities elective (ART-101 Art or MUS-101 Music Appreciation, PHL-106 Intro to Philosophy, PHL-206 Ethics & Society, REL-100 History of World Religions, or SPA-101 Intro to Spanish I).
4. Minimum of 2.50 high school GPA for students without prior college work (GED acceptable in lieu of high school transcript).
5. Good standing with the College including a minimum overall, cumulative GPA of 2.50.
6. Meeting the essential functions or technical standards required for nursing. The requirements for meeting essential functions for the nursing program can and may be

requested periodically during the nursing program by nursing faculty as indicated. If a nursing student cannot meet essential functions requirements, the student may be withdrawn from the nursing program.

7. Official results of the ACT (minimum of 18 composite score national is required) must be submitted to the Registrar's office with a copy attached to the nursing program application. The writing component of the ACT is not required for consideration of admission to the nursing program.
8. Transfer students must be in good standing from transferring institution with letter from Program Director and a minimum of 2.5 Cumulative GPA with nursing courses no more than one year from date of application. Acceptance of transfer students into the program at TSCC is not guaranteed.

Nursing Program Selection Criteria

1. **Points for grades in the following nursing required core general educational courses are as documented:**
A = 3 points, B = 2 points, C = 1 point
ENG-101 English Composition
MTH-100 Intermediate College Algebra
BIO-201 Anatomy & Physiology I
BIO-202 Anatomy & Physiology II
ORI-101 College Orientation
2. **An additional 10 points may be awarded as determined by the individual college policy and procedure.**
3. **A minimum 2.5 GPA is required in the core general educational courses for the nursing program. Not all courses may have been completed at the time of admission to the nursing program; however, students may experience less conflict in scheduling classes if general education classes are completed prior to entering the professional phase of study. Core general educational courses taken in high school as dual enrollment will be used in GPA calculation.**
4. **Associate Degree Nursing general education courses:**
ENG-101 English Composition I
MTH-100 Intermediate College Algebra (or higher-level math - Pre-Cal, Finite Math)
BIO-201/202 Anatomy & Physiology I & II

BIO-220 Microbiology
PSY-210 Human Growth & Development
SPH-106 or 107 Fundamentals of Oral Communication or Public Speaking

Humanities elective:

ART-101 Art or MUS-101 Music Appreciation
PHL-106 Intro to Philosophy
PHL-206 Ethics & Society (Preferred)
REL-100 History of World Religions
SPA-101 Intro to Spanish I

5. **Minimum 2.5 cumulative GPA at current, native institution or cumulative 2.5 GPA at institution from which student is transferring.**
6. **ACT- minimum requirement of 18 score/ points.**
7. **Minimum 2.5 cumulative high school GPA for students without prior college courses (GED as applicable).**
8. **Meeting the essential functions for nursing.**

Transfer Policy

The transfer policy applies only to students desiring to transfer between Alabama Community College System institutions. It does not apply to students wishing to transfer from other institutions. Questions regarding this policy should be directed to the nursing program director. Acceptance of transfer students into the program at TSCC is not guaranteed.

Awards Available

Associate of Applied Science
Registered Nursing

Program Contact

Dr. Debra Lett, PhD MSN, MPA, RN
Director of Nursing/Instructor
334-420-4497

Location: Trenholm Campus - Bldg. B

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	3 Terms	67	\$10,921	\$1,400	\$845	\$600

Estimated Testing Fees: \$1,000

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Registered Nursing

Degree Type

AAS

General Education Requirements (27 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (6 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (15 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
BIO-201	Human Anatomy and Physiology I	4
BIO-220	General Microbiology	4
BIO-202	Human Anatomy and Physiology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
NUR-112	Fundamental Concepts of Nursing	7
NUR-113	Nursing Concepts 1	8
NUR-114	Nursing Concepts II	8
NUR-115	Evidence Based Clinical Reasoning	2
NUR-211	Advance Nursing Concepts	7
NUR-221	Advanced Evidence-Based Clinical Reasoning	7

*** These courses are required for this program:** [ENG-101](#), [PHL-206](#), [SPH-106](#), [MTH-100](#), [BIO-201](#), [BIO-202](#), [BIO-220](#)

Note: Students applying for Practical Nursing are exempt from [PSY-200](#) - General Psychology.

Total Credits	67
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Practical Nursing

Program Information

The Practical Nursing program is designed to provide students with knowledge and competencies to provide safe and evidence-based nursing care for practice in varied settings within the legal scope of practice for the licensed practical nurse. Students are instructed in the provision of nursing care for clients across the lifespan. Clinical experiences are provided at area hospitals and health care agencies in adult health, maternal/child, mental health, community, and other areas for experiential development for the provision of safe nursing practice.

Few careers offer the versatility, satisfaction and longevity afforded by a nursing career. Students who have satisfactorily completed the program may sit for the National Council Licensure Examination for Practical Nursing (NCLEX®-PN). The Practical Nursing

program is accredited by the Accreditation Commission for Education in Nursing (ACEN) and approved by the Alabama Board of Nursing. The program has a competitive admissions process.

Occupational Choices

Employment of licensed practical and licensed vocational nurses is projected to grow 6 percent from 2021 to 2031, about as fast as the average for all occupations. About 58,800 openings for licensed practical and licensed vocational nurses are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire. *Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, September 8, 2022*

Average Full-Time Wage

In 2021, the median annual wages of licensed practical and licensed vocational nurses were \$48,070. Consequently, the highest 10 percent earned approximately \$ 63,790, with the lowest 10 percent earning less than \$37,150.

Source: of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, Licensed Practical and Licensed Vocational Nurses, September 8, 2022

Admission Criteria

Applicants should complete and submit a Practical Nursing Program Application and request for copies of college and high school transcripts sent directly to the College's Admission Office.

Minimum admission standards include:

1. Unconditional admission to the college. (Must complete college application)
2. Receipt of completed application for the nursing program by the established deadline for admission.
3. Minimum of 2.50 cumulative GPA for nursing required academic core courses and minimum 2.0 GPA at current, native institution.
4. Minimum of 2.50 high school GPA for students without prior college work (GED acceptable in lieu of high school transcript).

5. Math and Science courses must be within a 5-year time frame of application to the nursing program for eligibility requirements.
6. Good standing with college.
7. **Meeting the essential functions or technical standards required.**
8. ACT score of 18 or higher
9. Transfer students must be in good standing from transferring institution with letter from Program Director and a minimum of 2.5 Cumulative GPA with Nursing Courses no more than one year from date of application. Acceptance of transfer students into the program at TSCC is not guaranteed.

Students in the Practical Nursing Program must meet the following requirements which will be completed at the student's expense prior to and throughout enrollment in the program inclusive of:

1. Alabama Community College System Essential Functions
2. Verification of physical and mental capabilities to function as a nurse in diverse settings with or without reasonable accommodations,
3. Absence of use of drugs and alcohol by participation in random and scheduled drug/alcohol testing at the student's expense,
4. Adherence to policies of affiliated clinical agencies by submitting criminal background check and CPR certification prior to enrollment.

Admission to the Practical Nursing Program is competitive and the number of students is limited by the number of faculty and clinical facilities available. Meeting minimal requirements does not guarantee acceptance. If the number of eligible applicants exceeds the space available to new enrollees, applicants are rank ordered using a point system based on:

1. ACT score of 18 or higher
2. Points for selected college courses (i.e., ENG-101, MTH-100, BIO-201 & 202, PSY-210, SPH-106 or 107).
3. Students may be awarded up to 10 additional points as determined by college policy and procedures.

The applicant's actual score on ACT test will be the points awarded. Applicants must go online to schedule ACT testing and pay appropriate fee.

The Practical Nursing Admissions/Selection Committee will review and calculate points for students meeting minimum admissions standards after receiving GPA calculations from the Registrar.

This process may take 4-6 weeks after each deadline before applicants receive notification of acceptance. Calls to the department will slow the process.

Transfer Policy

The transfer policy applies only to students desiring to transfer between Alabama Community College System institutions. It does not apply to students wishing to transfer from other institutions. Questions regarding this policy should be directed to the nursing program director. Acceptance of transfer students into the program at TSCC is not guaranteed.

Awards Available

Certificate
Practical Nursing

Program Contact

Dr. Debra Lett, PhD MSN, MPA, RN
Director of Nursing/Instructor
334-420-4497
Location: Trenholm Campus - Bldg. B

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Certificate	3 Terms	46	\$7,498	\$1,200	\$745	\$600
Estimated Testing Fees: \$1,000						

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Practical Nursing

Degree Type

CER

General Education Requirements (9 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

***These courses are required for this program:**

[MTH-100](#), [MTH104](#)

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
NUR-112	Fundamental Concepts of Nursing	7
NUR-113	Nursing Concepts 1	8
NUR-114	Nursing Concepts II	8
NUR-115	Evidence Based Clinical Reasoning	2

*** These courses are required for this program.**

ORI 101- Orientation to College is required for program completion and must be taken at TSCC: [ENG-101](#), [SPH-106](#), [MTH-100](#), [BIO-201](#), [BIO-202](#), [PSY-210](#)

Note: Students applying for Practical Nursing are exempt [PSY-200](#) - General Psychology.

Total Credits **46**

Respiratory Care Therapy

Program Information

This program of study is designed to provide academic and clinical training in patients who suffer from heart and lung conditions. Respiratory Therapists work closely with doctors and nurses and have innovative awareness of mechanical ventilators and other technological equipment. The Associate of Applied Science degree awarded at program completion is a five-semester, competency-based curriculum that includes practical knowledge in a health care institution.

The Respiratory Care Therapy Program holds Provisional Accreditation from the Commission on Accreditation for Respiratory Care (www.coarc.com). It is recognized as an accredited program by the National Board for Respiratory Care (NBRC), which provides enrolled students who complete the

program with eligibility for the Respiratory Care Credentialing Examination(s). The program will remain on Provisional Accreditation until it achieves Continuing Accreditation.

Occupational Choices

Employment of respiratory therapists is projected to grow 14 percent from 2021 to 2031, much faster than the average for all occupations. About 9,400 openings for respiratory therapists are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire.

Growth in the older adult population will lead to an increased prevalence of respiratory conditions such as pneumonia, chronic obstructive pulmonary disease (COPD), and other disorders that restrict lung function. This, in turn, will lead to increased demand for respiratory therapy services and treatments, mostly in hospitals.

<https://www.bls.gov/ooh/healthcare/respiratory-therapists.htm>

Average Full-Time Wage

The median annual wage for respiratory therapists was \$61,830 in May 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount, and half earned less. The lowest 10 percent earned less than \$47,380, and the highest 10 percent earned more than \$95,540.

The median annual wage for respiratory therapists in the top industries in which they worked were as follows:

- Hospitals; state; local; private: \$61,940
- Offices of physicians: \$60,570
- Nursing care facilities: \$60,570

<https://www.bls.gov/ooh/healthcare/respiratory-therapists.htm#tab-5>

Admission Requirements

Program applications and deadline for application submission will be posted to the Respiratory Therapy (Respiratory Care Therapy) webpage in September each year.

Applicants must:

- Meet all general admission requirements of Trenholm State Community College and be in good standing.
- Complete all general required courses (prerequisites) courses with a minimum grade of "C" in each course (see listing below).
- Minimum ACT score of 18.
- Attain a minimum cumulative GPA of 2.5 or greater on a 4.0 scale with a grade of "C" or better on all general required prerequisite courses.
- Submit a completed RPT-program application by the application deadline to include all the following documents:

1. Completed RPT-Program Application. The program application can be found on the website in September. Select Programs, Health Science Division, then Respiratory Therapy.
2. Copies of transcripts from ALL colleges previously attended.
3. A copy of your Trenholm State transcript showing completion and transfer of ALL prerequisite courses.
4. A copy of your ACT score or Residual score showing 18 or higher (all applicants will be ranked according to his/her ACT score. Applicants with the highest ACT scores will be issued acceptance letters.
5. Good standing with the college.
6. Meet all the essential functions or technical standards required for Respiratory Therapy.

Technical Standards

Candidates must be able to meet all Essential Functions required of the program with or without accommodation. Essential functions include, but are not limited to the following:

- Sensory/Observational Skills: The candidate must be able to observe a patient precisely at a distance and up close. Perception requires the efficient use of all the senses.

- **Communication:** The candidate must be able to communicate, hear, and watch patients to evoke data, portray changes in mindset, movement and pose, and observe nonverbal communications. A candidate must be able to converse efficiently with patients and all members of the health care team. Communication includes but is not limited to: listening, speaking, reading and writing.
- **Motor Skills:** The candidate must have sufficient motor skills to increase contact to patients in a variety of care settings and to operate and apply the equipment utilized for assessment, general and emergency treatment of patients receiving Respiratory Care. Such actions require coordination of both gross and fine muscular movements, balance and practical use of the senses of touch and vision.
- **Intellectual-Conceptual, Integrative, and Quantitative Abilities:** These capabilities include measurement, calculation, reasoning, examination, and assessment. Problematic deciphering, the critical skill required of health care practitioners, necessitates all of these capabilities.
- **Behavioral/Social Skills and Professionalism:** A candidate must possess the emotional health obligatory for the utilization of his/her intellectual abilities. The implementation of moral decision, the swift completion of all tasks associated with the care of patients, and the growth of active affiliations with patients are vital services for health practitioners. Applicants must be able to tolerate heavy workloads and to function commendably under pressure. They must be able to acclimatize to shifting environments, to display flexibility, and to learn to perform in the face of the indecisions essential in the clinical complications of numerous patients. Apprehension for others, reliability, social skills, awareness, and inspiration are all personal assets required for the health practitioners.
- **Environmental:** All candidates must interact with patient populations of all ages with an array of acute and chronic illnesses. Candidates must be able to endure recurrent contact with transmittable diseases, poisonous substances, ionizing radiation, pharmaceutical preparations, aggressive individuals, and other conditions common to the health care setting.

Awards Available

Associate of Applied Science
Respiratory Care Therapy

Program Contact

Shalanda Lee
Program Director/Instructor
Location: Trenholm Campus – B 103C
334-420-4419
slee@trenholmstate.edu

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	76	\$12,388	\$3,400	\$600	\$600

Estimated Fees for uniforms, testing, etc.: 3,500

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

****The Respiratory Therapy Program accepts students once a year in the Spring Semester****

Admission to the Respiratory Care Therapy Program is competitive and meeting minimal requirements does not guarantee acceptance.

Respiratory Care Therapy

Degree Type
AAS

General Education Requirements (23 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (6 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (11 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
BIO-201	Human Anatomy and Physiology I	4
BIO-220	General Microbiology	4
BIO-202	Human Anatomy and Physiology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
RPT-210	Clinical Practice I	2
RPT-211	Introduction to Respiratory Care	2
RPT-212	Fundamentals of Respiratory Care I	4
RPT-213	Anatomy and Physiology for the RCP	3
RPT-214	Pharmacology for the RCP	2
RPT-220	Clinical Practice II	2
RPT-221	Pathology for the RCP I	3
RPT-222	Fundamentals of Respiratory Care II	4
RPT-223	Acid Base Regulation and Abg Analysis	2
RPT-230	Clinical Practice III	2
RPT-231	Pathology for the RCP II	3
RPT-232	Diagnostic Procedures for the RCP	2
RPT-233	Special Procedures for the RCP	2
RPT-234	Mechanical Ventilation for the RCP	4
RPT-240	Clinical Practice IV	4
RPT-241	Rehabilitation and Home Care for the RCP	2
RPT-242	Perinatal/Pediatric Respiratory Care	3
RPT-243	Computer Applications for the RCP	2
RPT-244	Critical Care Considerations for the RCP	2
RPT-266	Seminar in Respiratory Medicine I	1
RPT-268	Writing and Research for the RCP II	1

Note: Although a CIS course is not required, all RPT students will be required to demonstrate computer literacy through online assignments, presentations, and other computer-based activities.

Required General Education courses (23 credit hours) must be completed prior to applying to the Respiratory Care Therapy. All courses are offered at Trenholm State Community College. Transferability of courses from other education institutions will be assessed upon submission of a complete College application.

Total Credits **76**

Robotics/Mechatronics

Program Information

The Advanced Manufacturing program with a concentration in Robotics/Mechatronics will prepare graduates for entry-level employment in industrial automation. Concepts covered in the curriculum concentration will include a Mechatronic approach to training; programmable logic controllers; digital fundamentals; interfacing microcomputers to electro-mechanical devices; flexible manufacturing cells; and networking the multiple disciplines into an Advanced Manufacturing process.

Occupational Choices

Individuals who graduate with an associate degree in robotics might be qualified for careers in industries where robotic devices are used, such as manufacturing, defense, electronics, construction and space industries. Individuals can also pursue positions as electronic engineering technicians; manufacturing technicians; robotics technicians and/or quality technicians

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Mechanical Engineering Technologists and Technicians, at <https://www.bls.gov/ooh/architecture-and-engineering/mechanical-engineering-technicians.htm> (visited *March 03, 2023*).

Average Full-Time Wage

Robotics technicians had an average annual wage of \$60,750 as of 2021. A skill in machine programming, maintenance and manufacturing is associated with high pay for this job.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Mechanical Engineering Technologists and Technicians, at <https://www.bls.gov/ooh/architecture-and-engineering/mechanical-engineering-technicians.htm> (visited *March 03, 2023*).

Awards Available

Associate of Applied Science

Automotive/Advanced Manufacturing
Robotics/Mechatronics

Certificate

Automotive/Advanced Manufacturing
Robotics/Mechatronics

Short Term Certificate

Automotive/Advanced Manufacturing
Robotics/Mechatronics

Short Term Certificate

Automotive/Advanced Manufacturing
Robotics/Mechatronics
Industrial Automation

Program Contact

Edward Abrasley
Program Coordinator/Instructor
334-420-4369
Location: Patterson Site - Bldg. M

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Length	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	67	\$10,921	\$1,920	\$600	\$300
Certificate	5 Terms	56	\$9,128	\$1,920	\$600	\$300
Short Term Certificates (2)	3 Terms	28	\$4,564	\$1,000	\$600	\$200

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-

time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Automotive/Advanced Manufacturing, Robotics/ Mechatronics

Degree Type

AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

*These courses are preferred for this program:

[MTH-100](#), [MTH-104](#), [MTH-116](#), [PHS-112](#)

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-234	Applied Industrial Robotics (Fanuc)	3
ADM-250	Introduction to Flexible Manufacturing Cells	4
	ELT-108 or INT-101 or ADM-120	3
ELT-110	Wiring Methods	3
	ELT-112 or INT-122	5
ELT-117	Ac/DC Machines	3
ELT-119	Concepts of Solid-State Electronics	5
ELT-121	Concepts of Digital Electronics	5
	ELT-206 or ADM-111	3
	ELT-209 or INT-113	3
ELT-212	Motor Controls II	3
	ELT-231 or INT-184	3
	ELT-232 or INT-284	3
ELT-286	Co-Op	1
	MTT-147 or ADM-101	3
Total Credits		67

Automotive/Advanced Manufacturing, Robotics/ Mechatronics

Degree Type

CER

General Education Requirements (9 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

***These courses are preferred for this program:**

[MTH-100](#), [MTH-104](#), [MTH-116](#), [PHS-112](#)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-234	Applied Industrial Robotics (Fanuc)	3
ADM-250	Introduction to Flexible Manufacturing Cells	4
	ELT-108 or INT-101 or ADM-120	3
ELT-110	Wiring Methods	3
	ELT-112 or INT-122	5
ELT-117	Ac/DC Machines	3
ELT-119	Concepts of Solid-State Electronics	5
ELT-121	Concepts of Digital Electronics	5
	ELT-206 or ADM-111	3
	ELT-209 or INT-113	3
ELT-212	Motor Controls II	3
	ELT-231 or INT-184	3
	MTT-147 or ADM-101	3
	Total Credits	56

Advanced Manufacturing, Robotics/ Mechatronics

Degree Type

STC

General Education Requirements (3 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

***These courses are preferred for this program:**

[MTH-100](#), [MTH-104](#), [MTH-116](#), [PHS-112](#)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ADM-234	Applied Industrial Robotics (Fanuc)	3
ADM-250	Introduction to Flexible Manufacturing Cells	4
ELT-108	DC Fundamentals	3
ELT-112	Concepts of Alternating Current	5
ELT-209	Motor Controls I	3
ELT-231	Introduction to Programmable Controllers	3
ELT-232	Advanced Programmable Controllers	3
Total Credits		30

Advanced Manufacturing, Robotics/ Mechatronics - Industrial Automation

Degree Type

STC

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3

Area III - Natural Science & Mathematics

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

***These courses are preferred for this program:**

[MTH-100](#), [MTH-104](#), [MTH-116](#), [PHS-112](#)

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
	ELT-206 or ADM-111	3
ADM-200	Industrial Robotics Safety	3
ADM-234	Applied Industrial Robotics (Fanuc)	3
ADM-250	Introduction to Flexible Manufacturing Cells	4
ELT-108	DC Fundamentals	3
ELT-112	Concepts of Alternating Current	5
	MTT-147 or ADM-101	3
	Total Credits	30

Welding

Program Information

Welding is the technology of using various methods to join, cut, scrape, or finish metal by applying intense heat and/or pressure to melt the edges of metal so they fuse permanently.

The Welding program at Trenholm State Community College is designed to give technical knowledge and experience in six different welding and cutting processes. The student will attain hands-on experience in pipe welding, brazing, manual and machine cutting, blueprint reading, and welding processes used by industry in the fabrication of steel components. Through practical application, a student is taken through a series of welds and processes, using different joints and weld structures duplicated as closely as possible to an actual on-the-job situation.

Occupational Choices

Employment of welders, cutters, solderers, and brazers is projected to grow 2 percent from 2021 to 2031, about as fast as the average for all occupations. Employment growth reflects the need for welders in manufacturing because of the

importance and versatility of welding as a manufacturing process. The basic skills of welding are similar across industries, so welders can easily shift from one industry to another, depending on where they are needed most. For example, welders who are laid off in the automotive manufacturing industry may be able to find work in the oil and gas industry. The nation's aging infrastructure will require the expertise of welders, cutters, solderers, and brazers to help rebuild bridges, highways, and buildings. Also, the construction of new power generation facilities and, specifically, pipelines transporting natural gas and oil may result in new jobs.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Welders, Cutters, Solderers, and Brazers, at <https://www.bls.gov/ooh/production/welders-cutters-solderers-and-brazers.htm> (visited March 03, 2023).

Average Full-Time Wage

The median annual wage for welders, cutters, solderers, and brazers was \$47,010 in 2021. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$31,350, and the highest 10 percent earned more than \$63,660.

Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook*, Welders, Cutters, Solderers, and Brazers, at <https://www.bls.gov/ooh/production/welders-cutters-solderers-and-brazers.htm> (visited March 03, 2023).

Additional Requirements

1. Must be at least 16 years of age;
2. Must demonstrate adequate hand-eye coordination;
3. Must be oriented to reality and not be mentally impaired by mind altering substances.

Awards Available

Associate of Applied Science
Automotive/Advanced Manufacturing
Welding

Certificate

Automotive/Advanced Manufacturing
Welding

Short Term Certificate

Automotive/Advanced Manufacturing
Welding
Construction SMAW Plate Welding
Manufacturing Welding
Pipe Welding

Program Contact

Chris Burdick
Program Coordinator/Instructor
334-420-4379
Location: Patterson Site - Bldg. H

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

Estimated Program Length & Cost *

Award	Award	Credit Hours	Tuition/Fees	Books	Tools	Supplies
Associate Degree	6 Terms	65	\$10,595	\$400	\$250	\$0
Certificate	4 Terms	47	\$7,661	\$400	\$250	\$0
Short Term Certificate	1 Term	16	\$2,608	\$150	\$230	\$0
Short Term Certificate	1 Term	13	\$2,119	\$150	\$230	\$0

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.

Automotive/Advanced Manufacturing, Welding

Degree Type
AAS

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area II - Humanities & Fine Arts (3 hours)

(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If [SPH-106](#), [SPH-107](#), [SPA-101](#) or [SPA-102](#) has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:

Course Code	Title	Credits
ART-100	Art Appreciation	3
MUS-101	Music Appreciation	3

Humanities:

Course Code	Title	Credits
PHL-106	Introduction to Philosophy	3
PHL-206	Ethics and Society	3
REL-100	History of World Religions	3
REL-151	Survey of the Old Testament	3
REL-152	Survey of the New Testament	3
SPA-101	Introductory Spanish I	3
SPA-102	Introductory Spanish II	3
SPH-106	Fundamentals of Oral Communication	3
SPH-107	Fundamentals of Public Speaking	3

Literature:

Course Code	Title	Credits
ENG-251	American Literature I	3
ENG-252	American Literature II	3
ENG-261	English Literature I	3
ENG-262	English Literature II	3
ENG-271	World Literature I	3
ENG-272	World Literature II	3

Area III - Natural Science & Mathematics (6-7 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area IV - History, Social & Behavioral Sciences (3 hours)

(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

Note: Must complete 3 semester hours.

History:

Course Code	Title	Credits
HIS-101	Western Civilization I	3
HIS-102	Western Civilization II	3
HIS-121	World History I	3
HIS-122	World History II	3
HIS-201	United States History I	3
HIS-202	United States History II	3

Social and Behavioral Sciences:

Course Code	Title	Credits
PSY-200	General Psychology	3
PSY-210	Human Growth and Development	3
SOC-200	Introduction to Sociology	3
POL-200	Introduction to Political Science	3
POL-211	American National Government	3

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-100	Industrial Safety	3
ADM-111	Manufacturing Safety Practices	3
WDT-109	SMAW Fillet/Pac/Cac	3
WDT-110	Industrial Blueprint Reading	3
WDT-119	Gas Metal Arc/Flux Cored Arc Welding	3
WDT-228	Gas Tungsten Arc Welding	3

Welding Electives: (Choose 30 Credit Hours)

Course Code	Title	Credits
WDT-120	SMAW Groove	3
WDT-122	SMAW Fillet/OFC Lab	3
WDT-123	SMAW Fillet/PAC/CAC Lab	3
WDT-124	Gas Metal Arc/Flux Cored Arc Welding Lab	3
WDT-125	SMAW Groove Lab	3
WDT-131	Carbon Steel Fabrication Methods	3
WDT-155	GTAW Carbon Pipe Lab	3
WDT-156	GTAW Stainless Pipe Lab	3
WDT-157	Consumable Welding Processes	3
WDT-158	Consumable Welding Processes Lab	3
WDT-167	Flux Core Arc Welding Lab	3
WDT-219	Welding Inspection and Testing	3
WDT-221	Pipefitting and Fabrication	3
WDT-257	SMAW Carbon Pipe Lab	3
WDT-268	Gas Tungsten Arc Lab	3
WDT-286	Co-Op	1
CIS-146	Computer Applications	3
Total Credits		65

Automotive/Advanced Manufacturing, Welding

Degree Type

CER

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)

Course Code	Title	Credits
ENG-101	English Composition I	3
ENG-102	English Composition II	3
ENG-130	Technical Report Writing	3

Area III - Natural Science & Mathematics (3 hours)

(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed. Additional hours can be taken in the Natural Science area.

Mathematics:

Course Code	Title	Credits
MTH-100	Intermediate College Algebra	3
MTH-104	Plane Trigonometry	3
MTH-110	Finite Mathematics	3
MTH-112	Precalculus Algebra	3
MTH-116	Mathematical Applications	3

Natural Sciences:

Course Code	Title	Credits
BIO-101	Introduction to Biology I	4
BIO-102	Introduction to Biology II	4
BIO-103	Principles of Biology I	4
BIO-104	Principles of Biology II	4
PHS-111	Physical Science	4
PHS-112	Physical Science	4
PHY-120	Introduction to Physics	4

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ORI-101	Orientation to College	1
ADM-100	Industrial Safety	3
ADM-111	Manufacturing Safety Practices	3
WDT-109	SMAW Fillet/Pac/Cac	3
WDT-110	Industrial Blueprint Reading	3
WDT-119	Gas Metal Arc/Flux Cored Arc Welding	3
WDT-228	Gas Tungsten Arc Welding	3
WDT-286	Co-Op	1

Welding Electives: (Choose 21 Credit Hours)

Course Code	Title	Credits
WDT-120	SMAW Groove	3
WDT-122	SMAW Fillet/OFC Lab	3
WDT-123	SMAW Fillet/PAC/CAC Lab	3
WDT-124	Gas Metal Arc/Flux Cored Arc Welding Lab	3
WDT-125	SMAW Groove Lab	3
WDT-131	Carbon Steel Fabrication Methods	3
WDT-155	GTAW Carbon Pipe Lab	3
WDT-156	GTAW Stainless Pipe Lab	3
WDT-157	Consumable Welding Processes	3
WDT-158	Consumable Welding Processes Lab	3
WDT-167	Flux Core Arc Welding Lab	3
WDT-219	Welding Inspection and Testing	3
WDT-221	Pipefitting and Fabrication	3
WDT-257	SMAW Carbon Pipe Lab	3
WDT-268	Gas Tungsten Arc Lab	3
CIS-146	Computer Applications	3
Total Credits		47

Automotive/Advanced Manufacturing Welding, Construction SMAW Plate Welding

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
ADM-100	Industrial Safety	3
WDT-109	SMAW Fillet/Pac/Cac	3
WDT-122	SMAW Fillet/OFC Lab	3
WDT-123	SMAW Fillet/PAC/CAC Lab	3
Total Credits		12

Automotive/Advanced Manufacturing Welding, Manufacturing Welding

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
WDT-110	Industrial Blueprint Reading	3
WDT-119	Gas Metal Arc/Flux Cored Arc Welding	3
WDT-124	Gas Metal Arc/Flux Cored Arc Welding Lab	3
WDT-167	Flux Core Arc Welding Lab	3
WDT-268	Gas Tungsten Arc Lab	3
Total Credits		15

Automotive/Advanced Manufacturing Welding, Pipe Welding

Degree Type
STC

Area V: Pre-Professional/College Requirements

(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:

Course Code	Title	Credits
WDT-155	GTAW Carbon Pipe Lab	3
WDT-156	GTAW Stainless Pipe Lab	3
WDT-158	Consumable Welding Processes Lab	3
WDT-221	Pipefitting and Fabrication	3
WDT-257	SMAW Carbon Pipe Lab	3
Total Credits		15

Course Descriptions

Accounting

ACT-201: Entrepreneurism

This course covers the important issues and critical steps involved in starting a new business from scratch. Topics covered include developing a business plan, creating a successful marketing strategy, setting up legal basis for business, raising start-up funds, attracting and managing human resources, managing costs, and developing a custom base.

Credits 3

Prerequisites

None

ACT-254: Business Income Tax

This course focuses on federal income tax laws concerning business entities. Emphasis is on income tax investment of partnerships, corporation, LLPs and LLCs. Upon completion of this course, the student will be able to apply federal income tax laws concerning business entities.

Credits 3

ACT-257: Govt & Not for Profit Accounting

This course is an introduction to the principles, concepts and practices of accounting for governmental and not-for-profit organizations. Emphasis is on fund accounting and its utilization in governmental agencies, colleges and universities, hospitals, and other not-for-profit organizations. Upon completion of this course, the student will be able to apply the principles, concepts, and practices of governmental and not-for-profit accounting.

Credits 3

Prerequisites

BUS-248: Managerial Accounting

Advanced Manufacturing

ADM-100: Industrial Safety

This course is an introduction to general issues, concepts, procedures, hazards, and safety standards found in industrial environment. This safety course is to make technicians aware of safety issues associated with their changing work environment and attempts to eliminate industrial accidents.

Credits 3

Prerequisites

None

ADM-101: Precision Measurement

This course covers the use of precision measurement instruments utilized in inspection. In addition, basic print reading techniques reverse engineering, and related industry standards required in advanced manufacturing disciplines are covered. Upon completion, students should be able to demonstrate correct use of precision measuring instruments, interpret basic prints and apply basic reverse engineering techniques.

Credits 3

Prerequisites

As determined by college.

ADM-105: Fluid Systems

This course includes the fundamental concepts and theories for the safe operation of hydraulic and pneumatic systems used with industrial production equipment. Topics include the physical concepts, theories, laws, air flow characteristics, actuators, valves, accumulators, symbols, circuitry, filters, servicing safety, and preventive maintenance and the application of these concepts to perform work.

Upon completion, students should be able to service and perform preventive maintenance functions on hydraulic and pneumatic systems.

Credits 3

Prerequisites

As determined by college.

ADM-106: Quality Control Concepts

This course provides an overview of the materials and processes and quality assurance topics used in commercial and specialized manufacturing products. Emphasis is placed on process evaluation techniques that can be extrapolated to other system areas such as new products and new technology. Emphasis is also placed on quality assurance including the history of the quality movement, group problem solving, and statistical methods such as statistical process control (SPC), process capability studies, and the concepts associated with lean manufacturing.

Credits 3

Prerequisites

As determined by college

ADM-110: Blueprint Reading

This course is designed to provide students with a comprehensive understanding of blueprint reading. Topics include identifying types of lines and symbols used in mechanical drawings, recognition and interpretation of various types of views, tolerance, and dimensions.

Credits 3

Prerequisites

As determined by college.

ADM-111: Manufacturing Safety Practices

This course is an introduction to general issues, concepts, procedures, hazards, and safety standards found in an industrial environment. This safety course is to make technicians aware of safety issues associated with their changing work environment and attempt to eliminate industrial accidents. This course will offer credentialing for NCCER Core and OSHA 10 hour.

Credits 3

Prerequisites

As determined by college.

ADM-120: DC Fundamentals

This course is designed to provide students with a working knowledge of basic direct current (DC) electrical principles. Topics include safety, basic atomic structure and theory, magnetism, conductors, insulators, use of Ohm's law to solve for voltage, current, resistance, electrical sources, power, inductors and capacitors. Students will perform lockout/tagout procedures, troubleshoot circuits and analyze series, parallel, and combination DC circuits using the electrical laws and basic testing equipment to determine unknown electrical quantities. CORE

Credits 3

Prerequisites

None

ADM-121: AC Fundamentals

This course is designed to provide students with a working knowledge of basic alternating current (AC) electrical principles. Topics include basic concepts of electricity, electrical components, basic circuits, measurement instruments, the laws of alternating current, and electrical safety with lockout procedures. Hands-on laboratory exercises are provided to analyze various series, parallel, and combination alternating current circuit configurations containing resistors, inductors and capacitors. Upon course completion, students will be able to describe and explain alternating current circuit fundamentals, such as RLC circuits, impedance, phase relationships and power factors. They should also be able to perform fundamental tasks associated with troubleshooting, repairing and maintaining industrial AC systems. This is a CORE course.

Credits 3

Prerequisites

AUT-110

ADM-155: Manufacturing Projects

This is an introduction to project base learning. This course will involve research, team skills, the collaboration of trades, outsourcing, manufacturing management that emphasizes synthesis through collaborative learning. Students integrate and apply previous knowledge, skills, and experiences they learned in their major and other academic courses to complete individual & team-based projects. The course emphasizes communication skills, critical thinking, problem-solving, computer literacy, and teaming skills.

Credits 3

Prerequisites

As determined by college

ADM-200: Industrial Robotics Safety

This course covers safety aspects associated with industrial robots and the procedures to follow when working around them. The topics are approached from maintenance/repair and engineering perspectives. Students have the opportunity to learn common types of accidents associated with robot work and the sources of these accidents. North American and European safety standards including new ANSI/RIA safety standards for Industrial Robots (15.06), risk assessment methodologies, risk reduction methods and the application of various safety products are also covered.

Credits 3

ADM-234: Applied Industrial Robotics (Fanuc)

This course covers the basic techniques used to write, execute, test, and modify a basic robotic program for an application-specific operation. Topics covered are related safety, robotic systems, computer terminal programming, teach pendant programming, and input/output interfacing. Upon completion, a student should be able to write, test, and evaluate a robotic program.

Credits 3

Prerequisites

None

ADM-250: Introduction to Flexible Manufacturing Cells

This course covers techniques involved when grouping related machines for the purpose of completing a series of manufacturing processes in a flexible manufacturing cell. The student will be involved with the computerized integration of programmable control systems such as robotics, machine tools, and other peripheral equipment to emulate real-world manufacturing concepts employed in flexible manufacturing cells.

Credits 4

Prerequisites

None

ADM-291: MSSC Safety Course

This course is designed to provide students with knowledge and skills related to safety in a manufacturing environment. Topics covered include: work in a safe and productive manufacturing workplace, perform safety and environmental inspections, perform emergency drills and participate in emergency teams, identify unsafe conditions and take corrective action, provide safety orientation for all employees, train personnel to use equipment safely, suggest process and procedures that support safety of work environment, fulfill safety and health requirements for maintenance, installation and repair, monitor safe equipment and operator performance, utilize effective, safety-enhancing workplace practices

Credits 3

Prerequisites

None

ADM-292: MSSC Quality Practices/Measurements

This course is designed to provide students with knowledge and skills related to quality practices and measurement in a manufacturing environment.

Topics covered include participate in periodic internal quality audit activities; check calibration of gages and other data collection equipment; suggest continuous improvements; inspect materials and product/process at all stages to ensure they meet specifications; document the results of quality problems; communicate quality problems; take corrective actions to restore or maintain quality; record process outcomes and trends; identify fundamentals of blueprint reading; use common measurement systems and precision measurement tools. This course is equivalent to ADM 106 and WKO 132. Students completing this course will receive an MSSC certificate in quality practices and measurement. Students completing courses ADM 291, 292, 293 and 294 will receive the Certified Production Technician credential.

Credits 3

Prerequisites

ADM-291: MSSC Safety Course

ADM-293: MSSC Manufacturing Processes/Practices

This course is designed to provide students with knowledge and skills related to manufacturing processes and production in a manufacturing environment. Topics covered include identify customer needs; determine resources available for the production process; set up equipment for the production process; set team production goals; make job assignments; coordinate work flow with team members and other work groups; communicate production and material requirements and product specifications; perform and monitor the process to make the product; document product and process compliance with customer requirements; prepare final product for shipping or distribution. This course is equivalent to AUT 144 and WKO 133. Students completing this course will receive an MSSC certificate in manufacturing processes and production. Students completing courses ADM 291, 292, 293 and 294 will receive the Certified Production Technician credential.

Credits 3

Prerequisites

ADM-291: MSSC Safety Course

ADM-294: MSSC Maintenance Awareness Course

This course is designed to provide students with knowledge and skills related to maintenance awareness in a manufacturing environment. Topics covered include prepare preventative maintenance and routine repair, monitor indicators to ensure correct operations, perform all housekeeping to maintain production schedule, recognize potential maintenance issues with basic production systems, including knowledge of when to inform maintenance personnel about problems with: electrical systems, pneumatic systems, hydraulic systems, machine automation systems, lubrication systems, bearings and couplings.

Credits 3

Prerequisites

ADM-291: MSSC Safety Course

AUT-114: Programmable Logic Controllers

This course provides an introduction to programmable logic controllers. Emphasis is placed on, but not limited to, the following: PLC hardware and software, numbering systems, installation, and programming. Upon completion, students must demonstrate their ability by developing, loading, debugging, and optimizing PLC programs. This is a CORE course.

Credits 3

Prerequisites

As determined by college

Corequisites

As determined by college

AUT-116: Introduction to Robotics

This course provides instruction in concepts and theories for the operation of robotic servo motors and power systems used with industrial robotic equipment. Emphasis is on the application of the computer to control power systems to perform work. Student competencies include understanding of the functions of hydraulic, pneumatic, and electrical power system components, ability to read and interpret circuitry for proper troubleshooting and ability to perform preventative maintenance.

Credits 3

Prerequisites

As determined by college

Corequisites

As determined by college

AUT-138: Principles of Industrial Mechanics

This course provides instruction in basic physics concepts applicable to mechanics of industrial production equipment. Topics include the basic application of mechanical principles with emphasis on power transmission, specific mechanical components, alignment, and tension. Upon completion, students will be able to perform basic troubleshooting, repair and maintenance functions on industrial production equipment.

Credits 3

AUT-208: Auto Systems Diagnosis & Troubleshooting

This course focuses on systematically solving problems in automated systems. Emphasis is placed on safety, test equipment, basic troubleshooting techniques and hands on problem solving. Upon completion, students will be able to use a systematic process to solve complex malfunctions.

Credits 3

Prerequisites

As determined by college

Corequisites

As determined by college

AUT-234: Industrial Motor Controls I

This course is a study of the construction, operating characteristics, and installation of different motor control circuits and devices. Emphasis is placed on the control of three phase AC motors. This course covers the use of motor control symbols, magnetic motor starters, running overload protection, pushbutton stations, multiple control stations, two wire control, three wire control, jogging control, sequence control, and ladder diagrams of motor control circuits. Upon completion, students should be able to understand the operation of motor starters, overload protection, interpret ladder diagrams using pushbutton stations and understand complex motor control diagrams.

Credits 3

Prerequisites

As determined by college

AUT-235: Industrial Motor Controls II

This course covers complex ladder diagrams of motor control circuits and the uses of different motor starting techniques. Topics include wye-delta starting, part start winding, resistor starting and electronic starting devices. Upon completion, the students should be able to understand and interpret the more complex motor control diagrams and understand the different starting techniques of electrical motors.

Credits 3

Prerequisites

As determined by college.

AUT-251: Intro to Variable Frequency Drives & Servo Controls

This course provides an introduction to variable frequency drives (VFD) and servo drive technology. Topics include the purpose of VFDs, general operating principles, analog and digital servo drives, and characteristics of practical servo systems. The Lab enables students to program, test, and run drives and motors. The removal and replacement of servo drives will also be discussed. Upon completion students will be able to apply principles of VFD and servo drives.

Credits 3

Prerequisites

As determined by college

AUT-278: Robotic Programming and Welding

This program introduces students to the safety and programming associated with robotic welding technology. Topics include robotic weld station familiarity, safety, robotic motions, programming, and welding inspection. Upon completion, the student should be able to setup and program a robot to weld parts in an efficient and safe manner.

Credits 3

Prerequisites

As determined by college

Corequisites

As determined by college

Air Conditioning and Refrigeration

ACR-111: Principles of Refrigeration

This course emphasizes the fundamental principles for air conditioning and refrigeration. Instruction is provided in the theory and principles of refrigeration and heat transfer, HVAC/R system components, common, and specialty tools for HVAC/R, and application of the concepts of basic compression refrigeration. Upon completion, students should identify system components and understand their functions, identify and use common and specialty HVAC/R tools, and maintain components of a basic compression refrigeration system. This is a CORE course.

Credits 3

Prerequisites

None

ACR-112: HVACR Service Procedures

This course covers system performance checks and refrigerant cycle diagnosis. Emphasis is placed on the use of refrigerant recovery/recycle units, industry codes, refrigerant coils and correct methods of charging and recovering refrigerants. Upon completion, students should be able to properly recover/recycle refrigerants and demonstrate safe, correct service procedures which comply with the no-venting laws.

Credits 3

Prerequisites

None

ACR-113: Refrigeration Piping Practices

The course introduces students to the proper installation procedures of refrigerant piping and tubing for the heating, ventilation, air conditioning and refrigeration industry. This course includes various methods of working with and joining tubing. Upon completion, students should comprehend related terminology, and be able to fabricate pipe, tubing, and pipe fittings. This is a CORE course.

Credits 3

Prerequisites

None

ACR-121: Principles of Electricity for HVACR

This course is designed to provide the student with the basic knowledge of electrical theory and circuitry as it pertains to air conditioning and refrigeration. This course emphasizes safety, definitions, symbols, laws, circuits, and electrical test instruments. Upon completion students should understand and be able to apply the basic principles of HVACR circuits and circuit components. This is a CORE course.

Credits 3

Prerequisites

None

ACR-122: HVACR Electrical Circuits

This course introduces the student to electrical circuits and diagrams. Electrical symbols and basic wiring diagrams are constructed in this course. Upon completion, the student should understand standard wiring diagrams and symbols and be able to construct various types of electrical circuits. This is a CORE course.

Credits 3

Prerequisites

None

ACR-123: HVACR Electrical Components

This course introduces students to electrical components and controls. Emphasis is placed on the operations of motors, relays, contactors, starters, and other HVAC electrical components. Upon completion, students should be able to install electrical components and determine their proper operation. This is a CORE course.

Credits 3

Prerequisites

None

ACR-125: Fund of Gas & Electrical Heating Systems

This course provides instruction on general service and installation for common gas and electrical heating systems. Emphasis is placed on components, general service procedures, and basic installation. Upon completion, students will be able to install and service gas and electrical heating systems in a wide range of applications. This is a CORE course.

Credits 6

Prerequisites

None

ACR-127: HVACR Electric Motors

This course covers the basic maintenance of electric motors used in HVAC/R systems. Topics include types of motors, motor operations, motor installation, and troubleshooting motors. Upon completion student should be able to install and service HVAC/R electric motors.

Credits 3

Prerequisites

None

ACR-128: Heat Load Calculations

This course focuses on heat flow into and out of building structures. Emphasis is placed on determining heat gain/heat loss of a given structure. Upon completion, students should be able to calculate heat load and determine HVAC equipment size requirements.

Credits 3

Prerequisites

None

ACR-132: Residential Air Conditioning

This course introduces students to residential air conditioning systems. Emphasis is placed on the operation, service, and repair of residential air conditioning systems. Upon completion, students will be able to service and repair residential air conditioning systems.

Credits 3

Prerequisites

None

ACR-133: Domestic Refrigeration

This course covers domestic refrigerators and freezers. Emphasis is placed on installation, removal, and maintenance of components. Upon completion, students should be able to service and adjust domestic refrigeration units.

Credits 3

Prerequisites

None

ACR-134: Ice Machines

This course introduces students to commercial ice machines. Emphasis is placed on components, electrical and mechanical operation sequences, control adjustment procedures, preventive maintenance, repairs, and installation procedures. Upon completion, student should be able to install, service and repair commercial ice machines.

Credits 3

Prerequisites

None

ACR-135: Mechanical/Gas Safety Codes

This course is to enhance the student's knowledge of the International Fuel Gas Code and International Mechanical Code as well as fire and job safety requirements. Emphasis is placed on code book content and compliance with installation requirements. Upon completion, students should be able to apply code requirements to all work.

Credits 3

Prerequisites

None

ACR-141: Environmental Systems

This course provides students with knowledge and skills of environmental chambers. Topics include theory of the refrigerant components and refrigerant circuits, programmable controllers, electrical pressure and calibration instruments and places emphasis on safety. Upon course completion, students should be able to apply environmentally safe practices.

Credits 4

Prerequisites

None

ACR-147: Refrigeration Transition and Recovery

This course is EPA-approved and covers material relating to the requirements necessary for type I, II, and III universal certifications. Upon completion, students should be prepared to take the EPA-608 certification examination.

Credits 3

Prerequisites

None

ACR-152: Heat Pump Systems

This course provides instruction on the operation and servicing of heat pump systems. Emphasis is placed on theory and application of refrigerants for heat pump systems and on basic service of components. Students should possess a strong foundation of electrical principles and theory. Upon completion students will be able to install and service heat pumps.

Credits 6

Prerequisites

None

ACR-193: Co-Op

These courses constitute a series wherein the student works on a part-time basis in a job directly related to Air Conditioning/Refrigeration. In these courses the employer evaluates the student's productivity, and the student submits a descriptive report of his work experiences. Upon completion, the student will demonstrate skills learned in an employment setting.

Credits 1

Prerequisites

None

ACR-203: Commercial Refrigeration

This course focuses on commercial refrigeration systems. Emphasis is placed on evaporators, condensers, compressors, expansion devices, special refrigeration components and application of refrigeration systems. Upon completion students should be able to service and repair commercial refrigeration systems.

Credits 3

Prerequisites

None

ACR-205: System Sizing and Air Distribution

This course provides instruction in the load calculation of a structure and system sizing. Topics of instruction include heat loss, heat gain, equipment and air distribution sizing, and factors making acceptable indoor air quality. Upon course completion, students should be able to calculate system requirements.

Credits 3

Prerequisites

None

ACR-209: Commercial Air Conditioning Systems

This course focuses on servicing and maintaining commercial and residential HVAC/R systems. Topics include system component installation and removal and service techniques. Upon completion, the student should be able to troubleshoot and perform general maintenance on commercial and residential HVAC/R systems.

Credits 3

Prerequisites

None

ACR-210: Troubleshooting HVACR Systems

This course provides instruction in the use of various meters and gauges used in the HVAC/R industry. Emphasis is placed on general service procedures, system diagnosis, and corrective measure, methods of leak detection, and system evacuation, charging and performance checks. Upon completion students should be able to perform basic troubleshooting of HVAC/R.

Credits 3

Prerequisites

None.

Art

ART-100: Art Appreciation

This course is an introduction to the appreciation of art through an examination of the themes and purposes of art, the exploration of visual arts media and methods, and culturally significant works of art from the past and present. The course informs students about the language of art and its relevance in everyday life.

Credits 3

Prerequisites

None

Automotive Manufacturing

AUT-150: Introduction to Machine Shop I

This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, saws, milling machines, bench grinders, and layout instruments. Upon completion, students will be able to perform the basic operations of measuring, layout, drilling, sawing, turning, and milling.

Credits 3

Prerequisites

AUT-104 or AUT-166

Corequisites

AUT-151

AUT-151: Introduction to Machine Shop I Lab

This course provides practical application of the concepts and principles of machining operations learned in AUT 150. Topics include machine shop safety, measuring tools, lathes, saws, milling machines, bench grinders, and layout instruments. Upon completion, students will be able to perform the basic operations of measuring, layout, drilling, sawing, turning, and milling.

Credits 3

Prerequisites

None

Corequisites

AUT-150: Introduction to Machine Shop I

AUT-178: Gas Tungsten Arc Welding

This course provides student with knowledge needed to perform gas tungsten arc welds using ferrous and/or non-ferrous metals, according to applicable welding codes. Topics include safe operating practices, equipment identification and set-up, correct selection of tungsten type, polarity, shielding gas and filler metals. Upon completion, a student should be able to identify safe operating practices, equipment identification and setup, correct selection of tungsten type, polarity, shielding gas, filler metals, and various welds on ferrous and/or non-ferrous metals, using the gas tungsten arc welding process according to applicable welding codes.

Credits 3

Prerequisites

None

Corequisites

AUT-180

AUT-180 : Gas Tungsten Arc Welding Lab

This course provides student with skills needed to perform gas tungsten arc welds using ferrous and/or non-ferrous metals, according to applicable welding codes. Topics include safe operating practices, equipment identification and set-up, correct selection of tungsten type, polarity, shielding gas and filler metals. Upon completion, a student should be able to identify safe operating practices, equipment identification and setup, correct selection of tungsten type, polarity, shielding gas, filler metals, and various welds on ferrous and/or non-ferrous metals, using the gas tungsten arc welding process according to applicable welding codes.

Credits 3

Prerequisites

None

Corequisites

AUT-178: Gas Tungsten Arc Welding

AUT-186: Principles of Ind Maintenance Wdt & Metal Cutting Techniques

This course provides instruction in the fundamentals of acetylene cutting and the basics of welding needed for the maintenance and repair of industrial production equipment. Topics include oxy-fuel safety, choice of cutting equipment, proper cutting angles, equipment setup, cutting plate and pipe, hand tools, types of metal welding machines, rod and welding joints, and common welding passes and beads. Upon course completion, students will demonstrate the ability to perform metal welding and cutting techniques necessary for repairing and maintaining industrial equipment.

Credits 3

Prerequisites

None

Corequisites

AUT-178

AUT-210: Industrial Robotics

This course covers principles of electro-mechanical devices. Topics include the principles, concepts, and techniques involved in interfacing microcomputers to various electro-mechanical devices to produce geographical movement. Upon completion, students should be able to apply the principles of electro-mechanical devices. This course is also taught as ILT-216.

Credits 3

Prerequisites

None

AUT-211: Industrial Robotics Lab

This lab covers the principles, concepts, and techniques involved in interfacing microcomputers to various electro-mechanical devices to produce geographical movement. Upon completion students should be able to apply the principles of electro-mechanical devices. This course is also taught as ILT-217.

Credits 2

Prerequisites

None

AUT-221: Advanced Programmable Logic Controllers

This course includes the advanced principals of PLC's including hardware, programming, and troubleshooting. Emphasis is placed on developing advanced working programs, and troubleshooting hardware and software communication problems. Upon completion, students should be able to demonstrate their ability in developing programs and troubleshooting the system.

Credits 3

Prerequisites

None

AUT-230: Preventive Maintenance

This course focuses on the concepts and applications of preventive maintenance. Topics include the introduction of alignment equipment, job safety, tool safety, preventive maintenance concepts, procedures, tasks, and predictive maintenance concepts. Upon course completion, students will demonstrate the ability to apply proper preventive maintenance and explain predictive maintenance concepts.

Credits 3

Prerequisites

None

AUT-286: Co-Op

These courses constitute a series wherein the student works on a part-time basis in a job directly related to advanced manufacturing. In these courses the employer evaluates the student's productivity and the student submits a descriptive report of his work experiences. Upon completion, the student will demonstrate skills learned in an employment setting.

Credits 1

Prerequisites

As determined by program

AUT 186: Principles of Industrial Maintenance Welding & Metal Cutting Techniques

This course provides instruction in the fundamentals of acetylene cutting and the basics of welding needed for the maintenance and repair of industrial production equipment. Topics include oxy-fuel safety, choice of cutting equipment, proper cutting angles, equipment setup, cutting plate and pipe, hand tools, types of metal welding machines, rod and welding joints, and common welding passes and beads. Upon course completion, students will demonstrate the ability to perform metal welding and cutting techniques necessary for repairing and maintaining industrial equipment.

Credits 3

Prerequisites

None

Corequisites

AUT-178

ELT-219: Fluid Power Systems

This course includes the fundamental concepts and theories for the safe operation of hydraulic and pneumatic systems used with industrial production equipment. Topics include the physical concepts, theories, laws, air flow characteristics, actuators, valves, accumulators, symbols, circuitry, filters, servicing safety, and preventive maintenance and the application of these concepts to perform work. Upon completion, students should be able to service and perform preventive maintenance functions on hydraulic and pneumatic systems.

Credits 3

Prerequisites

As required by program.

INT-101: DC Fundamentals

This course provides an in depth study of direct current (DC) electronic theory. Topics include atomic theory, magnetism, properties of conductors and insulators, and characteristics of series, parallel, and series-parallel circuits. Inductors and capacitors are introduced and their effects on DC circuits are examined. Students are prepared to analyze complex DC circuits, solve for unknown circuit variables and to use basic electronic test equipment.

This course also provides hands on laboratory exercises to analyze, construct, test, and troubleshoot DC circuits. Emphasis is placed on the use of scientific calculator and the operation of common test equipment used to analyze and troubleshoot DC and to prove the theories taught during classroom instruction.

Credits 3

Prerequisites

As required by college

INT-123: Concepts of Solid State Electronics

This course is an introduction to semiconductor fundamentals and applications to electronic devices.

It covers the basic operations and applications of rectifier circuits, transistors, and thyristors.

Coverage is given to safety, use, and care with hazardous materials and personnel as well as material and environmental considerations. Upon completion students will be able to construct and test for proper operation of various types of solid state devices.

Credits 5

INT-284: Adv. Programmable Logic Controllers

This course includes the advanced principals of PLC's including hardware, programming, and troubleshooting. Emphasis is placed on developing advanced working programs, and troubleshooting hardware and software communication problems. Upon completion, students should be able to demonstrate their ability in developing programs and troubleshooting the system.

Credits 3

Prerequisites

As required by college

Automotive Service

ASE-101: Fundamentals Of Automotive Technology

This course provides basic instruction in Fundamentals of Automotive Technology. This is a CORE course and supports CIP Codes 15.0803 and 47.0604.

Credits 3

Prerequisites

None

ASE-112: Electrical Fundamentals

This course introduces the principles and laws of electricity. Emphasis is placed on wiring diagrams, test equipment, and identifying series, parallel and series-parallel circuits. Upon completion, students should be able to calculate, build, and measure circuits. This is a CORE course.

Credits 3

Prerequisites

None

ASE-121: Braking Systems

This course provides instruction in automotive technology or auto mechanics. Emphasis is placed on the practical application of brakes. This is a CORE course. ABR-223 – Automotive Mechanical Components is a suitable substitute for this course.

Credits 3

Prerequisites

None

ASE-122: Steering and Suspension

This course provides instruction in automotive technology or auto mechanics. Emphasis is placed on the practical application of steering and suspension. This is a CORE course. ABR-255 – Steering and Suspension is a suitable substitute for this course.

Credits 3

Prerequisites

None

ASE-124: Automotive Engines

This course provides instruction on the operation, design, and superficial repair of automotive engines. Emphasis is placed on understanding the four stroke cycle, intake and exhaust manifolds and related parts, engine mechanical timing components, engine cooling and lubrication system principles and repairs, and basic fuel and ignition operation. This is a CORE course and supports CIP Codes 47.0604 and 15.0803.

Credits 3

Prerequisites

None

ASE-130: Drive Train And Axles

This course provides basic instruction in automotive drive trains and axles. Emphasis is placed on the understanding and application of basic internal and external operation relating to proper operation and driveability. This is a CORE course. ABR-223 – Automotive Mechanical Components is a suitable substitute for this course.

Credits 3

Prerequisites

None

ASE-133: Motor Vehicle Air Conditioning

This course provides basic instruction in theory, operation, and repair of automotive heating and air conditioning systems. Emphasis is placed on the understanding and repair of vehicle air conditioning and heating systems, including but not limited to air management, electrical and vacuum controls, refrigerant recovery, and component replacement. ABR-258 – Heating and AC in Collision Repair is a suitable substitute for this course.

Credits 3

Prerequisites

None

ASE-162: Eletrical and Eletronic Systems

This is an intermediate course in automotive electrical and electronic systems. Emphasis is placed on troubleshooting and repair of battery, starting, charging, and lighting systems, subsystems, and components. This is a CORE course.

Credits 3

Prerequisites

[ASE-112](#) or instructor permission.

ASE-212: Advanced Electrical And Electronic Systems

This course provides instruction in advanced automotive electrical and electronic systems. Emphasis is placed on troubleshooting and repair of advanced electrical and electronic systems, subsystems, and components.

Credits 3

Prerequisites

None

ASE-220: Advanced Automotive Engines

This course provides in-depth instruction concerning internal engine diagnosis, overhaul and repair, including but not necessarily limited to the replacement of timing chains, belts, and gears, as well as the replacement or reconditioning of valve train components as well as replacement of pistons, connecting rods, piston rings, bearings, lubrication system components, gaskets, and oil seals. This course supports CIP Codes 47.0604 and 15.0803.

Credits 3

Prerequisites

None

ASE-221: Light Diesel For Automotive

This course will introduce students to basic light diesel fundamentals, operation, diagnosis, and repair. Emphasis is placed on design, maintenance, fuel systems, computer control and interrelated systems.

Credits 3

Prerequisites

None

ASE-224: Manual Transmission/ Transaxle

This course covers basic instruction in manual transmission and transaxles. Emphasis is placed on the understanding and application of basic internal and external operation relating to proper operation and driveability. This course supports CIP Codes 15.0803 and 47.0604.

Credits 3

Prerequisites

None

ASE-230: Automatic Transmission/ Transaxle

This course provides basic instruction in automatic transmissions and transaxles. Emphasis is placed on the comprehension of principles and powerflow of automatic transmissions and repairing or replacing internal and external components. This is a CORE course and supports CIP Codes 15.0803 and 47.0604.

Credits 3

Prerequisites

None

ASE-239: Engine Performance

This course provides basic instruction in engine performance with emphasis on fuel and ignition systems relating to engine operation. This is a CORE course and supports CIP Code 15.0803 and 47.0604.

Credits 3

Prerequisites

None

ASE-244: Engine Performance and Diagnostics

This course provides advanced instruction in engine performance. Emphasis is placed on engine management and computer controls of ignition, fuel, and emissions systems relating to engine performance and driveability. This is a CORE course and supports CIP Codes 15.0803 and 47.0604.

Credits 3

ASE-246: Automotive Emissions

This is an introductory course in automotive emission systems. Emphasis is placed on troubleshooting and repair of systems, subsystems, and components. This course supports CIP code 15.0803 and 47.0604.

Credits 3

Prerequisites

None

ASE-251: Dealership Work Experience

At the end of each on-campus period, the student returns to the sponsoring dealership to complete this segment of the program working full-time under the supervision of the dealership student work coordinator. He/she is expected to complete work assignments in the dealership that will reinforce and parallel the course work just completed at the college. Although indicated as 15 contact hours, students generally work on a full-time basis (40 hours per week) at the dealership. An evaluation of the students in dealership work performance is completed by the dealership supervisor.

Credits 3

Prerequisites

None

ASE-261: Dealership Work Experience

At the end of each on-campus period, the student returns to the sponsoring dealership to complete this segment of the program working full-time under the supervision of the dealership student work coordinator. He/she is expected to complete work assignments in the dealership that will reinforce and parallel the course work just completed at the college. Although indicated as 15 contact hours, students generally work on a full-time basis (40 hours per week) at the dealership. An evaluation of the students in dealership work performance is completed by the dealership supervisor.

Credits 3

Prerequisites

None

ASE-263: Hybrid & Electric Vehicles

This course is design to measure a technician's knowledge of the skills needed to diagnose both high and low voltage electrical/electronic problems, as well as other supporting system problems on hybrid/electric vehicles. This course prepares students for the ASE Light Duty Hybrid/Electric Vehicle Specialist (LE) certification.

Credits 3

Prerequisites

As determined by the College.

Biology

BIO-101: Introduction to Biology I

This is an introductory course designed for non-science majors. It includes physical, chemical, and biological principles common to all organisms. These principles are explained through a study of the scientific method, biological organization, cellular structure, bioenergetics of a cell, cell reproduction, gene theory, inheritance, and evolution. A 120-minute laboratory per week is required.

Credits 4

Prerequisites

As required by program.

BIO-102: Introduction to Biology II

Introduction to Biology II is the second of a two-course sequence for non-science majors. It covers evolutionary This is an introductory course designed for non-science majors. It includes evolutionary principles and relationships, environmental and ecological topics, phylogenetics and classification, and a survey of biodiversity. A 120-minute laboratory is required.

Credits 4

Prerequisites

[BIO-101: Introduction to Biology I](#)

BIO-103: Principles of Biology I

This is an introductory course for science and non-science majors. It covers physical, chemical, and biological principles common to all organisms. These principles are explained through a study of cell structure and function, cellular reproduction, basic biochemistry, cell energetics, the process of photosynthesis, and Mendelian and molecular genetics. Also included are the scientific method, basic principles of evolution, and an overview of the diversity of life with emphasis on viruses, prokaryotes, and protist. A 120-minute laboratory is required.

Credits 4

Prerequisites

Satisfactory completion of ENR-098 or satisfactory placement score.

BIO-104: Principles of Biology II

This course is an introduction to the basic ecological and evolutionary relationships of plants and animals and a survey of plant and animal diversity including classification, morphology, physiology, and reproduction. A 180 minute laboratory is required.

Credits 4

Prerequisites

BIO-103: Principles of Biology I

BIO-111: Survey of Human Biology

This course for the non-science major covers an overview of the human body functions with an emphasis on major organ systems. Laboratory is required.

Credits 4

Prerequisites

As required by the program

BIO-112: Human Reproduction & Inheritance

Human Reproduction and Inheritance is an introductory genetics course with primary emphasis on human inheritance, reproduction, venereal diseases, birth control, and teratology. No laboratory is required.

Credits 3

Prerequisites

None

BIO-120: Medical Terminology

This course is a survey of words, terms, and descriptions commonly used in medical arts. Emphasis is placed on spelling, pronunciation, and meanings of prefixes, suffixes, and roots. No laboratory is required.

Credits 3

Prerequisites

None

BIO-140: Human Anatomy for Dental Assisting

Human Anatomy for Dental Assisting covers the basic structure and function of human organ systems with primary emphasis on selected structures of the head and neck. Embryological, gross anatomical, and histological correlations illustrating dental health and oral pathology are emphasized. Laboratory is required.

Credits 3

Prerequisites

As required by program.

BIO-141: Microbiology for Dental Assisting

Microbiology, Pathology, and Pharmacology for Dental Assisting covers morphology, cultivation, transmission, and control of microbial pathogens. Pathology of the head, neck, and oral cavity and related therapeutic treatments are emphasized. Laboratory is required.

Credits 4

Prerequisites

BIO-140: Human Anatomy for Dental Assisting

BIO-201: Human Anatomy and Physiology I

Human Anatomy and Physiology I covers the structure and function of the human body. Included is an orientation of the human body, basic principles of chemistry, a study of cells and tissues, metabolism, joints, the integumentary, skeletal, muscular, and nervous systems, and the senses. Dissection, histological studies, and physiology are featured in the laboratory experience. A 120-minute laboratory is required.

Credits 4

Prerequisites

BIO-103: Principles of Biology I

BIO-202: Human Anatomy and Physiology II

Human Anatomy and Physiology II covers the structure and function of the human body. Included is a study of basic nutrition and metabolism; basic principles of fluids, electrolyte, and acid-base balance, and the endocrine, respiratory, digestive, excretory, cardiovascular, lymphatic, and reproductive systems. Dissection, histological studies, and physiology are featured in the laboratory experience. A 120-minute laboratory is required.

Credits 4

Prerequisites

BIO-103 and BIO-201

BIO-206: Human Anatomy

This course covers the basic structure and function of the human body. Emphasis is placed on the structure of the organ systems, cells, and tissues. Mammalian dissection and histological studies are featured in the required laboratory.

Credits 4

Prerequisites

BIO-103: Principles of Biology I

BIO-207: Human Physiology

This course covers the functions of the organ systems, cells, and tissues. Also included is a survey of cellular energetics, the major metabolic pathways, digestion, and fluid and electrolyte balance. Laboratory is required.

Credits 4

Prerequisites

BIO-103 and BIO-206

BIO-211: Human Anatomy and Physiology for Health Occupations I

This course is the first in a two-course sequence that covers the basic structure and function of the human body. Tissues and the following organ systems are covered: integumentary, skeletal, muscular, nervous, sensory, endocrine, circulatory, digestive, respiratory, excretory, and reproductive. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of human anatomy and physiology and their interrelationships. Laboratory is required.

Credits 4

Prerequisites

Satisfactory completion of ENR-098 or satisfactory placement score.

BIO-212: Human Anatomy and Physiology for Health Occupations II

This course is the second in a two-course sequence which provides a comprehensive study of the structure and function of the human body. Tissues and the following organ systems are covered: integumentary, skeletal, muscular, nervous, sensory, endocrine, circulatory, digestive, respiratory, excretory, and reproductive. Upon completion, students should be able to demonstrate an in-depth understanding of human anatomy and physiology principles and their interrelationships. Laboratory is required. [BIO-103](#) or BIO-211 will satisfy the prerequisite requirement for BIO-220, General Microbiology.

Credits 4

Prerequisites

BIO-211: Human Anatomy and Physiology for Health Occupations I

BIO-220: General Microbiology

This course covers the fundamental principles of microbiology, which includes the characteristics of bacteria, archaea, eukaryotes, and viruses; cell functions; chemical and physical control methods of microbial growth; and interactions between microbes and humans in relation to pathology, immunology, and the role of normal biota. The laboratory experience focuses on microbiological techniques including culturing, microscopy, staining, identification, and control of microorganisms. Two 120-minute laboratories are required.

Credits 4

Prerequisites

BIO-103 (RECOMMENDED: 4 Semester Hours of Chemistry)

Business

BUS-100: Introduction to Business

This is a survey course designed to familiarize the student with the fundamentals of American business in a global setting.

Credits 3

Prerequisites

As required by program.

BUS-147: Introduction to Finance

This course is a survey of monetary and credit systems. Topics include the role of the Federal Reserve System, sources of capital, including forms of long-term corporate financing, and consumer credit in the financial structure of our economy.

Credits 3

BUS-186: Elements of Supervision

This course is an introduction to the fundamentals of supervision. Topics include the functions of management, responsibilities of the supervisor, management-employee relations, organizational structure, project management, and employee training and rating.

Credits 3

Prerequisites

None.

BUS-215: Business Communication

This course covers written, oral and nonverbal communications. Topics include the application of communication principles to the production of clear, correct, and logically organized faxes, e-mail, memos, letters, resumes, reports, and other business communications.

Credits 3

Prerequisites

ENG-101: English Composition I

BUS-241: Principles of Accounting I

This course is designed to provide a basic theory of accounting principles and practices used by service and merchandising enterprises. Emphasis is placed on financial accounting, including the accounting cycle and financial statements.

Credits 3

Prerequisites

As required by program.

BUS-242: Principles of Accounting II

This course is a continuation of BUS 241. In addition to a study of financial accounting, this course covers topics in managerial accounting, corporations, and financial statement analysis.

Credits 3

Prerequisites

BUS-241: Principles of Accounting I

BUS-246: Computerized Accounting

This course utilizes the microcomputer in a study of accounting principles and practices. Emphasis is on the preparation and analysis of financial statements, measuring business activity, and making rational business decisions.

Credits 3

Prerequisites

BUS-241: Principles of Accounting I

BUS-248: Managerial Accounting

This course is designed to familiarize the student with management concepts and techniques of industrial accounting procedures. Emphasis is placed on cost behavior, contribution approach to decision-making, budgeting, overhead analysis, cost-volume-profit analysis, and cost accounting systems.

Credits 3

Prerequisites

As required by program.

BUS-249: Payroll Accounting

This course provides the foundation needed to calculate payroll, complete payroll taxes, and prepare payroll records and reports. Upon completion of this course, the student will have an in-depth understanding of payroll accounting and be able to accurately prepare payroll.

Credits 3

Prerequisites

[BUS-241: Principles of Accounting I](#)

BUS-252: Accounting Case Studies

This course includes a practical application of accounting knowledge through a series of case studies. The case study method of learning places emphasis on the preparation for, and classroom discussion described in the case. Upon completion of this course, the student will be able to apply accounting knowledge in a variety of situations.

Credits 3

Prerequisites

BUS-241 and BUS-242

BUS-253: Individual Income Tax

This course focuses on the fundamentals of the federal income tax laws with primary emphasis on those affecting the individual. Emphasis is on gross income determination, adjustments to income, business expenses, itemized deductions, exemptions, capital gains/losses, depreciation, and tax credits. Upon completion of this course, the student will be able to apply the fundamentals of the federal income tax laws affecting the individual.

Credits 3

Prerequisites

None

BUS-263: The Legal and Social Environment of Business

This course provides an overview of the legal and social environment for business operations. Topics include the Constitution, the Bill of Rights, court systems, alternative dispute resolution, civil and criminal law, administrative agencies, contracts, employment law, property interests and rights, and intellectual property, business organizations, and ethics.

Credits 3

Prerequisites

None

BUS-271: Business Statistics I

This is an introductory study of basic statistical concepts applied to economic and business problems. Topics include the collection, classification, and presentation of data; statistical description and analysis of data; measures of central tendency and dispersion; probability; discrete and continuous probability distributions; sampling; interval estimation; and introduction to hypothesis testing.

Credits 3

Prerequisites

[MTH-100: Intermediate College Algebra](#)

BUS-275: Principles of Management

This course provides a basic study of the principles of management. Topics include planning, organizing, leading, and controlling with emphasis on practical business applications.

Credits 3

Prerequisites

None.

BUS-276: Human Resource Management

This course provides an overview of the responsibilities of the supervisor of human resources. Topics include the selection, placement, testing, orientation, training, rating, promotion, and transfer of employees.

Credits 3

Prerequisites

[BUS-275: Principles of Management](#)

BUS-279: Small Business Management

This course provides an overview of the creation and operation of a small business. Topics include buying a franchise, starting a business, identifying capital resources, understanding markets, managing customer credit, managing accounting systems, budgeting systems, inventory systems, purchasing insurance, and the importance of appropriate legal counsel.

Credits 3

Prerequisites

BUS-275: Principles of Management

BUS-296: Business Internship

This course allows the student to apply knowledge and skills in a real-world work place. Evaluation is based upon a well-developed portfolio, job-site visits by the instructor, the employer's evaluation of the student, and the development and assessment by the student of a learning contract.

Credits 3

Prerequisites

As required by college.

Chemistry

CHM-104: Introduction to Chemistry I

This is a survey course of general chemistry for students who do not intend to major in science or engineering, and the course may not be substituted for CHM-111. Lecture will emphasize the facts, principles, and theories of general chemistry including math operations, matter and energy, atomic structure, symbols and formulas, nomenclature, the periodic table, bonding concepts, equations, reactions, stoichiometry, gas laws, phases of matter, solutions, and acids and bases. Laboratory is required.

Credits 4

Prerequisites

A minimum of MTH-098 or equivalent placement score

Child and Human Development

CHD-100 : Intro of Early Care & Education of Children

This course introduces students to the child education and care profession. It is designed to increase understanding of the basic concepts of child development and the developmental characteristics of children from birth through age 8/9 years, including infant and toddler and pre-school years. This course is the foundation for planning appropriate activities for children and establishing appropriate expectations of young children. This class also offers an opportunity to study the developmental domains (social, emotional, cognitive/language and physical). Course includes observations of the young child in early childhood settings. (Students may receive college course credit (3 credit hours) for CHD-100 if they have obtained the CDA credential prior to enrollment.)

Credits 3

Prerequisites

None

CHD-201: Child Growth and Development Principles

This course is a systematic study of child growth and development from conception through early childhood. Emphasis is on principles underlying physical, mental, emotional and social development, and methods of child study and practical implications. Upon completion, students will be able to use knowledge of how young children differ in development and approaches to learning to provide opportunities that supports physical, social, emotional, language, cognitive, and aesthetic development. This is a CORE (required) course.

Credits 3

Prerequisites

None

CHD-202: Children's Creative Experiences

This course focuses on fostering creativity in preschool children and developing a creative attitude in teachers. Topics include selecting and developing creative experiences in language arts, music, art, science, math and movement with observation and participation with young children required. Upon completion, students should be able to select and implement creative and age-appropriate experiences for young children.

Credits 3

Prerequisites

None

CHD-203: Children's Literature & Language Development

This course surveys appropriate literature and language arts activities designed to enhance young children's speaking, listening, pre-reading and writing skills. Emphasis is placed on developmental appropriateness as related to language. Upon completion, students should be able to create, evaluate and demonstrate activities which support a language-rich environment for young children. This is a CORE (required) course.

Credits 3

Prerequisites

None

CHD-204: Methods and Materials for Teaching Children

This course introduces basic methods and materials used in teaching young children. Emphasis is placed on students compiling a professional resource file of activities used for teaching math, language arts, science, and social studies concepts. Upon completion students will be able to demonstrate basic methods of creating learning experiences using developmental appropriate techniques, materials, and realistic expectations, including infant and toddler and pre-school. Course includes observations of young children in a variety of childcare environments. This is a CORE (required) course.

Credits 3

Prerequisites

None

CHD-205: Program Planning for Educating Young Children

This course provides students with knowledge to develop programs for early child development. Specific content includes a review of child development concepts and program contents. Upon completion students will be able to develop and evaluate effective programs for the education of young children.

Credits 3

CHD-206: Children's Health and Safety

This course introduces basic health, nutrition and safety management practices for young children. Emphasis is placed on how to set up and maintain safe, healthy environments for young children including specific procedures for infants and toddlers and procedures regarding childhood illnesses and communicable diseases. This is a CORE (required) course.

Credits 3

Prerequisites

None

CHD-208: Administration of Child Development Programs

This course includes appropriate administrative policies and procedures relevant to preschool programs. Topics include local, state and federal regulations; budget planning; record keeping; personnel policies and parent involvement. Upon completion, students should be able to identify elements of a sound business plan, develop familiarity with basic record-keeping techniques, and identify elements of a developmentally appropriate program.

Credits 3

Prerequisites

None

CHD-209: Infant and Toddler Education Programs

This course focuses on child development from infancy through 35 months of age with emphasis on planning programs using developmentally appropriate material. Emphasis is placed on positive ways to support an infant or toddler's social, emotional, physical and intellectual development. Upon completion, students should be able to plan an infant-toddler program and environment that is appropriate and supportive of the families and the children.

Credits 3

Prerequisites

None

CHD-210: Educating Exceptional Children

This course explores the many different types of exceptionalities found in young children. Topics include speech, language, hearing and visual impairments; gifted and talented children; mental retardation; emotional, behavioral, and neurological handicaps. Upon completion, students should be able to identify appropriate strategies for working with young exceptional children. This is a CORE (required) course.

Credits 3

Prerequisites

CHD-201 Child Growth and Development Principles

CHD-211: Child Development Seminar

This course provides students with the knowledge of a variety of issues and trends related to the childcare profession. Subject matter will vary according to industry and student needs. Upon completion students should be able to discuss special topics related to current trends and issues in child development. This course may be taken concurrently with CHD-219 - Supervised Practical Experiences

Credits 1

CHD-213: Child Development Trends Seminar

This course includes current topics in the child development field as an update for the professional caregiver. Industry needs determine course topics. Upon completion, students will demonstrate competency in meeting course objectives.

Credits 3

Prerequisites

ENG-101; CIS-146 or CIS-149

CHD-214: Families & Communities in Early Care & Ed Progs

This course provides students with information about working with diverse families and communities. Students will be introduced to family and community settings, the importance of relationships with children, and the pressing needs of today's society. Students will study and practice techniques for developing these important relationships and effective communication skills.

Credits 3

Prerequisites

None

CHD-215: Supervised Practical Experience in Child Dev

This course provides a minimum of 90 hours of hands-on, supervised experience in an approved program for young children. Students will develop a portfolio documenting experience gained during this course.

Credits 3

Prerequisites

Permission of Instructor; Completion of all Core and General Education courses, at least 90% of CHD degree requirements met.

CHD-217: Math and Science for Young Children

This course provides students with information on children's conceptual development and the fundamental basic concepts of both math and science. Students learn various techniques for planning, implementing and evaluating developmentally appropriate activities. Students also learn about integrated curriculum.

Credits 3

Prerequisites

None

CHD-219: Supervised Practical Experience

This course is taken as a co-requisite with [CHD-211](#) Child Development Seminar when offered This course provides hands-on, supervised experienced in an approved program for young children.

Emphasis is placed on performance of daily duties which are assessed by the college instructor and the cooperating teacher. Upon completion, students will be able to demonstrate competency in a childcare setting. This course may be taken concurrently with [CHD-211](#) - Child Development Seminar

Credits 2

CHD-221: Family Child Care

This course introduces methods for providing a developmentally appropriate childcare program in a home setting to include organizing home environments, establishing a daily schedule with children of different ages, building partnerships with parents and helping children learn through play, etc. Special instruction addresses family care as a small business operation with emphasis being placed on budgeting and tax requirements.

Credits 3

Prerequisites

None

CHD-222: Social Studies for Children

This course takes a global approach to the theory and practice of teaching social studies to young children. It includes methods and teaching materials used for teaching geography, history, the arts, and multicultural education using an integrated curriculum approach. The application of theoretical and philosophical concepts will be emphasized, as students are required to participate in both in-class demonstrations and laboratory experiences.

Credits 3

Prerequisites

None

CHD-224: School Age Child Care

This course is designed for caregivers/teachers providing programs for children age 5-12 in their before- and after- school care and summer programs. The course provides information on developmental profiles, discusses family concerns, and includes a variety of activities that caregivers can adopt to provide an educational and stimulating program.

Credits 3

Prerequisites

None

CHD-225: Child Development Seminar – Preschool

This course provides students with knowledge of a variety of issues and trends related to childcare issues in preschool. Upon completion students should be able to discuss special topics related to current trends and issues in preschool.

Credits 1

Prerequisites

None

CHD-226: Child Development Seminar – Family Child Care

This course provides students with knowledge of a variety of issues and trends related family childcare issues. Upon completion students should be able to discuss special topics related to current trends and issues in family childcare.

Credits 1

Prerequisites

As determined by college.

CHD-227: Child Development Seminar – Infant/Toddler Care

This course provides students with knowledge of a variety of issues and trends related infant/toddler care issues. Upon completion students should be able to discuss special topics related to current trends and issues in infant/toddler care.

Credits 1

Prerequisites

As determined by college.

Computer Information Systems

CIS-101 (A-B): Computer Applications Lab

This lab is designed to allow instructors to provide additional implementation of computer concepts as needed. This course may be duplicated with an alpha suffix added to the course number. This course may be scheduled as an Experimental Lab (2:1) or Manipulative Lab (3:1). (See Board Policy 705.01).

Credits 1

Corequisites

CIS-238 and CIS-269

CIS-103: Introductory Computer Skills II

This course is designed to focus on the development of computer skills suited to the needs of students in non-degree occupational programs. The course will generally use software packages appropriate to occupational programs and may include such topics as word processing, database, basic graphics, spreadsheets or other features typically needed in the field. Upon completion, the student will be able to demonstrate proficiency by the completion of appropriate assignments and occupation-specific applications.

Credits 3

Prerequisites

As required by college.

CIS-117: Database Mgmt Software Applications

This course provides students with hands-on experience using database management software. Students will develop skills common to most database management software by developing a wide variety of databases. Emphasis is on planning, developing, and editing functions associated with database management.

Credits 3

Prerequisites

CIS-146 OR Permission of Instructor

CIS-146: Computer Applications

This course is an introduction to computer software applications, including word processing, spreadsheets, database management, and presentation software. This course will introduce students to concepts associated with professional certifications.

Credits 3

Prerequisites

As required by program.

CIS-149: Introduction to Computers

This course is an introduction to computers and their impact on society. The course covers the development of computers, their impact on society, as well as future implications of development of computer and related communication technologies.

This course introduces programming and computer operating systems. Upon completion, students will have basic knowledge of computer technology and will be able to perform basic functions with a computer system. The course will help prepare students for the IC3 certification.

Credits 3

Prerequisites

As required by college.

CIS-155: Introduction to Mobile App Development

The purpose of this course is to introduce students to various app development tools for various mobile platforms. Specific topics include: app distribution sources, mobile device operating systems, survey of app development software, processes for design, build, deploying, and optimizing apps. At the conclusion of this course students will be able to design, build, deploy, and optimize a basic app.

Credits 3

Prerequisites

CIS-201 OR Permission of Instructor

CIS-157: Introduction to App Development with Swift

This introductory one-semester course is designed to help students build a solid foundation in programming fundamentals using Swift as the language. Students get practical experience with the tools, techniques, and concepts needed to build a basic iOS system.

Credits 3

Prerequisites

High School Graduate or GED

CIS-159: Introduction to Graphic Design for Apps

This introductory one-semester course is designed to enable students to integrate graphics for mobile app development. Students receive practical experience with the tools, techniques, and concepts needed to build or incorporate basic graphics.

Credits 3

Prerequisites

High School Graduate or GED

CIS-165: Network Lab

This lab is designed to allow instructors to provide additional implementation of networking concepts as needed.

Credits 1

Corequisites

CIS-280

CIS-171: Linux I

This course presents fundamental applications in UNIX/Linux. Included in this course are skills development for OS installation and setup, recompile techniques, system configuration settings, file/folder structures and types, run levels, basic network applications, and scripting. Additionally, the course presents security features from an administrative and user consideration.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-172: Linux II

This course is a continuation of [CIS-171](#) and includes advanced features of UNIX/Linux. Included in the course are web applications, integrated network configurations, file transfer, server administration, system controls, IP tables/ firewall to secure UNIX/Linux systems, and strategic user-group applications specific to administrative network control.

Credits 3

Prerequisites

CIS-171 OR Permission of Instructor

CIS-182: Help Desk Applications

The main purpose of this course is to provide students with a comprehensive understanding of the helpdesk environment and the knowledge, skills, and abilities necessary to work in the user support industry. Students will learn problem-solving and communication skills that are very valuable when providing user support. Through hands-on exercises and case projects students will learn how to apply their knowledge and develop their ideas and skills.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-200: Software Design

This course includes instruction in critical thinking, problem solving skills, and essential programming logic in structured and object-oriented design, using contemporary tools.

Credits 3

Prerequisites

CIS-238 & CIS-201

CIS-201: Intro to Computer Programming Concepts

This course presents fundamental programming concepts. Included in this course are problem solving and algorithms, various design tools, programming structures, variable data types and definitions, modularization, and selected programming languages. Techniques are introduced to enable students to develop programs. This course is a suitable substitution for the programming core of the AAT and AAS CIS programs.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-203: Intro to the Information Highway

This course introduces students to basic principles of the information highway. Students are exposed to different network information tools such as electronic mail, network news, browsers, commercial information services, appropriate editors, and Web authoring software.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-207: Web Development

This course provides students with opportunities to learn Hypertext Markup Language, cascading style sheets, and Java Script. At the conclusion of this course, students will be able to use specified markup languages to develop basic Web pages.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-208: Web Authoring Software

Students utilize various Web authoring tools to construct and edit Web sites for a variety of applications. Upon completion students will be able to use these tools to enhance Web sites.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-209: Advanced Web Development

This is an advanced Web design course emphasizing the use of scripting languages to develop interactive Web sites. Upon completion students will be able to create data driven Web sites. This course helps prepare students for the Certified Internet Webmaster (CIW) Foundations certification.

Credits 3

Prerequisites

CIS-207: [Web Development](#)

CIS-211: Principles of Information Assurance

This course is designed to introduce students to information security principles. Topics covered in this course will include the need for security, risk management, security technology, cryptography, and physical security. Security policies and legal/ethical issues will also be covered.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-212: Visual Basic Programming

This course emphasizes BASIC programming using a graphical user interface. The course will emphasize graphical user interfaces with additional topics on such topics as advanced file handling techniques, simulation, and other selected areas. Upon completion, the student will be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests.

Credits 3

Prerequisites

CIS-201 OR Permission of Instructor

CIS-213: Advanced Visual Basic Programming

This course is a continuation of [CIS-212](#), Visual Basic Programming.

Credits 3

Prerequisites

CIS-212: [Visual Basic Programming](#)

CIS-214: Security Analysis (Pen Testing)

This course introduces students to the concept of security analysis, or penetration testing, of information systems. Students will evaluate the security of a computer system or network, assessing security risks from the position of a potential attacker. Emphasis is on identifying security flaws and providing technical solutions.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-220: App Development with Swift I

This is the first of two courses designed to teach specific skills related to app development using Swift language.

Credits 3

Prerequisites

CIS-157 OR Permission of Instructor

CIS-222: Database Management Systems

This course will discuss database system architectures, concentrating on Structured Query Language (SQL). It will teach students how to design, normalize and use databases with SQL, and to link those to the Web.

Credits 3

Prerequisites

CIS-117 OR Permission of Instructor

CIS-227: App Development with Swift II

This course focuses on building specific features for iOS apps. Students apply their knowledge and skills to developing new apps.

Credits 3

Prerequisites

CIS-220 OR Permission of Instructor

CIS-237: Virtual Infrastructure: Installation and Configuration

Students explore concepts and capabilities of virtual architecture with a focus on the installation, configuration, and management of a virtual infrastructure, an ESX Server, and a Virtual Center. Covers fundamentals of virtual network design and implementation, fundamentals of storage area networks, virtual switching, virtual system management and engineering for high availability.

Credits 3

Prerequisites

CIS-171 & CIS-238

CIS-238: Cloud Computing: Infrastructure and Services

This course focuses on cloud infrastructure, deployment, security models, and the key considerations in migrating to cloud computing. Coverage includes the technologies and processes required to build traditional, virtualized and cloud data center environments, including computation, storage, networking, desktop and application virtualization, business continuity, security and management.

Credits 3

Prerequisites

CIS-149: Introduction to Computers

CIS-239: Information Storage & Management

This course focuses on advanced storage systems, protocol, and architectures, including Storage Area Networks (SAN), Network Attached Storage (NAS), Fibre Channel Networks, Internet Protocol SANS (IPSAN), iSCSI, and Content Addressable Storage (CAS).

Credits 3

Prerequisites

CIS-238 & CIS-171

CIS-245: Cyber Defense

The course provides students with information on the concept of cyber defense. Topics include information relative to legal aspects of cyber-attacks, threats to various levels of national and local social infrastructure, financial systems, personal data, and other direct and indirect threats. As part of this course students explore current and historical cyber threats and U.S. policy regarding infrastructure protection.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-246: Ethical Hacking

This course emphasizes scanning, testing, and securing computer systems. The lab-intensive environment provides opportunities to understand how perimeter defenses work and how hackers are able to compromise information systems. With awareness of hacking strategies, students learn to counteract those attempts in an ethical manner.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-250: E-Commerce

This course is an introduction into e-commerce. Topics include marketing, building an e-commerce store, security, and electronic payment systems. Upon completion students will be able to build an e-commerce presence.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-251: C++ Programming

This course is an introduction to the C++ programming language including object-oriented programming. Topics include: problem solving and design; control structures; objects and events; user interface construction; and document and program testing.

Credits 3

Prerequisites

CIS-201 OR Permission of Instructor

CIS-255: Java Programming

This course is an introduction to the Java programming language. Topics in this course include object-oriented programming constructs, Web page applet development, class definitions, threads, events and exceptions. Upon completion, the student will be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests.

Credits 3

Prerequisites

CIS-201 OR Permission of Instructor

CIS-256: Advanced Java

This course is a second course of a sequence using the Java programming language. Topics include: Sun's Swing GUI components, JDBC, JavaBeans, RMI, servlets, and Java media framework. Upon completion, the student will be able to demonstrate knowledge of the topics through programming projects and appropriate exams.

Credits 3

Prerequisites

CIS-255: Java Programming

CIS-265: End User and Desktop Applications Support I

This course covers the knowledge and skills necessary to support desktop operating systems in a corporate or small business environment.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-268: Software Support

This course provides students with hands-on practical experience in installing computer software, operating systems, and trouble-shooting. The class will help to prepare participants for the A+ Certification sponsored by CompTIA. This is a CORE course.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-269: Hardware Support

This course provides students with hands-on practical experience in installation and troubleshooting computer hardware. The class will help to prepare participants for the A+ Certification sponsored by CompTIA. This is a CORE course.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-270: CISCO/CCNA I

This course is the first part of a three-part curriculum leading to Cisco Certified Network Associate (CCNA) certification. The content of this course is based on current requirements from the CISCO Networking Academy certification standards.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-271: CISCO/CCNA II

This course is the second part of a four-part curriculum leading to Cisco Certified Network Associate (CCNA) certification. The content of this course is based on current requirements from the Cisco Networking Academy certification standards.

Credits 3

Prerequisites

CIS-270 OR Permission of Instructor

CIS-272: CISCO CCNA III

This course is the third part of a four-part curriculum leading to Cisco Certified Network Associate (CCNA) certification. The content of this course is based on current requirements from the Cisco Networking Academy certification standards.

Credits 3

Prerequisites

CIS-271 OR Permission of Instructor

CIS-275: Workstation Administration

This course provides a study of client system administration in a network environment. Topics include installing, monitoring, maintaining, and troubleshooting client operating system software and managing hardware devices and shared resources. Students gain hands-on experience in client operating system installation and basic administration of network workstations.

Credits 3

Prerequisites

CIS-149 or Permission of Instructor

CIS-276: Server Administration

This course introduces network operating system administration. Topics included in this course are network operating system software installation, administration, monitoring, and maintenance; user, group, and computer account management; shared resource management; and server hardware management. Students gain hands-on experience in managing and maintaining a network operating system environment.

Credits 3

Prerequisites

CIS-275 OR Permission of Instructor

CIS-280: Network Security

This course provides a study of threats to network security and methods of securing a computer network from such threats. Topics included in this course are security risks, intrusion detection, and methods of securing authentication, network access, remote access, Web access, and wired and wireless network communications. Upon completion students will be able to identify security risks and describe appropriate counter measures.

Credits 3

Prerequisites

CIS-268, CIS-269 or CIS-270 OR Permission of Instructor

CIS-281: System Analysis & Design

This course is a study of contemporary theory and systems analysis and design. Emphasis is placed on investigating, analyzing, designing, implementing, and documenting computer systems. Upon completion, the student will be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests.

Credits 3

Prerequisites

CIS-201 OR Permission of Instructor

CIS-282: Computer Forensics

This course introduces students to methods of computer forensics and investigations. This course helps prepare students for industry specific certification.

Credits 3

Prerequisites

CIS-149 OR Permission of Instructor

CIS-284: Cis Internship

This course is designed to provide the student with an opportunity to work in a degree/program related environment. Emphasis is placed on the student's "real world" work experience as it integrates academics with practical applications that relate meaningfully to careers in the computer discipline. Significance is also placed on the efficient and accurate performance of job tasks as provided by the "real world" work experience. Grades for this course will be based on a combination of the employer's evaluation of the student, and the contents of a report submitted by the student. Upon completion of this course, the student should be able to demonstrate the ability to apply knowledge and skills gained in the classroom to a "real world" work experience.

Credits 3

Prerequisites

Within 2 semesters of graduation OR EXPRESS
Permission of Instructor

CIS-285: Object Oriented Programming

This course is an advanced object-oriented programming course and covers advanced program development techniques and concepts in the context of an object-oriented language. Subject matter includes object-oriented analysis and design, encapsulation, inheritance, polymorphism (operator and function overloading), information hiding, abstract data types, reuse, dynamic memory allocation, and file manipulation. Upon completion, students should be able to develop a hierarchical class structure necessary to the implementation of an object-oriented software system.

Credits 3

Prerequisites

CIS-201 OR CIS-212 OR Permission of Instructor

CIS-287: SQL Server

This course will provide students with the technical skill required to install, configure, administer and troubleshoot SQL Server client/server database management system. At the completion of this series students will be able to: identify the features of SQL Server and the responsibilities and challenges in system administration; identify the benefits of integrating SQL Server and setup clients for SQL Server; install and configure SQL Server; manage data storage using database devices and partition data using segments; manage the user accounts; manage user permissions; identify the various task scheduling and alerting abilities of SQL Executive; identify the concepts used in replication and implement replication of data between two SQL Services; identify the types of backup and create backup devices; identify the factors effecting SQL Server performance and the need for monitoring and tuning; locate and troubleshoot problems that occur on the SQL Server.

Credits 3

Prerequisites

CIS-117 OR Permission of Instructor

CIS-294: Special Topics

This course allows study of currently relevant computer science topics, with the course being able to be repeated for credit for each different topic covered. Course content will be determined by the instructor and will vary according to the topic being covered. Upon completion, the student will be able to demonstrate knowledge of the course topic through completion of assignments and appropriate tests.

Credits 3

Prerequisites

Permission of Instructor

CIS-299: Directed Studies in Computer Science

This course allows independent study under the direction of an instructor. Topics to be included in the course material will be approved by the instructor prior to or at the beginning of the class. Upon completion, the student will be able to demonstrate knowledge of the topics as specified by the instructor.

Credits 3

Prerequisites

Permission of Instructor

Culinary Arts

CUA-101: Orientation to the Hospitality Profession

This course introduces various facets and opportunities within the hospitality profession. The intent is for students to gain a broad base of information relative to the hospitality industry. Emphasis is placed on having students comprehend their role as a hospitality industry professional. Topics include an overview of the hospitality profession, knowledge, and skills necessary for successful employment, the impact of the hospitality profession on society, issues that impact on various segments of the hospitality profession, and emerging trends. This is a CORE course.

Credits 3

Prerequisites

None

CUA-102: Catering

This course includes the theory and practice of operating a catering business. Topics include food production and management related to catering and other special services. Upon completion, the student will have a working knowledge of the principles involved in operating a catering business.

Credits 3

Prerequisites

None

CUA-110: Basic Food Preparation

In this course students acquire fundamental knowledge and skills in preparing a variety of basic foods. Specific topics include safety, the history of food service, professional standards of conduct and ethics, credentialing, the kitchen brigade, tools, and techniques for preparing various types of food items. This course is CORE for AAS/AAT or Diploma in Culinary Arts or Commercial Food Services.

Credits 3

Prerequisites

None

Corequisites

CUA-120

CUA-111: Foundations in Nutrition

This course focuses on nutrition and meal planning in relation to the food preparation industry. Topics include the science of food and nutrition, essential nutrients and their relation to the growth, maintenance and functioning of the body, nutritional requirements of different age levels and economic and cultural influences on food selection. Upon completion of this course, students will be able to apply the basic principles of meal planning. This is a CORE course.

Credits 3

Prerequisites

None

CUA-112: Sanitation, Safety and Food Service

This course introduces the basic principles of sanitation and safety to food service handling including purchasing, storing, preparation and serving. Specific topics include the dangers of microbial contaminants, food allergens and foodborne illness, safe handling of food, the flow of food, and food safety management systems. At the conclusion of this course students will be prepared to test for ServSafe® certification. The content of this course is foundational for all culinary art classes. This is a CORE course.

Credits 2

Prerequisites

None

CUA-115: Advanced Food Preparation

In this course, students apply food preparation and meal management skills in all areas of food service. Emphasis is placed on management and technical skills needed to operate a restaurant. Upon completion, students will develop advanced skills in food preparation and meal management.

Credits 3

Prerequisites

CUA-110, CUA-112, CUA-120, CUA-201

CUA-120: Basic Food Preparation Lab

In this course students apply fundamental knowledge and skills in preparing a variety of basic foods. Specific topics include safety, the history of food service, professional standards of conduct and ethics, credentialing, the kitchen brigade, tools, and techniques for preparing various types of food items. At the conclusion of this course students will demonstrate basic food preparation skills. This is a CORE for AAS/AAT or Diploma in Culinary Arts or Commercial Food Services.

Credits 2

Prerequisites

None

Corequisites

CUA-110: Basic Food Preparation

CUA-173: Culinary Arts Apprenticeship

This course provides the student with hands-on experience in a selected (approved) commercial food operation establishment under direct supervision. This course may be repeated for credit.

Credits 3

Prerequisites

CUA-110: Basic Food Preparation

CUA-112: Sanitation, Safety and Food Service

CUA-120: Basic Food Preparation Lab

CUA-201: Meat Preparation and Processing

This course focuses on meat preparation and processing. Students will be responsible for the preparing of meats including beef, pork, poultry, fish, and seafood so they can be used for final preparations in the other stations of the kitchens. Upon completion, students will be able to demonstrate an understanding of the principles in meat preparation and processing.

Credits 3

Prerequisites

CUA-110: Basic Food Preparation

CUA-112: Sanitation, Safety and Food Service

CUA-120: Basic Food Preparation Lab

CUA-204: Foundations of Baking

This course covers basic ingredients, weights and measures, baking terminology, and formula calculations. Topics include yeast-raised products, quick breads, pastry dough, various cakes and cookies, and appropriate filling and finishing techniques. Upon completion, students should be able to prepare and evaluate baked products.

Credits 3

Prerequisites

None

CUA-206: Advanced Garde Manger

This course is a continuation of skill development in the art of Garde Manger. Major topics to be covered include preparation of gourmet foods, application of cold food fabrications and display, sausage making, ice carving and carving decorative substances to produce buffets. Upon completion, students should be able to lay out a basic cold food display and exhibit an understanding of the cold kitchen and its related terminology.

Credits 2

Prerequisites

CUA-110: Basic Food Preparation

CUA-112: Sanitation, Safety and Food Service

CUA-120: Basic Food Preparation Lab

CUA-201: Meat Preparation and Processing

CUA-208: Advanced Baking

This course is a continuation of [CUA-204](#). Topics include specialty breads, pastillage, marzipan, chocolate, pulled-sugar, confections, classic desserts, pastries, and cake decorating. Upon completion, students should be able to demonstrate pastry preparation and plating, cake decorating, and show-piece production skills.

Credits 3

Prerequisites

CUA-110: Basic Food Preparation

CUA-112: Sanitation, Safety and Food Service

CUA-120: Basic Food Preparation Lab

CUA-204: Foundations of Baking

CUA-210: Beverage Management

This is a survey course of basic alcoholic and non-alcoholic beverages as they relate to food service. Topics include wine and food appreciation and laws related to alcohol services. Upon completion, students should be able to determine what beverages complement various cuisines and particular tastes.

Credits 2

Prerequisites

None

CUA-213: Food Purchasing and Cost Control

Emphasis is placed on procurement, yield tests, inventory control, specification, planning, forecasting, market trends, terminology, cost controls, pricing, and food service ethics. Upon completion, students should be able to apply effective purchasing techniques based on the end-use of the product. This is a CORE course.

Credits 3

Prerequisites

None

CUA-251: Menu Design

This course introduces menu design. Topics include development of standardized recipes, layout, nutritional concerns, product utilization, demographics and customer needs. Upon completion, students should be able to write, lay out, and produce effective menus for a variety of hospitality settings.

Credits 3

Prerequisites

None

CUA-262: Restaurant Management and Supervision

This course introduces restaurant and food service information systems. Topics include planning, cost controls, forecasting, inventory control, recipe control, production control, and nutritional analysis. Upon completion, students should be able to demonstrate competence in utilizing contemporary information application systems in a restaurant setting.

Credits 3

Prerequisites

None

CUA-281: Apprenticeship/Qualifying Dinner

In this course, students will demonstrate chef's skills developed during culinary training by practical examination through preparing a gourmet meal for a panel of chef judges.

Credits 3

Prerequisites

CUA-110: Basic Food Preparation

CUA-112: Sanitation, Safety and Food Service

CUA-120: Basic Food Preparation Lab

CUA-115: Advanced Food Preparation

CUA-201: Meat Preparation and Processing

CUA-204: Foundations of Baking

Dental Assisting

DAT-100: Introduction to Dental Assisting

This course is designed to provide an introduction to the field of dentistry. Topics include but are not limited to the history of dentistry, dental equipment, dental auxiliaries, psychology as it applies to dentistry, professional organizations, certification requirements, legal and ethical considerations, work ethics, communication skills, and management of medical emergencies occurring in the dentistry setting. Emphasis is placed on the Alabama Dental Practice Act and OSHA Standards. Upon completion, students should be able to discuss basic aspects of dentistry. CORE COURSE

Credits 2

Prerequisites

Permission of Instructor

Corequisites

DAT-101, DAT-102, DAT-103, DAT-112

DAT-101: Pre-Clinical Procedures I

This course is designed to introduce chairside assisting including concepts of four handed dentistry, sterilization techniques, dental instruments, anesthesia, operative dentistry and dental specialties. Emphasis will be placed on preparation of the student for clinical dental assisting. Upon completion, the student should be able to perform dental assisting skills in a clinical setting. This course is offered in the fall each year.

Credits 3

Prerequisites

Permission of Instructor

Corequisites

DAT-100, DAT-102, DAT-103, DAT-112

DAT-102: Dental Materials

This course is designed to provide study of the characteristics, manipulation, and application of dental materials ordinarily used in the dental office. Students will be given intra and extra oral technical tasks to perform. Upon completion, students should be able to take and pour preliminary impressions, trim study models, construct custom trays and temporary crowns, prepare, and place restorative material, and manipulate cements and impression materials. This course is offered in the fall each year.

Credits 3

Prerequisites

Permission of Instructor

Corequisites

DAT-100, DAT-101, DAT-103, DAT-112

DAT-103: Anatomy & Physiology for Dental Asstg

This course is designed to provide study of anatomy and physiology of the head and neck with a basic understanding of body structure and function. Emphasis will be placed on tooth and root morphology, and embryological and histological correlations. It provides a foundation essential to an understanding of dental health. Upon completion, students should be able to discuss and identify the basic structure and function of the human body specifically the head, neck, and dentition. This course is offered in the fall each year. This is a CORE course.

Credits 3

Prerequisites

Permission of Instructor

Corequisites

DAT-100, DAT-101, DAT-102, DAT-112

DAT-104: Basic Sciences for Dental Assisting

This course is designed to study basic microbiology, pathology, pharmacology. Additional topics include but are not limited to medical emergencies, special populations, and individuals suffering from drug and/or substance addiction. Emphasis is placed on the correlation of these sciences to the practice of dentistry. Upon completion, students should be able to apply basic science to the dental field.

Credits 2

Prerequisites

Successful completion of DAT-100, DAT-101, DAT-102, DAT-103, DAT-112 and/or Permission of Instructor

Corequisites

DAT-111, DAT-113, DAT-116, DAT-124

DAT-105: Pre-Clinical Procedure and Practicum

This course is a continuation of Pre-Clinical Procedures I. Emphasis is placed on dental specialties. Upon completion, the student should be able to perform specific dental assisting skills pertaining to dental specialty procedures and instrumentation. This course is offered in the spring each year.

Credits 3

Prerequisites

Successful completion of DAT/DNT-101 or equivalent

DAT-112: Dental Radiology

This course is designed to cover the essential knowledge of radiographic technique for the practice of dentistry. Students will be taught to produce diagnostically acceptable intra and extra-oral radiographs with emphasis being placed on x-ray properties, generation of x-rays, film processing, operator and patient safety, infection control, quality assurance, intraoral radiographic technique and image characteristics. Upon completion, students should be able to expose, process, and mount radiographs for diagnostic purposes under the direct supervision of a licensed dentist. This course is offered in the fall each year. This is a CORE course.

Credits 3

Prerequisites

Permission of Instructor

Corequisites

DAT-100: Introduction to Dental Assisting

DAT-101: Pre-Clinical Procedures I

DAT-102: Dental Materials

DAT-103: Anatomy & Physiology for Dental Asstg

DAT-113: Dental Health Education

This course is designed to introduce the student to the basic principles of nutrition, preventive dentistry, and dental health education. Emphasis will be placed on the philosophy of preventive dentistry including: oral hygiene, patient motivation and management, and methods of oral health education. Upon completion, students should be able to apply the basic principles of nutrition and preventive dentistry. This course is offered in the spring each year. This is a CORE course.

Credits 2

Prerequisites

Successful completion of DAT-100, DAT-101, DAT-102, DAT-103, DAT-112 and/or Permission of Instructor

Corequisites

DAT-104, DAT-111, DAT-116, DAT-124

DAT-115: Clinical Practicum I

This course is designed to allow the student the opportunity for practical work experience in clinical settings. Emphasis is placed on the basic skills of dental assisting. Upon completion, the student should be able to demonstrate basic skills in the area of chairside assisting. This course is offered in the spring each year.

Credits 5

Prerequisites

Permission of Instructor

Corequisites

DAT-104, DAT-113, DAT-116, DAT-124

DAT-120: Office Administration for Dental Assisting

This course is designed to address basic dental office procedures including appointment and recall systems, financial records, accounting procedures, insurance claims, filing systems, purchasing and inventory of supplies and equipment, and the utilization of computers to perform business office procedures. Emphasis is placed on the duties of a dental receptionist. Upon completion, students should be able to demonstrate proficiency in the area of dental office administrative procedures. This course is offered in the summer each year.

Credits 3

Prerequisites

Successful completion of DAT-104, DAT-111, DAT-113, DAT-116, DAT-124 and/or Permission of Instructor

Corequisites

DAT-122, DAT-123

DAT-122: Clinical Practice II

This course is designed to provide the student the opportunity to develop advanced dental assisting skills in chairside dental assisting procedures, radiology, team work, communication skills and administrative duties. Emphasis will be placed on clinical procedures. Upon completion, students should be able to demonstrate proficiency in the area of chairside assisting. This course is offered in the summer each year. This is a CORE course.

Credits 4

Prerequisites

Successful completion of DAT-104, DAT-111, DAT-113, DAT-116, DAT-124 and/or Permission of Instructor

Corequisites

DAT-121, DAT-123

DAT-123: Dental Assisting Seminar

This course is designed to discuss the students' clinical experiences, the résumé, and interview process. Emphasis will be placed on new technology in dental practices as related to dental assisting and the certification exam review. Upon completion, students should be able to successfully complete the Dental Assisting National Board Examination to become a Certified Dental Assistant. This course is offered in the summer each year. This is a CORE course.

Credits 4

Prerequisites

Successful completion of DAT-104, DAT-111, DAT-113, DAT-116, DAT-124 and/or Permission of Instructor

Corequisites

DAT-121, DAT-122

DAT-124: Clinically Applied Infection Control and Osha Standards

This course is designed for the integration of previously acquired knowledge of OSHA Standards and Infection Control in a clinical setting. Emphasis will be placed on clinical application of Infection Control and Compliance of OSHA Standards as it relates to dental chairside assisting. Upon completion, students should be able to demonstrate skills in the area of Infection Control and OSHA Guidelines. This course is offered in the spring each year. This is a CORE course.

Credits 1

Prerequisites

Successful completion of DAT-100, DAT-101, DAT-102, DAT-103, DAT-112 and/or Permission of Instructor

Corequisites

DAT-104, DAT-111, DAT-113, DAT-116

DAT-141: Directed Studies in Dental Assisting

This course is designed to provide study of specific areas of dentistry as chosen by the student and faculty member. Emphasis will be placed on the research and critique of a specific dental topic. Upon completion, students should be able to deliver a written and oral presentation on the chosen topic. This course is offered at least one term every year.

Credits 3

Prerequisites

Permission of Instructor

DAT-205: Dental Field Practice

This course is designed to provide the student with the opportunity to deliver dental services within an under-served population. Emphasis is placed on providing basic dental care to impoverished populations. Upon completion, the student should be able to discuss the development and implementation of dental field work. This course is offered in the summer each year.

Credits 1

Prerequisites

Permission of Instructor

Diagnostic Medical Sonography

DMS-202: Foundations of Sonography

This course provides the student with concepts of the history and development of sonography in medical imaging, patient care, medical ethics and law, cultural diversity, and medical terminology used in the practice of sonography. Emphasis in theory and lab is placed on patient assessment and considerations of physical and psychological conditions in both routine and emergency situations. Upon completion, students will demonstrate an understanding of concepts, as well as demonstrate/explain patient care procedures appropriate to setting and situation while utilizing medical terminology. This is a CORE course.

Credits 3

Prerequisites

Admission to program

Corequisites

DMS-206, DMS-215, DMS-229, DMS-233

DMS-205: Abdominal Sonography I with Lab

This course will provide instruction in a classroom and laboratory setting in order to perform sonographic studies of the abdomen. Classroom components will focus on concepts of normal and relational anatomy, physiology, Doppler principles, sonographic technique and appearance. At course completion the student will be expected to perform a complete abdominal sonogram. This is a CORE course.

Credits 4

Prerequisites

DMS-229

Corequisites

DMS-207, DMS-216, DMS-220, DMS-230

DMS-206: Gynecologic Sonography with Lab

This course will familiarize the student with the transabdominal and transvaginal protocols of gynecologic scanning and common pathologies of the female reproductive system as seen on ultrasound. Lab values and patient history will be stressed as well as correlation with images from other modalities. The student will be able to perform a transabdominal pelvic sonogram at course completion. This is a CORE course.

Credits 4

Prerequisites

Admission to program

Corequisites

DMS-202, DMS-215, DMS-229, DMS-233

DMS-207: Abdominal Pathology

This course will provide the student with a working knowledge of the sonographic appearance and pathophysiology of common diseases abnormalities of the abdomen. Associated history, symptoms, lab values, treatments and appearance on other imaging modalities will be demonstrated. The student will be required to conduct research for presentation. At course completion, students will be able to identify many major pathologies of the abdomen on sonograms. This is a CORE course.

Credits 3

Prerequisites

DMS-229

Corequisites

DMS-205, DMS-216, DMS-220, DMS-230

DMS-215: Intro to Sonographic Prin/Instr.

This course will provide an introduction to mathematical and sonographic principles related to the application of sonography. This will also provide the student with knowledge of the principles of sound and imaging instrumentation as applied to sonography. The physical nature of sound waves and how those waves interact with mediums and how they can be successfully utilized in diagnostic imaging will be studied.

Credits 2

Prerequisites

Admission to program

Corequisites

DMS-202, DMS-206, DMS-229, DMS-233

DMS-216: Sonographic Princpls/Instr. I

This course will provide the student with knowledge of the principles of sound and imaging instrumentation as applied to sonography. The physical nature of sound waves and how those waves interact with mediums and how they can be successfully utilized in diagnostic imaging will be studied. Upon completion the student will be able to produce sonographic images. This is a CORE course.

Credits 3

Prerequisites

DMS-215: Intro to Sonographic Prin/Instr.

Corequisites

DMS-205, DMS-207, DMS-220, DMS-230

DMS-217: Sonographic Principles and Instr. II

This lab allows students to perform quality assurance tests and surveys. Students will also investigate statistical applications utilized in medical research. Upon completion the student will be able to develop a quality assurance program.

Credits 2

Prerequisites

DMS-216: Sonographic Princpls/Instr. I

Corequisites

DMS-221, DMS-225, DMS-231, DMS-234, DMS-240, DMS-245

DMS-220: Obstetrical Sonography I

This course will provide instruction regarding the development and sonographic appearance of the fetal and extra-fetal anatomy throughout the gestation period. Assessment, lab values, and performance for determining gestational age and fetal viability will be studied. At completion, the student will be required to differentiate between normal and abnormal obstetrical studies. This is a CORE course.

Credits 3

Prerequisites

DMS-206: Gynecologic Sonography with Lab

Corequisites

DMS-205, DMS-207, DMS-216, DMS-230

DMS-221: Obstetrical Sonography II

This course will provide instruction regarding the sonographic appearance of fetal and extra-fetal anatomy and correlate findings of fetal anomalies and genetic links. Assessment, lab values, and performance for determining gestational age and fetal viability will be studied. At completion, the student will be required to differentiate between normal and abnormal obstetrical studies. This is a CORE course.

Credits 3

Prerequisites

DMS-220: Obstetrical Sonography I

Corequisites

DMS-217, DMS-225, DMS-231, DMS-234, DMS-240, DMS-245

DMS-225: Superficial Sonography

This course will review the anatomy and familiarize students with scanning protocols for the thyroid, parathyroid, breast, scrotum, male pelvis and other superficial structures. Common pathologies will be discussed and correlated with other imaging modalities. Upon completion, students will identify protocols appropriate to specific techniques and will perform superficial sonograms. This is a CORE course.

Credits 1

Prerequisites

DMS-207: Abdominal Pathology

Corequisites

DMS-217, DMS-221, DMS-231, DMS-234, DMS-240, DMS-245

DMS-229: Sonography Preceptorship I

This course provides the sonography student with the opportunity to practice patient care skills and use beginning sonographic skills in a clinical environment. At course completion, the student should be able to provide basic patient care needs for the individual scheduled for a sonogram and create sonographic images pertinent to the current level of didactic training in general sonography specialties. Competencies will be required. This is a CORE course.

Credits 2

Prerequisites

Admission to program

Corequisites

DMS-202, DMS-206, DMS-215, DMS-233

DMS-230: Sonography Preceptorship II

This course provides the student with the opportunity to develop additional sonographic skills in the clinical setting. The student will assist with and perform sonographic exams pertinent to the level of didactic training in general sonography specialties. Competencies will be required. This is a CORE course.

Credits 3

Prerequisites

DMS-229: Sonography Preceptorship I

Corequisites

DMS-205, DMS-206, DMS-216, DMS-220, DMS-230

DMS-231: Sonography Preceptorship III

This course provides a continuum in the development of sonographic skills while in the clinical setting. Students should be able to perform more exams with less assistance from the supervising sonographer. Competencies will be required. This is a CORE course.

Credits 4

Prerequisites

DMS-230: Sonography Preceptorship II

Corequisites

DMS-217, DMS-221, DMS-225, DMS-234, DMS-240, DMS-245

DMS-232: Sonography Preceptorship IV

This course will provide an in-depth practice of all sonographic skills in the clinical setting. Upon completion the student will perform general and/or specialty sonograms with little to no assistance from the supervising sonographer. Competencies will be required. This is a CORE course.

Credits 5

Prerequisites

DMS-231: Sonography Preceptorship III

Corequisites

DMS-235, DMS-241, DMS-250

DMS-233: Sonographic Lab I

This course is designed to allow students the opportunity to improve their application of knowledge gained in other courses. Content will vary depending on student needs as determined by the instructor. Content may include General or Cardiovascular sonographic concepts.

Credits 1

Prerequisites

Admission to program

Corequisites

DMS-202: Foundations of Sonography

DMS-206: Gynecologic Sonography with Lab

DMS-215: Intro to Sonographic Prin/Instr.

DMS-229: Sonography Preceptorship I

DMS-234: Sonography Lab II

This course is designed to allow students the opportunity to improve their application of knowledge gained in other courses. Content will vary depending on student needs as determined by the instructor. Content may include General or Cardiovascular sonographic concepts.

Credits 1

Prerequisites

DMS-230: Sonography Preceptorship II

Corequisites

DMS-217, DMS-221, DMS-225, DMS-231, DMS-240, DMS-245

DMS-235: Sonographic Lab III

This course is designed to allow students the opportunity to improve their application of knowledge gained in other courses. Content will vary depending on student needs as determined by the instructor. Content may include General or Cardiovascular sonographic concepts.

Credits 1

Prerequisites

DMS-234: Sonography Lab II

Corequisites

DMS-232, DMS-241, DMS-250

DMS-240: Sonographic Principles & Instrumentation Seminar

This course provides a review for SONOGRAPHY PRINCIPLES AND INSTRUMENTATION Exam. Topics include sonographic principles and instrumentation. Mock registries must be passed with a grade of 75% or better to complete this course.

Credits 2

Prerequisites

DMS-216: Sonographic Princpls/Instr. I

Corequisites

DMS-217, DMS-221, DMS-225, DMS-231, DMS-234, DMS-245

DMS-241: Abdominal & OBGYN Seminar

This course provides a review for the National Registry Exam. Topics include abdominal, superficial, gynecological, and obstetrical sonography. Mock registries must be passed with a grade of 75% or better to complete this course. This is a CORE course.

Credits 3

Prerequisites

DMS-240: Sonographic Principles & Instrumentation Seminar

Corequisites

DMS-232, DMS-235, DMS-250

DMS-245: Sonography Case Presentations

Students are required to present cases with sonographic images, reports, patient history and symptoms and correlating reports from other exams/tests performed. The cases become the property of the program for use as future reference material. By the end of the term, students will have developed proficiency and expertise in case presentation.

Credits 1

Prerequisites

DMS-230: Sonography Preceptorship II

Corequisites

DMS-217: Sonographic Principles and Instr. II

DMS-221: Obstetrical Sonography II

DMS-225: Superficial Sonography

DMS-231: Sonography Preceptorship III

DMS-234: Sonography Lab II

DMS-240: Sonographic Principles & Instrumentation Seminar

DMS-250: Intro to Advanced Sonography

This course will introduce students to any of the following: pediatric, vascular, cardiac, neurology, interventional, and orthopedic sonography. Advanced technologies in these fields will be researched. At completion, students will identify and describe skills and modalities in sonography.

Credits 3

Prerequisites

DMS-231: Sonography Preceptorship III

Corequisites

DMS-232: Sonography Preceptorship IV

DMS-235: Sonographic Lab III

DMS-241: Abdominal & OBGYN Seminar

DMS-260: Introduction to Vascular Sonography

This course will introduce the student to sonographic anatomy of the vascular system of the human body, techniques and protocols for performing diagnostic studies of the vascular system. Common pathologies and anomalies, along with patient history, lab values, and symptomology will also be introduced in this course. CV CORE

Credits 3

Prerequisites

As required by program.

DMS-261: Vascular Sonography Techniques

This course will familiarize the student with sonographic anatomy of the peripheral vascular structures of the human body. The student will learn techniques to perform spectral, color and angiographic Doppler of these vessels. Images will be correlated with other imaging modalities (i.e. computed technology, magnetic resonance, and angiography). The student will scan volunteers in order to develop skills in vascular analysis. At course completion student will be able to perform vascular sonograms. CV CORE

Credits 3

Prerequisites

As required by program.

DMS-263: Pathology of Vascular Systems

This course will educate the student in common pathologies of the vascular system. Patient symptoms and history will be correlated with abnormalities seen. At completion students will be able to identify common abnormalities of the vascular system on sonograms. CV CORE

Credits 3

Prerequisites

As required by program.

DMS-264: Vascular Sonographic Clinical

This course will allow the student to practice vascular scanning skills in the clinical setting. Competency will be sought in all types of peripheral vascular studies as well as correlation of studies with patient history, laboratory values and symptomology. At completion the student will be able to demonstrate practical application of vascular sonographic procedures.

Credits 5

Prerequisites

As required by program.

DMS-270: Introduction to Cardiac Sonography

This course will introduce the student to sonographic anatomy of the cardiovascular system of the human body, techniques and protocols for performing a diagnostic study of the cardiovascular system. Common pathologies and anomalies, along with patient history, lab values, and symptomology will also be introduced in this course. CV CORE

Credits 3

Prerequisites

As required by program.

DMS-271: Echocardiographic Technology

This course will familiarize the student with sonographic anatomy of the cardiovascular system of the human body. Techniques and protocols for performing a diagnostic study of the cardiovascular system will be presented. The lab will enable the student to practice echocardiographic scanning skills on volunteers in the campus lab. At completion, student will be able to perform basic echocardiograms. CV CORE

Credits 3

Prerequisites

As required by program.

DMS-273: Pathology of Cardiovascular System

This course will educate the student in common pathologies and anomalies of the cardiovascular system. Patient history, lab values and symptomology will be correlated with abnormalities seen. At course completion the student will be able to identify common cardiac abnormalities on echocardiograms. CV CORE

Credits 3

Prerequisites

As required by program.

DMS-274: Echo Clinical

This course will allow the student to practice cardiac scanning skills in the clinical setting. Students will demonstrate competency in cardiovascular studies, including transthoracic, transesophageal, and intraluminal echocardiography.

Credits 5

Prerequisites

As required by program.

Diesel Mechanics

DEM-119: Bearings and Lubricants

This course focuses on roller, ball and shell bearing design and application. Topics include vehicle and industrial bearings and lubrication requirements. Upon course completion, students should diagnose related problems and service and replace bearings.

Credits 3

Prerequisites

None

DEM-122: Heavy Vehicle Brakes

This course covers the theory and repair of braking systems used in medium and heavy duty vehicles. Topics include hydraulic and ABS system diagnosis and repair. Upon completion, students should be able to troubleshoot, adjust, and repair braking systems on medium and heavy duty vehicles. This is a CORE course.

Credits 3

Corequisites

DEM-125

DEM-123: Pneumatics and Hydraulics

This course provides instruction in the identification and repair of components found in hydraulic and pneumatic systems. Topics include schematics and symbols used in fluid power transmission and the troubleshooting of components in these systems. Upon completion, students should be able to diagnose, adjust, and repair hydraulic and pneumatic system components.

Credits 3

Prerequisites

None

DEM-125: Heavy Vehicle Drive Trains

This course introduces the operating principles of mechanical medium and heavy duty vehicle transmissions. Topics include multiple counter shafts, power take-offs, slider idler clutches, friction clutches, mechanical transmission power components, and hydraulics. Upon completion, students should be able to diagnose, inspect, and repair mechanical transmissions. This is a CORE course.

Credits 3

Prerequisites

None

DEM-128: Heavy Vehicle Drive Train Lab

This lab provides reinforcement of material covered in [DEM-125](#). The students will apply the knowledge they learned on driveshafts, power take-offs, standard transmissions, fluid drives, torque converters, clutch assemblies, drive axles, and special drives through experiential learning techniques. Upon completion, students should be able to diagnose, inspect, remove, repair or replace, and install heavy vehicle drive train components.

Credits 3

Prerequisites

None

Corequisites

[DEM-125: Heavy Vehicle Drive Trains](#)

DEM-129: Diesel Engine Lab

This lab allows the student to refine the skills required to repair diesel engines.

Credits 3

Prerequisites

None

DEM-130: Electrical / Electronic Fundamentals

This course introduces the student to basic Electrical / Electronic concepts and fundamentals. It provides the principles of electricity, magnetism, and Ohm's Law. Emphasis is placed on batteries, starting, charging, and lighting circuits, which include series, parallel, and series-parallel circuits. Troubleshooting and repair of wiring harnesses, starting motors, charging systems, and accessories are included along with the computerized monitoring of vehicle systems. Upon completion, students should be able to identify components, test systems, and repair minor electrical problems according to manufacturer's literature. This is a CORE course.

Credits 3

Prerequisites

None

DEM-145: Electrical Schematics and Symbols

This course introduces the student to electrical symbols and schematics. It prepares the student to utilize wiring diagrams and schematics to troubleshoot electrical problems. Upon completion students should be able to understand electrical circuits by reading wiring diagrams.

Credits 3

Prerequisites

None

DEM-146: Engine Fundamentals

This course introduces students to procedures and components of spark ignition engines.

Credits 3

Prerequisites

None

DEM-147: Fuel and Ignition Systems

This course introduces the student to the operating principles and concepts related to fuel and ignition systems.

Credits 3

Prerequisites

None

DEM-181: Special Topics in Electrical

This course provides specialized instruction in various areas related to the electrical systems of the diesel mechanics industry. Emphasis is placed on meeting students' needs.

Credits 3

Prerequisites

None

DEM-191: Special Projects in Diesel Mechanics

This course provides information on current trends in diesel mechanics as they relate to employment responsibilities. Topics may vary by term to reflect relevant training needs by the industry.

Credits 3

Prerequisites

None

DEM-262: Co-Op

These courses constitute a series wherein the student works on a part-time basis in a job directly related to diesel mechanics. In these courses the employer evaluates the student's productivity, and the student submits a descriptive report of his work experiences. Upon completion, the student will demonstrate skills learned in an employment setting.

Credits 1

Prerequisites

None

Economics

ECO-231: Principles of Macroeconomics

This course is an introduction to macroeconomic theory, analysis, and policy applications. Topics include the following: scarcity, demand and supply, national income analysis, major economic theories concerning monetary and fiscal policies as stabilization measures, the banking system, and other economic issues or problems including international trade.

Credits 3

Prerequisites

As required by program.

ECO-232: Principles of Microeconomics

This course is an introduction of the microeconomic theory, analysis, and applications. Topics include scarcity; the theories of consumer behavior, production and cost, markets, output and resource pricing, and international aspects of microeconomics.

Credits 3

Prerequisites

As required by program.

ECO-232: Principles of Microeconomics

This course is an introduction of the microeconomic theory, analysis, and applications. Topics include scarcity; the theories of consumer behavior, production and cost, markets, output and resource pricing, and international aspects of microeconomics.

Credits 3

Prerequisites

None

Electrical

ELT-104: Distribution Systems

This course involves the theory, applications, calculations, and connections associated with transformers and power distribution systems commonly used in the electrical field.

Credits 3

Prerequisites

ELT-108

ELT-108: DC Fundamentals

This course is designed to provide students with a working knowledge of basic direct current (DC) electrical principles. Topics include safety, basic atomic structure and theory, magnetism, conductors, insulators, use of Ohm's law to solve for voltage, current, and resistance, electrical sources, power, inductors, and capacitors. Students will perform lockout/tagout procedures, troubleshoot circuits and analyze series, parallel, and combination DC circuits using the electrical laws and basic testing equipment to determine unknown electrical quantities. This is a CORE course.

Credits 3

Prerequisites

None

ELT-110: Wiring Methods

This course is a study of various tasks, wiring methods, materials, and associated NEC requirements that students will be required to work with in residential and commercial wiring courses. This is a CORE course.

This is a CORE course.

Credits 3

Prerequisites

None

ELT-112: Concepts of Alternating Current

This course provides an advanced study of alternating current (AC) concepts and application principles. Specific topics include safety, terms and symbols, AC electrical theory, components, circuits, electrical measurement instruments, laws of AC, and methods for constructing and measuring various types of AC circuits. Students gain hands-on experience through laboratory exercises designed to analyze complex circuits, power requirements, faults, phase relationships, and power factors. Emphasis is placed on the use of scientific calculators and the operation of various types of test equipment used to analyze and troubleshoot AC circuits. This course may serve as a substitute core for DC Fundamentals.

Credits 5

Prerequisites

None

ELT-114: Residential Wiring Methods

This course is a study of residential wiring practices and methods, the NEC requirements and residential blueprint interpretations. This is a CORE course.

Credits 3

Prerequisites

None

ELT-117: Ac/DC Machines

This course covers the theory and operation of DC motors single and three phase AC motors and the labs will reinforce this knowledge. Emphasis is placed on the various types of single and three phase motors, wiring diagrams, starting devices, and practical application in the lab. This is a CORE course.

Credits 3

Prerequisites

As required by program.

ELT-118: Commercial/Industrial Wiring I

This course focuses on principles and applications of commercial and industrial wiring. Topics include electrical safety practices, an overview of National Electric Code requirements as applied to commercial and industrial wiring, conduit bending, circuit design, pulling cables, transformers, switch gear, and generation principles. This is a CORE course.

Credits 3

Prerequisites

ELT-108: DC Fundamentals

ELT-119: Concepts of Solid-State Electronics

This course is an introduction to semiconductor fundamentals and applications to the electronic devices. Course covers the basic operations and applications to include rectifier circuits, transistors, and thyristors. Coverage is given to safety, use, and care with hazardous materials and personal as well as material and environmental considerations.

Upon completion students will be able to construct and test for proper operation of various types of solid state devices.

Credits 5

Prerequisites

None.

ELT-121: Concepts of Digital Electronics

This course provides instruction in digital electronics. Topics include: number systems and codes, a review of Boolean algebra, logic elements, digital circuits, programmable logic circuits, and memory and computing circuits. This course provides laboratory exercises to analyze, construct, test and troubleshoot digital circuits.

Credits 5

Prerequisites

ELT-112: Concepts of Alternating Current

ELT-206: OSHA Safety Standards

This course provides the student with the knowledge of OSHA safety standards as required by this organization, and as it related to the job site. Emphasis is placed on overall safety practices, construction site safety practices and safety procedures required by Federal/State laws. Upon completion, students should be able to understand the requirements of OSHA as it relates to general and specific construction sites.

Credits 3

Prerequisites

None

ELT-209: Motor Controls I

This course is a study of the construction, operating characteristics, and installation of different motor control circuits and devices. Emphasis is placed on the control of three phase AC motors. This course covers the use of motor control symbols, magnetic motor starters, running overload protection, pushbutton stations, multiple control stations, two wire control, three wire control, jogging control, sequence control, and ladder diagrams of motor control circuits. Upon completion, students should be able to understand the operation of motor starters, overload protection, interpret ladder diagrams using pushbutton stations and understand complex motor control diagrams. This is a CORE course.

Credits 3

Prerequisites

As required by program.

ELT-212: Motor Controls II

This course covers complex ladder diagrams of motor control circuits and the uses of different motor starting techniques. Topics include wye-delta starting, part start winding, resistor starting and electronic starting devices. Upon completion, the students should be able to understand and interpret the more complex motor control diagrams and understand the different starting techniques of electrical motors.

Credits 3

Prerequisites

As required by college.

ELT-231: Introduction to Programmable Controllers

This course provides an introduction to programmable logic controllers. Emphasis is placed on, but not limited to, the following: PLC hardware and software, numbering systems, installation, and programming. Upon completion, students must demonstrate their ability by developing, loading, debugging, and optimizing PLC programs.

Credits 3

Prerequisites

As required by program.

ELT-232: Advanced Programmable Controllers

This course includes the advanced principals of PLC's including hardware, programming, and troubleshooting. Emphasis is placed on developing advanced working programs, and troubleshooting hardware and software communication problems. Upon completion, students should be able to demonstrate their ability in developing programs and troubleshooting the system.

Credits 3

Prerequisites

As required by program.

ELT-234: PLC Applications

This course introduces advanced PLC programming techniques. Topics include tags, parallel processing, program optimization, and advanced math instructions. Emphasis is placed on optimizing PLC functions. Upon completion students will be able to utilize advanced instructions to control PLC functions.

Credits 3

Prerequisites

ELT-108, ELT-209, ELT-117, ELT-231, ELT-232, and MTH-104

Corequisites

MTH-104: Plane Trigonometry

ELT-241: National Electric Code

This course introduces the students to the National Electric Code and text and teaches the student how to find needed information within this manual. Emphasis is placed on locating and interpreting needed information within the NEC code manual. Upon completion, students should be able to locate, with the NEC code requirements for a specific electrical installation.

Credits 3

Prerequisites

ELT-108: DC Fundamentals

ELT-286: Co-Op

These courses constitute a series wherein the student works on a part-time basis in a job directly related to electrical technology. In these courses the employer evaluates the student's productivity, and the student submits a descriptive report of his work experiences. Upon completion, the student will demonstrate skills learned in an employment setting.

Credits 1

Prerequisites

As required by program.

English

ENG-099: Introduction to College Writing

This course places emphasis on providing students with additional academic and noncognitive support with the goal of success in the students' paired ENG-101 class. The material covered or practiced in the ENG-099 course is complementary to and supportive of material taught in ENG-101 and the needs of the ENG-099 student. This course is offered each term.

Credits 1

Prerequisites

None

Corequisites

ENG-101

ENG-100: Vocational Technical English

This course is designed to enhance reading and writing skills for the workplace. Emphasis is placed on technical reading, job-related vocabulary, sentence writing, punctuation, and spelling with substantial focus on occupational performance requirements. Upon completion, students should be able to identify main ideas with supporting details and produce mechanically correct short writings appropriate to the workplace. This course is NOT creditable toward associate degree requirements.

Credits 3

Prerequisites

Satisfactory placement score.

ENG-101: English Composition I

This course provides instruction and practice in the writing of at least four extended compositions and the development of rhetorical strategies, analytical and critical reading skills, and basic reference and documentation skills in the composition process. English Composition I may include instruction and practice in library usage and information literacy. This course is offered each term.

Credits 3

Prerequisites

Satisfactory placement scores or successful completion of ENR-098

ENG-102: English Composition II

English Composition II provides continued instruction and practice in the writing of at least four extended compositions or equivalent assignments of which at least one is a research project using outside sources and/or references effectively and legally. Additionally, English Composition II provides instruction in the development of analytical and critical reading skills in the composition process. English Composition II may include instruction and practice in library usage and information literacy. This course is offered each term.

Credits 3

Prerequisites

A grade of "C" or better in ENG-101 or equivalent.

ENG-130: Technical Report Writing

This course provides instruction in the production of technical and/or scientific reports. Emphasis is placed on research, objectivity, organization, composition, documentation, and presentation of the report. Students will demonstrate the ability to produce a written technical or scientific report by following the prescribed process and format.

Credits 3

Prerequisites

ENG-101: English Composition I or an equivalent

ENG-251: American Literature I

This course is a survey of American literature from its beginnings to the mid-nineteenth century. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them.

Credits 3

Prerequisites

ENG-102 or equivalent.

ENG-252: American Literature II

This course is a survey of American literature from its beginnings to the mid-nineteenth century. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them.

Credits 3

Prerequisites

ENG-102 or equivalent.

ENG-261: English Literature I

This course is a survey of English/British literature from its inception to the end of the eighteenth century. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them.

Credits 3

Prerequisites

ENG-102 or equivalent.

ENG-262: English Literature II

This course is a survey of English/British literature from the late eighteenth century to the present. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them.

Credits 3

Prerequisites

ENG-102 or equivalent.

ENG-271: World Literature I

This course is a survey of world literature from its inception to the mid-seventeenth century. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them.

Credits 3

Prerequisites

ENG-102 or equivalent.

ENG-272: World Literature II

This course is a survey of world literature from the mid-seventeenth century to the present. Emphasis is placed on representative works and writers of this period and on the literary, cultural, historical, and philosophical forces that shaped these works and that are reflected in them.

Credits 3

Prerequisites

ENG-102 or equivalent.

Entrepreneurship

ETP-265: Entrepreneurial Marketing

This course is designed to help students learn about best practices in Entrepreneurial Marketing. Topics include the analysis of marketing opportunities, identification of the target audience, and the development of a marketing strategy, brand positioning and an integrated marketing plan. Upon completion, students should be able to demonstrate an understanding of marketing issues that are unique to new ventures and small businesses.

Credits 3

Prerequisites

[BUS-100: Introduction to Business](#)

ETP-266: Entrepreneurial Finance

This course is designed to teach students the accounting issues that are important to the business owner, not the accounting practitioner. Topics include start-up funding, sources of financing, identifying and preventing fraud, buying and valuing ventures, and harvesting the value created in business ventures. This course also covers the creation of personal financial statements and pro forma financial statements which are crucial components of a business plan.

Credits 3

Prerequisites

[BUS-100: Introduction to Business](#)

ETP-267: Innovation and Creativity

This course is designed to develop in students a mindset for thinking creatively and prepare them to create their own businesses or revitalize a business that has lost its direction by learning to observe things from different perspectives and to reason from different viewpoints in order to develop effective solutions to problems.

Credits 3

Prerequisites

[BUS-100: Introduction to Business](#)

ETP-268: Business Planning

This capstone course is designed to build upon information from previous courses. Students will complete a business plan, pieces of which were constructed in previous courses. Additionally, teams of students will compete in a business simulation. As a part of this activity, teams will submit regular "management" reports discussing the results of the decisions they have made. Upon completion, students will be prepared to lead their own venture.

Credits 3

Prerequisites

Permission of instructor.

Graphic Design

GRD-101: Introduction to Graphics

This course introduces the student to the Graphic Design industry. Emphasis is placed on visual language vocabularies, the elements and principles of design, typography, creative problem solving, design processes, current design technologies, and professional expectations of graphic designers. This is a CORE course.

Credits 3

Prerequisites

None

GRD-112: Layout and Design

This course introduces students to layout and design principles using current software. Topics include importing, combining, and manipulating text, graphic elements, and images for composite layout. Upon completion, students should be able to design and layout various projects at a professional level for production. This is a CORE course.

Credits 3

Prerequisites

None

GRD-114: Illustration Graphics

This course covers the use of vector-based software for preparing illustrations for output using form, balance, repetition, proportion, and color theory. Emphasis is placed on creating clip art, logos, and illustrations to be reproduced in print and electronic media. Upon completion, students should be able to successfully prepare scalable artwork for production. This is a CORE course.

Credits 3

Prerequisites

None

GRD-116: Photoshop

This course introduces students to digital imaging software. Emphasis is placed on painting and editing, creating special effects, basic image corrections, photo retouching, preparing images for web publications and creating color separations. Upon completion, students should be able to identify the different tools, work with multiple layer images, retouch a photograph, create special effects and prepare an image for a web publication. This is a CORE course.

Credits 3

Prerequisites

None

GRD-118: Graphic Design Techniques

This course introduces the different creative processes involved to produce professional graphic designs. Emphasis is placed on the student developing a standard of design quality to be used throughout the graphic design program and professional life.

Credits 3

Prerequisites

None

GRD-121: Digital Photography Foundation

This course introduces the creative process of digital photography. Emphasis is placed on the components, accessories, and maintenance of a digital camera. Upon completion a student will comprehend how to compose and shoot a picture using a digital camera.

Credits 3

Prerequisites

None

GRD-137: 3-D Fundamentals

This course introduces students to fundamental concepts, principles, and practices of 3D digital modeling and 3D modeling and rendering software. Students are given instruction in 3D modeling techniques including: production of geometric and organic surfaces and forms using NURBS (Non-uniform rational B-spline), polygon construction and sub-divisional surfaces.

Credits 3

Prerequisites

None

GRD-143: Digital Video Foundation

This course introduces students to the basic knowledge and development of digital video and audio. Students are introduced to creating digital video productions and editing techniques. Emphasis is placed on aesthetics and techniques of digital video and audio recording and non-linear editing.

Credits 3

Prerequisites

None

GRD-150: Web Design

This course focuses on the necessary technical tools and design principles used for creating and posting web sites. Emphasis is placed on software and the creation and maintenance of a web site. Upon completion, students should be able to design, implement and maintain a web site.

Credits 3

Prerequisites

None

GRD-160: Production Procedures

This course introduces students to the stages and procedures necessary to prepare conceptual artwork for print. Traditional as well as contemporary production methods are explored. Students will develop and enhance interpersonal and communication skills necessary to work with clients, peers and suppliers involved in the print production process.

Credits 3

Prerequisites

None

GRD-164: Illustration Design

This course covers the use of vector-based software for preparing illustrations for output using form, balance, repetition, proportion, and color theory. Emphasis is placed on expanding the student's ability to create illustrations to communicate concepts and ideas.

Credits 3

Prerequisites

None

GRD-170: Production Processes

This course introduces students to the stages and procedures necessary to prepare conceptual artwork for print. Traditional as well as contemporary production methods are explored. Students will develop and enhance interpersonal and communication skills necessary to work with clients, peers and suppliers involved in the print production process.

Credits 3

Prerequisites

None

GRD-171: Digital Photography Techniques

This course focuses on picture composition, lighting, camera angles, depth of field and camera settings to create a visual impression. Emphasis is placed on the student's ability to shoot and present photographic work in various delivery platforms. Design concepts are reinforced in this course for use with all media types.

Credits 3

Prerequisites

None

GRD-175: Web Graphics

This course focuses on creating original graphics for the web. Students will design images for backgrounds, text, graphic formats, navigation, and animation. Students will learn to use appropriate colors, file formats, and compression methods in designing web graphics and layouts.

Credits 3

Prerequisites

None

GRD-183 : Digital Video Production

This course focuses on production planning, camera techniques, lighting, audio, and advanced non-linear editing. Students will work independently or in small groups to develop, capture, edit, and deliver digital video projects while also learning compression and delivery standards.

Credits 3

Prerequisites

None

GRD-187: 3-D Animation

This course focuses on a series of project-based lessons designed to guide students through the process of creating and generating an animation. Emphasis is placed on animation, texture map, adding visual effects and rendering techniques using lighting, camera, and color manipulation within a current 3D Modeling and Animation software.

Credits 3

Prerequisites

None

GRD-190: Portfolio Preparation

This course includes the preparation of artwork for a portfolio presentation. Topics include production of a portfolio for presentation at the completion of the first year of course work. Upon completion, students should be able to prepare and produce a portfolio for presentation.

Credits 3

Prerequisites

None

GRD-212: Publication Design

This course further prepares students for publication layout and design principles incorporating creative software. Topics include importing, combining and manipulating text, graphic elements, and images for composite layout. Emphasis is placed on using elements of multiple design software applications to produce professional publications.

Credits 3

Prerequisites

None

GRD-214: Illustration Design Techniques

This course further develops the student's ability to communicate visually by incorporating raster and vector imagery for illustration purposes. Emphasis is placed on creating complex illustrations that communicates an idea or concept.

Credits 3

Prerequisites

None

GRD-216: Photoshop Techniques

This course further enhances the student's experience with digital imaging software. Emphasis is placed on the development of intermediate level skills in the use of Photoshop for the purpose of creating and manipulating imagery that communicates an idea or concept.

Credits 3

Prerequisites

None

GRD-219: Photoshop Imaging

This course draws from the student's previous experiences to enhance their use of digital imaging software. Emphasis is placed on the development of advanced level skills in the use of Photoshop for the purpose of creating and manipulating imagery that communicates an idea or concept.

Credits 3

Prerequisites

None

GRD-221: Conceptual Digital Photography

This course allows the student to create powerful images through different utilizations of light, perspective, and composition. Advanced camera functions, software and final image output are explored. Emphasis is placed on improving the students' photographic skills by encouraging discovery of personal style.

Credits 3

Prerequisites

None

GRD-225: Publication Studio

This course allows the student to draw from his/her creative talent and previous course work to design and prepare complex publications for printing. Emphasis is placed on the student's ability to use creative problem solving techniques to manage a project from concept to completion.

Credits 3

Prerequisites

None

GRD-230: Basic Multimedia Presentation

This course covers basic desktop electronic imaging technology and multimedia presentation development and production. Emphasis is placed on preparation and production of multimedia presentations with a variety of computer hardware and software. Upon completion, students should be able to prepare and produce multimedia presentations.

Credits 3

Prerequisites

None

GRD-235: Advanced Multimedia Production

This course covers advanced desktop electronic imaging technology and multimedia presentation development and production. Emphasis is placed on preparation and production of multimedia presentations with a variety of computer hardware and software. Upon completion, students should be able to prepare and produce multimedia presentations.

Credits 3

Prerequisites

None

GRD-237: 3-D Graphics and Animation

Building on previously learned skills this course is a series of project-based lessons designed to guide students through the process of creating and generating an animation. Emphasis is placed on animation, texture map, adding visual effects and rendering techniques using lighting, camera, and color manipulation within a current 3D Modeling and Animation software.

Credits 3

Prerequisites

None

GRD-240: Graphic Software Exploration

This course allows students to explore various graphic software applications that are not offered in a traditional classroom setting. Emphasis is placed on typography, 3-D graphics, and photo imaging. Upon completion, students should be able to apply the knowledge learned to enhance existing skills.

Credits 3

Prerequisites

None

GRD-243: Digital Video Effects

This course focuses on the creation of 2D visual effects in digital video productions. Emphasis is placed on keyframe, chroma key screen, composition, and proper rendering techniques. Students will conceptualize and create an original scene for a movie, TV, or video game.

Credits 3

Prerequisites

None

GRD-250: Web Media

This course focuses on creating original graphics for the web. Students will design web based media, animation, and navigation for the purpose of human interface design. Emphasis is placed on techniques and technologies for designing web media in which interactivity is the focus.

Credits 3

Prerequisites

None

GRD-261: Design Studio I

This course allows students to create, design and produce a corporate image project. Emphasis is placed on the integration of graphic design skills, typography, creative visual problem-solving, and professional presentation. Upon completion, students should be able to apply skills to design projects from concept to implementation.

Credits 3

Prerequisites

None

GRD-262: Design Studio II

This course allows students to create, design and produce a corporate image project. Emphasis is placed on the integration of graphic design skills, typography, creative visual problem-solving, and professional presentation. Upon completion, students should be able to apply skills to design projects from concept to implementation.

Credits 3

Prerequisites

None

GRD-263: Design Studio III

This course allows students to create, design and produce a corporate image project. Emphasis is placed on the integration of graphic design skills, typography, creative visual problem-solving, and professional presentation. Upon completion, students should be able to apply skills to design projects from concept to implementation.

Credits 3

Prerequisites

None

GRD-264: Illustration Design Studio

This course is designed to allow the student to draw on their previous illustrative work to communicate. Classes are designed around a series of problems and illustration experiences for which there are no pre-established solutions. Emphasis is placed on the student's illustrative ability to create a visual image that communicates an idea or concept.

Credits 3

Prerequisites

None

GRD-265: Package Design Studio

This course is designed to allow the student to draw on their previous course work to produce a prototype package design. Classes are designed to allow students to explore the form and function of 3-D packaging. Emphasis is placed on designing and constructing containers and/or displays for various products.

Credits 3

Prerequisites

None

GRD-271: Digital Photography Studio

This course allows the student to develop photographic skills in professional, editorial and studio photography. The use of advanced digital photography techniques and processes will be expected, including studio photography with portrait figure, still life, and architectural form, as well as black-and-white, and color formats.

Credits 3

Prerequisites

None

GRD-275: Web Design Studio

This course allows the student to design and produce a project suitable for use on the web. Emphasis is placed on creating an original concept in which the successful design and implementation of a web site is achieved. It must serve as an effective communication tool using current technologies and user interaction. Students will design and implement effective web sites that can be included in their portfolios.

Credits 3

Prerequisites

None

GRD-283: Digital Video Studio

This course allows the student to design and produce a project suitable for use in a movie, TV, or video game. Emphasis is placed on creating an original concept, storyboarding, production, and post-production processing. The student will document each stage of the project's development. The project will be presented for critique and evaluation at each of the developmental stages.

Credits 3

Prerequisites

None

GRD-287: 3-D Studio

This course allows the student to design and produce a project suitable for digital animation, 3D design, or game development. Emphasis is placed on creating an original concept, storyboarding, and post-production processing. The student will document each stage of the project's development. The project will be presented for critique and evaluation at each of the developmental stages.

Credits 3

Prerequisites

None

GRD-290: Portfolio Presentation

This course includes the preparation of artwork and a resume for portfolio presentation. Topics include production of a resume and portfolio for presentation during the second year of course work. Upon completion, students should be able to prepare and produce a resume and portfolio for presentation.

Credits 3

Prerequisites

None

GRD-292: Practicum / Coop

This course is designed for the student to obtain real work experience in the graphic arts industry. Emphasis is placed on instruction by a qualified graphic artist in a work situation and producing printable assignments using current technology. Upon completion, students should be able to work in a graphic arts environment with little or no supervision.

Credits 3

Prerequisites

None

GRD-293: Practicum / Coop

This course is designed for the student to obtain real work experience in the graphic arts industry. Emphasis is placed on instruction by a qualified graphic artist in a work situation and producing printable assignments using current technology. Upon completion, students should be able to work in a graphic arts environment with little or no supervision.

Credits 3

Prerequisites

None

GRD-294: Practicum / Coop

This course is designed for the student to obtain real work experience in the graphic arts industry. Emphasis is placed on instruction by a qualified graphic artist in a work situation and producing printable assignments using current technology. Upon completion, students should be able to work in a graphic arts environment with little or no supervision.

Credits 3

Prerequisites

None

GRD-295: Graphic Trends

This course covers current trends and practices in the graphic arts industry. Emphasis is placed on software programs that are currently being used by professionals. Upon completion, students should be able to use applicable current software.

Credits 3

Prerequisites

None

GRD-296: Graphic Trends

This course covers current trends and practices in the graphic arts industry. Emphasis is placed on software programs that are currently being used by professionals. Upon completion, students should be able to use applicable current software.

Credits 3

Prerequisites

None

GRD-297: Graphic Trends

This course covers current trends and practices in the graphic arts industry. Emphasis is placed on software programs that are currently being used by professionals. Upon completion, students should be able to use applicable current software.

Credits 3

Prerequisites

None

GRD-298: Graphic Trends

This course covers current trends and practices in the graphic arts industry. Emphasis is placed on software programs that are currently being used by professionals. Upon completion, students should be able to use applicable current software.

Credits 3

Prerequisites

None

History

HIS-101: Western Civilization I

This survey course examines the social, intellectual, economic, cultural, and political developments which have shaped the modern Western world. It covers the history of the West from its earliest beginnings to the early modern era.

Credits 3

Prerequisites

As required by program.

HIS-102: Western Civilization II

This survey course examines the social, intellectual, economic, cultural, and political developments which have shaped the modern Western world. It covers the history of the West from the early modern era to the present.

Credits 3

Prerequisites

As required by program.

HIS-121: World History I

This course surveys social, intellectual, cultural, economic, and political developments which have molded the modern world. Focus is on both non-western and western civilizations from the prehistoric to the early modern era.

Credits 3

Prerequisites

As required by program.

HIS-122: World History II

The course surveys social, intellectual, cultural, economic, and political developments which have molded the modern world. It covers world history, both western and nonwestern, from the Early Modern Era through the Post-Modern Era.

Credits 3

Prerequisites

As required by program.

HIS-201: United States History I

This course surveys United States history from the pre-Columbian period to the Civil War era.

Credits 3

Prerequisites

As required by program.

HIS-202: United States History II

This course surveys United States history from the Civil War era to the Modern era.

Credits 3

Prerequisites

As required by program.

Hospitality Management

HSM-112: Law and Hospitality Industry

This course focuses on laws that apply to hotels, food-service establishments, and the travel industry. Topics include innkeepers' duties to guests, tenants, licensees and trespassers; concepts of liability and negligence; credit and collection practices; and miscellaneous statutes applicable to the hospitality industry.

Credits 3

Prerequisites

None

HSM-123: Hospitality Field Experience I

The supervised field experience program puts student's classroom knowledge into practical use. It provides a balance between theory and practice, allowing the student to experience various facets of the industry that are not always available in the classroom. This experience provides the opportunity to clarify career goals, assess strengths and weaknesses, and obtain, develop, and practice skills necessary for future success. This experience is also crucial to job placement. Any weaknesses in the program of the student can be identified and corrected to insure better job placement and salaries.

Credits 3

Prerequisites

None

HSM-181: Special Topics

These courses provide specialized instruction in various areas related to hospitality services management. Emphasis is placed on meeting students' needs.

Credits 3

Prerequisites

None

HSM-250: Hospitality Marketing

This course is designed to study the principles of marketing and promotion as they related to the hospitality industry. Topics include promotional techniques, advertising, the organization of a lodging operation's sales department and promotion of special events.

Credits 3

Prerequisites

None

HSM-281: Special Topics

These courses provide specialized instruction in various areas related to hospitality services management. Emphasis is placed on meeting students' needs.

Credits 3

Prerequisites

None

Industrial Systems & Automation

ELT-111: Concepts of Direct Current

This course provides an advanced study of direct current (DC) concepts and application principles. Specific topics include safety, terms and symbols, electrical theory, Ohm's law, power law, electrical measurement, DC electrical components, series, parallel, and series-parallel circuit construction. Students gain hands-on experience through various laboratory problems. Emphasis is placed on the use of scientific calculators, reading schematics, and the operation of common test equipment used to analyze and troubleshoot DC circuits and to prove the theories taught during classroom instruction.

This course may serve as a substitute core for DC Fundamentals.

Credits 5

INT-105: Introduction to Process Technology

This course is designed to provide students with an introduction to process control technology and various instruments used to control processes. Upon completion, students should be able to comprehend principles of process control technology and the application of various instruments used to control processes in an industrial setting.

Credits 3

Prerequisites

As required by college.

INT-113: Industrial Motor Control I

This course is a study of the construction, operating characteristics, and installation of different motor control circuits and devices. Emphasis is placed on the control of three phase AC motors. This course covers the use of motor control symbols, magnetic motor starters, running overload protection, pushbutton stations, multiple control stations, two wire control, three wire control, jogging control, sequence control, and ladder diagrams of motor control circuits. Upon completion, students should be able to understand the operation of motor starters, overload protection, interpret ladder diagrams using pushbutton stations and understand complex motor control diagrams.

Credits 3

Prerequisites

None

INT-117: Principles of Industrial Mechanics

This course provides instruction in basic physics concepts applicable to mechanics of industrial production equipment. Topics include the basic application of mechanical principles with emphasis on power transmission, specific mechanical components, alignment, and tension. Upon completion, students will be able to perform basic troubleshooting, repair and maintenance functions on industrial production equipment. This is a CORE course.

Credits 3

Prerequisites

None

INT-118: Fundamentals of Industrial Hydraulics & Pneumatics

This course includes the fundamental concepts and theories for the safe operation of hydraulic and pneumatic systems used with industrial production equipment. Topics include the physical concepts, theories, laws, air flow characteristics, actuators, valves, accumulators, symbols, circuitry, filters, servicing safety, and preventive maintenance and the application of these concepts to perform work. Upon completion, students should be able to service and perform preventive maintenance functions on hydraulic and pneumatic systems. This is a CORE course.

Credits 3

Prerequisites

As required by college

INT-126: Preventive Maintenance

This course focuses on the concepts and applications of preventive maintenance. Topics include the introduction of alignment equipment, job safety, tool safety, preventive maintenance concepts, procedures, tasks, and predictive maintenance concepts. Upon course completion, students will demonstrate the ability to apply proper preventive maintenance and explain predictive maintenance concepts.

Credits 3

Prerequisites

None

INT-127: Principles of Industrial Pumps and Piping Systems

This course provides instruction in the fundamental concepts of industrial pumps and piping systems. Topics include pump identification, operation, and installation, maintenance and troubleshooting, and piping systems, and their installation. Upon course completion, students will be able to install, maintain, and troubleshoot industrial pumps and piping systems.

Credits 3

Prerequisites

None

INT-134: Principles of Industrial Maintenance Weld Cutting Techniques

This course provides instruction in the fundamentals of acetylene cutting and the basics of welding needed for the maintenance and repair of industrial production equipment. Topics include oxy-fuel safety, choice of cutting equipment, proper cutting angles, equipment setup, cutting plate and pipe, hand tools, types of metal welding machines, rod and welding joints, and common welding passes and beads. Upon course completion, students will demonstrate the ability to perform metal welding and cutting techniques necessary for repairing and maintaining industrial equipment. This is a CORE course

Credits 3

Prerequisites

As required by college

INT-140: FAME Manufacturing Core Exercise 1, Safety Culture

This course introduces the Federation of Advanced Manufacturing Education (FAME) MCE-1 (Manufacturing Core Exercise) for Safety Culture. The course includes an introduction to safety and safety practice and the development of a safety culture. Specific topics covered regarding safety culture are: Internal, self-driven value for safe behavior; Active concern for both personal safety and the safety of others; Full understanding of the impact and consequence of unsafe behavior and acts; Proactive thinking about safety, safe practices, and consequences. Self-driven initiative to be safe and to promote the safety of others.

Credits 1

Prerequisites

As determined by college

INT-142: FAME Manufacturing Core Exercise 2, Workplace Visual Organizations

This course introduces the Federation of Advanced Manufacturing Education (FAME) MCE-2 (Manufacturing Core Exercise) for Workplace Visual Organization (AKA: 5S). Students will learn how to achieve higher productivity, produce fewer defects, meet deadlines, attain higher workplace safety and how to expose abnormal work conditions quickly and easily for correction and countermeasure. The 5S process will be clearly defined with experiential exercises, reinforcing the following process steps and their objectives: Sift – Organization, Sort – Orderliness, Sweep and Wash – Cleanliness, Spic and Span- Total Standardization, Sustain - System Sustainment

Credits 1

Prerequisites

As determined by college

INT-144: FAME Manufacturing Core Exercise 3, LEAN Manufacturing

This course introduces the Federation of Advanced Manufacturing Education (FAME) MCE-3 (Manufacturing Core Exercise) for Lean Manufacturing. Students will be introduced to a systematic method for waste minimization (AKA: Muda) within a manufacturing system, without sacrificing productivity. Lean also takes into account waste created through overburden (AKA: Muri) and waste created through unevenness in workloads (AKA: Mura). The Lean management philosophy will be clearly defined and explained with experiential exercises, reinforcing the following concepts: The value-added product; The maintenance value-added product; Value-added work and necessary work; How this leads to increased profit; Workload unevenness (Mura); Waste created through overburden (Muri). The seven areas of non-value-added waste (Muda): conveyance, correction, motion, over-production, over-processing, waiting and inventory

Credits 1

Prerequisites

As determined by college

INT-146: FAME Manufacturing Core Exercise 4, Problem Solving

This course introduces the Federation of Advanced Manufacturing Education (FAME) MCE-4 (Manufacturing Core Exercise) for Problem Solving. Students will learn how to use the eight-step problem solving model in an experiential learning environment, in conjunction with the PDCA cycle (plan, do, check and act). The eight steps students will learn to use are: Clarify the problem (plan); Breakdown the problem (plan); Set the target (plan); Analyze the root cause (plan); Develop countermeasures (plan); Implement countermeasures (do); Monitor results and process (check); Standardize and share success (act)

Credits 1

Prerequisites

As determined by college

INT-148: FAME Manufacturing Core Exercise 5, Machine Reliability

This course introduces the Federation of Advanced Manufacturing Education (FAME) MCE-5 (Manufacturing Core Exercise) for machine reliability. Students will learn how to use the process of Reliability-Centered Maintenance (RCM) to drive for zero downtime and reach for maximum Heijunka. Students will be given an in depth understanding of Heijunka (Japanese for “leveling”), as a process that maintains a balanced relationship between predictability by leveling demand, flexibility by decreasing changeover time and stability by averaging production volume and type, over the long-term. The RCM process will be clearly defined with experiential exercises reinforcing comprehension and application of the following core questions: What are the functions of the equipment? How does it fail? What causes it to fail? Does it matter if it fails? What can be done to predict or prevent each failure? What if the failure cannot be prevented?

Credits 1

Prerequisites

As determined by college

INT-184: Intro to Programmable Logic Controllers

This course introduces programmable logic controllers. Emphasis is placed on, but not limited to, the following: PLC hardware and software, numbering systems, installation, and programming. Upon completion, students must demonstrate their ability by developing, loading, debugging, and optimizing PLC programs. This course is also taught as [AUT-114](#), ATM-211, ENT-204, [ELT-231](#), ILT-194, IAT-160, and IET-231.

Credits 3

Prerequisites

None

INT-206: Industrial Motors I

This course focuses on basic information regarding industrial electrical motors. Upon completion students will be able to troubleshoot, remove, replace, and perform routine maintenance on various types of motors.

Credits 3

Prerequisites

None

INT-215: Troubleshooting Techniques

This course is designed to allow students an opportunity to study directly related topics of particular interest which require the application of technical knowledge and technical skills. Emphasis is placed on the application of skills and knowledge with practical experiences. Upon completion, students should be able to solve job related problems using technical skills and knowledge.

Credits 3

Prerequisites

None

INT-218: Special Lab in Hydraulics and Pneumatics

This course provides specialized instruction in maintaining and troubleshooting Hydraulic and Pneumatic systems. Topics include safe component removal and installation, schematic reading and diagramming, and theoretical calculations.

Credits 2

Prerequisites

Permission of instructor.

INT-254: Robot Maintenance and Troubleshooting

This course introduces principle concepts troubleshooting and maintenance of robots. Topics include Recognize and describe major robot component. Students will learn to diagnose robot mechanical problems to the component level, replacement of mechanical components and perform adjustments, troubleshooting class 1, 2, and 3 faults, to manipulate I/O for the robot, and periodic and preventive maintenance. Students will learn how to safely power up robots for complete shutdown and how to manipulate robots using the teach pendant. Upon completion students will be able to describe the various robot classifications, characteristics, explain system operations of simple robots, and maintain robotic systems.

Credits 3

Prerequisites

As required by the College.

INT-288: Applied Prin of Programmable Controllers

This course provides a comprehensive study in the theory and application of specific models of programmable logic controllers. Topics include hardware configuration, memory and addressing detail function of software, instruction types, system troubleshooting, and simple programming techniques.

Credits 3

Prerequisites

None

INT-296: Co-Op

These courses constitute a series wherein the student works on a part-time basis in a job directly related to Industrial Maintenance. In these courses the employer evaluates the student's productivity, and the student submits a descriptive report of his work experiences. Upon completion, the student will demonstrate skills learned in an employment setting.

Credits 1

Prerequisites

None

Industrial Technology

ILT-108: Introduction to Instruments and Process Control

This course is an introductory study of the control devices and methods used in industry for the control and transmission of information pertaining to process variables. This study includes an introduction to instrumentation and control mathematics. This course also provides instruction in the fundamental concepts of pressure, force, weight, motion, liquid level, fluid flow and temperature.

Credits 3

Prerequisites

As required by program.

ILT-110: Advanced Industrial Process Control Technology

This course is an advanced study of the principles governing methods of using process variables in the control of industrial processes. The study includes methods and procedures for measuring, displaying and transmitting process variables according to industry standards. The course also includes an in-depth study of mathematics pertaining to industrial control instruments.

Credits 3

Prerequisites

As required by program.

ILT-114: Instrumentation Operation and Calibration

The hardware used to measure and control process variables is presented. The student learns the principles of operation, servicing, maintenance, calibration, and troubleshooting procedures used on mechanical, pneumatic, electronic and digital based industrial transmitters, recorders, controllers, valves, and other control devices. The course is broken down into theory and laboratory work on actual process measuring and control equipment.

Credits 3

Prerequisites

As determined by college.

Logistics and Supply Chain Management

LGT 106: Workplace Essentials

This course emphasizes the foundational information to develop knowledge and skills to prepare individuals for employment following the completion of technical and academic programs. At the conclusion of this course, students will have knowledge and skills relevant to work ethic, communication, resume writing, job interviewing, dress and appearance, behavior, problem-solving, decision making, and project management.

Credits 3

Prerequisites

None

LGT 108: Introduction to Logistics

This course introduces students to the basic concepts of logistics for a variety of applications. Students gain insights into how logistics play a vital role in all aspects of business and industry. Specific topics include basic concepts of logistics and health and safety concerns in warehouse and transportation environments.

Credits 3

Prerequisites

None

LGT 114: Supply Chain Fundamentals and Management

This course introduces students to the basic concepts of supply chain and supply chain management. Students gain insights into the various components of the supply chain, how the supply chain functions interrelate and how they are managed in the business and industry environment. Specific topics include basic concepts of “links and drivers” in the Supply Chain, such as inventory management, sourcing, requisitioning, ERP systems, Purchase Orders, EDI, contracting, and distribution.

Credits 3

Prerequisites

None

LGT 115: Purchasing in Logistics

This course provides students with an introduction to purchasing processes to include the impact of purchasing, compliance issues, and Incoterms. Emphasis is placed on the purchase of efficient and effective purchasing practice to ensure the best uses of resources.

Credits 3

Prerequisites

None

LGT 137: Warehouse and Inventory Management

This course provides students with information on the efficient and effective operation of warehouse operations. Emphasis is placed on the management of warehouse operation and its relationship with supply chain management.

Credits 3

Prerequisites

None

LGT 271: Supply Chain Analytics

This course provides an introduction to data analysis tools and techniques used by Logistics/Supply Chain Management personnel to effectively analyze large volumes of data. Topics include collection, classification, sortation, and presentation of multiple levels/types of product data.

Credits 3

Prerequisites

None

Machine Tool Technology

MTT-147: Introduction to Machine Shop I

This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, saws, milling machines, bench grinders, and layout instruments. Upon completion, students will be able to perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This is a CORE course.

Credits 3

Prerequisites

As determined by college.

MTT-148: Introduction to Machine Shop I Lab

This course provides practical application of the concepts and principles of machining operations learned in [MTT-147](#). Topics include machine shop safety, measuring tools, lathes, saws, milling machines, bench grinders, and layout instruments. Upon completion, students will be able to perform the basic operations of measuring, layout, drilling, sawing, turning, and milling. This is a CORE course. MTT-100 is a suitable substitute for [MTT-147/148](#). This course is aligned with NIMS certification standards. This course is also taught as AUT-151.

Credits 3

Prerequisites

None

Corequisites

None

Math

MTH-098: Elementary Algebra

This course provides a study of the fundamentals of algebra. Topics include the real number system, linear equations and inequalities, graphing linear equations and inequalities in two variables and systems of equations. This course does not apply toward the general core requirement for mathematics.

Credits 4

Prerequisites

None

MTH-099: Support for Intermediate College Algebra

This Learning Support course provides co-requisite support in mathematics for students enrolled in MTH-100. The material covered in this course is parallel to and supportive of the material taught in MTH-100. Emphasis is placed on providing students with additional academic and noncognitive support with the goal of success in the students' paired MTH-100 class. This course does not apply toward the general core requirement for mathematics.

Credits 1

Prerequisites

Appropriate mathematics placement score or MTH-098 Elementary Algebra. (Note that MTH-099 is required for students completing MTH-098 Elementary Algebra.)

Corequisites

MTH-100 Intermediate College Algebra

MTH-100: Intermediate College Algebra

This course provides a study of algebraic concepts such as laws of exponents, polynomial operations, factoring polynomials, radical and rational expressions and equations and quadratic equations. Functions and relations are introduced and graphed. This course does not apply toward the general core requirement for mathematics.

Credits 3

Prerequisites

MTH-098 Elementary Algebra or appropriate mathematics placement score.

Corequisites

MTH-099 Support for Intermediate College Algebra, if required. (Note that MTH-099 is required for students completing MTH-098 Elementary Algebra.)

MTH-103: Intro to Technical Mathematics

This course is designed for the student in technology needing simple arithmetic, algebraic, and right triangle trigonometric skills.

Credits 3

Prerequisites

MTH-098: Elementary Algebra

OR appropriate mathematics placement score

MTH-104: Plane Trigonometry

This course emphasizes such topics as the solution of triangles, vectors, geometric concepts and complex numbers.

Credits 3

Prerequisites

MTH-100: Intermediate College Algebra

MTH-110: Finite Mathematics

This course provides an overview of topics in finite mathematics together with their applications and is intended for students who are not majoring in science, engineering, commerce, or mathematics (i.e., students who are not required to take calculus). The course introduces logic, set theory, counting techniques, basic probability, statistics, and personal finance.

Credits 3

Prerequisites

MTH-100: Intermediate College Algebra

MTH-112: Precalculus Algebra

This course emphasizes the algebra of functions – including polynomial, rational, exponential, and logarithmic functions. In addition, the course covers non-linear inequalities as well as systems of linear and non-linear equations and inequalities.

Credits 3

Prerequisites

Successful completion of MTH-100 Intermediate College Algebra with a grade of C or higher or appropriate placement.

MTH-113: Precalculus Trigonometry

This course includes the study of trigonometric (circular) functions and inverse trigonometric functions as well as extensive work with trigonometric identities, equations, and formulas. The course also covers vectors, complex numbers, DeMoivre's Theorem, and polar graphs. Additional topics may include conic sections and product-sum formulas.

Credits 3

Prerequisites

Grade of C or higher in MTH-112 or appropriate placement scores

MTH-115: Precalculus Algebra and Trigonometry

This course is a one-semester accelerated combination of Precalculus Algebra ([MTH-112](#)) and Precalculus Trigonometry ([MTH-113](#)). This course is intended for students with a strong background in college preparatory mathematics. The course includes the algebra of functions (including polynomial, rational, exponential, and logarithmic functions) as well as the study of trigonometric functions and inverse trigonometric functions. This course also includes extensive work with trigonometric identities, equations, and formulas; vectors; complex numbers; and polar graphs.

Credits 4

Prerequisites

As determined by college but may be no less than a C or higher in MTH-100 and permission from the department chairperson.

MTH-116: Mathematical Applications

This course provides practical applications of mathematics and includes selected topics from consumer math, algebra, and geometry. The course covers integers, percent, interest, ratio and proportion, measurement systems, linear equations, and problem solving.

Credits 3

Prerequisites

None

MTH-120: Calculus and Its Applications

This course is intended to give a broad overview of calculus. It includes limits, differentiation, and integration of algebraic, exponential, logarithmic, and multi-variable functions with applications to business, economics, and other disciplines. This course may also include LaGrange multipliers, extrema of functions of two variables, method of least squares, linear approximation, and linear programming.

Credits 3

Prerequisites

Grade of C or higher in MTH-112, MTH-113, or MTH-115 or appropriate placement score.

MTH-125: Calculus I

This is the first of three courses in the basic calculus sequence taken primarily by students in science, engineering, and mathematics. Topics include the limit of a function; the derivative of algebraic, trigonometric, exponential, and logarithmic functions; and the definite integral and its basic applications to area problems. Applications of the derivative are covered in detail, including approximations of error using differentials, maximum and minimum problems, and curve sketching using calculus.

Credits 4

Prerequisites

Grade of C or higher in MTH-113 or MTH-115 or appropriate placement score.

MTH-231: Math for the Elementary Teacher I

This course is designed to develop a deeper understanding of elementary school mathematics content needed for teaching. The course is designed to develop conceptual understanding of number systems and operations by focusing on basic concepts and principles, exploring multiple representations and strategies, and illuminating connections among concepts and procedures. Topics include whole numbers and integers, fractions, ratio, percent, decimals, and arithmetic operations within these systems.

Credits 3

Prerequisites

Grade of C or higher in MTH-100 or appropriate placement score

MTH-232: Math for the Elementary Teacher II

This course is designed to provide mathematical insights into measurement and geometry for students majoring in elementary education. Topics include geometric shapes (two- and three-dimensional), measurement, congruence and similarity, symmetry, and transformations.

Credits 3

Prerequisites

Grade of C or higher in MTH-100 or appropriate placement score

Medical Assisting

MAT-100: Intro to Medical Document Production

This course covers basic keyboarding skills using medical terminology and format. Emphasis is placed on correct techniques and development of speed and accuracy. Upon completion, the student should be able to key medical material at an acceptable speed and accuracy level. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

None

MAT-101: Medical Terminology

This course is designed for medical assistants, student nurses, and others in medically related fields. The course will focus on the more common prefixes, roots, and suffixes used to construct medical terms with these word parts to determine the meanings of new or unfamiliar terms. The student will learn a system of word building which will enable them to interpret medical terms. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

None

MAT-102: Medical Assisting Theory I

A description of anatomical descriptors and the cell introduces the student to and serves as an overview of the body's systems. The structure and function of the nervous, sensory, integumentary, muscular, skeletal, respiratory, and cardiovascular systems are taught with the diseases related to these systems presented. Upon completion, students should be able to demonstrate a basic working knowledge of these body systems. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

None

MAT-103: Medical Assisting Theory II

The structure and function of the digestive, urinary, reproduction, endocrine, and immune systems are presented. Disease processes that are related to these systems will be included. Basic concepts of reproduction, growth and development, and nutrition are taught. Upon completion, students should be able to demonstrate a basic working knowledge of these body systems. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

None

MAT-111: Clinical Proc I for the Medical Assistant

This course includes instruction in clinical examining room procedures. Topics include asepsis, infection control, assisting with examination, and patient education. Upon completion, students will be able to demonstrate competence in exam room procedures. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

MAT-101 or BIO-120, MAT-102

MAT-120: Medical Administrative Procedures I

This course introduces medical office administrative procedures. Topics include appointment scheduling, telephone techniques, managing the physician's schedule, handling mail, preparing and maintaining medical records, and patient orientation. Upon completion, students should be able to perform basic medical administrative skills. This is a CORE course.

Credits 3

Prerequisites

College level computer course key 30 wpm or completion of MAT-100 and MAT-101 or BIO-120

MAT-121: Medical Administrative Procedures II

This course introduces medical office administrative procedures not covered in Medical Administrative Procedures I. Topics include fees, credit, and collections, banking, bookkeeping, payroll, and computerized finance applications. Upon completion students should be able to manage financial aspects of medical offices. This is a CORE course.

Credits 3

Prerequisites

MAT-120: Medical Administrative Procedures I

MAT-122: Basic Concepts of Interpersonal Relationships

This course is designed to assist students in health occupations to learn basic principles of human behavior. Activities for developing effective interpersonal relations are included. Exploration of self-concept and the negative effect of poor self-concept as they relate to one's health are presented. Upon completion, students should be able to apply these concepts to the work setting. This course is offered at least one term every year.

Credits 3

Prerequisites

None

MAT-125: Lab Procedures I for the Medical Assistant

This course provides instruction in basic lab techniques used by the medical assistant. Topics include lab safety, quality control, collecting and processing specimens, performing selective diagnostic tests, such as a CBC, screening, and follow-up of test results and OSHA/CLIA regulations. Upon completion, students should be able to perform basic lab tests/skills based on course topics. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

MAT-101 or BIO-120, MAT-102

MAT-128: Med Law & Ethics for the Medical Assistant

This course provides basic information related to the legal relationship of patient and physician. Topics to be covered include creation and termination of contracts, implied and informed consent, professional liability, invasion of privacy, malpractice, tort, liability, breach of contract, and the Medical Practice Act. Upon completion, students should be able to recognize ethical and legal implications of these topics as they relate to the medical assistant. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

None

MAT-200: Management of Office Emergencies

This course is designed to instruct students in handling emergencies in the medical office. Emergencies presented will include cardiovascular emergencies, diabetic emergencies, seizures, syncope, hyperthermia and hypothermia, shock, Musculo-skeletal emergencies, and poisoning. Upon completion, students should be able to recognize emergency situations and take appropriate actions. This course is offered at least one term every year. This is a CORE course.

Credits 2

Prerequisites

MAT-102: Medical Assisting Theory I

MAT-103: Medical Assisting Theory II

MAT-211: Clinical Proc II for the Medical Assistant

This course includes instruction in vital signs and special examination procedures. Emphasis is placed on interviewing skills, appropriate triage and preparing patients for diagnostic procedures. Upon completion, students should be able to assist with special procedures. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

MAT-101 or BIO-120, MAT-102, MAT-111

MAT-215: Lab Procedures II for the Medical Assistant

This course instructs the student in the fundamental theory and lab application for the medical office. Microbiology, urinalysis, serology, blood chemistry, and venipuncture theory as well as venipuncture collection procedures are discussed and performed. Upon completion, students should be able to perform basic lab tests/skills on course topics. This course is offered at least one term every year. This is a CORE course.

Credits 3

Prerequisites

MAT-125: Lab Procedures I for the Medical Assistant

MAT-216: Pharmacology for the Medical Office

This course teaches the commonly administered drugs used in the medical field including their classifications, actions, indications, contraindications, and side effects on the body. Correct demonstration of drug calculation, preparation, administration, and documentation are also taught. Upon completion, students should be able to demonstrate safe drug administration and recognize common medical classifications and their patient implications. This course is offered at least one term every year. This is a CORE course.

Credits 4

Prerequisites

MAT-101 or BIO-120, MAT-102, MAT-103, MTH-116

MAT-220: Medical Office Insurance

In this course emphasis is placed on insurance procedures with advanced diagnostic and procedural coding in the outpatient facility. Study will include correct completion of insurance forms and coding. Upon completion, students should be able to demonstrate proficiency in coding for reimbursements.

Credits 3

Prerequisites

MAT-101 or BIO-120, MAT-120, MAT-121 and college level computer course

MAT-222: Medical Transcription I (Elective)

This course introduces dictating equipment and typical medical dictation. Emphasis is placed on correct punctuation, capitalization, and spelling. Upon completion, students should be able to transcribe physician's dictation.

Credits 2

Prerequisites

As required by program.

MAT-227: Special Topics in Medical Assisting (Elective)

This course includes specialized study on current topics and issues in the field of medical assisting. Emphasis is placed on personal and occupational responsibilities and developing problem-solving skills encountered in the medical office. Upon completion, students should be able to apply problem-solving skills to medical office situations. This course is offered as needed.

Credits 1

Prerequisites

None

MAT-228: Medical Assistant Review Course

This course includes a general review of administrative and clinical functions performed in a medical office. The course will assist the student or graduate in preparing for national credentialing examination.

Credits 1

Prerequisites

[MAT-101: Medical Terminology](#)

[MAT-102: Medical Assisting Theory I](#)

[MAT-103: Medical Assisting Theory II](#)

[MAT-111: Clinical Proc I for the Medical Assistant](#)

[MAT-211: Clinical Proc II for the Medical Assistant](#)

MAT-230: Medical Assisting Preceptorship

This course is a medical assisting capstone course. The student is expected to apply administrative, clinical, and laboratory knowledge while under the supervision of a designated preceptor. The student performs administrative, clinical, and laboratory skills while displaying positive affective behaviors expected of a medical assistant in the medical setting. The total number of contact hours must be a minimum of 160 hours in length. The content of the course is aligned with standards and guidelines from the Medical Assisting Education Review Board (MAERB) in collaboration with CAAHEP.

Credits 3

Prerequisites

MAT-111, MAT-125, MAT-200, MAT-211, MAT-215, MAT-216, MAT-222, plus 30 additional credit hours in MAT program and/or as required by program

MAT-239: Phlebotomy Preceptorship

This course is designed to provide the opportunity to apply phlebotomy techniques in the physician's clinic and hospital setting. Emphasis is placed on training individuals to properly collect and handle blood specimens for laboratory testing and to interact with health care personnel, patients, and the general public. Upon completion, students should be prepared for entry-level phlebotomy and to sit for the Phlebotomy Technician Examination (ASCP). This course is offered as needed.

Credits 3

Prerequisites

MAT-101 or BIO-120, MAT-102, MAT-125, MAT-215, MAT-122, acceptable computer course and/or as required by program.

Medical Radiologic Technology

RAD-111: Introduction to Radiology

This course provides students with an overview of radiography and its role in health care delivery. Topics include the history of radiology, professional organizations, legal and ethical issues, health care delivery systems, introduction to radiation protection, and medical terminology. Upon completion students will demonstrate foundational knowledge of radiologic science.

Credits 2

Prerequisites

Admission into program

Corequisites

[RAD-112](#), [RAD-113](#), [RAD-114](#)

RAD-112: Radiologic Procedures I

This course provides the student with instruction in anatomy and positioning of the Chest and Thorax, Upper and Lower Extremities, and Abdomen. Theory and laboratory exercises will cover radiographic positions and procedures. Upon completion of the course the student will demonstrate knowledge of anatomy and positioning skills, oral communication and critical thinking in both the didactic and laboratory settings.

Credits 4

Prerequisites

Admission into program

Corequisites

[RAD-111](#), [RAD-113](#), [RAD-114](#)

RAD-113: Patient Care

This course provides the student with concepts of patient care and pharmacology and cultural diversity. Emphasis in theory and lab is placed on assessment and considerations of physical and psychological conditions, routine and emergency. Upon completion, students will demonstrate / explain patient care procedures appropriate to routine and emergency situations.

Credits 2

Prerequisites

Admission into program

Corequisites

[RAD-111](#), [RAD-112](#), [RAD-114](#)

RAD-114: Clinical Education I

This course provides the student with the opportunity to correlate instruction with applications in the clinical setting. The student will be under the direct supervision of a qualified practitioner. Emphasis is on clinical orientation, equipment, procedures, and department policies. Upon completion of the course, the student will demonstrate practical applications of specific radiographic procedures identified in RAD-112.

Credits 2

Prerequisites

Admission into program

Corequisites

[RAD-111](#), [RAD-112](#), [RAD-113](#)

RAD-122: Radiologic Procedures

This course provides the student with instruction in anatomy and positioning of spine, cranium, body systems and special procedures. Theory and laboratory exercises will cover radiographic positions and procedures with applicable contrast media administration. Upon completion of the course the student will demonstrate knowledge of anatomy and positioning skills, oral communication and critical thinking in both the didactic and laboratory settings.

Credits 4

Prerequisites

Successful complete of [RAD-111](#), [RAD-112](#), [RAD-113](#), [RAD-114](#)

Corequisites

[RAD-124](#), [RAD-125](#)

RAD-124: Clinical Education II

This course provides students with the opportunity to correlate previous instruction with applications in the clinical setting. Students will be under the direct supervision of a qualified practitioner. Practical experience in a clinical setting enables students to apply theory presented thus far and to practice radiographic equipment manipulation, radiographic exposure, routine radiographic positioning, identification, and patient care techniques. Upon completion of the course, students will demonstrate practical applications of radiographic procedures presented in current and previous courses.

Credits 5

Prerequisites

Successful completion of [RAD-111](#), [RAD-112](#), [RAD-113](#), [RAD-114](#)

Corequisites

[RAD-122](#), [RAD-125](#)

RAD-125: Imaging Equipment

This course provides students with knowledge of basic physics and the fundamentals of imaging equipment. Topics include information on x-ray production, beam characteristics, units of measurement, and imaging equipment components. Upon completion, students will be able to identify imaging equipment as well as provide a basic explanation of the principles associated with image production.

Credits 3

Prerequisites

Successful completion of [RAD-111](#), [RAD-112](#), [RAD-113](#), [RAD-114](#)

Corequisites

[RAD-122](#), [RAD-124](#)

RAD-134: Clinical Education III

This course provides students with the opportunity to correlate previous instruction with applications in the clinical setting. Students will be under the direct supervision of a qualified practitioner. Practical experience in a clinical setting enables students to apply theory presented thus far and to practice radiographic equipment manipulation, radiographic exposure, routine radiographic positioning, identification, and patient care techniques. Upon completion of the course, students will demonstrate practical applications of radiographic procedures presented in current and previous courses.

Credits 5

Prerequisites

Successful completion of [RAD-122](#), [RAD-124](#), [RAD-125](#)

Corequisites

[RAD-135](#), [RAD-136](#)

RAD-135: Exposure Principles

This course provides students with the knowledge of factors that govern and influence the production of radiographic images and assuring consistency in the production of quality images. Topics include factors that influence density, contrast and radiographic quality as well as quality assurance, image receptors, intensifying screens, processing procedures, artifacts, and state and federal regulations.

Credits 3

Prerequisites

Successful completion of [RAD-122](#), [RAD-124](#), [RAD-125](#)

Corequisites

[RAD-134](#), [RAD-136](#)

RAD-136: Radiation Protection & Biology

This course provides the student with principles of radiation protection and biology. Topics include radiation protection responsibility of the radiographer to patients, personnel and the public, principles of cellular radiation interaction and factors affecting cell response. Upon completion the student will demonstrate knowledge of radiation protection practices and fundamentals of radiation biology.

Credits 2

Prerequisites

Successful completion of [RAD-122](#), [RAD-124](#), [RAD-125](#)

Corequisites

[RAD-134](#), [RAD-135](#)

RAD-212: Image Evaluation & Pathology

This course provides a basic understanding of the concepts of disease and provides the knowledge to evaluate image quality. Topics include evaluation criteria, anatomy demonstration and image quality with emphasis placed on a body system approach to pathology. Upon completion students will identify radiographic manifestations of disease and the disease process. Students will evaluate images in the classroom, laboratory and clinical settings.

Credits 2

Prerequisites

Successful completion of [RAD-134](#), [RAD-135](#), [RAD-136](#)

Corequisites

[RAD-214](#)

RAD-214: Clinical Education IV

This course provides students with the opportunity to correlate previous instruction with applications in the clinical setting. Students will be under the direct supervision of a qualified practitioner. Practical experience in a clinical setting enables students to apply theory presented thus far and to practice radiographic equipment manipulation, radiographic exposure, routine radiographic positioning, identification, and patient care techniques. Principles of computed tomography and cross sectional anatomy will be presented. Upon completion of the course, students will demonstrate practical applications of radiographic procedures presented in current and previous courses.

Credits 8

Prerequisites

Successful completion of [RAD-134](#), [RAD-135](#), [RAD-136](#)

Corequisites

[RAD-212](#)

RAD-224: Clinical Education V

This course provides students with the opportunity to correlate previous instruction with applications in the clinical setting. Students will be under the direct supervision of a qualified practitioner. Practical experience in a clinical setting enables students to apply theory presented thus far and to practice radiographic equipment manipulation, radiographic exposure, routine radiographic positioning, identification, and patient care techniques. Principles other imaging modalities will be presented. Upon completion of the course, students will demonstrate practical applications of radiographic procedures presented in current and previous courses.

Credits 8

Prerequisites

Successful completion of [RAD-212](#), [RAD-214](#)

Corequisites

[RAD-227](#)

RAD-227: Review Seminar

This course provides a consolidated and intensive review of the basic areas of expertise needed by the entry level technologist. Topics include basic review of all content areas, test taking techniques and job seeking skills. Upon completion, the student will be able to pass comprehensive tests of topics covered in the Radiologic Technology Program.

Credits 2

Prerequisites

Successful completion of [RAD-212](#), [RAD-214](#)

Corequisites

[RAD-224](#)

Music

MUS-101: Music Appreciation

This is a survey course that requires no previous musical skills. The course covers a minimum of three stylistic periods of music, provides a multicultural perspective, and includes both vocal and instrumental genres. It includes the aesthetic/stylistic characteristics of historical periods and an aural perception of the elements of music.

Credits 3

Prerequisites

None

MUS-110: Basic Musicianship

This course is designed to provide rudimentary music knowledge and skills for the student with a limited music background. Topics include a study of notation, rhythm, scales, keys, intervals, chords and basic sight singing and ear training skills. Upon completion, students should be able to read and understand musical scores and demonstrate basic sight singing and ear training skills for rhythm, melody, and harmony.

Credits 3

Prerequisites

MUS-099 or suitable placement score or permission of the instructor.

MUS-111: Music Theory I

This course introduces the student to the diatonic harmonic practices in the Common Practice Period. Topics include fundamental musical materials (rhythm, pitch, scales, intervals, diatonic harmonies) and an introduction to the principles of voice leading and harmonic progression. Upon completion, students should be able to demonstrate a basic competency using diatonic harmony through analysis, writing, sight singing, dictation and keyboard skills.

Credits 3

Prerequisites

MUS-110 or suitable placement score or permission of the instructor.

MUS-112: Music Theory II

This course completes the study of diatonic harmonic practices in the Common Practice Period and introduces simple musical forms. Topics include principles of voice leading used in three and four-part triadic harmony and diatonic seventh chords, non-chord tones, cadences, phrases and periods. Upon completion, students should be able to demonstrate competence using diatonic harmony through analysis, writing, sight singing, dictation and keyboard skills.

Credits 3

Prerequisites

MUS-111: Music Theory I

MUS-113: Music Theory Lab I

This course provides the practical application of basic musical materials through sight singing; melodic, harmonic and rhythmic dictation; and keyboard harmony. Topics include intervals, simple triads, diatonic stepwise melodies, basic rhythmic patterns in simple and compound meter and four-part triadic progressions in root position. Upon completion, students should be able to write, sing and play intervals, scales, basic rhythmic patterns, diatonic stepwise melodies, simple triads and short four-part progressions in root position.

Credits 1

Prerequisites

MUS-110 or suitable placement score or permission of the instructor.

Corequisites

MUS-111 if ear training lab is a separate course.

MUS-114: Music Theory Lab II

This course continues the practical application of diatonic musical materials through sight singing; melodic, harmonic and rhythmic dictation; and keyboard harmony. Topics include intervals, scales, diatonic melodies with triadic arpeggiations, more complex rhythmic patterns in simple and compound meter and four-part diatonic progressions in all inversions. Upon completion, students should be able to write, sing and play all intervals, rhythmic patterns employing syncopations and beat divisions, diatonic melodies and four-part diatonic progressions.

Credits 1

Prerequisites

MUS-113: Music Theory Lab I

Corequisites

MUS-112, if ear training lab is a separate course.

MUS-211: Music Theory III

This course introduces the student to chromatic harmonic principles in the Common Practice Period and beyond. Topics include secondary functions, modulatory techniques, and formal analysis. Upon completion, students should be able to demonstrate competence using chromatic harmony through analysis, writing, sight singing, dictation and keyboard skills.

Credits 3

Prerequisites

MUS-112: Music Theory II

Corequisites

MUS-213, if ear training lab is a separate course.

MUS-212: Music Theory IV

This course completes the study of chromatic harmonic principles in the Common Practice Period and beyond. Topics include the Neapolitan and augmented sixth chords, sonata form, late nineteenth-century tonal harmony and contemporary practices and forms. Upon completion, students should be able to demonstrate competence using chromatic harmony and basic twentieth century techniques through analysis, writing, sight singing, dictation and keyboard skills.

Credits 3

Prerequisites

MUS-211: Music Theory III

Corequisites

MUS-214, if ear training lab is a separate course.

MUS-213: Music Theory Lab III

This course provides the practical application of chromatic musical materials through sight singing; melodic, harmonic and rhythmic dictation; and keyboard harmony. Topics include melodies with simple modulations, complex rhythms in simple and compound meter, and secondary function chords. Upon completion, students should be able to write, sing and play modulating melodies, rhythmic patterns with beat subdivisions and four-part chromatic harmony.

Credits 1

Prerequisites

MUS-114: Music Theory Lab II

Corequisites

MUS-211, if ear training lab is a separate course.

MUS-214: Music Theory Lab IV

This course provides the practical application of chromatic music materials and simple contemporary practices through sight singing; melodic, harmonic, and rhythmic dictation; and keyboard harmony. Topics include chromatic and atonal melodies; complex rhythmic patterns in simple, compound, and asymmetric meters; chromatic chords and contemporary harmony. Upon completion, students should be able to write, sing and play chromatic and atonal melodies, complex rhythms and meters, four-part chromatic harmony and simple twentieth-century chord structures.

Credits 1

Prerequisites

MUS-213: Music Theory Lab III

Corequisites

MUS-212, if ear training lab is a separate course.

Music Lessons

MUL-101: Class Piano I

Group instruction is available in voice, piano, strings, woodwinds, brass, percussion and fretted instruments for students with little or no previous training. Emphasis is placed on the rudiments of music, basic performance technique and general musicianship skills. Upon completion of one or a sequence of courses, students should be able to demonstrate a basic proficiency in singing or playing and a knowledge of music fundamentals.

Credits 1

Prerequisites

As required by program.

MUL-102: Class Piano II

Group instruction is available in voice, piano, strings, woodwinds, brass, percussion and fretted instruments for students with little or no previous training. Emphasis is placed on the rudiments of music, basic performance technique and general musicianship skills. Upon completion of one or a sequence of courses, students should be able to demonstrate a basic proficiency in singing or playing and a knowledge of music fundamentals.

Credits 1

Prerequisites

As required by program.

MUL-180: Chorus I

This course provides an opportunity for students to participate in a performing ensemble. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Upon completion, students should be able to effectively participate in performances presented by the ensemble.

Credits 1

Prerequisites

NONE

MUL-181: Choral Ensemble II

This course provides an opportunity for students to participate in a performing ensemble. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Upon completion, students should be able to effectively participate in performances presented by the ensemble.

Credits 1

Prerequisites

NONE

MUL-201: Class Piano III

Group instruction is available in voice, piano, strings, woodwinds, brass, percussion and fretted instruments for students with little or no previous training. Emphasis is placed on the rudiments of music, basic performance technique and general musicianship skills. Upon completion of one or a sequence of courses, students should be able to demonstrate a basic proficiency in singing or playing and a knowledge of music fundamentals.

Credits 1

Prerequisites

As required by program.

MUL-202: Class Piano IV

Group instruction is available in voice, piano, strings, woodwinds, brass, percussion and fretted instruments for students with little or no previous training. Emphasis is placed on the rudiments of music, basic performance technique and general musicianship skills. Upon completion of one or a sequence of courses, students should be able to demonstrate a basic proficiency in singing or playing and a knowledge of music fundamentals.

Credits 1

Prerequisites

As required by program.

MUL-280: Choral Ensemble III

This course provides an opportunity for students to participate in a performing ensemble. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Upon completion, students should be able to effectively participate in performances presented by the ensemble.

Credits 1

Prerequisites

Instructor permission.

MUL-281: Choral Ensemble IV

This course provides an opportunity for students to participate in a performing ensemble. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Upon completion, students should be able to effectively participate in performances presented by the ensemble.

Credits 1

Prerequisites

Instructor permission.

Music Performance

MUP-111: Private Voice I

Individual performance instruction is available in keyboard instruments, voice, strings, woodwinds, brass, percussion and fretted instruments. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's educational goals. Students are required to practice a minimum of five hours per week for each credit hour. Upon completion, students should be able to effectively perform assigned repertoire and technical studies in an appropriate performance evaluation setting.

Credits 1

Prerequisites

Instructor permission.

MUP-112: Private Voice II

Individual performance instruction is available in keyboard instruments, voice, strings, woodwinds, brass, percussion and fretted instruments. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's educational goals. Students are required to practice a minimum of five hours per week for each credit hour. Upon completion, students should be able to effectively perform assigned repertoire and technical studies in an appropriate performance evaluation setting.

Credits 1

Prerequisites

Instructor permission.

MUP-211: Private Voice II

Individual performance instruction is available in keyboard instruments, voice, strings, woodwinds, brass, percussion and fretted instruments. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's educational goals. Students are required to practice a minimum of five hours per week for each credit hour. Upon completion, students should be able to effectively perform assigned repertoire and technical studies in an appropriate performance evaluation setting.

Credits 1

Prerequisites

Instructor permission.

MUP-212: Private Voice IV

Individual performance instruction is available in keyboard instruments, voice, strings, woodwinds, brass, percussion and fretted instruments. Emphasis is placed on developing technique, repertoire and performance skills commensurate with the student's educational goals. Students are required to practice a minimum of five hours per week for each credit hour. Upon completion, students should be able to effectively perform assigned repertoire and technical studies in an appropriate performance evaluation setting.

Credits 1

Prerequisites

Instructor permission.

Nursing

NUR-112: Fundamental Concepts of Nursing

This course teaches foundational knowledge of nursing concepts and clinical decision making to provide evidence-based nursing care. Content includes but is not limited to: healthcare delivery systems, professionalism, health promotion, psychosocial well-being, functional ability, gas exchange, safety, pharmacology, and coordinator/manager of care.

Credits 7

Prerequisites

ADMISSION TO THE PROGRAM

Corequisites

[BIO-201](#), [MTH-100](#) OR HIGHER

NUR-113: Nursing Concepts 1

This course teaches foundational knowledge of nursing concepts and clinical decision making to provide evidence-based nursing care. Content includes but is not limited to: coordination/manager of care, perfusion, oxygenation, infection, inflammation, tissue integrity, nutrition, elimination, mobility/immobility, cellular regulation, acid/base balance, and fluid/electrolyte balance.

Credits 8

Prerequisites

[NUR-112](#), [BIO-201](#), [MTH-100](#) OR HIGHER LEVEL MATH

Corequisites

[BIO-202](#): Human Anatomy and Physiology II

[ENG-101](#): English Composition I

[PSY-210](#): Human Growth and Development

NUR-114: Nursing Concepts II

This course teaches foundational knowledge of nursing concepts and clinical decision making to provide evidence-based nursing care. Content includes but is not limited to: coordinator/manager of care, sexuality, reproduction and childbearing, infection, inflammation, sensory perception, perfusion, cellular regulation, mood disorders and affect, renal fluid/electrolyte balance, and medical emergencies.

Credits 8

Prerequisites

[NUR-112](#): Fundamental Concepts of Nursing

[NUR-113](#): Nursing Concepts 1

[ENG-101](#): English Composition I

[BIO-201](#): Human Anatomy and Physiology I

[BIO-202](#): Human Anatomy and Physiology II

[PSY-210](#): Human Growth and Development

[ORI-101](#): Orientation to College

Corequisites

[NUR-115](#), [SPH-106](#) or [SPH-107](#)

NUR-115: Evidence Based Clinical Reasoning

This course provides students with opportunities to collaborate with various members of the health care team in a family and community context. Students utilize clinical reasoning to assimilate concepts within the individual, health, and nursing domains.

Credits 2

Prerequisites

[NUR-112](#): Fundamental Concepts of Nursing

[NUR-113](#): Nursing Concepts 1

[ENG-101](#): English Composition I

[BIO-201](#): Human Anatomy and Physiology I

[BIO-202](#): Human Anatomy and Physiology II

[PSY-210](#): Human Growth and Development

[ORI-101](#): Orientation to College

Corequisites

[NUR-114](#), [SPH-106](#) or [SPH-107](#)

NUR-211: Advance Nursing Concepts

This course provides opportunities for students to integrate advanced nursing care concepts within a family and community context. Content includes but is not limited to manager of care for advanced concepts in safety, fluid/electrolyte balance, cellular regulation, gas exchange, psychosocial well-being, growth and development, perfusion, and medical emergencies.

Credits 7

Prerequisites

NUR-114, NUR-115, SPH-106 or SPH-107

Corequisites

BIO-220: General Microbiology

NUR-221: Advanced Evidence-Based Clinical Reasoning

This course provides students with opportunities to demonstrate graduate competencies through didactic and preceptorship experiences necessary to transition to the profession of nursing. Content in nursing and health care domains includes management of care, professionalism, and healthcare delivery systems.

Credits 7

Prerequisites

BIO-220: General Microbiology

NUR-211: Advance Nursing Concepts

Corequisites

HUM-Humanities elective (Ethics preferred)

Office Technology

OAD-103: Intermediate Keyboarding

This course is designed to assist the student in increasing speed and accuracy using the touch method of keyboarding through classroom instruction and lab exercises. Emphasis is on the production of business documents such as memoranda, letters, reports, tables, and outlines from unarranged rough draft to acceptable format. Upon completion, the student should be able to demonstrate proficiency and an acceptable rate of speed and accuracy, as defined by the course syllabus, in the production of business documents.

Credits 3

Prerequisites

As required by college.

OAD-125: Word Processing

This course is designed to provide the student with basic word processing skills through classroom instruction and outside lab. Emphasis is on the utilization of software features to create, edit, and print common office documents. Upon completion, the student should be able to demonstrate the ability to use industry-standard software to generate appropriately formatted, accurate, and attractive business documents such as memoranda, letters, and reports.

Credits 3

Prerequisites

As required by college.

OAD-133 : Business Communications

This course is designed to provide the student with skills necessary to communicate effectively. Emphasis is on the application of communication principles to produce clear, correct, logically organized business communications. Upon completion, the student should be able to demonstrate effective communication techniques in written, oral, and nonverbal communications.

Credits 3

OAD-138 : Record Information Management

This course is designed to give the student knowledge about managing office records and information. Emphasis is on basic filing procedures, methods, systems, supplies, equipment, and modern technology used in the creation, protection, and disposition of records stored in a variety of forms. Upon completion, the student should be able to perform basic filing procedures.

Credits 3

Prerequisites

None.

OAD-218: Office Procedures

This course is designed to develop an awareness of the responsibilities and opportunities of the office professional. Emphasis is on current operating functions, practices and procedures, work habits, attitudes, oral and written communications, and professionalism. Upon completion, the student should be able to demonstrate the ability to effectively function in an office support role.

Credits 3

Prerequisites

None.

OAD-230: Desktop Publishing

This course is designed to introduce the student to the elements and techniques of page design, layout, and typography through classroom instruction and lab exercises. Emphasis is on the use of current commercial desktop publishing software, graphic tools, and electronic input/output devices to design and print high-quality publications such as newsletters, brochures, catalogs, forms, and flyers. Upon completion, the student should be able to utilize proper layout and design concepts in the production of attractive desktop published documents.

Credits 3

Prerequisites

As required by college.

OAD-243: Spreadsheet Applications

This course is designed to provide the student with a firm foundation in the use of computerized equipment and appropriate software in performing spreadsheet tasks through classroom instruction and lab exercises. Emphasis is on spreadsheet terminology and design, common formulas, and proper file and disk management procedures. Upon completion, the student should be able to use spreadsheet features to design, format, and graph effective spreadsheets.

Credits 3

Prerequisites

As required by college.

OAD-244: Database Applications

This course is designed to provide the student with an understanding of the concepts of database management through classroom instruction and lab exercises. Emphasis is on the use of database software for business applications. Upon completion, the student should be able to create and manipulate data files and format output such as documents and reports.

Credits 3

Prerequisites

As required by college.

OAD-246: Office Graphics & Presentation

This course is designed to provide the student with a foundation in the use of the computer and appropriate application software in the production of business slides and presentations through classroom instruction and lab exercises. Emphasis is on available software tools, presentation options and design, as well as such presentation considerations as the make-up of the target audience. Upon completion, the student should be able to demonstrate the ability to design and produce a business presentation.

Credits 3

Prerequisites

As required by college.

Orientation

ORI-101: Orientation to College

This course aids new students in their transition to the institution; exposes new students to the broad educational opportunities of the institution; and integrates new students into the life of the institution.

Credits 1

Prerequisites

As required by program.

Philosophy

PHL-106: Introduction to Philosophy

This course is an introduction to the basic concepts of philosophy. The literary and conceptual approach of the course is balanced with emphasis on approaches to critical thinking. Major philosophical ideas are discussed within historical and global contexts.

Credits 3

Prerequisites

As required by program.

PHL-200: Ethics in the Workplace

This course is a survey of the ethical principles involved in the workplace with emphasis on common modern problems. The perspectives of workers, supervisors, management, owners, and consumers are considered. The student should have an understanding of the ethical issues unique to the work environment

Credits 3

Prerequisites

As required by program.

PHL-206: Ethics and Society

This course involves the study of ethical issues which confront individuals in the course of their daily lives. The focus is on the fundamental questions of right and wrong, of human rights, and of conflicting obligations. The student should be able to understand and be prepared to make decisions in life regarding ethical issues.

Credits 3

Prerequisites

As required by program.

PHL-210: Ethics and the Health Sciences

This course is a study of ethical issues related to the health sciences such as contraception, abortion, and eugenics; human experimentation; truth in drugs and medicine; death and dying; and other health related issues. The student should be able to clarify relevant ethical considerations and have a philosophical basis for decisions on right and wrong, good and bad, rights and responsibilities.

Credits 3

Prerequisites

As required by program.

Physical Science

PHS-111: Physical Science

This course provides the non-technical student with an introduction to the basic principles of geology, oceanography, meteorology, and Astronomy. Laboratory is required.

Credits 4

Prerequisites

As required by program.

PHS-112: Physical Science

This course provides the non-technical student with an introduction to the basic principle of chemistry and physics. Laboratory is required.

Credits 4

Prerequisites

As required by program.

Physics

PHY-112: Principle of Physics

This course introduces the student to the basic principles of physics with an emphasis on electricity and magnetism. The course is designed to provide the student with not only a basic knowledge of electricity and magnetism but also an understanding of real-world applications. To prepare the student to understand electricity and magnetism, additional topics include forces, work, energy, power, sound, and the atomic nature of matter. Topics in electricity and magnetism include electrical forces and fields, currents, electrical circuits, magnetic forces and fields, capacitance, electromagnetic induction and transformers.

Credits 2

Prerequisites

MTH-100: [Intermediate College Algebra](#)

PHY-115: Technical Physics

Technical physics is a one-semester survey of physics using college algebra. Major topics include Newton's laws of motion, work and energy, thermodynamics, waves and sound, and basic electricity. This course is for non-science majors pursuing a degree in a technical program. Laboratory is required. Upon completion, students will be able to define motion and describe specific module concepts, utilize microcomputers to generate motion diagrams, understand the nature of contact forces and distinguish passive forces, work cooperatively to set up laboratory exercises and demonstrate applications of module-specific concepts.

Credits 4

Prerequisites

MTH-103 or MTH-100

PHY-120: Introduction to Physics

This course introduces general physics for non-science majors. Topics in fundamentals of mechanics, properties of matter, heat and temperature, simple harmonic motion, SHM, waves and sound, electric and magnetism, optics and modern physics. Laboratory is required.

Credits 4

Prerequisites

MTH-098 or higher

Political Science

POL-200: Introduction to Political Science

This course is an introduction to the field of political science through examination of the fundamental principles, concepts, and methods of the discipline, and the basic political processes and institutions of organized political systems. Topics include approaches to political science, research methodology, the state, government, law, ideology, organized political influences, governmental bureaucracy, problems in political democracy, and international politics. Upon completion, students should be able to identify, describe, define, analyze, and explain relationships among the basic principles and concepts of political science and political processes and institutions of contemporary political systems.

Credits 3

Prerequisites

As required by program.

POL-211: American National Government

This course surveys the background, constitutional principles, organization, and operation of the American political system. Topics include the U. S. Constitution, federalism, civil liberties, civil rights, political parties, interest groups, political campaigns, voting behavior, elections, the presidency, bureaucracy, Congress, and the justice system. Upon completion, students should be able to identify and explain relationships among the basic elements of American government and function as more informed participants of the American political system

Credits 3

Prerequisites

As required by program.

Psychology

PSY-200: General Psychology

The course is a survey of the scientific study of psychological, biological, and socio-cultural factors that influence behavior and mental processes.

Credits 3

Prerequisites

Successful completion of ENR-098 or satisfactory placement score.

PSY-210: Human Growth and Development

This course is the study of the psychological, social, and physical factors that affect human behavior from conception to death.

Credits 3

Prerequisites

PSY-200: General Psychology

PSY-230: Abnormal Psychology

This course is a survey of abnormal behavior and its social and biological origins. The anxiety related disorders, psychoses, personality disorders and mental deficiencies will be covered.

Credits 3

Prerequisites

PSY-200: General Psychology

Religion

REL-100: History of World Religions

This course is designed to acquaint the student with the beliefs and practices of the major contemporary religions of the world. This includes the religions of Africa, the Orient, and the western world. The student should have an understanding of the history and origins of the various religions in the world.

Credits 3

Prerequisites

As required by program.

REL-151: Survey of the Old Testament

This course is an introduction to the content of the Old Testament with emphasis on the historical context and contemporary theological and cultural significance of the Old Testament. The student should have an understanding of the significance of the Old Testament writings upon completion of this course.

Credits 3

Prerequisites

As required by program.

REL-152: Survey of the New Testament

This course is a survey of the books of the New Testament with special attention focused on the historical and geographical setting. The student should have an understanding of the books of the New Testament and the cultural and historical events associated with these writings.

Credits 3

Prerequisites

As required by program.

Respiratory Care Therapy

RPT-210: Clinical Practice I

This clinical course provides for initial hospital orientation and development of general patient assessment and communication skills required for safe and effective patient care. Emphasis is placed upon application of classroom and laboratory experiences within the clinical environment. Upon completion, students should demonstrate adequate psychomotor skills and cognitive abilities necessary for initial patient contact and safe and effective performance of basic respiratory care procedures. This is a CORE course.

Credits 2

RPT-211: Introduction to Respiratory Care

This course is designed to acquaint the student with responsibilities of the Respiratory Care Practitioner (RCP) as a member of the health care team. Areas of emphasis include history of the profession, credentialing mechanism, licensure, medical ethics, communication skills, basic medical terminology, and patient assessment. Upon completion, students should be able to demonstrate effective communication skills, proper use of aseptic technique, deference to appropriate professional ethics and behavior, and be able to perform basic patient assessment. This is a CORE course.

Credits 2

RPT-212: Fundamentals of Respiratory Care I

A fundamental course which presents the scientific basis for respiratory care procedures and application of basic chemistry and physics as related to compressed gases and respiratory care equipment operation. Experimental laboratory is required and emphasis includes design, functional characteristics, and operation of commonly encountered respiratory care equipment, use of medical gases and applied chemistry, physics, and mathematics. Upon completion, the student should be able to demonstrate an adequate knowledge base concerning function and troubleshooting of respiratory care equipment and concepts of applied physics, chemistry, and mathematics. This is a CORE course.

Credits 4

RPT-213: Anatomy and Physiology for the RCP

This course provides detailed lecture and audio-visual presentations which concentrate on the cardiopulmonary and renal systems. Emphasis is placed on structure, function, and physiology of the cardiopulmonary and renal systems and the role each plays in the maintenance of homeostasis. Upon completion, the student should be able to demonstrate adequate knowledge of the structure, function, and physiology of the cardiopulmonary and renal systems. This is a CORE course.

Credits 3

RPT-214: Pharmacology for the RCP

This course is a detailed study of drugs encountered in respiratory care practice and the function of the autonomic nervous system. Areas of emphasis include determination of drug dosage, applied mathematics, clinical pharmacology, indications, hazards, intended actions, and side-effects of agents used in respiratory care. Upon completion, the student should be able to complete a dosage calculation test with 90% proficiency and demonstrate an adequate understanding of the clinical pharmacology of respiratory care drugs, and the general principles of pharmacology. This is a CORE course.

Credits 2

RPT-220: Clinical Practice II

This course is a continuation of clinical practice and allows the student to further integrate classroom and laboratory instruction into the practice of respiratory care. Areas of emphasis include bedside patient assessment techniques, airway management, hyperinflation therapy, protocol implementation, development of patient care plans, oxygen, humidity and aerosol administration, and an introduction to management of the mechanical ventilation of the adult. Upon completion, the student should be able to demonstrate appropriate psychomotor skills and cognitive abilities necessary to successfully function as primary care giver for routine respiratory care procedures. This is a CORE course.

Credits 2

Prerequisites

RPT-210: Clinical Practice I

RPT-221: Pathology for the RCP I

This course is a survey of commonly encountered diseases and disorders which may affect the function of the cardiopulmonary system, and the clinical manifestations and treatment rationales as related to respiratory care practice. Practical laboratory is required, and course emphasis is placed upon the application of sound diagnostic techniques in the gathering of data in support of diagnosis of specific disease entities as well as progression of pathological changes in cardiopulmonary function. Upon completion, the student should be able to demonstrate the ability to gather appropriate information from various sources in support of diagnosis of specific cardiopulmonary disease as well as an adequate understanding of cardiopulmonary pathology. This is a CORE course.

Credits 3

RPT-222: Fundamentals of Respiratory Care II

This course continues to present the fundamental scientific basis for selected respiratory care procedures. Experimental laboratory is required and areas of emphasis include therapeutic techniques utilized in bronchial hygiene, hyperinflation therapy, mechanical ventilation of the adult, manual resuscitation equipment, the equipment utilized in bedside assessment, and mechanical ventilation. Upon completion, the student should be able to demonstrate the cognitive abilities and psychomotor skills required to perform the procedures presented. This is a CORE course.

Credits 4

Prerequisites

RPT-212: Fundamentals of Respiratory Care I

RPT-223: Acid Base Regulation and Abg Analysis

This course provides the student with lecture and audiovisual presentation of material essential to the understanding of acid/base physiology and arterial blood gas interpretation. Emphasis is placed upon Arterial Blood Gas (ABG) sampling technique, quality assurance, basic chemistry as related to acid/base balance, evaluation of oxygen transport, and the role of the respiratory and renal systems in maintenance of homeostasis. Upon completion, the student should be able to demonstrate appropriate psychomotor skills and cognitive abilities for the fundamental concepts of acid/base balance and regulation of homeostasis by the respiratory and renal systems.

Credits 2

RPT-230: Clinical Practice III

This is the third course in the clinical sequence and is designed to allow the student to function in the role of primary care giver. Emphasis is placed upon mastery of basic respiratory care procedures, administration of aerosol drugs, and care of the patient receiving mechanical ventilation. Upon completion, the student should be able to demonstrate psychomotor skills and cognitive abilities necessary to function safely and effectively in the role of primary care giver. This is a CORE course.

Credits 2

Prerequisites

RPT-220: Clinical Practice II

RPT-231: Pathology for the RCP II

This course continues to present specific disease entities which may impair cardiopulmonary function. Laboratory study is directed toward diagnostic techniques and decision making. Course emphasis is placed upon etiology, diagnosis, prognosis, and treatment rationale for each medical problem presented. Upon completion, the student should be able to demonstrate the cognitive abilities necessary to integrate clinical and laboratory data obtained from various sources in support of the diagnosis and treatment of the specific disease entities presented.

Credits 3

Prerequisites

RPT-221: Pathology for the RCP I

RPT-232: Diagnostic Procedures for the RCP

This course is designed to present the value of various procedures as an aid to diagnosis in cardiopulmonary disease. Course emphasis is placed upon procedures such as complete pulmonary function testing, bronchoscopy, cardiac diagnostic procedures, and ventilation/perfusion studies. Upon completion, the student should be able to demonstrate the psychomotor and cognitive abilities necessary to perform routine diagnostic procedures. This is a CORE course.

Credits 2

RPT-233: Special Procedures for the RCP

This course identifies and presents special procedures and medical specialties for various tasks required of the RCP, while functioning in an assistive role to the physician. Course emphasis is placed upon phlebotomy, bronchoscopy, hemodynamic assessment, and advanced cardiopulmonary monitoring techniques. Upon completion, the student should be able to demonstrate cognitive abilities and understand the psychomotor skills necessary to perform assistive functions during the various procedures presented. This is a CORE course.

Credits 2

RPT-234: Mechanical Ventilation for the RCP

This course continues and expands the presentation of material concerning mechanical ventilation as previously introduced including indications, modification, and discontinuance of mechanical ventilation. Laboratory is required and course emphasis is placed upon the application of scientific principles to the clinical use of various modes of mechanical ventilation. Upon completion, the student should be able to demonstrate the cognitive and psychomotor skills required to effectively institute and maintain various methods of mechanical ventilation. This is a CORE course.

Credits 4

RPT-240: Clinical Practice IV

This course, the last in the required clinical sequence, provides opportunities for the student to further refine clinical skills. Course emphasis is placed upon critical care, neonatal mechanical ventilation, home care and discharge planning. Upon completion, the student should be able to demonstrate the cognitive and psychomotor skills required to function in the role of advanced respiratory care practitioner. This is a CORE course.

Credits 4

Prerequisites

RPT-230: Clinical Practice III

RPT-241: Rehabilitation and Home Care for the RCP

This course presents special considerations which apply to rehabilitation and home care of the patient with cardiopulmonary disorders. Emphasis is placed upon the role of the RCP within the home care medical community and modification of techniques and procedures necessary for effective pulmonary management. Upon completion, the student should be able to demonstrate an understanding of discharge planning and disease management protocols as applied to rehabilitation and the continuation of effective respiratory care outside of an acute care facility. This is a CORE course.

Credits 2

RPT-242: Perinatal/Pediatric Respiratory Care

This course presents the unique requirement for appropriate delivery of respiratory care to the neonatal and pediatric patient. Laboratory is required and course emphasis is placed upon a detailed outline of fetal lung development, fetal circulation, neonatal cardiopulmonary disorders, and specialized equipment and techniques, as well as general considerations of provision of care to neonatal and pediatric patients. Upon completion, the student should be able to demonstrate the cognitive and psychomotor skills required for safe and effective delivery of respiratory care to the neonatal and pediatric patient. This is a CORE course.

Credits 3

RPT-243: Computer Applications for the RCP

This course is designed to allow the student practice in utilizing computer assisted clinical simulation software as well as allow for a general program review in preparation for credentialing examinations. Emphasis is placed on development of critical thinking skills, specific to the discipline, and development of computer literacy. Upon completion, students should be able to demonstrate computer literacy and satisfactory performance on nationally standardized comprehensive self-assessment examinations. This is a CORE course.

Credits 2

RPT-244: Critical Care Considerations for the RCP

This course provides for continued discussion concerning the monitoring and maintenance of patients who are treated in the critical care area of an acute care hospital. Course emphasis is placed upon advanced monitoring and assessment techniques employed in the treatment of the critical care patient. Upon completion, the student should be able to demonstrate increased psychomotor and cognitive abilities as pertaining to critical care. This is a CORE course.

Credits 2

RPT-266: Seminar in Respiratory Medicine I

This course is a series of physician and/or guest lecturers designed to present topics of special interest to the student or practitioner. Emphasis is placed upon current medical practice within the field of pulmonary medicine and cardiology. Upon completion, the student should be able to demonstrate an increased knowledge base concerning the topics of special interest presented.

Credits 1

RPT-268: Writing and Research for the RCP II

This course allows for independent research on a topic of special interest within the field of respiratory care. A written narrative of research activities or a literature research paper is required. Upon completion, students should be able to effectively communicate in written narrative form the results of independent study.

Credits 1

Sociology

SOC-200: Introduction to Sociology

This course is an introduction to the vocabulary, concepts, and theoretical perspectives of sociology.

Credits 3

Prerequisites

As required by program.

Spanish

SPA-101: Introductory Spanish I

This course provides an introduction to Spanish. Topics include the development of basic communication skills and the acquisition of basic knowledge of the cultures of Spanish-speaking areas.

Credits 3

Prerequisites

As required by program.

SPA-102: Introductory Spanish II

This continuation course includes the development of basic communication skills and the acquisition of basic knowledge of the cultures of Spanish-speaking areas.

Credits 3

Prerequisites

SPA-101 or Equivalent.

Speech

SPH-106: Fundamentals of Oral Communication

This is a performance course that includes the principles of human communication: intrapersonal, interpersonal, and public. The course surveys current communication theory and provides practical application for workforce readiness.

Credits 3

Prerequisites

Satisfactory placement scores or successful completion of ENR-098.

SPH-107: Fundamentals of Public Speaking

This course explores principles of audience and environment analysis as well as the actual planning, rehearsing and presenting of formal speeches to specific audiences. Historical foundations, communication theories and student performances are emphasized.

Credits 3

Prerequisites

As required by program.

Speech Communication

SPC-103: Oral Communication Skills

This course is for students without a high school diploma or GED. This course is not creditable toward associate degree requirements. This course introduces the basic concepts of interpersonal communication and the oral communication skills necessary to interact with co-workers and customers, and to work effectively in teams. Topics include overcoming barriers to effective communication, effective listening, applying the principles of persuasion, utilizing basic dynamics of group discussion, conflict resolution, and positive communication patterns in the business setting. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, develop a businesslike personality, and effectively present themselves before co-workers and the public.

Credits 3

Prerequisites

Satisfactory placement scores or successful completion of ENR-098.

Welding

WDT-109: SMAW Fillet/Pac/Cac

This course provides the student with instruction on safety practices and terminology in the Shielded Metal Arc Welding (SMAW) process. Emphasis is placed on safety, welding terminology, equipment identification, set-up and operation, and related information in the SMAW process. This course also covers the rules of basic safety and identification of shop equipment and provides the student with the skills and knowledge necessary for the safe operation of carbon arc cutting and plasma arc cutting. This is a CORE course.

Credits 3

Prerequisites

None

WDT-110: Industrial Blueprint Reading

This course provides students with the understanding and fundamentals of industrial blueprint reading. Emphasis is placed on reading and interpreting lines, views, dimensions, weld joint configurations and weld symbols. Upon completion students should be able to interpret welding symbols and blueprints as they apply to welding and fabrication. This is a CORE course

Credits 3

Prerequisites

None

WDT-119: Gas Metal Arc/Flux Cored Arc Welding

This course introduces the student to the gas metal arc and flux cored arc welding process. Emphasis is placed on safe operating practices, handling and storage of compressed gasses, process principles, component identification, various welding techniques and base and filler metal identification. This is a CORE course.

Credits 3

Prerequisites

None

WDT-120: SMAW Groove

This course provides the student with instruction on joint design, joint preparation, and fit-up of groove welds in accordance with applicable welding codes. Emphasis is placed on safe operation, joint design, joint preparation, and fit-up. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of groove welds in accordance with applicable welding codes. This is a CORE course.

Credits 3

Prerequisites

None

WDT-122: SMAW Fillet/OFC Lab

This course is designed introduce the student to the proper set-up and operation of the shielded metal arc welding equipment. Emphasis is placed on striking and controlling the arc, and proper fit-up of fillet joints. This course is also designed to instruct students in the safe operation of oxy-fuel cutting. Upon completion, students should be able to make fillet welds in all positions using electrodes in the F-3 groups in accordance with applicable welding code and be able to safely operate oxy-fuel equipment and perform those operations as per the applicable welding code.

Credits 3

Prerequisites

None

WDT-123: SMAW Fillet/PAC/CAC Lab

This course is designed introduce the student to the proper set-up and operation of the shielded metal arc welding equipment. Emphasis is placed on striking and controlling the arc, and proper fit-up of fillet joints. This course is also designed to instruct students in the safe operation of plasma arc and carbon arc cutting. Upon completion, students should be able to make fillet welds in all positions using electrodes in the F-4 groups in accordance with applicable welding code and be able to safely operate plasma arc and carbon arc equipment and perform those operations as per applicable welding code.

Credits 3

Prerequisites

None

WDT-124: Gas Metal Arc/Flux Cored Arc Welding Lab

This course provides instruction and demonstration using the various transfer methods and techniques to gas metal arc and flux cored arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases.

Credits 3

Prerequisites

None

WDT-125: SMAW Groove Lab

This course provides instruction and demonstration in the shielded metal arc welding process on carbon steel plate with various size F-3 and F-4 group electrodes in all positions. Emphasis is placed on welding groove joints and using various F-3 and F-4 group electrodes in all positions. Upon completion, the student should be able to make visually acceptable groove weld joints in accordance with applicable welding codes.

Credits 3

Prerequisites

None

WDT-131: Carbon Steel Fabrication Methods

This course allows the student to plan, execute and present results of fabrication processes using carbon steel material. Emphasis is placed on enhancing skill attainment in the carbon steel fabrication field. The student will be able to demonstrate and apply competencies identified and agreed upon between the student and the instructor.

Credits 3

Prerequisites

As required by college.

WDT-155: GTAW Carbon Pipe Lab

This course is designed to provide the student with the skills in welding carbon steel pipe with gas tungsten arc welding techniques in various pipe weld positions. Upon completion, students should be able to perform gas tungsten arc welding on carbon steel pipe with the prescribed filler metals in various positions in accordance with the applicable code.

Credits 3

Prerequisites

None

WDT-156: GTAW Stainless Pipe Lab

This course is designed to provide the student with the skills in welding stainless steel pipe with gas tungsten arc welding techniques in various pipe weld positions. Upon completion, students should be able to perform gas tungsten arc welding on stainless steel pipe with the prescribed filler metals in various positions in accordance with the applicable code.

Credits 3

Prerequisites

None

WDT-157: Consumable Welding Processes

This course provides instruction and demonstration with the consumable welding processes to produce groove and fillet welds in all positions, according to applicable welding codes. Topics include safe operating practices, equipment identification, equipment set-up, correct selection of electrode, current/polarity, shielding gas and base metals.

Credits 3

Prerequisites

None

WDT-158: Consumable Welding Processes Lab

This course provides instruction and demonstration with the consumable welding processes to produce groove and fillet welds in all positions, according to applicable welding codes. Topics include safe operating practices, equipment identification, equipment set-up, correct selection of electrode, current/polarity, shielding gas and base metals. Upon completion, the student should be able to produce groove and fillet welds using consumable welding processes according to AWS Codes and standards. This course supports CIP Code 48.0508

Credits 3

Prerequisites

None

WDT-167: Flux Core Arc Welding Lab

This course provides instruction and demonstration with the flux core arc welding process to produce groove and fillet welds in all positions, according to applicable welding codes. Topics include safe operating practices, equipment identification, equipment set-up, correct selection of filler metals, current/polarity, shielding gas and base metals. Upon completion, the student should be able to produce groove and fillet welds using the FCAW welding process, according to AWS Codes and Standards.

Credits 3

Prerequisites

None

WDT-219: Welding Inspection and Testing

This course provides the student with inspection skills and knowledge necessary to evaluate welded joints and apply quality control measures as needed. Emphasis is placed on interpreting welding codes, welding procedures, and visual inspection methods. Upon completion, students should be able to visually identify visual acceptable weldments as prescribed by the code or welding specification report.

Credits 3

Prerequisites

None

WDT-221: Pipefitting and Fabrication

This course provides the student with skills and practices necessary for fabricating pipe plans using pipe and fittings. Emphasis is placed on various pipe fittings to include various degree angles. Upon completion, students should be able to fit various pipe fittings, and cut and fabricate tees, and assorted angles.

Credits 3

Prerequisites

None

WDT-228: Gas Tungsten Arc Welding

This course provides a student with the knowledge needed to perform gas tungsten arc welds using ferrous and/or non-ferrous metals, according to applicable welding codes. Topics include safe operating practices, equipment identification and set-up, correct selection of tungsten type, polarity, shielding gas and filler metals. Upon completion, a student should be able to identify safe operating practices, equipment identification and setup, correct selection of tungsten type, polarity, shielding gas, filler metals, and various welds on ferrous and/or non-ferrous metals, using the gas tungsten arc welding process according to applicable welding codes.

Credits 3

Prerequisites

None

WDT-257: SMAW Carbon Pipe Lab

This course is designed to provide the student with the skills in welding carbon steel pipe with shielded metal arc welding techniques in various pipe weld positions. Upon completion, students should be able to perform shielded metal arc welding on carbon steel pipe with the prescribed electrodes in various positions in accordance with the applicable code.

Credits 3

Prerequisites

None

WDT-268: Gas Tungsten Arc Lab

This course provides student with skills needed to perform gas tungsten arc welds using ferrous and/or non-ferrous metals, according to applicable welding codes. Topics include safe operating practices, equipment identification and set-up, correct selection of tungsten type, polarity, shielding gas and filler metals. Upon completion, a student should be able to identify safe operating practices, equipment identification and setup, correct selection of tungsten type, polarity, shielding gas, filler metals, and various welds on ferrous and/or non-ferrous metals, using the gas tungsten arc welding process according to applicable welding codes.

Credits 3

Prerequisites

None

WDT-286: Co-Op

These courses constitute a series wherein the student works on a part-time basis in a job directly related to welding. In these courses the employer evaluates the student's productivity, and the student submits a descriptive report of his work experiences. Upon completion, the student will demonstrate skills learned in an employment setting.

Credits 1

Prerequisites

As required by program

Writing and Reading

ENR-098: Writing and Reading for College

This course integrates reading and writing skills students need to comprehend and interact with college-level texts and to produce original college-level writing. Reading skills will center on processes for literal and critical comprehension, as well as the development of vocabulary skills. Writing skills will focus on using an effective writing process including generating ideas, drafting, organizing, revising, and editing to produce competent essays using standard written English. This course may include a one-hour lab component.

Credits 4

Prerequisites

None

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