

2013-2014

# Catalog



CALHOUN  
COMMUNITY  
COLLEGE

Your Community. Your College. Your Future.



# 2013-2014 CATALOG

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Decatur, AL 35609-2216  
Phone (256) 306-2500

HUNTSVILLE/CUMMINGS RESEARCH PARK CAMPUS  
102B Wynn Drive  
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<http://www.calhoun.edu>

Calhoun Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award associate's degrees and certificates. Contact the Commission on Colleges at 1866 Southern Lane, Decatur, Georgia 30033-4097 or call 404-679-4500 for questions about the accreditation of Calhoun Community College. Specific questions regarding Calhoun's educational programs, admissions and other matters related specifically to the College should be forwarded directly to the College.

**Member of**  
**American Association of Community Colleges**  
**Alabama Community College System**

It is the intent of the compilers of this catalog that it contain policies, procedures, and guidelines adopted or approved by The State Board of Education of Alabama. Users are cautioned that changes in policies, procedures, and guidelines may occur. Therefore, the information provided in the catalog is not the basis of a contract between the College and the student. The College will make every effort to maintain the integrity of the catalog and notify students of any changes that may occur. However, the College withholds the right to change any provision in this publication without notifying a student individually. In the event of any such change, the current statement of State Board policy shall prevail.

## **EQUAL OPPORTUNITY IN EDUCATION AND EMPLOYMENT**

Calhoun Community College is committed to equal opportunity in employment and education. The College does not discriminate in any program or activity on the basis of race, color, religion, sex, age, or national origin, or against qualified disabled persons, and it maintains an affirmative action program for protected minorities and women.

## **NONDISCRIMINATION STATEMENT**

Calhoun Community College has filed with the Federal Government an Assurance of Compliance with all requirements imposed by or pursuant to Title VI of the Civil Rights Act of 1964 and the Regulation issued thereunder, to the end that no person in the United States shall, on the basis of race, color or national origin, be excluded from participation in, be denied the benefits thereof, or be otherwise subjected to discrimination under any program or activity sponsored by this institution. It is also the policy of Calhoun to be in accordance that "no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving Federal financial assistance." The Title IX Coordinator for administrators, faculty, and staff is Ms. Kim Gaines, Office of Human Resources, P.O. Box 2216, Decatur, Alabama 35609-2216; telephone (256) 306-2592. The Title IX Coordinator for students is Dr. Kermit Carter, Dean for Student Affairs, P. O. Box 2216, Decatur, Alabama 35609-2216; telephone (256) 306-2613.

In addition, the College does not discriminate on the basis of disability in its educational programs and activities, pursuant to the requirements of Section 504 of the Rehabilitation Act of 1973, Public Law 93-112, and the Americans with Disabilities Act of 1990 (ADA), Public Law 101-336. This policy extends to employment by and admission to the college. The Section 504 Coordinator for administrators, faculty and staff is Ms. Kim Gaines, Office of Human Resources, P.O. Box 2216, Decatur, AL 35609-2216; telephone (256) 306-2592. The Section 504 Coordinator for students is Dr. Kermit Carter, Dean for Student Affairs, P.O. Box 2216, Decatur, AL 35609-2216; telephone (256) 306-2613 or 890-4700. The Dean for Student Affairs is the ADA Coordinator for the College.

Persons or any specific class of individuals who believe they have been subjected to discrimination prohibited by Titles VI, IX, Section 504, ADA, or an Act or Regulation issued thereunder may, alone or with a representative, file with the United States Commissioner of Education or with this institution, or with both, a written complaint.

Calhoun Community College engages in continual study on our effectiveness. Students may be required to participate in tests/surveys or other activities as part of this process.

*Calhoun Community College owns all photographs of students and participants taken at Calhoun events and reserves the right to use these photographs for college promotional materials, both digital and print. Students who do not wish to have their photographs used must have a "Do Not Use Photograph" form completed and on file in the Calhoun Public Relations Office.*

# Welcome to Calhoun Community College

## HISTORY OF CALHOUN COMMUNITY COLLEGE

Calhoun Community College is the result of the consolidation of the Tennessee Valley State Technical School and John C. Calhoun State Technical Junior College. The Tennessee Valley State Technical School was instituted by the Wallace-Patterson Trade School Act of 1947. John C. Calhoun State Technical Junior College was established under the Alabama Trade School Authority Act of 1963. The two schools were merged into a comprehensive institution to become John C. Calhoun State Technical Junior College and Technical School in September 1965. Both the Technical School and the Junior College are under the supervision of the Alabama State Board of Education. The president is directly responsible to the State Board through the Chancellor of the Department of Postsecondary Education. The present designation as a community college was formalized by a State Board of Education resolution of September 23, 1973.

## ALABAMA STATE BOARD OF EDUCATION

Governor Robert Bentley .....	President of the Board, Montgomery
Ms. Tracy Roberts .....	First District, Mobile
Mrs. Betty Peters .....	Second District, Opelika
Mrs. Stephanie W. Bell (Vice President).....	Third District, Montgomery
Dr. Yvette M. Richardson .....	Fourth District, Fairfield
Mrs. Ella Bell .....	Fifth District, Montgomery
Dr. Charles Elliott .....	Sixth District, Decatur
Mr. Jeffery Newman .....	Seventh District, Tuscaloosa
Mrs. Mary Scott Hunter .....	Eighth District, Huntsville

Chancellor  
The Alabama Community College System

# Message from the President

Welcome to Calhoun Community College. We are extremely pleased that you have chosen to continue your higher education journey with us.

As one of the region's premier educational institutions, Calhoun is committed to providing an environment which strongly supports and encourages academic excellence and scholarly pursuit. Our primary goal is success for every student, and we are all dedicated to helping you attain your educational objectives.

On behalf of the entire Calhoun Community College family, I look forward to you joining us and wish you a very successful 2013-14 academic year.



**MARILYN C. BECK**  
**President**

## Mission

The mission of Calhoun Community College is to provide quality, innovative instruction and promote community development and cultural enrichment by:

- Ensuring open access
- Providing responsive student support services
- Valuing diversity
- Integrating assessment, accountability, and improvement
- Assuring a safe environment
- Promoting lifelong learning
- Securing partnerships for economic development
- Facilitating research efforts to meet workforce development needs
- Supporting professional development

## Values

- |                  |              |
|------------------|--------------|
| • Integrity      | • Excellence |
| • Service        | • Diversity  |
| • Growth         | • Innovation |
| • Accountability | • Teamwork   |

## Vision Statement

Success for every student.

# 2013-2014 CALENDAR

## Faculty Duty Days – 87 Instructional Days – 80

Registration	M	Aug	12
Registration	T	Aug	13
Professional Development/Fall In-Service/Duty Day	W	Aug	14
Registration/Duty Day	R	Aug	15
Registration/Duty Day	F	Aug	16
Class Begin	M	Aug	19
Holiday – Labor Day	M	Sept	2
Holiday – Veterans' Day	M	Nov	11
State Professional Development/ Local Professional Development/Faculty Duty Day	M – T	Nov	25-26
Faculty Duty Day	W	Nov	27
Holiday – Thanksgiving	R-F	Nov	28-29
Last Class Day Before Finals	T	Dec	10
Finals	W-T	Dec	11-17
Grade Reporting/Duty Day	W	Dec	18

	Faculty Duty Day	Instructional Days
Aug.	13	10
Sept.	20	20
Oct.	23	23
Nov.	18	15
Dec.	13	12
Total	87	80

## Faculty Duty Days – 89 Instructional Days – 81

Professional Development/Duty Day	M	Jan	6
Registration/Duty Day	T	Jan	7
Registration/Duty Day	W	Jan	8
Registration/Duty Day	R	Jan	9
Registration/Duty Day	F	Jan	10
Classes Begin	M	Jan	13
Holiday – King/Lee	M	Jan	20
Local Professional Development	T	Feb	18
***Spring Break	M-F	Mar	24-28
Classes Resume	M	Mar	31
Last Class Day Before Finals	W	May	7
Final Exams	R-W	May	8-14
Grading/Duty Day	R	May	15
Graduation/Duty Day	F	May	16

## Spring Semester

	Faculty Duty Day	Instructional Days
Jan.	19	14
Feb.	20	19
Mar.	16	16
Apr.	22	22
May	12	10
Total	89	81

## Faculty Duty Days – 54 Instructional Days – 50

Duty Day/Registration	R	May	22
Duty Day	F	May	23
Holiday – Memorial Day	M	May	26
Classes Begin	T	May	27
Holiday/Independence Day	F	July	4
Last Class Day Before Finals	W	July	30
Final Exams	R-W	July	31-Aug 6
Grade Reporting/Duty Day	R	Aug	7

## Summer Semester

	Faculty Duty Day	Instructional Days
May	6	4
June	21	21
July	22	22
Aug.	5	4
Total	54	51

### Grand Totals Faculty Duty Days and Instructional Days

Semester	Faculty Duty Days	Instructional Days
Fall	87	80
Spring	89	81
Summer	54	51
<b>Total</b>	<b>176</b>	<b>161</b>
<b>Grand Total</b>	<b>230</b>	<b>212</b>

### The College will be closed the following ten holidays:

Monday	September 2, 2013	Labor Day
Monday	November 11, 2013	Veterans' Day
Thursday	November 28, 2013	Thanksgiving Day
Friday	November 29, 2013	Day after Thanksgiving
Tuesday	December 24, 2013	Christmas Eve
Wednesday	December 25, 2013	Christmas Day
Wednesday	January 1, 2014	New Years' Day
Monday	January 20, 2014	Martin Luther King/Robert E. Lee
Monday	May 26, 2014	Memorial Day
Friday	July 4, 2014	Independence Day

### In addition, the College will be closed the following days:

Monday	December 23, 2013
Thursday	December 26, 2013
Friday	December 27, 2013
Monday	December 30, 2013
Tuesday	December 31, 2013
Thursday	March 27, 2014
Friday	March 28, 2014

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## **COLLEGE POLICIES AND REGULATIONS**

### **NOTICE OF AVAILABLE ACCOMMODATIONS FOR STUDENTS, EMPLOYEES, AND APPLICANTS WITH DISABILITIES.**

Calhoun Community College does not discriminate on the basis of disability in admitting students to, providing access to, or in the operations of its programs, services, or activities, or in its hiring or employment practices.

Questions, concerns, complaints, requests for information, or requests for the provision of reasonable accommodations to persons with disabilities should be directed to Calhoun Community College's ADA Compliance Coordinator, whose name, address, e-mail, and phone number are shown below:

Dr. Kermit Carter  
Dean for Student Affairs  
Chasteen Student Center, Room 205  
P.O. Box 2216  
Decatur, Alabama 35609-2216  
klc@calhoun.edu  
Phone: 256-306-2613  
Fax Number: 256-306-2948  
Office Hours: 7:45 a.m. - 5:15 p.m., Monday-Thursday  
7:45 a.m. - 11:45 a.m., Friday

Students who need auxiliary aids for effective communication in participating in the programs and services of Calhoun Community College should make these needs known to the ADA Compliance Coordinator or designee.

This notice is provided pursuant to the requirements of the Americans with Disabilities Act of 1990. It is also available in larger print, on audio tape, and in Braille from the ADA Compliance Coordinator.

### **TOBACCO-FREE POLICY**

Calhoun Community College is committed to providing a safe and healthy environment for its employees, students and visitors. The College recognizes the right of persons to make their own decisions about their personal use of tobacco products away from the College. However, in light of findings of the U.S. Surgeon General that exposure to secondhand tobacco smoke and the use of tobacco products are significant health hazards, it is the intent of the College to establish a tobacco-free environment on its campuses and in its vehicles. Consequently, the use, distribution, or sale of tobacco products, including the carrying of any lighted smoking instrument, in College buildings or in or upon other College premises or inside College owned, rented or leased vehicles is prohibited.

For the purposes of this policy, a "tobacco product" is defined to include any lighted or unlighted cigarette, cigar, pipe, bidi, clove cigarette, and any other smoking product, as well as smokeless or spit tobacco, also known as dip, chew, snuff, snus, in any form.

All College employees, students, visitors and contractors are required to comply with this policy, which shall remain in force at all times. Any College employee or student found to be in violation of the tobacco-free policy will be subject to a monetary fine. Tickets will be

issued by campus police officers for violations of Calhoun's tobacco-free policy. Monetary fines will be imposed as listed below, depending on whether the offender is an employee or student.

### **Student Fines**

Any Calhoun student found to have violated this policy shall be subject to the following fines:

1st Ticket	\$25.00 Fine
2nd Ticket	\$25.00 Fine

All fines must be paid within seven (7) days of ticketing. Fines that are not paid within the seven (7) days shall automatically double in amount.

A student who has pending fine or fines may not register for classes nor have transcripts released until all fines are paid in full.

Any student wishing to appeal a fine arising from the finding of a tobacco-free violation under this policy may do so with the Dean for Student Affairs, Dr. Kermit Carter.

### **Employee Fines**

Any Calhoun employee found to have violated this policy shall be subject to the following fines:

1st Ticket	\$25.00 Fine
2nd Ticket	\$25.00 Fine

All fines must be paid within seven (7) days of ticketing. Fines that are not paid within the seven (7) days shall automatically double in amount.

Any employee wishing to appeal a fine arising from the finding of a violation of this policy may do so with the Vice-President for Instruction and Student Success.

With the exception of advertising in a newspaper, magazine, or similar publication that is not produced by Calhoun Community College, no tobacco-related advertising or sponsorship shall be permitted on Calhoun Community College property or at college-sponsored events. No tobacco-related advertising or sponsorship shall appear in any publications produced by the College or by any club or association authorized by Calhoun Community College. For the purposes of this policy, the term "tobacco-related" applies to the use of a tobacco brand or corporate name, trademark, logo, symbol or motto, selling message, recognizable pattern of colors or any other indicia of product identification identical to or identifiable with, those used for any brand of tobacco products or company which manufactures tobacco products.

The College President will develop administrative regulations and procedures as necessary to implement this policy, including provisions for notification, signage, disciplinary consequences, complaint procedures and enforcement.

Procedures will be developed to offer, promote prevention and education initiatives that actively support non-use and address the risks of all forms of tobacco use. The College will also endeavor to have information available for its students and employees on community programs or services related to helping persons stop the use of tobacco products.

## SECURITY/POLICE

We take your safety seriously! To ensure the continued health and safety of Calhoun students, employees, and visitors, we must all consider our own security, as well as the security of others, a priority when on campus. Should a crime occur on campus, Calhoun strongly encourages you to report this crime immediately to the College's Campus Security/Police Department by calling 256-306-2575. For emergencies only call 256-306-2911 on the Decatur campus or 256-890-4711 on the Huntsville campus. The office of the Director of Calhoun Police is located in building #6 across from the Machine Tool building on the Decatur campus. Huntsville Police Department officers are located in the Administrative Office at the Huntsville/Cummings Research Park campus.

Calhoun Community College is proud of its historically safe campus. In an effort to promote awareness and enhance safety, we would like to inform you of our campus crime disclosure report. We hope this information is helpful to you. Should you have any questions or suggestions regarding campus safety, please contact the campus police at 256-306-2574. If an emergency, call 256-306-2911.

**Calhoun Community College  
Campus Crime Statistical Disclosure Report**

<b>Crime</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Murder	0	0	0
Rape	0	0	0
Sex Offenses:			
Forcible	0	0	0
Non-Forcible	0	0	0
Robbery	1	1	1
Aggravated Assaults	0	0	0
Burglary	0	0	0
Breaking & Entering			
Motor Vehicle	20	12	3
Arrests	4	3	2
Motor Vehicle Thefts	0	0	2
Liquor Law Violations	0	0	0
Drug Violations	0	0	0
Weapons Violations	1	0	1
Criminal Mischief	6	3	11
Thefts	38	36	33
Harassment	5	13	13
Leaving Scene of Accident	3	10	10
Public Intoxication	2	0	0
Property Damage	1	0	1
Trespassing	2	0	3
Disorderly Conduct	4	13	10
Hate Crime	0	0	0
Auto Accidents		25	36
Domestic Violence		2	0
Medical Calls			30

## STUDENT IDENTIFICATION CARDS

All students enrolled at Calhoun Community College are required to have in their possession a valid Student I.D. card for general identification purposes and to present it upon demand when requested by a school official. The Student I.D. card is valid for each semester of the student's attendance. Students I.D. cards are issued during the first two weeks of each semester for new and transferring students. Replacement I.D. cards for returning students can be made at a cost of \$20.00. Replacement cost cannot be charged to student accounts and must be paid in cash. The I.D. card can be used for (1) book buying (campus bookstore only), (2) library book checkout, (3) access to learning labs, (4) entrance into college-sponsored activities, (4) check cashing, (5) student discounts, and (6) general identification.

## MOTOR VEHICLE REGISTRATION

All students driving any type of motor vehicle on campus must secure and properly affix an official college parking decal to the vehicle regardless of the location of classes. Parking decals are available at the switchboard at the Decatur campus or the Security Office at the Huntsville campus. For students who have received disability access license plates or disability access placards for Disability Access Parking Privileges under Alabama law and who wish to use College disability access parking spaces, special disability access parking decals are available from the Disability Services Office located on the second floor of the Chasteen Student Center, Room 220G upon appropriate documentation by the respective student of having received Disability Access Parking Privileges. Decals may also be obtained at the Huntsville Campus Security Desk. In the interest of safeguarding designated disability access parking spaces from misuse by persons who are not properly entitled to use those spaces, the use of disability access parking spaces will be only permitted for those cards that display **both** a College disability access decal **and** either a disability access license plate or a disability access placard.

## HANDICAP PARKING POLICY

Eligibility to access available handicap parking on campus requires that a student, faculty or staff member show proof that they are the legally registered recipient of the state issued handicap parking placard. A valid Calhoun ID along with a receipt, similar to a tag receipt from the Department of Motor Vehicles will be required to verify that the faculty, staff, or student is the registered user of the handicap placard or handicap tag and must be presented to the Disability Services Office located on the second floor of the Chasteen Student Center in room 220G. Students must also show a current (paid) schedule. The Calhoun handicap parking placard must be displayed on the rearview mirror of the eligible vehicle when parked on campus. The handicap parking areas will be monitored. Fines for handicap parking violations are \$50.00.

## ABANDONED VEHICLES

If a vehicle is left unattended or is left in the same place for more than ten (10) days, the vehicle will be considered abandoned and will be towed at the owner's expense. If a vehicle is illegally parked (for example, blocking another vehicle that is legally parked), the illegally-parked vehicle will be towed at the owner's expense.

## PARKING/TRAFFIC CITATION APPEALS COMMITTEE

This is a three-member committee made up of students appointed by the Student Government Association. It is charged with the responsibility of hearing and ruling on each case in which a student appeals having received a parking ticket. The committee meets each Friday at 11:00 a.m. in the Student Activities Office, Decatur campus. Parking appeals at the Huntsville/Cummings Research Park campus should be made to the Dean for the Cummings Research Park campus.

## SEX OFFENDER REGISTRATION

If you are a student at Calhoun Community College and are a convicted sex offender, you are required under Alabama State Statute 15-20-25.2 to register with the appropriate law enforcement agency. Students attending the Decatur Campus should register with the Limestone County Sheriff's Office. Students attending the Huntsville Campus should register with the Madison County Sheriff's Office **AND** the Huntsville Police Department.

## RESTROOM POLICY

Restrooms are designated separately for men and women. Any individual found in the opposite gender's restroom will be subject to dis-

## General Information

disciplinary action and criminal trespassing. There will be no loitering in restrooms on Calhoun's campuses.

### WEAPONS POLICY

No person shall keep, use, possess, display, or carry any rifle, shotgun, handgun, knife, bow and arrow, or other lethal or dangerous weapons or devices capable of casting a projectile by air, gas or explosion, or mechanical means on any property or in any building owned or operated by Calhoun Community College or in any vehicle on campus. Realistic facsimiles of weapons are also specifically not allowed.

If an instructor approves such items to be demonstrated for class purposes only, the instructor and student must obtain permission from Calhoun Police.

Any such person seen with or using such weapons on campus will be subject to disciplinary and criminal charges.

Pursuant to state board policy 511.01, Calhoun Community College adheres to the following:

**Firearms are prohibited on campus or any other facility operated by the college. Exceptions to this policy are: Law enforcement officers legally authorized to carry such weapons who are officially enrolled in classes or are acting in the performance of their duties or an instructional program in which firearms are required equipment.** If the off-duty officer is a student, he/she must notify campus police once a semester. A weapon is prohibited from any type of hearing for personal business.

## ADMISSIONS INFORMATION

Calhoun Community College maintains an admissions policy that provides higher education for individuals who meet minimum admission requirements as set forth by the policies of the Alabama College System.

Admission to the College does not guarantee entrance into a particular course or program. Some programs have specific admission requirements. Requirements for admission to certain programs, such as Health programs, are found in the appropriate section of this catalog.

## ADMISSION ELIGIBILITY

### FIRST-TIME COLLEGE STUDENTS

Applicants who have not previously attended a postsecondary institution accredited by a regional accrediting agency or the Council on Occupational Education will be classified as first-time college students or "native" students.

### ADMISSION TO COURSES CREDITABLE TOWARD AN ASSOCIATE DEGREE

As defined by the Alabama State Board of Education, to be eligible for admission to courses creditable toward an associate's degree, a first-time college student must meet one of the following criteria:

1. Applicant holds an Alabama High School Diploma, the high school diploma of another state equivalent to the Alabama High School Diploma, or an equivalent diploma issued by a non-public regionally and/or state accredited high school; or

2. Applicant holds a high school diploma equivalent to the Alabama High School Diploma issued by a non-public high school and has passed the Alabama Public High School Graduation Examination; or
3. Applicant holds a high school diploma equivalent to the Alabama High School Diploma\* and has achieved a minimum American College Test (ACT) composite score of 16 or a total of 790 on the Scholastic Aptitude Test (SAT); or
4. Applicant holds the Alabama Occupational Diploma, the high school diploma of another state equivalent to the Alabama Occupational Diploma, or an equivalent diploma issued by a non-public high school, and has achieved a minimum ACT composite score of 16 or a total of 790 on the SAT Critical Reading and Math sections; or
5. Applicant holds a GED Certificate issued by an appropriate state agency.

\*Minimum credit requirements for an Alabama standard diploma

- Minimum of 24 credits to include:

English Language	4 credits	
Mathematics	4 credits to include:	
	Algebra	1 credit
	Geometry	1 credit
Science	4 credits to include:	
	Biology	1 credit
	Physical Science	1 credit
Social Sciences	4 credits to include:	
	Social Studies	1 credit
	World History	1 credit
	U.S. History	1 credit
	Government	.5 credits
	Economics	.5 credits
Physical Education, Health Education and/or Fine Arts		2 credits
Computer Applications		.5 credits (may be embedded)
Electives		5.5 credits

Applicants who meet one of these criteria shall be classified as "Degree-Eligible" students. Calhoun Community College may establish additional admission requirements to specific courses or occupational degree programs when student enrollment must be limited. All non-public, online, and non-accredited high school diplomas are evaluated on an individual basis. Students who graduate from these schools may be required to provide additional or appropriate supporting documentation for admissions eligibility. Students holding these types of high school diplomas are encouraged to contact the Calhoun Admissions Office for more information about acceptance criteria.

### ADMISSION TO COURSES NOT CREDITABLE TOWARD AN ASSOCIATE DEGREE

Applicants to courses not creditable toward an associate degree and programs comprised exclusively of courses not creditable toward an associate degree may be admitted provided they meet the standard admission criteria. Limestone Correctional Facility programs may

have different admission requirements based on program eligibility. Calhoun Community College has established higher or additional admission requirements for specific programs or services when student enrollment must be limited or greater benefit can be assured to those students.

## **ADMISSION STATUS**

### **UNCONDITIONAL ADMISSION OF FIRST-TIME COLLEGE STUDENTS**

For Unconditional Admission, applicants must meet the identification requirement and have on file at the college a completed application for admission and at least one of the following:

1. An official transcript showing graduation with an Alabama High School Diploma (standard or advanced), the high school diploma of another state equivalent to the Alabama High School Diploma, or an equivalent diploma issued by a non-public regionally and/or state accredited high school; or
2. An official transcript showing graduation from high school with a high school diploma equivalent to the Alabama Public High School Diploma issued by a non-public high school and proof of passage of the Alabama Public High School Graduation Examination; or
3. An official transcript showing graduation from high school with a high school diploma equivalent to the Alabama High School Diploma issued by a non-public high school and evidence of a minimum ACT composite score of 16 or a total score of 790 on the SAT Critical Reading and Math sections; or
4. An official transcript showing graduation from high school with an Alabama Occupational Diploma, the high school diploma of another state equivalent to the Alabama Occupational Diploma, or an equivalent diploma issued by a non-public high school, and has achieved a minimum ACT composite score of 16 or a total score of 790 on the SAT Critical Reading and Math sections; or
5. An official GED Certificate issued by an appropriate State agency. All male students between the ages of 18 and 26 must show proof of registration with the U.S. Selective Service System in accordance with §36-26-15.1 of the Code of Alabama of 1974 (as amended).

### **CONDITIONAL ADMISSION OF FIRST-TIME COLLEGE STUDENTS**

1. Conditional admission may be granted to an applicant who does not have on file at the College at least one of the documents as described in the "Unconditional Admission of First-Time College Students" section. Conditional admission is a strictly temporary circumstance in which the student will be permitted to enroll and attend classes until such time as the necessary documents are received by the College. All admission documentation must be received prior to registration for the second term.
2. If all required admissions records have not been received by the College prior to issuance of the first semester grades, the grades will be reported on the transcript, but the transcript will note "Continued Enrollment Denied Pending Receipt of Admission Records." This notation will be removed from the transcript only upon receipt of all required admission records. Students attending under conditional admission may not be eligible for federal student aid.

### **TRANSFER STUDENTS**

- A student who has previously attended another post-secondary Institution which is accredited by a regional accrediting agency or by the Council on Occupational Education will be considered a

transfer student.

- Students must complete an application for admission and will be required to furnish official transcripts of all work attempted at all said institutions. Calhoun Community College may require submission of documents required of first-time college students to verify completion of a high school diploma, a GED and the required ACT or SAT test scores.
- A transfer student who meets requirements for admission to degree creditable courses and programs shall be classified as "degree-eligible." A transfer student who does not meet the admission requirements will not be granted admission to the College.
- Transfer students on academic or disciplinary suspension from another college or university must submit a written appeal to the College Admissions Committee for admission. Written appeals, along with official or unofficial college transcripts, must be submitted at least thirty (30) days before the term of intended enrollment.

### **UNCONDITIONAL ADMISSION OF TRANSFER STUDENTS**

1. For Unconditional Admission, transfer students must have submitted to the college an application for admission, official transcripts from all required sources, and any other documents required for admission.
2. Transfer students who attend another postsecondary institution and who desire to earn credits for transfer to that parent institution may be admitted to the college as **transient** students. Transient students must submit an application for admission and a transient letter from the institution they have been attending which certifies that the credits they earn will be accepted as a part of their academic program. Students are not required to submit transcripts since the transient approval letter will serve in lieu of transcripts.
3. Applicants who have completed the baccalaureate degree will be required to submit only the transcript from the institution granting the baccalaureate degree. NOTE: If the student intends to obtain a degree or certificate from Calhoun Community College, transcripts from all institutions must be submitted for evaluation prior to graduation. If the student intends to register for courses requiring prerequisites that have been fulfilled at another institution, transcripts from those institutions must be submitted for evaluation prior to enrolling in those courses at Calhoun Community College.

### **CONDITIONAL ADMISSION OF TRANSFER STUDENTS**

1. Transfer students who do not have on file official transcripts from all postsecondary institutions attended and any additional required documents may be granted a Conditional Admission for one term. No transfer student shall be allowed to enroll for a second semester unless all required admission records have been received by the College prior to registration for the second semester.
2. If all required admission documents are not received by the end of the first term, continued enrollment will be denied. Grades for the first term will be posted to a transcript and annotated to read CONTINUED ENROLLMENT DENIED PENDING RECEIPT OF ADMISSION RECORDS. This notation will be removed only upon receipt and review of all required admission records.

### **INITIAL ACADEMIC STATUS OF TRANSFER STUDENTS**

1. An initial academic status cannot officially be determined until all official documents are received and reviewed. Once records are



received, an initial status will be determined for the student's first term of enrollment. Submission of incorrect or false information on the application for admission could result in immediate removal from the college and forfeiture of all tuition, fees, and other monies.

2. A transfer student whose cumulative grade point average at the transfer institution(s) is 2.0 or above on a 4.0 scale will be admitted with "Clear" academic status.
3. A transfer student whose cumulative grade point average at the transfer institution is less than a 2.0 on a 4.0 scale but is not on academic suspension/dismissal will be admitted on Academic Probation. The Calhoun transcript will be annotated to read ADMITTED ON ACADEMIC PROBATION.
4. A transfer student applicant who has been academically suspended (dismissed) from another regionally or Council on Occupation Education accredited postsecondary institution may be admitted only after following the appeal process established for "native" students. Calhoun Community College requires that the applicant submit a written appeal to the College Admissions Committee along with all official transcripts. Written appeals, an application, and transcripts must be received by the Admissions Committee, prior to the first official class day. No appeals will be considered on or after the first official class day for that term. If the transfer student is admitted upon appeal, the student will enter the college on Academic Probation. The Calhoun transcript will read ADMITTED UPON APPEAL – ACADEMIC PROBATION.
5. A transfer student admitted on academic probation retains that status until the student has attempted 12 credit hours at Calhoun Community College. If the student's cumulative GPA at Calhoun is below a 1.5 after the semester in which 12 or more credit hours are attempted, the student will be placed on academic suspension for at least one semester. More stringent guidelines may be placed on students by the College Admissions Committee when written appeals are approved.

### GENERAL PRINCIPLES FOR TRANSFER OF CREDIT

1. Transfer credit will be evaluated and recorded once when all official transcripts have been received. Students will be notified through communication from the Administrative Office of the results of their evaluation. (A review of records by counselors, advisors, faculty, etc. for advising purposes does not constitute an official evaluation.)
2. Coursework transferred or accepted for credit toward an undergraduate program must represent collegiate coursework relevant to the formal award with course content and level of instruction resulting in student competencies at least equivalent to those of students enrolled in the institution's own undergraduate formal award programs.
3. A course completed at other regionally or Council on Occupational Education accredited postsecondary institutions with a passing grade (C minimum required in Composition courses) will be accepted for transfer as potentially creditable toward graduation requirements.
4. A transfer student from a collegiate institution not accredited by the appropriate regional association or Council on Occupational Education may request an evaluation of transfer credits after completing 15 semester hours with a cumulative GPA of 2.0 or above.
5. A transfer grade of "D" will only be accepted when the transfer student's cumulative transfer GPA is 2.0 or above. Regardless of the GPA, a "D" in English Composition courses will not be accepted in transfer. Please note that some programs/courses

require minimum grades of "C", thus a "D" will not transfer.

6. Transfer course grades are not calculated into a student's grade point average. Transfer grades are only calculated into a grade point average for graduation and honors consideration.
7. Credit may be extended based on a comprehensive evaluation of demonstrated and documented competencies and previous formal training. Please refer to the section on Credit from Nontraditional Sources in this catalog.
8. The criteria for awarding credit for work completed in foreign colleges and universities will be the same as for other institutions within the United States. Students wishing to receive transfer credit for such foreign study must provide an English translation and a detailed report. Reports must outline recommendations for awarding specific credit for specific courses. We must have a "course-by-course" evaluation provided by Educational Credential Evaluators, Inc., eval@ece.org or World Education Services, info@wes.org.

### TRANSIENT STUDENTS

A transient student is defined as a student who desires to enroll at Calhoun Community College for one term with the intent to return to their parent institution to complete their degree

A Calhoun student who desires to attend another institution to take a course(s) needed for graduation at Calhoun must be in good standing with Calhoun. A student in good standing with the institution must hold a cumulative GPA of 2.0 or higher and have no outstanding obligations with Calhoun. Students will be responsible for requesting their transcripts be sent to Calhoun once the course(s) has been completed. Courses will only be accepted to Calhoun as transfer credit from accredited institutions and with a grade of "C" or better.

### INTERNATIONAL STUDENTS—(F-1 VISA HOLDERS)

Calhoun Community College accepts international students who have F-1 visas and who meet the academic, linguistic, and financial requirements outlined below:

#### First Time College Students

- An international student who holds an American high school diploma or a diploma from his/her country that is equivalent may be eligible for admission.
- Prospective international students must submit all of the following to be considered for admission.
  - 1) A complete application in English.
  - 2) Official transcripts/leaving certificate in English that document graduating from a secondary school that is equivalent to a U.S. high school diploma. The transcript/leaving certificate must be forwarded directly to Calhoun Community College from all institutions previously attended. Translation of all documents is the responsibility of the applicant.
  - 3) Test of English as a Foreign Language (TOEFL) requirements:
    - a. A minimum written score of 500 (or)
    - b. A minimum computer-based score of 173 (or)
    - c. Internet based score 61 (or)
    - d. IELTS ranging 5.5-6.0
    - e. The scores must be mailed directly from the Educational Testing Services to the Calhoun Office of Admissions and Records. Personal copies are **not accepted**.

- f. The TOEFL Test is not administered at Calhoun Community College.

**EXCEPTIONS (TOEFL)**

- a. a graduate of an accredited U.S. high school or an accredited American high school overseas (or)
  - b. a citizen of an English-speaking country that has been granted exemption to the TOEFL policy.
- 4) A signed, notarized affidavit with bank statements declaring that the international applicant will be fully responsible and that funds are available for financial obligations during an enrollment with Calhoun Community College. Financial obligations include but are not limited to: tuition and fees, books and supplies, living expenses, housing, and miscellaneous expenses.
- 5) Documentation of insurance must declare adequate health and life insurance (which must include medical repatriation and medical evacuation expenses). It must be maintained during any and all terms of enrollment with Calhoun Community College.

All required documents should be forwarded directly to the International Student Advisor, Calhoun Community College.

**Transfer Students – International**

Any international student who has attended an accredited college or university may be considered for admission as a transfer student. Transfer students must comply with all items listed under **First-Time Students – International**. In addition to all items listed, an international student who wishes to apply to Calhoun Community College must

- a) Have official transcripts from all previously attended colleges and universities attended mailed directly to Calhoun Community College.
- b) Complete a transfer clearance form (obtain from school advisor to which he/she is transferring).
- c) Be in-status at the most recent college/university attended. Individuals who are out-of-status must apply for reinstatement through their former school.

All documents required for admission as a First Time college student or Transfer student must be on file before an admission decision will be made. I-20s will only be issued to applicants who meet all criteria and are, if transferring, in status with the Immigration and Naturalization Services. Calhoun is unable to issue an I-20 for any individual who is out-of-status.

**Note:** International students who have completed ENG 101/100 or its equivalent at an accredited college or university with a grade of C or better may be exempt from the TOEFL requirement.

**HIGH SCHOOL HONORS PROGRAMS**

Calhoun Community College, in conjunction with our area high schools, offers “honor” students the opportunity to enroll for college coursework. Two programs have been approved by the Alabama State Board of Education, the Accelerated High School Student Program and the Dual Enrollment/Dual Credit for High School Student program. Even though the basic criteria for enrollment are similar, each program is unique. Review the following and discuss with your counselor your eligibility and which program best meets your needs.

**ACCELERATED HIGH SCHOOL PROGRAM**

Calhoun Community College offers qualified high school students the opportunity to earn college credit while still in high school. Students who attend accredited high schools must meet the criteria listed here:

1. The student must have successfully completed the 10th grade;
2. The student must provide certification (form available online at [www.calhoun.edu](http://www.calhoun.edu)) from the local principal and/or his/her designee that the student has a minimum cumulative “B” average and recommends the student for enrollment;
3. The student may enroll only in postsecondary courses for which the high school prerequisites have been completed (for example: a student may not take English Composition until all required high school English courses have been completed).

Exceptions may be granted by the Chancellor for a student documented as gifted and talented according to the standards included in the State Plan of Exceptional Children and Youth. Exceptions may only apply to items 1 and 2 noted above.

Students who attend a non-accredited high school must meet additional criteria as listed below:

1. Comply with items 1, 2, and 3 as noted above.
2. Provide ACT scores with a composite of at least 16 or total math and Critical Reading of 790 on the SAT.

**DUAL ENROLLMENT/DUAL CREDIT FOR HIGH SCHOOL STUDENTS PROGRAM**

The Dual Enrollment/Dual Credit for High School Students program allows qualified students the opportunity to receive both high school and college credit. The program is restricted to qualified students in Alabama high schools and home schools which have signed a working agreement with Calhoun Community College.

Criteria for student eligibility are developed by each individual school system and may be more restrictive than the minimum criteria that follows:

1. The student must have a “B” average in completed high school courses;
2. The student must have written approval (application and approval form available online at [www.calhoun.edu](http://www.calhoun.edu)) of his/her principal and the local superintendent of education; and
3. The student must be in grade 10, 11, or 12.

Determination of the equivalencies of Calhoun Community College coursework toward high school graduation requirements is at the discretion of the high school system. Typically, one 3-semester hour course equates to one-half unit.

*Courses eligible for Dual Enrollment include any college-level courses in English, foreign languages, mathematics, science, or social science; any occupational/technical courses; or any other courses agreed upon by the school system and the college. Students must meet the course prerequisites prior to enrollment in any of these courses including completion of the Calhoun Placement Examination and/or minimum levels on the ACT or SAT in English and Mathematics. Students may not enroll in developmental courses, physical education courses, nor may they enroll in any course on an audit basis under the Dual Enrollment/Dual Credit program.*

*Students in the Dual Enrollment/Dual Credit program may take their*

## General Information

*coursework at any Calhoun campus or through Distance Learning. Students should consult the college's current course offering schedule or contact the academic advising centers for information on the dates, times and locations of courses. Calhoun also offers courses at selected school campuses. Information is available through local high school counselors.*

For additional or more specific information contact your high school counselor or the Calhoun Community College *Dual Enrollment Coordinator*, Ms. Gwen Baker at 256-306-2665.

### EARLY COLLEGE ENROLLMENT PROGRAM (ECEP)

The Early College Enrollment Program (ECEP) allows qualified high school juniors and seniors with a stated interest in vocational/technical fields to enter a technical or community college early. Students must have a minimum of a 2.5 grade point average on a 4.0 scale in required high school courses and must have passed the high school exit exam.

ECEP participants earn credits applicable toward high school graduation and college degree requirements at no cost to the student. Participation in the ECEP does not affect a student's eligibility to participate in high school extracurricular activities. Any public community and/or technical college and public high school in Alabama may provide the ECEP option for secondary students.

Students are not restricted to attending the two-year college(s) where service area(s) includes their high school. Participation in the ECEP is at the discretion of the local education agency (LEA) and ECEP enrollment is limited to courses that are not available within the system at the local high school or career tech center or for students who are classified as program concentrators (must have completed two courses within a pathway). Students selected to participate in ECEP complete their remaining high school credits on the college campus, while also taking courses in their chosen vocational/technical field.

There is no cost for tuition to the ECEP students. Contingent upon the availability of postsecondary funding each year, there is no cost for tuition to the local education agency. If funds are not available to provide tuition vouchers from postsecondary funding, the cost of tuition shall be a maximum of \$1,000 per student per semester and shall be the responsibility of the LEA.

For additional or more specific information contact your high school counselor or the Calhoun Community College Dual Enrollment Coordinator, Ms. Gwen Baker, at 256-306-2665.

### AUDIT STUDENTS

Auditors are students who register for credit courses on a non-credit basis. Students may not audit any health science classes. The College may require complete academic records for any applicant. In the absence of complete academic records, the College may accept as the basis of admission the information provided by the applicant on the regular application form. Auditors will under no circumstances receive credits applicable to degree requirements. Tuition and fees for courses audited are the same as those for courses taken for credit. Students may not change from "Credit" to "Audit" or "Audit" to "Credit" after the Drop/Add period.

### APPLICATION PROCEDURES

Students must present acceptable proof of identification (photo) to

the Admissions and Records Office.

According to Alabama State Board Policy 801.01, for admission to an Alabama Community College System institution, all new students as of the spring 2009 semester must have on file in the Admissions the following:

1. One primary form of photo identification, such as an unexpired Driver's License, or
2. Two secondary forms of identification, one of which must be an acceptable alternative photo ID. Additional information on acceptable forms of identification can be found at [www.calhoun.edu](http://www.calhoun.edu), click on admissions, then admissions requirements.

Proof of identification must be on file PRIOR to being admitted.

### Students Entering College for the First Time

1. Applicants must complete an application for admission online. Applicants should submit their application as early as possible prior to the semester in which they plan to enroll. Applications may be submitted online at [www.calhoun.edu](http://www.calhoun.edu)
2. Applicants must request that the high school from which they graduated mail their official transcript directly to the Admissions Office at the address listed below. Test scores, if applicable, must also be forwarded directly to Admissions.
3. Applicants who hold a GED must have an official GED transcript sent directly to the Admissions Office at the address noted below.

Admissions Office  
Calhoun Community College  
P.O. Box 2216  
Decatur, AL 35609-2216

### Transfer Students

1. Transfer applicants must complete an application for admission and submit it online, in person, or by mail to the Admissions Office, Calhoun Community College. The application should be submitted as early as possible prior to the semester of intended enrollment. Applications may be mailed to the address listed below:

Admissions Office  
Calhoun Community College  
P.O. Box 2216  
Decatur, AL 35609-2216

2. All transfer applicants must have official transcripts from all other colleges or universities forwarded directly to Calhoun's Admissions Office at the address noted above. It is the student's responsibility to request his/her official records be forwarded in a prompt and complete manner to clear his/her admission to Calhoun Community College. Transcripts from high school, ACT/SAT test scores or a GED certificate are also required from students who attended a non-regionally accredited college or university.

### Students Applying for Readmission

1. Applicants who previously applied for admission but did not attend are required to submit a new application for admission and provide all required admission records.
2. Students who have not been in attendance within one calendar year will be required to complete an application for re-admission. If the student has been in attendance at another college or university since his/her last enrollment with Calhoun, official

transcripts must be requested and forwarded directly to the Admissions Office.

### **SENIOR CITIZENS ATTENDING UNDER THE SENIOR ADULT SCHOLARSHIP PROGRAM**

Senior citizens sixty (60) years of age or older may be eligible for a tuition waiver if they qualify for the Senior Adults Scholarship Program. Applicants must meet the following conditions:

1. They must comply with the college admission standards as noted earlier in this catalog under Admission, First-Time Students, Admission of Transfer Students or Former Students Applying for Readmission. Please refer to the appropriate section for details of admission requirements.
2. Must be Alabama residents.
3. Must be sixty (60) years of age or older.
4. Students must enroll for credit; non-credit enrollment is not allowed.

The student is responsible for any fees or other charges applied to the general student body. Senior citizens granted a tuition waiver under the Senior Adult Scholarship Program may receive the tuition waiver only one time per course. Any time a senior citizen repeats a course the student is responsible not only for fees but also for tuition.

Questions regarding admission and eligibility should be directed to the staff of the Admissions and Records Office or the Financial Aid Office.

**NOTE:** Senior citizen course enrollment under the Senior Adult Scholarship Program is restricted to a space available basis. A course will not be expanded beyond the optimal number to accommodate the enrollment of a senior citizen attending under the Senior Adult Scholarship Program.

### **COLLEGE ADMISSIONS COMMITTEE**

Students on academic suspension from another post-secondary institution must file a written appeal directly to the Director of Admissions/Records for submission to the College Admissions Committee. Appeals for admission should be submitted at least thirty days prior to the intended term of enrollment. Decisions of the Admissions Committee are final.

## **STUDENT RECORDS AND TRANSCRIPTS**

### **Family Educational Rights and Privacy Act of 1974**

Calhoun Community College complies with the provisions of the Family Educational Rights and Privacy Act (FERPA) of 1974 as amended. FERPA sets forth the requirements pertaining to the privacy of student records. The law governs the release of educational records and access to the records.

### **Student Records and FERPA**

Students are notified that when a student attains the age of 18 or is attending an institution of postsecondary education, the permission or consent required of and the rights accorded to the parents of the student shall thereafter only be required of and accorded to the student. Therefore, a person other than the student requesting information on a student must submit written authorization from the student if the request is beyond the scope of authorized exceptions to the Act.

Responsibility for protection of the privacy of educational records rests primarily with the Director of Enrollment Services/Registrar of the college. FERPA defines educational records to include records, files, documents, and other materials that contain information directly related to students and are maintained by an educational agency or institution with exceptions under the Act.

### **Notification of Rights under FERPA**

**FERPA affords students certain rights with respect to their educational records. The rights provided to students are:**

1. The right to review their educational records with certain exceptions. Students and former students may present a valid photo identification card and complete a written request form to review their records. The college may delay a record review up to 45 days if circumstances so dictate. Record reviews are conducted in the Records Office, Chasteen Student Center, Decatur campus. Note: The College is not required to provide access to records of applicants for admission who are denied acceptance or, if accepted, do not attend.
2. The right to request the amendment of the student's educational records that the student believes is inaccurate or misleading. The student should submit to the Director of Enrollment Services/Registrar a written statement which identifies the part of the record they want changed, why it should be changed, and any documentation to support the request. The student will be notified in writing of the decision to amend or not to amend. A student will be notified of a hearing procedure process they may initiate if the result of the student's request is not to amend their record.
3. The right to consent to disclosure of personally identifiable information contained in the student's educational records, except to the extent that FERPA authorizes disclosure.

Calhoun Community College considers the following to be directory information and may be released to individuals and/or agencies, institutions, etc. unless the student signs a Do Not Release form.

#### **Directory Information**

Name  
Address  
Telephone listing  
E-mail address  
Date and place of birth  
Major field of study  
Dates of attendance  
Enrollment status  
Class standing  
Degrees, honors, and awards received  
Most recent educational agency or institution attended

It should be noted that directory information is used to verify a student's enrollment with insurance agencies, banks, employers, etc. unless prohibited in writing by the Do Not Release Information form. Calhoun does not provide mailing lists unless required to do so by federal legislation (Solomon Amendment), a court directive, or as deemed appropriate by the President of the college or his/her agent.

FERPA has established rules that allow some personnel and agencies to have access to student's records without their written consent. The exception to the requirement of written consent follows:



## **General Information**

Authorized representatives of the following for audit and evaluation of federal and/or state supported programs or for enforcement of a compliance with federal legal requirements which relate to these programs:

- Comptroller General of the United States
- Attorney General of the United States
- Secretary of the Department of Education
- State and local educational authorities
- State and local officials to whom disclosure is specifically required by state statute adopted prior to November 19, 1974.
- Veterans Administration officials
- Other school officials with the institution determined by the institution to have a legitimate educational interest
- Officials of other institutions at which the student seeks or intends to enroll, provided the institution makes a reasonable attempt to inform the student of the disclosure, unless the student initiates the transfer or the annual notification of the institution includes a notice that the institution forwards education records to other institutions at which the student seeks or intends to enroll have requested the records. (Students are so notified.)
- Persons or organizations providing financial aid to students or determining financial aid decisions on the condition that the information is necessary to: 1) determine eligibility for aid, 2) determine the amount of aid, 3) determine the conditions for the aid, or 4) enforce the terms and conditions of the aid.
- Organizations conducting studies for or on behalf of education agencies or institutions to develop, validate, and administer predictive tests, to administer student aid programs, or to improve instruction. Conditioned on organizations not to disclose personally identifiable information on students, information must be destroyed when no longer needed for project.
- Accrediting organizations carrying out their accreditation functions.
- Parents of a student who have established a student's status as a dependent according to IRS Code of 1986, Section 152.
- Persons in compliance with a judicial order or lawfully issued subpoena provided that the institution makes a reasonable attempt to notify the student in advance of compliance. An institution may not provide advance notice of subpoena compliance if the subpoena is issued by a federal grand jury or for law enforcement purposes provided the subpoena orders the institution not to disclose the existence or contents of the subpoena.
- Our institution is not required to obtain a subpoena to produce education records of a student if the institution is sued by the student or takes legal action against a student. The records produced must be needed by the institution to proceed with legal action as plaintiff or to defend itself.
- Persons in an emergency if the knowledge of information, in fact, is necessary to protect the health or safety of students or other persons.
- Additional instances may occur where the college is required by law to release information. Contact the Registrar for the answers to specific questions.

In the event a student believes that his/her FERPA rights were not met, he or she has the right to file a written complaint with The Family Policy Compliance Office, U.S. Department of Education, 600 Independence Avenue SE, Washington, DC 20202-4605.

## **Transcript Policy**

The transcript policy of Calhoun Community College includes the following items:

- A. In compliance with the Family Educational Rights and Privacy Act, Calhoun Community College does not release transcripts of a student's academic work, except upon the student's request;
- B. Official transcripts are sent to institutions, companies, agencies, etc., upon the student's request;
- C. Transcript Request Forms can be downloaded at <https://www.calhoun.edu> under Admissions, Applications and Forms, or on MyCalhoun. Transcript requests are processed as they are received. REQUESTS SHOULD BE MADE AT LEAST TWO WEEKS BEFORE THE TRANSCRIPTS ARE NEEDED;
- D. Transcripts will not be issued for persons who have financial, academic, or administrative obligations to the college;
- E. Written transcript requests should be sent to:  
Calhoun Community College  
Admissions and Records Office, Transcripts  
P.O. Box 2216  
Decatur, AL 35609-2216 or fax to 256-306-2941  
Include name, signature, dates of attendance, social security number and address to which transcript should be forwarded. (NOTE: Students with name changes should include all former names.)

The Office of Admissions and Records does not release official transcripts from other institutions. Requests for official transcripts from other institutions must be directed to the institution concerned.

## **FINANCIAL INFORMATION**

### **CASHIER'S OFFICE HOURS (Decatur Campus)**

Monday-Thursday	8:00 a.m. – 6:00 p.m.
Friday	8:00 a.m. - 11:00 a.m.

### **CASHIER'S OFFICE HOURS (Huntsville Campus)**

Monday-Thursday	9:00 a.m. – 5:30 p.m.
Friday	8:00 a.m. - 11:30 a.m.

## **TUITION AND FEES**

The following information reflects the current tuition and fee schedule enacted by the Alabama State Board of Education.

### **TUITION**

In-State Students	\$109.00 per credit hour
Out-of-State	\$218.00 per credit hour
Distance Learning	\$138.00 per credit hour*
Distance Learning Out-of-State	\$247.00 per credit hour*

### **FEES**

Technology Fee	\$ 9.00 per credit hour
Facility Renewal Fee	\$ 9.00 per credit hour
Special Building Fee	\$10.00 per credit hour
Bond Surety Fee	\$ 1.00 per credit hour

\*No fees apply to Distance Learning classes

Students who register after classes begin will be charged a \$25 late registration fee.

NOTE: Tuition and fees are subject to change without prior notice.

## PAYMENTS

Calhoun Community College accepts MasterCard, Visa, American Express, and Discover for payment of tuition and fees. Students can pay for classes on the Internet by accessing [www.calhoun.edu](http://www.calhoun.edu) and logging onto MyCalhoun.

## TUITION AND FEES REFUND POLICY

**Before Classes Begin .....100% Refund**

### **During Drop/Add**

Drops a class or classes but less than total...100% of net

Drops **ALL** classes during drop/add .....75% of net

### **After Drop/Add (Withdrawal Refund Period)**

Drops a class or classes but less than total .....No refund

Total withdrawal during first week of classes .....75% of net

Total withdrawal during second week of classes .....50% of net

Total withdrawal during third week of classes .....25% of net

Total withdrawal after third week of classes.....No refund

NET AMOUNT IS TUITION AND FEES LESS 5% ADMINISTRATIVE FEE.

## Refund Methods

When a refund is due to a student from any payment made on MyCalhoun, that refund will be credited back to the original method of payment (i.e. debit or credit card). If the refund is more than the original payment amount, the remaining balance will be issued through Sallie Mae using the reimbursement method selected by the student.

Calhoun uses Sallie Mae Refund Disbursement for all refunds in an effort to get the money into the hands of the students quickly and easily. All students are required to register with Sallie Mae. During registration, students will select one of the following reimbursement methods:

- Direct deposit to an existing checking or savings account, or
- MyFlexCard

Students who do not register with Sallie Mae will automatically default to the check reimbursement method. The address information used by Sallie Mae is sent by Calhoun. If a student's address is incorrect, the information needs to be updated through MyCalhoun. Address changes are submitted to Sallie Mae on a weekly basis. Calhoun no longer prints refund checks, therefore the Business Office cannot hold checks for pick up.

## Timeframe for each Reimbursement Method

MyFlexCard - Same day by 7:00 pm

Direct Deposit to Checking or Savings Account - 24-48 hours

Paper Check (default method) - 7-10 business days

## Steps to Register with Sallie Mae

Go to [www.calhoun.edu](http://www.calhoun.edu)  
Select Student Services  
Click on "Get My Refund"  
Click on the orange "Enroll Now" button  
Click on the "Sign Up" button

Click the box inside "Please Accept Agreement"

Enter Last Name

Enter your "C" number (make sure to use a capital C)

Enter your Date of Birth in the MM/DD/YYYY format

Click "Next"

Students can view their Refund Reimbursement Summary through the Sallie Mae website to determine their refund status.

Please note that all stop payment requests for a lost refund check must be requested by completing an agreement form in the Business Office. The agreement states that the student authorizes the college to deduct the applicable stop payment fee of \$15 from the credit balance refund prior to reissuance. Once the stop payment is issued, it cannot be revoked. The student must agree that if the original refund is found, the student must return it to Calhoun and, if the check is cashed, the student is responsible to pay the full amount of the check plus any applicable fees to Calhoun immediately. The student must also understand that it is the student's responsibility to register with Sallie Mae and to select the MyFlexCard or direct deposit reimbursement method. No refunds will be issued to the student until registration is successfully completed.

## ADDITIONAL FEES (SUBJECT TO CHANGE WITHOUT NOTICE)

Additional charges by the institution and not mentioned above include the following:

1. Returned check fee (by Alabama law) \$25\*
2. Parking traffic citations (variable, depending on type of citation); check student handbook
3. Tobacco use violation citation (see page 8)
4. Replacement and processing fees for Library books checked out and not returned (variable).
5. Audit fees (auditing a course costs the same as taking the course for credit)

\*Negotiating a worthless negotiable instrument is a Class A misdemeanor. Pursuant to Alabama law (Act No. 80-200, S. 317), a person will be given 10 days to tender payment of the full amount of such instrument plus a service charge of not more than \$25. Unless this amount is paid in full within the specified time, the individual may assume that this instrument will be turned over to the proper authorities for criminal prosecution.

## GENERAL EDUCATION DEVELOPMENT (GED) TEST FEE

Those desiring to take the General Education Test at Calhoun Community College will be required to pay a \$25 fee. Call 256-306-2830 or 256-306-2610 for more information.

## RESIDENCY/OUT-OF-STATE AND INTERNATIONAL STUDENTS

Guidelines for determining "In-State" Tuition Rates

### I. ELIGIBLE FOR "IN-STATE" TUITION

A student or prospective student described in either part A or part B below may be eligible for "In-State" tuition rates. Non-resident students described in Part B must submit a written appeal with documentation to the Tuition Eligibility Committee to

## General Information

obtain “in-state” tuition rates. The Tuition Eligibility Committee will determine whether or not a student meets the criteria. The Committee’s decision is final. All written appeals should be forwarded with documentation directly to the Registrar at Calhoun Community College.

### Resident Student

A Resident Student shall be charged the in-state tuition rate established by the State Board of Education.

A Resident Student is an applicant for admission who is a citizen of the United States or a duly registered resident in the State of Alabama for at least 12 months immediately preceding application for admission, or whose non-estranged spouse has resided and had habitation, home, and permanent abode in the State of Alabama for at least 12 months immediately preceding application for admission.

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 12 months immediately preceding application for admission. If the parents are divorced, residence will be determined by the residency of the parent 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 19 years of age and a married individual under 18 years of age, but excludes an individual whose disabilities of non-age have 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 parents of the student, if the parents are living 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, support person shall 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.

- A. Students participating in the Southern Regional Electronic Campus (or any successor organization) shall be considered Resident Students for tuition purposes.
- B. An individual claiming to be a resident shall certify by a signed statement each of the following:
  1. A specific address or location within the State of Alabama as his or her residence.
  2. An intention to remain at this address indefinitely.
  3. Possession of more substantial connections with the State of Alabama than with any other state.
- C. Though certification of an address and an intent to remain in the state indefinitely shall be prerequisites to establishing status as a resident, ultimate determination of that status shall be made by the institution by evaluating the presence or absence of connections with the State of Alabama. This evaluation shall

include the consideration of all of the following connections:

1. Consideration of the location of high school graduation or GED with three years of application for admission.
2. Payment of Alabama state income taxes as a resident.
3. Ownership of a residence or other real property in the state and payment of state ad valorem taxes on the residence or property.
4. Full-time employment in the state.
5. Residence in the state of a spouse, parents, or children.
6. Previous periods of residency in the state continuing for one year or more.
7. 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.
8. Possession of state or local licenses to do business or practice a profession in the state.
9. Ownership of personal property in the state, payment of state taxes on the property, and possession of state license plates.
10. Continuous physical presence in the state for a purpose other than attending school, except for temporary absences for travel, military service, and temporary employment.
11. Membership in religious, professional, business, civic, or social organizations in the state.
12. Maintenance in the state of checking and savings accounts, safe deposit boxes, or investment accounts.
13. In-state address shown on selective service registration, driver’s 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 full academic year of their most previous enrollment unless there is evidence that the student subsequently has abandoned resident status, for example, registering to vote in another state. Students failing to re-enroll within one full academic year must establish eligibility upon re-enrollment.

### Non-Resident Student (additional persons for resident tuition)

A Non-Resident Student, one who does not meet the standard of having resided in the State of Alabama for at least 12 months immediately preceding application for admission, shall be charged the in-state tuition rate established by the State Board of Education under the following circumstances provided such student is a citizen of the United States.

The dependent student (as defined by Internal Revenue Codes)

- 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 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.

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 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.

Students who reside in Bedford, Franklin, Marshall, Maury, Moore, Lawrence, Lincoln, Wayne, or Giles counties in Tennessee will be assessed tuition at the "in-state" rate upon submission of documentation verifying residency.

## **II. OUT OF STATE STUDENT**

Any applicant for admission who does not fall into one of the categories noted above shall be charged a minimum tuition of two times the resident tuition rate charged by that institution. All international students are assessed at the out-of-state rate and are not eligible for in-state rates.

Students initially classified as ineligible for resident tuition will retain that classification for tuition purposes until they provide documentation that they have qualified for resident tuition. Upon approval, they will receive in-state tuition from that point forward. Tuition will not be refunded retroactively.

## **FINANCIAL AID**

Financial aid is available at Calhoun Community College in a variety of forms. Students needing assistance with college expenses should communicate with personnel in the Office of Student Financial Services at the following address:

Office of Student Financial Services  
Calhoun Community College  
P.O. Box 2216  
Decatur, AL 35609-2216

FINANCIAL AID PROGRAMS AVAILABLE at Calhoun Community College include the following:

1. Alabama Student Assistance Grants
2. Federal Work-Study
3. Federal Pell Grants
4. Federal Direct Student Loan
5. Dorothy B. Johnson Loan Fund
6. Federal Supplemental Educational Opportunity Grants
7. Veterans', Service Members', and their Dependents' Benefits
8. Workforce Investment Act (WIA)
9. Scholarships
  - a. Academic
  - b. Calhoun Foundation
  - c. Performing Arts
  - d. Senior Adult Program
  - e. Scholarships for Disadvantaged Nursing Students (SDS)

### **WHO MAY APPLY FOR FEDERAL FINANCIAL AID PROGRAMS?**

Federal Student Financial Aid Programs are Federal Pell Grants, Federal Direct Student Loan (DSL), Federal Supplemental Educational Opportunity Grants (FSEOG), Federal Work-Study (FWS), Alabama Student Assistance Grants (ASAG), and Workforce Investment Act (WIA).

To qualify for financial aid from one of these five programs, one must:

- demonstrate financial need, except for some loan programs;
- have a high school diploma or a GED certificate, or pass an independently administered test approved by the U. S. Department of Education;
- be enrolled as a regular, degree seeking student working toward a AA, AS, AAS or certificate in an eligible program;
- be a U.S. citizen or eligible non-citizen;
- maintain satisfactory academic progress according to the institutional policy;
- not be in default on a Direct Stafford Loan or Federal Family Education Loan (FFEL); and
- not owe a repayment on any federal financial aid program.

NO EXCEPTIONS WILL BE MADE TO THE ABOVE REGULATIONS.

### **TRANSIENT STUDENTS**

Students from other colleges and universities enrolling only for a few courses and/or during the summer are not eligible to receive Title IV funds.

### **FEDERAL FINANCIAL AID APPLICATION PROCEDURES**

Expenses for tuition, books, supplies, at-home maintenance, transportation, and miscellaneous personal costs are used in preparing an annual budget to help determine the applicant's financial need. Therefore, those who qualify must apply for financial aid each year.

Students who qualify may apply for financial aid at any time. However, processing time is generally four to six weeks; therefore, begin the application process as early as possible. All financial aid application forms and instructions are available in the Office of Student Financial Services as well as the capability to process electronically via [www.fafsa.ed.gov](http://www.fafsa.ed.gov).

Priority in making awards for FSEOG and Federal Work-Study shall be given to students completing the application process prior to April 1 each year. Awards for applications submitted after the deadline will be based on availability of funds.



## **General Information**

### **Dependent/Independent Policy**

The Federal Government has identified for student financial assistance programs certain categories of students who must be considered independent financial aid applicants. As a result, a student is considered an independent financial aid applicant if he or she meets one of the following criteria.

- Student was born before January 1, 1990.
- Student is a veteran or ward of the court or was a ward of the court until age of 18.
- Student has a child who receives more than half support from student.
- Student has a dependent (other than child or spouse) that lives with and will receive more than half support from student through June 30, of the academic year.
- Student is a married student.
- Student is a graduate or professional student.

An independent financial aid applicant is not required to submit parental information in the application process. However, if the independent applicant is married, spousal information must be reported. A student who cannot meet at least one of the above criteria is considered a dependent applicant and must provide parental information in the application process.

## **STUDENT RESPONSIBILITIES**

- Review and consider all information about Calhoun's programs before you enroll.
- Pay special attention to your application for student financial aid, complete it accurately and submit it on time to the right place. Errors can delay receiving your financial aid. Intentional misreporting of information on application forms for Federal financial aid is a violation of the law and is considered a criminal offense subject to penalties under the U.S. Criminal Code.
- Provide all additional documentation, verification, corrections and/or new information requested by either the Office of Student Financial Services or the processing center where you submitted your application.
- Read and understand all forms that you are asked to sign, and keep copies of them.
- Accept responsibility for all agreements you sign.
- Perform, in a satisfactory manner, the work that is agreed upon in a Federal Work-Study job.
- Know and comply with the deadlines for application or reapplication for aid.
- Understand the school's refund policy.
- Maintain satisfactory academic progress for continued financial aid eligibility.
- Notify the Office of Student Financial Services if you are planning to attend another institution.
- Pay any tuition, fees or other expenses not paid by financial aid or scholarships by the deadlines.

### **REFUND POLICY**

A Student Financial Aid (SFA) refund applies when your payments and financial aid credits exceed your charges. The institution must calculate a refund using the refund policies in accordance with state and federal laws and regulations.

## **FINANCIAL AID ENROLLMENT AND ATTENDANCE POLICIES**

### **Enrollment Status**

The Federal Pell Grant will be reduced proportionally for a student enrolling less than full-time (less than 12 semester hours). If a student withdraws from a class or classes, he or she will likely have to repay some or all of their financial aid. If a student withdraws before 60% of the semester has been completed, a percentage of aid will be returned to the Federal program based on the length of time the student is enrolled prior to withdrawing. For example, if a student withdraws when 50% of the semester has elapsed, then 50% of the funds received by the student will be returned to the Federal program. After 60% of the semester has passed, a student is considered to have used all aid received for that semester.

In order to receive a student loan, a student must enroll at least half-time (6 or more semester hours).

### **Attendance Policies**

Title IV funds (Federal Pell Grants, Direct Student Loans and SEOG) are awarded to a student based on the assumption that the student will attend school for the entire period that the funding was allocated. A student begins earning Title IV funding (Federal Pell Grant) on his or her first day of attendance. Calhoun Community College instructors are required to verify attendance beginning the first day of class and for each day that the class meets. Students enrolled who do not attend the first class day after registration will not be eligible to receive Federal Pell Grant, SEOG and/or Federal Student Loan funding.

Attendance is very important. Attendance is taken at each class meeting. Absences are counted beginning with the first class meeting after the student registers. If a student registers and begins class after the first class date, it is the student's responsibility to complete all coursework assigned from the first day of class. The individual course syllabus states the specific policies and guidelines of the course and the student will be held accountable to the individual course syllabus.

Instructors cannot withdraw a student for any reason. If a student fails to officially withdraw from a course, a grade of "F" will be assigned and this can adversely affect a student's financial aid. Withdrawing from a course is the student's responsibility. If a student fails to withdraw and receives an "F", the grade will not be changed without the written approval of the Vice-President for Instruction and Student Success.

## **REPAYMENT POLICIES**

### **Recalculation Policy**

Changes in a student's original enrollment may result in a recalculation of Title IV benefits; therefore students will be paid based on their enrollment status at the time of payment.

FWS funds are **not** considered in the refund process.

### **Repayment Policy**

This policy applies to students who have withdrawn from 100% of

their classes. It does not apply to students who have withdrawn from selected courses.

A repayment is the unearned amount of financial aid that a student receives and must pay back. If the institution determines that the student received Title IV funds in excess of the cost to attend school while still enrolled, then the portion of the Title IV funds not earned must be repaid by the student to Calhoun Community College and/or the SFA programs.

Federal Work Study (FWS) and Student Loan (SL) funds are **excluded** in the repayment policy.

Cash, money order, and cashier's check are the only methods of payment accepted for repayments.

## **SATISFACTORY ACADEMIC PROGRESS (SAP)**

### **Policy**

Federal regulations, HEA Sec. 484(c), §668.16, 668.34, require all schools participating in Title IV Federal Financial Aid programs to have a Satisfactory Academic Progress (SAP) policy that conforms to the requirements detailed below. These requirements apply to all students as one determinant of eligibility for financial aid.

- Your SAP status is based on your entire academic record, at all schools attended (includes all transferrable hours), regardless of whether you received financial aid.
- SAP is calculated each semester after grades have been posted to academic history by the Registrar's Office.
- If after the first term of attendance you are not making SAP, you will be put on a Warning status and allowed to keep aid for one term. Your continued eligibility will be determined after the next term check point.
- If your SAP status is Failure after the check is performed, you will not qualify for financial aid for the following term.
- If your SAP status is Failure and you cannot mathematically attain SAP requirements following the next term, an appeal will not be permissible. Documented mitigating circumstances may allow continued eligibility on a case-by-case basis and will require an academic plan.
- A student may appeal their SAP Failure status only twice during their academic career at Calhoun Community College.

### **GPA and Completion Rate Requirements**

#### **GPA**

- If the student has attempted 1-21 hours they must maintain a 1.5 GPA.
- If the student has attempted 22-32 hours they must maintain a 1.75 GPA
- If the student has attempted 33 or more hours they must maintain a 2.0 GPA.

#### **Completion Rate**

- If the student has attempted 12-21 hours they must maintain a 58% completion rate.
- If the student has attempted 22-32 hours they must maintain a 62% completion rate.
- If the student has attempted 33 or more hours they must maintain a 67% completion rate.

### **Additional Regulations**

- Students are only allowed 150% of the programs length to complete the degree or certificate.
  - Example: General Studies is 64 credits. You are allowed 150% or 96 attempted credits to complete the program successfully. If you do not complete your program in the allotted timeframe your grant will be suspended.
- Transfer hours will be included in the calculations.
- Remedial courses will be included in the calculations.
- Title IV funds (grants and loans) will **only** pay for courses in the student's declared major.
- If you do not meet any of the requirements listed you will be given one warning semester in which you will be eligible to receive aid.
- After the warning semester you must have the required GPA or completion rate to continue to receive financial aid assistance.
- If your funds are suspended you are able to appeal based on any mitigating circumstances that caused you to be unsuccessful in your coursework.
- Courses attempted include any course in which grades of A, B, C, D, F, W, I, S, U or IP are given. Only courses with grades of A, B, C, or D count as earned credits.
- Federal financial aid will **only** pay for repeating a previously passed course one time. Contact the office for information specific to your file.

### **Financial Aid Appeal**

- Students may submit a Financial Aid Appeal if they can provide documented proof of mitigating circumstances. Mitigating Circumstances are those that are beyond the student's control.
- Students must submit the appeal and all documentation pertaining to the appeal, by the published appeal deadline. Submitting a Financial Aid Appeal is **NOT** an automatic approval.
- The Financial Aid Committee will meet each term to review the appeals.
- Students will be notified of the decision made by the committee by e-mail.
- Students must follow the terms of their appeal if approved or their Financial Aid will be suspended.

### **Policy Details**

#### **What happens when you do not meet the requirements?**

- You are no longer eligible for financial aid – including work, loans, grants or scholarships. If on a Warning Status – eligibility may continue (note below).
- Because you do not qualify for financial aid, you must pay your tuition and fees by the payment deadline or your registration will be cancelled by the Business Office.

**Maximum Time Frame (maximum attempted credit hours)** – When you have attempted the maximum credit hours, you are no longer eligible to receive financial aid.

**Is there extended eligibility for a 2nd degree?** – Yes, you may attempt a total of 150% of the hours needed to complete your first degree plus 33 additional hours. The standard is  $64 \times 150\% = 96 + 33 = 129$  attempted hours.

**Low Completion Ratio** – There are three statuses for low completion

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ratio before your eligibility for financial aid is cancelled.

- **Warning Status** – The first time you fall short of meeting the required completion ratio, your status is Warning. You remain eligible to receive financial aid while in warning status.
- **Failure Status (Loss of Eligibility)** – After attending one semester on Warning status, if you do not meet the required completion ratio, your status becomes Failure Status. You are no longer eligible to receive financial aid until the required standards are met. You must successfully appeal to regain eligibility.
- **Probation Status** – After being placed on a Failure Status, AND a student has successfully appealed and financial aid has been reinstated, the student is eligible to receive financial aid. This status is only for one term and quite often will carry conditions and/or stipulations for continued eligibility.

### Appeal Requirements:

1. A typewritten explanation of extenuating circumstances associated with Failure Status. Indicate how these circumstances have changed so that you can comply with regulations in the future. Attach supporting documents to support the extenuating circumstances mentioned in the letter.
2. Include a “student plan of action” for academic improvement. This requires that you meet with an Academic Advisor or access MyCalhoun and get an Academic Evaluation Report.
3. Attach at least one letter of support from someone that can substantiate the extenuating circumstances. This individual should not be a family member. Examples would include a medical doctor, clergy, professional, etc.
4. Attach the SAP Appeal form and the SAP Evaluation Form.
5. The appeals forms must be provided to the Office of the Student Financial Services within the prescribed dates as noted on the SAP Appeal Form. Failure to provide these within the prescribed dates will result in a delayed determination.
6. An objective committee, composed of selected individuals outside the Office of Student Financial Services, determines whether the appeal is approved. The decision of the Appeals Committee is final and cannot be appealed further.
7. Appeal Denials or Non-appeals – If you are denied an appeal or you decide not to appeal, you must complete the necessary hours and earn the appropriate grades. Once you have reached the prescribed standards you become eligible to receive financial aid.

### No Progress (receiving all Fs or all Ws)

In addition, any student that fails to make progress by receiving all Fs in any given semester will be placed on SAP Failure and will immediately lose eligibility for financial aid beginning the next semester.

Students receiving all Ws will be placed on SAP Warning beginning the following semester regardless of the students' cumulative GPA, and their continued financial aid eligibility will be checked consistent with policy (the following term).

### INFORMATION ON SPECIFIC FINANCIAL AID PROGRAMS

1. **ALABAMA STUDENT ASSISTANCE GRANT**  
The Alabama State Grant Program provides additional assistance to undergraduates who demonstrate

exceptional financial need. Students who receive Pell Grants with the lowest family contribution figure (FC) are eligible. The Alabama State Grant is not a loan; therefore, the funds do not have to be paid back.

#### 2. FEDERAL WORK-STUDY

The College Work-Study Program provides employment for Calhoun students who need financial assistance. Students work part-time for the college while attending classes.

#### 3. DOROTHY B. JOHNSON LOAN FUND

This fund is available to students with an immediate cash flow problem and may be used to cover the cost of tuition and books. It must be repaid from grant or individual accounts within the semester borrowed.

#### 4. FEDERAL PELL GRANT

The Pell Grant Program provides financial assistance for students who qualify for funds in order to attend a postsecondary educational institution. A Pell Grant is not a loan; therefore, the funds do not have to be paid back. Students can receive a Pell Grant for a maximum of twelve semesters.

#### 5. FEDERAL PLUS LOAN PROGRAM

The Federal PLUS Loan Program provides loans to parents of eligible dependent students who need additional financial assistance in meeting postsecondary educational expenses. Eligibility is not based on income. This program is intended to supplement the Federal Stafford Loan Program.

A parent may receive an amount not to exceed the student's estimated cost of attendance minus any financial aid the student has been or will be awarded during the period of enrollment. There are no aggregate limits.

#### 6. FEDERAL DIRECT STUDENT LOAN

The Direct Student Loan (DSL) program is a loan program where a student may borrow funds to cover his/her educational expenses. Students may borrow either a subsidized or unsubsidized loan.

A **subsidized** loan is awarded on the basis of financial need. You will not be charged any interest before you begin repayment or during authorized periods of deferment. The federal government “subsidizes” the interest during these periods.

An **unsubsidized** loan is not awarded on the basis of need. You'll be charged interest from the time the loan is disbursed until it is paid in full. If you allow the interest to accumulate, it will be capitalized; that is, the interest will be added to the principal amount of your loan and additional interest will be based upon the higher amount. This will increase the amount you have to repay. If you choose to pay the interest as it accumulates, you'll repay less in the long run.

- a. If you are a first-time borrower, your first payment will not be disbursed until 30 days after the first day of classes.

- b. Loan Entrancing Counseling is mandatory for all borrowers.
- c. Students placed on financial aid probation are not eligible for the student loan program(s).

7. **FEDERAL SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANT**

The FSEOG Program provides additional assistance to undergraduates who demonstrate exceptional financial need. Students who receive Pell Grants are eligible. The Supplemental Educational Opportunity Grant is not a loan; therefore, the funds do not have to be repaid.

8. **VETERANS, SERVICEMEMBERS, AND THEIR DEPENDENTS' BENEFITS**

The Veterans Affairs Office is located in Room 101R at the Huntsville Campus. Qualified students may also submit paperwork through the Financial Aid Office in the Chasteen Student Center on the Decatur campus. Appointments for Decatur area students may be arranged at the main campus if the veteran has questions and concerns or may call 256-306-2500 or 256-890-4718. The VA Office is the certifying authority for veterans, active duty service members, reservists and National Guard, and dependents that qualify for the federal program. The VA Office serves as the link between the Regional Veterans Affairs Office and the VA benefit recipient who is enrolled at Calhoun Community College.

Calhoun Community College does **not** participate in the VA Advanced Pay Program. Veteran students (except Chapter 31- Rehabilitation and Employment, and Chapter 33 Post 9/11 G.I. Bill) are required to pay all tuition and fees. After certification has been sent to the Regional Office, the education benefits will be sent directly to the veteran.

Calhoun Community College currently participates in the VA Advance Pay Program. The advance will pay the first and second month checks to the school to cover tuition/fees. Requests must be submitted to the Calhoun VA Office at least 35 days prior to the start of the semester.

<b>Office Hours</b>	<b>Monday through Thursday</b>
Huntsville Campus	7:45 a.m. – 5:45 p.m.
	<b>Friday</b>
	7:45 a.m. - 11:30 a.m.
<b>Decatur Campus</b>	<b>Monday through Thursday</b>
Financial Aid	7:30 a.m. – 6:00 p.m.
	<b>Friday</b>
	7:45 a.m. – 11:45 a.m.

**FAX 256-306-2948**

To apply for the **Alabama G.I. Dependents' Scholarship Program**, please follow the procedure listed below:

- (1) Apply for certificate at your local county Veterans

Affairs Office.

- (2) When student receives certificate from the Alabama Department of Veterans Affairs in Montgomery, Alabama, contact the Business Office, Calhoun Community College at 256-306-2541 or 256-890-4700 or 1-800-626-3628.

Courses under Course Number 100 will not be approved for students under this program. Benefits include tuition, technology fee and books only. Facility fees must be paid by the student each semester.

- 9. **WORKFORCE INVESTMENT ACT (WIA)** is a federally funded program to provide training assistance to dislocated individuals. Students may qualify for tuition assistance, book allowances and tool assistance. Interested dislocated workers should apply at their local Alabama State Employment Service.

10. **SCHOLARSHIPS AND GRANTS-IN-AID**

a. **ACADEMIC SCHOLARSHIPS**

March 1st is the date on which applications for academic scholarships are due. Scholarship applications are available online at Calhoun's website at [www.calhoun.edu](http://www.calhoun.edu). Each application is reviewed by the Calhoun Scholarship Committee, and each award is based upon academic achievement.

b. **CALHOUN FOUNDATION SCHOLARSHIPS**

The Calhoun Community College Foundation provides tuition scholarships based upon a variety of qualifying criteria. Recipients must have at least a "B" average for high school grades and/or maintain the average for courses taken at Calhoun. Scholarships are renewable for four semesters unless otherwise specified in the scholarship guidelines.

c. **FINE ARTS SCHOLARSHIPS**

Fine Arts Scholarships are available for students in art, graphic design, photography, voice, instruments, drama, and music industry. Additional information is available from a faculty member in the Fine Arts Department.

d. **SENIOR ADULT PROGRAM SCHOLARSHIPS**

This program provides tuition free admission for those who are 60 years of age and older. Students must enroll for credit courses and meet college and program of study admission standards. The award is based upon space availability in each course. Fees and other costs, other than tuition, are paid by the senior adult student.

e. **STUDENT ACTIVITY AND LEADERSHIP SCHOLARSHIPS**

These scholarships are received by:

- 1. President, Vice-President, and Secretary/Treasurer of the Student Government Association;
- 2. Editor and assistant editor or photographer of the college literary magazine, *The Muse*;



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3. Members of the College's official student ambassadors, the Warhawks; and
4. President of Phi Theta Kappa

If a student leaves the position for which the scholarship was awarded, the scholarship may be passed to a successor. In addition, the student leaving the leadership position will reimburse the college a prorated amount of the tuition scholarship based upon the amount of time remaining in the college term.

f. **SCHOLARSHIPS FOR DISADVANTAGED NURSING STUDENTS**

These scholarships are awarded through a grant funded by the U.S. Department of Health and Human Services. These scholarships are awarded to full-time, financially needy students from disadvantaged backgrounds enrolled in the Associate Degree Nursing (ADN) Program. For purposes of SDS eligibility, full-time status is based on a combination of traditional contact hours and clinical hours in the Associate Degree Nursing Program.

Disadvantaged backgrounds as defined by HRSA (Health Resources and Services Administration) include: (a) comes from an environment that has inhibited the individual from obtaining the knowledge, skill, and abilities required to enroll in and graduate from a school (environmentally disadvantaged); or (b) comes from a family with an annual income below a level which is based on low-income thresholds according to family size published by the U.S. Bureau of the Census, adjusted annually for changes in the Consumer Price Index, and adjusted by the Secretary of Health and Human Services (HHS) for adaptation to this program (economically disadvantaged).

For more information, contact the SDS Grants Office or Dr. Debi Hendershot at 256-306-2581.

**PLEASE NOTE: LPN students do not qualify for SDS Scholarships.**

**Additional financial aid information can be obtained from the Office of Student Financial Services.**

## **BOOKSTORE**

The College Bookstore is an auxiliary service owned and operated by Follett. The purpose of the Bookstore is to provide the college community with the widest possible selection of goods and services of high quality at equitable prices, with particular attention paid to academic requirements. For your convenience, the bookstore is located at both the Decatur and Huntsville campuses.

### **BUSINESS HOURS**

**DECATUR CAMPUS**  
**Monday-Thursday**  
7:45 a.m.-5:00 p.m.  
**Friday**  
7:45 a.m.-12:00 noon

### **Special Hours**

First week of class, special hours will be posted. Hours may vary when classes are not in session.

Special seasonal hours will be posted on the bookstore website:

**[www.calhouncatur.bkstr.com](http://www.calhouncatur.bkstr.com)**  
**[www.calhounhuntsville.bkstr.com](http://www.calhounhuntsville.bkstr.com)**

### **HUNTSVILLE CAMPUS**

#### **Monday-Thursday**

9:00 a.m. - 6:00 p.m.

#### **Friday**

9:00 a.m. - 11:45 a.m.

(Bookstore hours are subject to change without notice.)

Hours may vary when classes are not in session.

### **METHOD OF PAYMENT**

Payment may be made by cash, personal check or credit card. The following policy governs payment by check:

1. Checks are accepted for the amount of purchase only.
2. Checks must be made payable to the Calhoun College Bookstore.
3. Phone number, student number or driver's license number and address must be recorded on face of check.

### **REFUND POLICY**

Refunds will be granted up to seven (7) days after the first day of class with receipt. After the first week of classes, customers will have two days with receipt. There will be no refunds during the week of finals.

### **BOOK BUY BACK POLICY**

Textbooks may be sold to the Bookstore any day that the bookstore is open. General buyback policy is as follows:

1. You must present a photo ID.
2. All titles will be considered for buyback regardless of where you purchased them. Price will be determined by market demand and may be purchased for as much as 50% of original purchase price.
3. Normal markings and underlining expected; however, books with excessive markings, water stains, broken bindings, loose pages, heavily soiled, etc. will not be purchased.

## **SECURITY/POLICE**

The office of the Director of Calhoun Police is located in building #6 across from the Machine Tool building on the Decatur campus.

The campus police at the Huntsville/Cummings Research Park location can be contacted in the Administrative office at that location. Officers are available whenever classes are in session. Calhoun police have the responsibility for the following:

1. Assisting students

2. Enforcing traffic and parking regulations and state laws
3. Providing for parking and traffic flow for special events (Students, faculty, and staff must notify security when special events are scheduled on campus)
4. Issuing decals
5. Maintaining building security
6. Responding to any emergency situation

Phone: 256-306-2575, Decatur  
256-890-4741, Huntsville

Emergency: 256-306-2911

**NOTE:** In case of a medical emergency, security will, at the individual's expense, call an ambulance for transporting to a nearby emergency room for treatment.

## INSTRUCTIONAL INFORMATION AND REGULATIONS

### BEGINNING FALL 2012

*All first-time freshmen are required to enroll in ORI 101, Freshman Orientation, during their first semester at Calhoun Community College.*

## CLASSIFICATION OF STUDENTS

### University Parallel

Students who plan to enroll for coursework which will transfer to a four-year institution are considered to be university parallel students. Enrollment may be for a minimum of one term or through completion of a two-year degree. Students should meet with an academic advisor to discuss programs of study and transfer requirements.

### Transient

Students who have previously attended another college and who will be enrolled for only one semester and then return to the college of original enrollment are considered to be transient students. Students must submit an official letter from the parent institution they have been attending which specifies the course(s) to be taken and certifies that the credits earned will be accepted by transfer.

### Career and Technical

Students follow one of the career, technical, or allied health programs which lead to a certificate or degree.

### Course Load

Students are classified according to the course load based on the credit hours for which they are enrolled on a semester basis.

Credit Hour Loads	Credit Hours
Full-Time	12 or more
3/4 Time	9 - 11
Half-Time	6 - 8
Less than Half-Time	1 - 5

**NOTE:** To be eligible for financial assistance a student typically must be enrolled for at least 6 credit hours.

### Drop-and-Add Period

The drop and add period for fall and spring will be the first two days of each semester and the first two days of each summer semester. No grade will be assigned if a course is dropped during the drop/add period. See the section of this catalog on refund policy for refund information.

## GRADING POLICIES

### Withdrawals

Students may withdraw from class, or the College, prior to the last day of the withdrawal period for the semester or term, as published in the College Schedule. To withdraw from class or the college, students must withdraw using MyCalhoun. Students who withdraw prior to the deadline will be assigned a grade of "W". 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.

### Grades

The following letter symbols are used to indicate the student's level of achievement in courses taken:

- A** - Excellent (90-100)
- B** - Good (80-89)
- C** - Average (70-79)
- D** - Poor (60-69)
- F** - Failure (Below 60)

- S** - Successful
- U** - Unsuccessful

- AU** - Audit
- I** - Incomplete
- IP** - In Progress
- W** - Withdrawal

**NOTE:** Some programs and/or courses may require a higher numeric range than the standard noted above.

**A, B, C,** are letter grades which represent levels of accomplishment sufficient to allow students to progress satisfactorily toward graduation and/or prerequisite requirements.

**D** is a letter grade which indicates minimum level accomplishment. Some courses/programs require a minimum of a "C" grade to progress to the next course or to remain eligible for continuation in a program of study.

**F** is the letter grade assigned to students who fail to meet minimum course requirements.

**W** is the letter grade assigned when a student withdraws from a course/courses after the drop/add period until the withdrawal deadline; the specific date can be found in the Class Schedule for each term.

**I** as a letter grade indicates incompleteness of course requirements; thus an "I" is not a satisfactory completion and will not allow a student to progress to the next course level. An "I" is awarded only under extenuating circumstances. An "I" typically is used to signify

## General Information

that an instructor has granted permission to a student to complete work or that the Dean or designee has approved the student take his/her final examination late. Other circumstances as approved by the instructor and/or Dean or designee may be granted. The student must be aware that he is **not** to sign up for the course again, but to see the instructor **promptly** and complete the course requirements.

**Regardless of the circumstances, a grade of I must be changed by the end of the following term or it will be converted to an F.**

**IP** as a letter grade indicates IN PROGRESS and may only be assigned to developmental credit courses, practicums, and internships. The awarding of an IP is the option of the instructor, provided the student has been in regular attendance and has demonstrated conscientious effort yet has not achieved course mastery. Students who receive an IP must repeat the course; it is not satisfactory completion. An IP may be used only once for a class.

**S** – Co-op, practicums, and training for Business and Industry.

**U** – Co-op, practicums, and training for Business and Industry.

### Grade Points

A student's academic standing or Grade Point Average (GPA) is a means to evaluate the overall quality of work being done. In order to perform this measure, the following grade points are assigned.

A	4	grade points per hour
B	3	grade points per hour
C	2	grade points per hour
D	1	grade point per hour
F	0	grade points per hour
S	0	grade points per hour
U	0	grade points per hour

The student's grade point average is obtained by dividing the total grade points earned by the total number of semester hours for which the grades of A, B, C, D, or F are assigned. Grades of W, IP, and AU do not affect the grade point average. A student must have a total overall grade point average of 2.0 (C) on all courses used for graduation in order to be eligible for graduation from Calhoun. (Developmental courses will not apply to the graduation audit).

### Grade Appeal Procedure

Student grade appeals may be expected to occur in a large and complex institution. The prevailing philosophy of the institution is that such appeals be handled informally if possible. Only after full and comprehensive attempts made by students and faculty to resolve grade appeals have failed should a formal procedure be initiated.

There is no appeal procedure if six months of calendar time have elapsed; therefore, the grade appeal procedure must be initiated by the student within six months from the time the grade is received. There are two procedures for appealing a final grade. The first applies if the appeal is within the first eight weeks of the semester immediately following the one for which the grade was received. The second final grade appeal procedure applies if the appeal is after the first eight weeks of the succeeding term.

- A. Procedure for appealing a final grade during the first eight weeks of the following semester:

A student may appeal the final grade received for a course

by following the procedures outlined here. Grades received during the academic term for performance, tests, or other activities are private and confidential material between the student and the instructor and are not intended to be covered by the procedures. Daily grades may be considered only as evidence in the formal part of the appeal process, viewed solely on the basis of "a need to know," and handled in such manner so as to continue confidentiality.

1. The student should consult with the instructor promptly after receiving a final grade which he or she feels is unwarranted. If the appeal is not satisfied at this level, the Dean of the Division should meet with either or both in an informal attempt to reach closure. The burden of proof in the grade appeal lies with the student. If the appeal is resolved at this point, a "memorandum of record" should be prepared by the Dean of the Division and be maintained on file. The memorandum will serve as the institution's record that the disagreement was resolved informally.
2. If closure is not reached by using the informal approach, the student may file a formal grade appeal with the appropriate Dean of the Division. This writing must be dated and filed with the appropriate person prior to the midpoint of the succeeding semester. The formal grade appeal must state the reasons for the request, include the dates involved, name the instructor who assigned the grade, and include the previous attempts at resolving the situation informally. The burden of proof in the grade appeal lies with the student.
3. Prompted by the Dean of the Division, a divisional grade appeal committee is limited to two calendar weeks from the date of the appeal to convene, gather evidence, and conduct a hearing. Appropriate evidence in support of the appeal must be provided by the student. However, the committee may request the student's materials from the instructor in cases where the instructor possesses the evidence. Grade and attendance records may be requested of the instructor. However, neither tangential issues nor individual personalities will be considered by the committee. To maintain the confidentiality of the hearing, only committee members, the instructor, and the student may be present at the proceedings.

Each division shall maintain a divisional grade appeal committee. Divisions may elect members or members may be appointed by the Dean of the Division. The divisional grade appeal committee should contain no fewer than three full-time faculty members. Members should rotate off the committee on a yearly basis. If a committee member is unable to serve due to involvement in the specific case being heard, the division chair will appoint a substitute for that particular case. The chairperson of the Divisional Grade Appeal Committee will be elected by the membership and will have the following duties: arrange times and places for the committee meetings and hearings; inform in writing all parties of the committee's activities; ensure that proper records are prepared, maintained, and

safeguarded; and chair all meetings and hearings.

The Chair of the committee shall ensure that hearings are reasonable and fair; that only matters properly before the committee are discussed; that meetings and hearings are conducted in a professional atmosphere; and that every attempt is made to protect the integrity of the parties involved.

Committee members must be present at all hearings in order to vote following deliberations. (If, in the committee's opinion, special experience or expertise is necessary for sufficient information to be available or if the appeal is of such sensitivity that the committee should not hear the appeal, the Chairperson shall so advise the Vice President for Instruction and Student Success or designee. The Dean will then appoint a special appeals committee of institution-wide membership to hear the specific case.)

4. Following the conclusion of the hearing, the committee will deliberate privately as appropriate and prepare a written recommendation for the Vice President of Instruction and Student Success or designee to be submitted not later than seven calendar days after the date of the hearing. Their recommendation will be either to retain the grade or to alter it. If the recommendation is to alter, the specific grade after alteration will be indicated. The recommendation should include a brief summary of the facts of the hearing and the reasons for the committee's decision. The deliberations and recommendation of the committee are confidential. The committee may meet with the Vice President of Instruction and Student Success or designee at the Vice President's discretion to discuss actions, deliberations, and recommendations.

5. The Vice President of Instruction and Student Success or designee will provide a statement of the decision to the student within one calendar week following the committee's recommendation. Copies of the statement of decision will be provided to the appeal committee, the Division Chairperson, and the faculty member involved. The decision of the Vice President of Instruction and Student Success or designee is final. (CCC)

- B. Procedure for appealing a final grade after the first eight weeks of the following semester:

Within six months from the time the student received the grade being appealed, the student must initiate the process with the instructor of the course for which the grade was received. This appeal process is strictly informal in nature and must remain a discussion between the student and the instructor of the course. The instructor's decision is final. There is no appeal procedure for final grades if six months of calendar time has elapsed.

#### **Course Forgiveness Policy**

Courses undertaken at Calhoun may be repeated at Calhoun. The last grade earned excluding W, and AU will be the grade used for graduation audits. Courses may not be repeated at another institution and

used as a component of Calhoun's Course Forgiveness Policy.

1. If a student repeats a course once, the second grade (excluding grades of W, IP or AU) replaces the first grade in his/her cumulative grade point average if the student files a written request with the Admissions and Records Office.
2. When a course is repeated more than once, all grades for the course, excluding the first grade, will be employed in computation of the cumulative grade point average provided the student has requested course repeat as noted in item 1.
3. 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. A transfer institution may choose to average all coursework regardless of Calhoun's institutional policy.
4. A student must request, by submission of the appropriate form, that the Registrar implement the "Course Forgiveness" policy after a course has been repeated.

#### **Auditing a Course**

Instructions for auditing a course at Calhoun are as follows:

- A. A student who desires to audit a course must be admitted to the College;
- B. The student's intent to audit a course must be made by the end of the registration/drop/add period and may not be changed thereafter. Students may not change from "Credit" to "Audit" or "Audit" to "Credit" after the drop/add period. The Registrar will designate the student's audit status on the class roll.
- C. The student who audits a course will complete the same assignments as students who register for credit. In addition, the instructor may require the student who audits to take examinations.
- D. Students may not audit any health science courses.
- E. The cost of auditing a course is the same as for taking a course for credit.

#### **ACADEMIC PROGRAM CHANGING**

Request for a change of academic program should be submitted in writing to the Office of Admissions and Records.

Students should be aware of the possible consequences resulting from a change of academic program — transferability of courses completed, new requirements for graduation, job potential, limit on total number of courses for financial aid eligibility, etc. Students should confer with an advisor prior to initiating a change of academic program.

Students affected by VA regulations should consult Veterans Services staff in the Financial Aid Office prior to initiating a change of major.

#### **ACADEMIC BANKRUPTCY**

- A. A student may request in writing to the Registrar a declaration of academic bankruptcy under the following conditions for coursework attempted with Calhoun:
  1. If fewer than three (3) calendar years have elapsed since the semester for which the student wishes to declare bankruptcy, he/she may declare academic bankruptcy on all coursework taken during that one



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semester provided the student has completed a minimum of 18 semester hours of coursework at Calhoun since that semester. All coursework taken during the semester for which academic bankruptcy is declared, including hours completed satisfactorily, will be disregarded in the cumulative grade point average.

2. If three (3) or more calendar years have elapsed since the most recent semester for which the student wishes to declare bankruptcy, the student may declare academic bankruptcy on all coursework taken during 1-3 semesters/terms provided the student has completed a minimum of 18 semester hours of coursework at Calhoun since the bankruptcy semester occurred. All coursework taken, during semester(s) for which academic bankruptcy is declared, including hours completed satisfactorily, will be disregarded in the cumulative grade point average.
- B. When academic bankruptcy is declared, the term "ACADEMIC BANKRUPTCY" will be noted on the transcript for each semester affected. When academic bankruptcy is declared, the transcript will reflect the semester of its implementation and the transcript will indicate "ACADEMIC BANKRUPTCY IMPLEMENTED."
- C. A student may declare academic bankruptcy only once.
- D. Implementation of academic bankruptcy at Calhoun does not guarantee that other institutions will approve such action. This determination will be made by the respective transfer institution(s).

### Student Course Overloads

A full-time student must be enrolled for 12 semester credit hours or more each term. Students may register for more than 19 semester credit hours only with the written permission of the Vice President of Instruction and Student Success or designee. No student will be approved for more than 24 semester credit hours in any one term for any reason. "Miniterms/minimesters" are only a part of a full term/semester and are not considered as stand-alone/individual terms. No more than two (2) laboratory courses will be approved as part of any overload request.

To be considered for an overload, the student must meet the following criteria:

1. Have successfully completed a minimum of 18 semester credit hours with Calhoun; and
2. have a minimum of a 3.0 GPA for all coursework completed at Calhoun.

## ADVANCED STANDING CREDIT

### Credit by Transfer

Refer to General Principles for Transfer of Credit on page 11.

### Credit from Nontraditional Sources

Calhoun Community College provides an opportunity for students to earn a reasonable amount of credit toward the Associate Degree or Certificate through methods other than formal classroom instruction. While nontraditional credit may apply toward degree and certificate programs granted by the college, it should not be assumed that such credit will automatically be accepted by other colleges.

Not more than 25% of total credit required for any program may be awarded through nontraditional means towards a degree from Calhoun. Students may not earn credit through nontraditional

sources for any course in which a grade has been previously received. The types of nontraditional credit and procedures to follow are listed below:

### COLLEGE LEVEL EXAMINATION PROGRAM-CLEP

Calhoun Community College honors credit earned through CLEP examinations provided appropriate scores are achieved and certain conditions are met. A minimum score at or above the 50th percentile is required for specific course credit.

Any elective credit earned by nontraditional means may apply toward the total number of hours required for graduation but may not apply toward specific requirements in a particular subject area. For example, elective credit in English will not meet degree requirements of six hours of composition.

Credit for SUBJECT EXAMINATIONS may be granted provided the student has not been enrolled for more than one week in the course for which credit is to be earned. CLEP credit is not granted for college level courses previously failed, for courses in which credit for higher level course work has been earned, or for both subject examination and its course equivalent. The CLEP Subject Exam will supersede the CLEP General Exam; credits will not be awarded for the Subject and General Exam in the same discipline. Only elective credit will be given for general exams.

### CLEP SUBJECT EXAMINATIONS

#### Scores for computer based tests only.

Examination	Approx. Score	CCC Equivalent	Sem. Hrs.
<b>Business</b>			
Financial Accounting.....	50	BUS 241 .....	3
Information Systems and Computer Applications.....	50	CIS 130.....	3
Management, Prin.....	50	BUS 275 .....	3
Marketing, Prin.....	50	BUS 285 .....	3
<b>Composition and Literature</b>			
American Literature.....	50	ENG 251-252 .....	6
College Comp. ....	50	ENG 101-102 .....	6
College Comp. Modular.....	50	ENG 101 .....	3
English Literature .....	50	ENG 261-262 .....	6
<b>Science and Mathematics</b>			
Biology .....	50	BIO 103-104 .....	4-8
Calculus.....	50	MTH 125.....	4
Chemistry.....	50	CHM 111-112 .....	8
Pre-calculus .....	50	MTH 112.....	3
College Algebra .....	50	MTH 100.....	3
<b>Social Sciences</b>			
American Government.....	50	POL 211.....	3
Human Growth & Dev. ....	50	PSY 210.....	3
Macroeconomics.....	50	ECO 231.....	3
Microeconomics.....	50	ECO 232.....	3
Psychology, Intro.....	50	PSY 200.....	3
Sociology, Intro.....	50	SOC 200 .....	3
History of US to 1877.....	50	HIS 201 .....	3
History of US II 1865- present .....	50	HIS 202 .....	3
Western Civ I.....	50	HIS 101 .....	3
Western Civ II.....	50	HIS 102 .....	3

**Foreign Language**

Credit for CLEP French, German, and Spanish allowed. Check with Admissions or Advising for specific test and scores.

The scores listed above are reflective of the computerized CLEP examination. Students who have CLEP scores from a paper and pen examination should contact the Admissions and Records Office for minimum scores to determine credit awards. Scores are estimates and subject to change without notice.

The policy of granting credit through CLEP at Calhoun Community College may differ from policies at other colleges. Check with other colleges to obtain additional information. Area colleges offering the CLEP are Alabama A&M, Athens State University, and UA Huntsville.

**POLICE ACADEMY WORK**

Credit may be available for completion of approved Peace Officer Training Courses/Programs. Consult the Dean for Social Sciences and Humanities for information.

**SPECIALIZED MILITARY TRAINING**

Calhoun adheres to policies prescribed by the Guide to the Evaluation of Educational Experiences in the Armed Services published by the American Council on Education, in granting credit for military course work.

**CREDIT FOR PRIOR EXPERIENCE**

Credit may be granted through the following methods only:

1. Comprehensive Departmental Challenge Examinations;
2. CLEP General or Subject Examinations;
3. An evaluation of training as detailed in the National Guide to Educational Credit for Training Programs;
4. Professional Secretary Certification (CPS);
5. Other experiences which have been received by the American Council on Education and credit recommendations published.

**ADVANCED PLACEMENT TEST (AP)**

Credit for the Advanced Placement Test will be awarded for a minimum score of three on subject tests. Not more than 25% of total credit required for any program may be awarded through non-traditional means towards a degree from Calhoun.

**INTERNATIONAL BACCALAUREATE (IB)**

Credit may be awarded for IB courses provided:

- Calhoun Community College recognizes International Baccalaureate (IB) credit with a score of 4 on the higher level examinations.
- Reports of IB scores should be sent to the Calhoun Office of Admissions for evaluation.
- Additional credit may be awarded on a course-by-course basis as approved by the department associated with the student's program. The department will determine the application of credits toward degree requirements.
- Any credit awarded will be recorded without grades or quality points and will not be included in the calculation of grade point average.

**SPECIALIZED TRAINING WITH INDUSTRY**

Credit may be awarded for industry training provided:

1. A specific contractual agreement is in effect.
2. Industry training has been reviewed by the appropriate faculty in

the discipline affected or designee.

3. In no way shall this be interpreted as a means of reviewing industry training on an individual basis. Calhoun Community College does not conduct portfolio reviews.

**STATEWIDE CAREER/TECHNICAL ARTICULATION AGREEMENTS**

Effective January 2006, students who have completed technical coursework in high school and enroll in the same program with Calhoun Community College may be eligible for advanced credit. Programs that are involved include: Industrial Maintenance, Machine Tool Technology, Air Conditioning and Refrigeration, Electrical Technology, Design Drafting Technology, Health Science, Aerospace-Welding, Computer Science, Cosmetology, Business, Early Childhood Education, Cooperative Education, Graphic Design, and Photography.

To qualify for possible credit, a student must:

1. have earned a "B" or higher in courses to be articulated,
2. must be admitted to Calhoun,
3. credit allowed only for courses in their program of study, and
4. no more than 16 months may have elapsed since high school graduation.

For specific information on programs, what credit may be awarded, and any other limitations, please contact the Division of Business, Technologies and Workforce Development, faculty in specific programs, or the Office of Admissions and Records.

**ADVANCED PLACEMENT VIA TECH PREP ARTICULATION AGREEMENTS**

Please refer to the Tech Prep section of this catalog for additional information.

**PROBATION AND SUSPENSION**

**A. Academic Standards of Progress**

According to the number of hours a student has attempted with Calhoun, the following GPA levels must be met to remain in good academic standing:

1. 12-21 credit hours attempted at Calhoun, minimum cumulative GPA of 1.50;
2. 22-32 credit hours attempted at Calhoun, minimum cumulative GPA of 1.75;
3. 33 credit hours or more attempted at Calhoun, minimum cumulative GPA of 2.00.

**B. Clear Academic Status**

A student's status is clear when the cumulative GPA is at or above the GPA required for the total number of credit hours attempted at Calhoun.

**C. Academic Probation**

1. When a student's cumulative GPA is below the GPA required for the number of hours attempted at Calhoun, the student is placed on Academic Probation.
2. When a student on Academic Probation has a cumulative GPA below the requirement based on hours attempted at Calhoun, but the semester GPA is 2.00 or above, the student remains on Academic Probation.

**D. SUSPENSION - ONE SEMESTER**

When the cumulative GPA of a student on Academic

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Probation remains below the GPA required for the total number of hours attempted at Calhoun and the semester GPA is below 2.00, the student is suspended for one semester. The transcript will read **SUSPENDED - ONE SEMESTER**.

### E. SUSPENSION - ONE YEAR

A student readmitted after serving a suspension or upon appeal re-enters on Academic Probation. If the cumulative GPA remains below the level required for the total number of hours attempted at Calhoun and the semester GPA is below 2.00, the student will be suspended for one calendar year. The student's transcript will read **SUSPENDED - ONE YEAR**.

### F. APPEAL OF SUSPENSION

A student who wishes a reconsideration of his/her suspension, whether it is for one semester or for one year, must do so in writing to the College Admissions Committee. The student may present a rationale and/or mitigating circumstances in support of his/her request for readmission. The decision of the Admissions Committee for an appeal is final.

## ATTENDANCE POLICY

### FOR CLASSES OTHER THAN DISTANCE LEARNING/HYBRID CLASSES:

Attendance is taken for each class meeting. Absences are counted beginning with the first class meeting after the student registers; however, students are responsible for all coursework and assignments made or due from the first day of class. In general, students should have no more than 4 absences for a 15-week term, no more than 3 absences for a 10-week term, no more than 2 absences for an 8-week term, and no more than 1 absence for a 5-week term. Each course syllabus will clearly state the number of absences considered as the acceptable maximum for the class as well as how late arrivals and early departures will be handled. Each course syllabus will also state policies regarding make-up work, if allowed. The policies stated in the course syllabus for a student's specific class will be the policies for which the student will be held accountable. Communication with the instructor concerning absences is essential. If a student has excessive absences, s/he is encouraged to withdraw from the course after consulting with the instructor. Instructors will not withdraw students for any reason. **If a student fails to officially withdraw from a course, this could result in a grade of F and adversely impact financial aid.** Withdrawing from a course is the responsibility of the student. Therefore, a grade of F will not be changed without written approval from the Vice President of Instruction and Student Success. Military personnel who are involuntarily called to active duty for unscheduled and/or emergency situations and those individuals called for jury duty will be excused with official documentation. College related events which the student is required to attend by the club sponsor and which have been approved by the appropriate Dean will also be excused. Official documentation will be required. Make-up work will be accepted under these excused circumstances as outlined in the individual course syllabus.

### FOR DISTANCE LEARNING/HYBRID CLASSES:

The U.S. Department of Education has indicated that documenting a student's attendance in a distance education class by confirming that they have logged in or requiring simple communication with the instructor is not adequate. Instead, an instructor must demonstrate

that a student has participated in class or was otherwise engaged in an academically-related activity.

Based on this Federal requirement, attendance in a Distance Learning or Hybrid course will be recorded within the **FIRST WEEK** of the course by one or more of the following:

- Student contact with the instructor through attendance at an on-site orientation session;
- Student participation in an online orientation session that is tracked through Blackboard's "Student Tracking" feature, or through "Tegrity Reports", followed by an online discussion or assessment;
- Student submission (online or in-person) of completed assessments, assignments, essays, or other course related work

**After the first week**, the student's "attendance record" will be based on the student's meeting course requirements such as submitting assignments or communicating with the instructor as outlined in the course syllabus. It is expected that a student will receive a weekly attendance record based on requirements stated in the course syllabus. If a student does not meet attendance requirements as stated in the course syllabus, the student is encouraged to officially withdraw from the course. **Failure to officially withdraw from the course could result in a grade of F and adversely impact financial aid.**

### Final Examination Attendance

Attendance at final examinations is mandatory. Such examinations are administered in all academic subjects at the end of each semester in accordance with an examination schedule issued by the Dean or designee. Any student who must miss a final examination has the responsibility of notifying his/her instructor to make arrangements to take the final examination on an alternate date, if possible. This is accomplished by filling out a form entitled "Permission to Alter Final Examination Schedule" which may be obtained in divisional/departamental offices. One copy of the form is retained by the faculty member and one copy is retained by the student. Faculty members should not change the published class examination schedule without prior approval from the Dean or designee.

## RECOGNITION OF ACADEMIC EXCELLENCE

### President's List

Calhoun publishes a President's List at the end of each semester. The President's List contains the names of all students carrying 12 or more semester hours who have earned a grade point average of 4.00. Developmental courses will not count toward minimum course load requirement for academic recognition.

### Dean's List

Calhoun publishes a Dean's List at the end of each semester. The Dean's List contains the names of all students carrying 12 or more semester hours who have earned a grade point average of 3.50 through 3.99 and who have made no grade below a "C." Developmental courses will not count toward minimum course load requirement for academic recognition. The GPA is figured by semester, and the Dean's List is not based on the student's cumulative GPA.

### Phi Theta Kappa

Calhoun students who are enrolled in at least one course after the drop/add period ends each semester and who have at least a 3.5 cumulative GPA and have completed at least 12 semester hours creditable toward a two-year degree are invited to join the Sigma Lambda

Chapter of Phi Theta Kappa, the International Honor Society of two-year colleges. Members must maintain at least a 3.0 cumulative GPA to retain membership. Phi Theta Kappa members may qualify for numerous scholarships to four-year colleges and universities throughout the United States. Phi Theta Kappa members are authorized to wear the prestigious gold membership pin after induction, and the distinctive gold tassel, honors stole and double honor cords at the Calhoun graduation ceremony. A graduating member will have the Phi Theta Kappa gold seal affixed to the awarded degree. The academic transcript of a member displays the Phi Theta Kappa designation. Membership in the organization is considered to be an asset on an employment resume.

### **Sigma Kappa Delta**

Sigma Kappa Delta is the English Honor Society for two-year colleges. Sigma Kappa Delta national headquarters is located at Calhoun Community College. The society strives to:

- Confer distinction for high achievement in English Language and Literature in undergraduate studies;
- Provide, through its local chapters, cultural stimulation on college campuses and promote interest in literature and the English language in surrounding communities;
- Foster all aspects of the discipline of English, including literature, language, and writing;
- Promote exemplary character and good fellowship among its members; and
- Exhibit high standards of academic excellence and serve society by fostering literacy.

Sigma Kappa Delta's central purpose is to confer distinction upon students of the English language and literature in undergraduate studies. Our parent organization, Sigma Tau Delta, the International English Honor Society, is the proud sponsor of the National English Honor Society (NEHS). NEHS, a program of Sigma Tau Delta serves students and faculty who share a commitment to excellence in English Language Arts.

Calhoun students must meet the following criteria for membership:

- Have completed a minimum of one college-level English Language (composition) or literature course at 100 level or above with a "B" average or better;
- Have completed at least 12 semester hours or the equivalent quarter hours of college credit; and
- Have a minimum 3.0 GPA on a 4.0 scale.

## **GRADUATION**

Calhoun Community College awards:

- the Associate of Science degree,
- the Associate of Applied Science degree, and
- Certificates.

Even if you plan on transferring to pursue another degree, receiving your Associate's degree from Calhoun Community College is valuable and a great start to your academic career.

Applying for graduation at Calhoun is easy. Simply go to [www.calhoun.edu](http://www.calhoun.edu), click on Admissions, choose Applications and Forms, print and complete the graduation application and survey and return to the Admissions and Records Office. NOTE: There is no cost to have your degree posted on your academic transcript. However, to receive a

copy of your diploma, the cost is \$20 per degree.

## **DEGREES**

The **Associate of Science Degrees** are designed for those students who plan to transfer to a four-year institution. The associate of science degrees are comprised of at least 60 semester credit hours, but no more than 64 semester credit hours.

The **Associate of Applied Science Degrees** are designed for those students who plan to seek employment based upon the competencies and skills attained through these programs. While not designed to meet the needs of students who transfer to a four-year institution, portions of these programs may do so. The associate of applied science degrees are comprised of at least 60 semester credit hours, but no more than 76 semester credit hours. Specific requirements are outlined in this catalog.

The **Certificate** programs are below the degree level and are designed for students who plan to seek employment. There are two types of certificates, long-term and short-term. The long-term certificates are comprised of at least 30 semester credit hours, but no more than 60 semester credit hours. The short-term certificates are comprised of at least 9 semester credit hours, but no more than 29 semester credit hours. Specific requirements are outlined in this catalog.

### **Degree Requirements**

1. Any applicant for graduation who has coursework more than seven years old may be required to repeat that coursework before a degree/certificate is awarded to ensure that their skills and knowledge meet today's standards. The coursework limit only applies to certain fields (i.e. computer science, applied technology, allied health, etc.). Students who are unsure about their coursework should consult the appropriate division dean.
2. Applicants may elect to graduate using the course requirements under the catalog in effect at the time of initial enrollment or the catalog in effect at the time they apply for graduation provided the student has maintained continuous enrollment or lacks only one semester to graduate. Any student, who fails to register for classes for two or more consecutive semesters, excluding summer, has not maintained continuous enrollment. Students who do not maintain continuous enrollment will fall under the catalog in effect at the time of readmission or may elect to use the catalog in effect at the time they apply for graduation. Students who change their major will fall under the catalog in effect at the time the major is changed or the one in effect at the time they apply for graduation to determine graduation requirements.
3. Applicants must complete 60 - 76 semester hours of college credit work in a planned program of study. (Courses considered as developmental will not apply toward degree requirements.)
4. Applicants must earn a minimum grade point average of 2.00 in all courses attempted at the institution. A course may be counted only once for purposes of meeting graduation requirements.
5. Applicants must complete at least 25% of the total semester hours at Calhoun Community College.
6. Generally applicants are expected to be enrolled during



the semester the degree is earned. However, those students who are within five calendar years from the last semester of attendance at Calhoun and have transferred to another college or university are encouraged to transfer credits back to Calhoun to complete the requirements for a degree. A minimum grade of "C" is required in the courses transferred.

7. An application for graduation must be submitted to the Office of Admissions and Records once the appropriate graduate fee has been paid to the Business Office. NOTE: There is no cost to have your degree posted on your academic transcript. However, to receive a copy of your diploma, the cost is \$20 per degree. The application for graduation should be submitted at least one term prior to your planned term of graduation. Completing your application at least one term prior to graduation, will allow the Admissions and Records Office time to perform a graduation audit to ensure all requirements have been met. This process also allows time for adjustments to a student's academic plan as needed.
8. Applicants must clear all procedural, operational, and financial obligations to the college.

## HONOR GRADUATES

To graduate with honor, a student must maintain the following grade point average on all college level course work (developmental courses not included) considered for degree requirements. Also, in order to be eligible for a graduation honor, the student must have completed a minimum of 24 semester hours at Calhoun Community College. NOTE: Please remember, courses transferred in from other institutions are not calculated into a student's grade point average.

Cum Laude	3.50 to 3.69 GPA
Magna Cum Laude	3.70 to 3.89 GPA
Summa Cum Laude	3.90 to 4.00 GPA

## VISITING STUDENT PROGRAM

A cooperative arrangement exists with Alabama A & M University, Athens State University, Oakwood University, the University of Alabama in Huntsville, and Calhoun Community College. Under this arrangement, a student at any of the participating institutions may request permission to attend a class at one of the other schools. Conditions governing the granting of permission include the following:

1. The student must be a full-time student.
2. The student must have an overall "C" average.
3. The course desired must be unavailable at the student's home institution but be included in the student's home institution catalog.
4. The student's request must be approved by the student's advisor and other appropriate personnel.
5. Permission of the institution teaching the course is dependent upon availability of space for the visitor after its own students are accommodated.
6. Distance Education and CIS courses are restricted enrollment and are not normally available to visiting students.
7. Enrollment in courses is subject to appropriate prerequisite and/or placement testing.

Any student interested in participating in the Visiting Student

Program should contact the Office of Admissions at the parent institution for additional information.

## LIBRARY SERVICES

[www.calhoun.edu/library](http://www.calhoun.edu/library)

### *Mission:*

***We offer access to information and promote lifelong learning.***

### **Brewer Library, Decatur Campus**

The Albert P. Brewer Library is located on the Decatur campus. Print books, eBooks, online databases, magazines and journals, newspapers, books-on-tape, books-on-CD, and Reserve materials are included in the holdings.

Computer workstations provide access to print materials as well as 46,500 full text EBSCOhost electronic books (eBooks) through the Library Catalog found on the Library Web site.

Calhoun students (including Dual Enrollment) and faculty have access to licensed, online databases offered through the Alabama Virtual Library plus databases licensed by the college. Thousands of magazines, journals, newspapers, and trade publications offer full-text articles. Off Campus access requires a Username (7 Digit Calhoun Student/Employee ID) and Password (last name).

Workstations offer access to Microsoft Office 2010 application software (Word, Excel, Access, and PowerPoint). In addition, students can access Web Advisor, Blackboard, Tegrity, SPACE and STARS from workstations.

Reciprocal borrowing privileges are in place for all Calhoun students and faculty to borrow books at the libraries of Athens State University, Drake State Technical College, and Alabama A&M University without a charge. The UAH Library charges a \$25 annual fee for the checkout of materials. All cooperating libraries require verification that the student is registered at Calhoun for the current semester. Community patrons are also invited and encouraged to register for a Calhoun Library Card. A driver's license and social security number are required for registration.

One-on-one assistance in conducting library research and traditional reference services are offered by a librarian. Library instruction for classes (day and evening) can be scheduled by communicating with the Reference Librarian at 256-306-2777 or email [reference@calhoun.edu](mailto:reference@calhoun.edu).

The Library Instruction Room (LIR) is equipped with student workstations for hands-on use and may be scheduled by instructors and other groups by calling the circulation staff at 256-306-2774.

**TILT** (The Information Literacy Tutorial), offered in ORI 101, is customized by librarians to teach library instruction and is updated regularly.

Personalized library instruction is offered to English 101 classes when instructors make the request. Online tutorials for searching selected databases and eReference guides are available through the Library Web site.

For more information, including hours, the Library blog, Twitter, and Facebook, please access the Library Web site.

### Huntsville Campus Library

The Huntsville Campus Library is conveniently located just off the Grand Foyer. The online Library Catalog offers access to print collections held at the HCL and Brewer Library as well as eBook collections. More than 46,500 EBSCOhost eBooks offer online, full text content. Credo Reference offers full text, online access to 550+ reference books. When accessing an eBook off campus, you must enter a Username (7 Digit Calhoun Student/Employee ID Number) and Password (last name).

Computers offer access to licensed, online databases provided by the Alabama Virtual Library plus databases licensed by the college. All licensed databases offer full text articles and are accessible remotely to authorized users via a Username (7 Digit Student/Employee ID) and Password (last name).

A collection of print magazines, journals, and newspapers is available for casual reading.

A Virtual Reference Desk compiled by librarians is accessible from the Library Web site and offers Web based dictionaries, handbooks, encyclopedias, directories, and respected Web resources listed by subject (within academic departments).

Librarians offer one-on-one assistance in conducting library research. Inquire at the Reference Desk in person, by telephone, or make a request via email at [reference@calhoun.edu](mailto:reference@calhoun.edu).

**TILT** (The Information Literacy Tutorial), offered in ORI 101, teaches the basics of information literacy and library instruction—how to select, access, evaluate and use information resources available to Calhoun students through the Brewer Library and Huntsville Campus Library.

Librarians offer personalized library instruction for English 101 classes upon request by the instructor—day, evening, and weekend—in the Multi-Media Room. To schedule a class, call 256-890-4777 or email [reference@calhoun.edu](mailto:reference@calhoun.edu).

The Multimedia Room (MMR) offers 31 student workstations, a large screen, LCD and Internet access and can be scheduled by instructors for occasional groups by calling circulation staff at 256-890-4774.

For more information, including hours, the Library blog, Twitter, and Facebook, please access the Library Web site.

### Center for the Study of Southern Political Culture

The Center for the Study of Southern Political Culture (CSSPC) is an archive and exhibit of political literature and related items from national, state, and local campaigns and political activities such as the Civil Rights Movement. The collection is housed in the Huntsville Campus Library. It is open by appointment. Inquiries should be addressed to Dr. Waymon E. Burke, Project Director (256-890-4737).

## SPECIAL PROGRAMS

### ADULT EDUCATION

This program offers adults the opportunity to prepare for the GED, WorkKeys, High School Exit Exam, ASVAB or simply improve their academic skills. Persons who speak other languages also have the opportunity to learn to speak English as a second language through our ESL program. All of these services are provided free of charge.

Distance Learning is offered for Adult Education students who qualify and meet the minimum technology requirements.

Each participant begins by taking a diagnostic exam to determine qualifications and his/her individual need. Instruction is on an individualized basis. Based upon the results of the diagnostic exam, the student and instructor design a program to help reach the student's goal.

Persons who complete the WorkKeys Assessment tests and make a minimum score of 3 in Applied Mathematics, Reading for Information and Locating for Information will receive a Career Readiness Certificate from the State of Alabama. These certificates will be awarded according to the score achieved. A score of 3 will earn bronze, 4 a silver or 5 a gold certificate.

Contact the Adult Education Office at 256-306-2830 in Decatur or 256-890-4729 in Huntsville to make an appointment for the diagnostic test.

### General Education Development Testing Service

Calhoun Community College's General Education Development (GED) Testing Service is a program of the American Council on Education. Our primary mission is to provide a reliable process for certifying that adults possess the major and lasting outcomes of a traditional high school education. Calhoun Community College accepts the GED diploma as a component for admission.

- Pre-registration is mandatory.
- Test fees are applicable.
- Special accommodations are available upon approval.

The GED tests are administered at the Decatur and Huntsville campuses.

The GED Testing Center is located in the Business Center auditorium (Decatur campus). For test and registration information at the Decatur campus, call 256-306-2610 and 256-713-5801 for the Huntsville Campus.

### COOPERATIVE EDUCATION

Calhoun Community College's Cooperative Education Program affords students the opportunity to acquire on-the-job experience before graduation by combining studies at Calhoun with a related work experience in business/industry. The program offers two work plans, the Parallel Plan and the Alternating Plan. The Parallel Plan allows the student to work on a part-time or full-time basis (a minimum of 20

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hours per week) in a job directly related to his/her academic major while attending school. Under the Alternating Plan, students alternate semesters of study at Calhoun with semesters of full-time work in business/industry. Cooperative education is also available to students already working in a job that is related to their major.

### Requirements

To be eligible for consideration for the program, an applicant must:

1. Complete and submit a program application packet (application, resume, transcript release, and Instructor recommendation).
2. Schedule an appointment and meet with the Co-op Coordinator.
3. Have and maintain an overall GPA of 2.5 (minimum).
4. Have declared a major in field for which student is applying for a co-op.
5. Technologies and Pre-engineering students have additional coursework pre-requisites. They are as follows:
  - a) TECHNOLOGIES: a minimum of 12 credit hours to include successful completion of ADM 100 - Industrial Safety AND ADM 101 - Precision Measurement or ADM 106 - Quality Control Concepts with a "C" or better
  - b) PRE-ENGINEERING: a minimum of 33 credit hours to include successful completion of MTH 126 AND PHY 213/216 with a "C" or better. Must also have taken or be taking EGR 101 in the semester that the student plans to co-op.
6. Be a minimum of 18 years of age.
7. Be eligible for employment in the United States.
8. Adhere to Calhoun's attendance policy.
9. Adhere to company-specific personnel policies including those regarding time and attendance.

### Application Procedures

Students who wish to be considered for the Cooperative Education Program should complete the following steps:

1. Check requirements and confirm that all pre-requisites are met.
2. Print and fill out all application forms. Forms can be at [www.calhoun.edu/cooperation](http://www.calhoun.edu/cooperation).
3. Secure a recommendation for the Co-op program from an instructor in the student's major. This recommendation must be in writing. The Instructor Recommendation Form can be found at: [www.calhoun.edu/cooperation](http://www.calhoun.edu/cooperation)
4. Set up an appointment and meet with Calhoun's Co-op Coordinator.
5. Contact the Co-Op Office at 256-306-2515 with any questions.

## TECH PREP

Tech Prep is a program of study designed to prepare students for today's technologically demanding workplace. Tech Prep helps students identify career pathways that lead to an associate or baccalaureate degree or a post-secondary certificate in a specific career field. Calhoun Tech Prep works with area high schools to improve technical and academic preparation of students and provide a transition plan for those students seeking to enter a two-year college program in a technical field of study.

Calhoun Community College is a member of the "Advanced Technologies" Tech Prep consortium with Athens City Schools, Decatur City Schools, Hartselle City Schools, Limestone County Schools, Madison City Schools and Morgan County Schools.

Articulation agreements, which award college credit for identified high school coursework completed under the Tech Prep program, have been established in the areas of technology, business, computer information systems, graphic arts, child development and medical terminology. The articulated high school courses contain the same course content as an equivalent college course and Calhoun has agreed to award college credit to those students who meet the requirements outlined in the course articulation agreement. In order to receive articulated credit, a student must be admitted to Calhoun and must request articulated credit no later than 16 months following high school graduation.

The Tech Prep program also works with middle and high schools in the consortium to conduct numerous programs that promote Career/Technical Education including the annual Career & Workforce Expo and the High Tech Symposium series.

For more information on the Tech Prep program call 256-306-2665.

## DISTANCE LEARNING

Distance Learning focuses on utilizing technology and teaching methods to provide instruction to students outside the regular classroom and thereby increase flexibility and scheduling options. There are two types of Distance Learning courses at Calhoun: hybrid and online.

- A hybrid course is one in which a majority of instruction is delivered in a structured alternative delivery format including, but not limited to, the Internet and/or other off-campus formats. Calhoun identifies a hybrid course with an "HG" in the course schedule.
- An online course is one in which instruction is delivered entirely online through Blackboard, a course management system that uses the Internet for delivery and interaction. Calhoun identifies an online course with a "W" in the course schedule.

Both hybrid and online courses require a reliable and current computer and Internet access, preferably high-speed. Additionally, Distance Learning courses require computer literacy and reading comprehension skills, as well as self-discipline and motivation. Students register

for Distance Learning courses in the same way they register for traditional courses. For additional information, please visit our website, [www.calhoun.edu](http://www.calhoun.edu).

## WEEKEND COLLEGE

Weekend College is available at the Huntsville Campus location during Fall and Spring semesters. For more information regarding weekend classes in Huntsville, call 256-890-4701. The semester schedule includes all weekend course offerings.

## STATEWIDE TRANSFER AND ARTICULATION REPORTING SYSTEM (STARS)

In order to assist Calhoun Community College students with the transferring of courses to other institutions of higher education in the state, Calhoun is a full member in the Statewide Transfer and Articulation Reporting System (STARS).

The STARS computerized advising system has been created to inform students of the courses that they can take and transfer among public institutions within the State of Alabama without losing credit. Go to the STARS website at <http://stars.troy.edu>.

## CALHOUN WORKFORCE SOLUTIONS (CWS)

Our mission is to provide accessible, quality educational opportunities, promote community and economic development, and enhance the quality of life for those we serve. To achieve this mission, we partner with companies to support, extend and customize their training opportunities to meet increasingly complex job skill needs.

Our services are unique because they are low in cost, convenient, flexible and can be customized to meet the unique needs of business and industry.

**Professional Development:** CWS offers a variety of online and traditional facilitator-led professional development opportunities including WorkKeys Test Preparation, Call Center Training, Industrial Maintenance Online Theory Training, basic computer skills, Ed2Go, and Leadership Training. For more information, call 256-306-2585.

**Industrial Technologies:** CWS offers learning opportunities in the following areas: pre-apprenticeship Lineworker Training, millwright maintenance mechanic, machining, instrumentation technicians, HVAC, plumbing, OSHA 10- and 30-hour, and welding for plate and pipe (construction and industrial) using NCCER, Contren curriculum. Online Industrial Maintenance Training is available. For more information, contact Tom Collins at 256-306-2664.

**Professional Certifications/Computer Operations:** CWS provides local area companies and nontraditional students with timely training and preparation for the workforce. Companies have an option to take advantage of the regularly scheduled courses, or CWS can customize training to meet client requirements. Calhoun is a recognized Certiport

Center for third-party testing. Opportunities include Microsoft Office Suite, Microsoft, CISCO, CompTIA, and customized computer network training. For more information, call at 256-890-4734.

**Professional Certifications/Health:** CWS delivers certification preparation in areas such as Electronic Health Record Management, Medical Administrative Assistant, Medical Billing and Coding, Pharmacy Technician, and EKG Technician (Calhoun proctors the National EKG Technician Exam). For more information, call 256-890-4734.

**Professional Certifications/Quality Training:** In conjunction with local industry partners, CWS offers refresher courses for ASQ certification in the areas listed below. Facilitators are local working quality professionals. Companies have an option to take advantage of the regularly scheduled courses. In addition, Calhoun can customize training to meet client requirements. Third-party testing is provided locally through the American Society of Quality (ASQ). For more information, call 256-890-4734.

**Other Professional Certifications:** In addition to the Commercial Driver's License Program (see below), CWS offers certification preparation for American Design Drafting Association (ADDA), American Institute of Architects (AIA), Crane, National Center for Construction Education & Research (NCCER), National Institute of Metalworking Skills (NIMS), Robotics & Automation, SpaceTEC, Welding, and many others. For more information, call 256-306-2585.

**Commercial Truck Driving Training (CDL):** There is a federal requirement that each state have standards for the licensing of commercial drivers. This class provides driver license testing information and training for unskilled drivers who wish to have a commercial driver license (CDL) and endorsements. To get a CDL, you must pass knowledge and skill test; this class will help you prepare to pass the tests. For more information, call 256-306-2584.

**Workforce Testing and Assessments:** Calhoun is a nationally recognized ACT Testing Center. CWS conducts ACT WorkKeys Job Profiling to local business and industry clients to determine the basic skills needed for specific jobs. In addition, the ACT Center delivers individual WorkKeys assessments to determine the level of skills one can bring to a job. Additionally, the ACT Center offers a variety of online licensure and certifications exams. For more information, call 256-306-2637.

**Global Corporate College:** Calhoun is a member of the Global Corporate College (GCC) network. This positions Calhoun to provide customized, targeted corporate training through the unique GCC network of leading colleges and universities. Through this network, Calhoun works one-on-one with companies to design and deliver superior corporate training programs throughout each company's footprint. Capabilities are from entry-level to "CSuite" executives, from local to international, and across the spectrum of industries. Utilizing the GCC curriculum, CWS offers a wide array of supervisor/manager leadership employee development opportunities (see below). For more information, call 256-306-2515.

**Supervisor/Manager Training:** This training integrates learning principles and concepts with exercises and tools to help participants transfer the training from the classroom to their job performance. Program content is based on business objectives to ensure that employees have the skills they need to drive the business forward. The training is characterized by: a modular approach to content



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development, customized exercises, and post-training follow-up to enhance skill development and integration. For more information, call 256-306-2515.

**Community Education:** Consider broadening your horizons, learning a new skill, or just having some fun through one of Calhoun's Community Education courses. The Community Education program at Calhoun Community College offers something for everyone! Whether you're looking for a new hobby, or want to start your own business, we have a class for you. Classes are designed to provide you with the skills you need to pursue your goals. We offer classes for children, teens, and adults during convenient times to meet your schedule. Sign up today and join the fun! We look forward to seeing you in our Community Education program! For specific schedule information and registration, please visit our website at [www.calhoun.edu/communityed](http://www.calhoun.edu/communityed) or call 256-260-2462.

## COMMUNITY EDUCATION CLASSES

Classes for fun and personal development, in your neighborhood or online

The Community Education Program at Calhoun Community College offers something for everyone! Whether you're looking for a new hobby or want to start your own business, we have a class for you. Classes are designed to provide you with the skills you need to pursue your goals. We offer classes for adults as well as teens and children during convenient times to meet your schedule. Sign up today and join the fun! We look forward to seeing you in our community education program.

For a complete listing of courses available and registration, visit our website at <http://www.calhoun.edu/communityed>

### Education To Go - Online Courses

Calhoun Community College in partnership with Education 2 Go offers more than 250 highly interactive courses that you can take entirely over the Internet. All of our courses include expert instructors, many of whom are nationally known authors. Most courses start as low as \$95.00. Our online courses are affordable, fun, fast, convenient, and geared just for you. A certificate of completion is available upon successful completion of the course. Courses are offered in

- **Career and Professional** (Accounting, Business and Management, Teaching and Education, Grant Writing and Non-profit, Health Care, Law and Legal, Sales and Marketing, Start Your Own Business and Veterinary)
- **Computers and Technology** (Computer Applications, Basic Computer Literacy, Web and Computer Programming, Database Management, Graphic and Multi-Media Design, The Internet, and PC Networking and Security)
- **Writing and Publishing** (Business Writing, Creative Writing, Publishing)
- **Personal Development** (Arts, Personal Enrichment, Children, Parents and Family, Digital Photography, Personal Finance, Health and Wellness, Job Search, Languages, and Test Prep)

All courses run for six weeks, with a two-week grace period at the end. Two lessons are released every Wednesday and Friday by noon Eastern time for the six-week duration of the course. You do not have to be present when lessons are released. You will have access to all lessons until the course ends. New sections start monthly!

For a complete listing of courses available and registration, visit our website at <http://www.ed2go.com/calhouncal.us/>.

### ACT Center Learning Online Classes

Calhoun Community College operates an ACT Center with over 5,000 online, skill-based courses. The ACT Center offers convenient online training for businesses and individuals. The courses are available at your convenience, and may be taken from any computer with Internet access available.

The ACT Center offers courses in the following areas:-Management - Workplace Safety -Basic Office Skills -Basic Computer Skills - Networking Fundamentals. For more information visit <http://www.act-centerlearning.com/calhoun>.

# *Programs of Study*



Your Community. Your College. Your Future.

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## ELECTIVES

FOR PURPOSES OF FULFILLING PROGRAM REQUIREMENTS, CALHOUN PROVIDES THE FOLLOWING DEFINITIONS:

**AREAS RECOMMENDED AS  
HUMANITIES AT CALHOUN**

Courses in humanities ideally serve to give the student a broader understanding of the dimensions of man, the human condition, and human culture. The student may select courses from the following areas to satisfy Calhoun requirements (A=Fine Arts, H=Humanities):

Art (A)	Philosophy (H)
Foreign Language (H)	Religion (H)
Literature (H)	Theatre (A)
Music (A)	

**AREAS RECOMMENDED AS SOCIAL AND/OR  
BEHAVIORAL SCIENCES AT CALHOUN**

Courses in the social sciences should give the student a broader understanding of social systems and the ways in which human beings relate to each other and to socio-economic-political conditions. At Calhoun, students may select courses from the following areas to satisfy Calhoun requirements:

Anthropology	Political Science
Economics	Psychology
Geography	Sociology
History	

**AREAS RECOMMENDED AS NATURAL  
SCIENCES AT CALHOUN**

Courses in the natural sciences are based on investigation of natural phenomena through the processes of reason based on systematic empirical observation. At Calhoun, the student may select courses from the following areas to satisfy Calhoun requirements:

Astronomy  
Biology  
Chemistry  
Physical Geography  
Physical Science  
Physics

Each student should work closely with his/her advisor to determine the course preference for transfer to a specific program, college, or university.

**Calhoun Community College has general educational outcomes expected of all graduates. All students graduating from Calhoun Community College will have competencies in critical thinking; communication; quantitative reasoning; scientific reasoning; cultural literacy; information and computer literacy and diversity. In each of the general education courses, students will cultivate these skills.**



# AWARDS CONFERRED BY CALHOUN COMMUNITY COLLEGE

**Associate of Science Degree:** The Associate of Science (A.S.) degree in General Studies is the award conferred on students who wish to transfer to an Alabama senior institution and pursue a Bachelor's Degree (B.S. or B.A.) The Associate's degree is comprised of five areas (Area I-V) intended to provide the student with a foundation of general education courses in Areas I-IV and more specific courses that provide a base in the pre-major area of study in Area V.

**Associate of Applied Science Degree:** The Associate of Applied Science (A.A.S.) degree is the award conferred on students who wish to complete two years of education at the community college level and then enter the workforce. While many courses taken in an A.A. S. degree program will transfer to an Alabama senior institution, the degree is not designed as a transfer degree.

**Certificate:** The certificate is the award conferred on students who wish to train or retrain in a specific field or skill and enter or re-enter the workplace with a new or more advanced skill set.

## BEGINNING FALL 2012

All first-time freshmen are required to enroll in ORI 101, Freshman Orientation, during their first semester at Calhoun Community College.

## ACADEMIC PROGRAMS

### ASSOCIATE OF SCIENCE (A.S.) DEGREE

Calhoun Community College students graduating with the Associate of Science (A.S.) degree may transfer with junior status into a variety of majors at Alabama public colleges and universities. The courses completed in the A.S. degree must be those approved by the Articulation and General Studies Committee (AGSC) as listed in the STARS Guide.

To achieve junior status upon transferring to an Alabama public college or university the student must:

1. Print and sign a dated STARS Guide for the major at the college/university to which the student plans to transfer. It is recommended that the student do this prior to or during the first semester at Calhoun.
2. Complete all coursework at Calhoun as outlined by the STARS Guide;
3. Transfer within four years from the date printed on the original, signed STARS Guide;
4. Upon transfer, take the original, signed and dated STARS Guide to the transfer college/university.

### STATEWIDE TRANSFER AND ARTICULATION REPORTING SYSTEM (STARS)

**The Statewide Transfer and Articulation Reporting System (STARS)** is a web-accessible data-base system which provides guidance and direction to streamline the transfer process for students who transfer to an Alabama public college or university from an Alabama community college. STARS may be accessed at [stars.troy.edu](http://stars.troy.edu). Courses listed in a STARS Transfer Guide/Agreement are approved by the Articulation and General Studies Committee (AGSC) for transfer and outline the first two years of coursework relative to a major and are intended to serve as pre-major/pre-professional curricula.

If the STARS Guide (also called an Articulation Agreement) is followed and the declared major is not changed, a student can transfer to an Alabama public college or university without loss of credit. For

more information, consult an academic advisor and visit the STARS website at [stars.troy.edu](http://stars.troy.edu).

**Students must accept the final responsibility of becoming familiar with the requirements of the Alabama public college or university to which they may transfer. Changing from one major to another, at the same transfer school, may result in the student having to take additional courses. Students should consult program advisors at their transfer schools.**

The Articulation/STARS Agreement is divided into Areas I – V. Areas I – IV consist of 41 – 42 semester credit hours and are referred to as the General Education Requirements. The remaining 19 – 23 semester credit hours, called Area V, consists of courses from the student's chosen major or area of concentration. While a student may choose to major in any field offered at an Alabama public college or university, included below are a few examples of majors into which students with the Associate of Science degree may transfer. Those examples are followed by the degree plan for each major. Degree plans, which are found on the next few pages, are designed to serve as a guide. A student should consult STARS ([stars.troy.edu](http://stars.troy.edu)) and the specific institution's Area V page for more detailed information.

NOTE: Calhoun does not offer majors under the A.S. Degree.

**Examples of majors/concentrations into which students with the A.S. Degree may transfer include:**

Accounting/Business/Economics	Management/Management
Art	Information
Biology/Chemistry/Physics	Systems/Marketing
Biotechnology	Mathematics
Child Development	Music
Communication Studies	Nursing
Computer Information Systems	Photography
Criminal Justice	Pre-Law, Medicine, Dentistry,
Education	Pharmacy, Veterinary
Engineering	Medicine
English	Psychology
Fire Science Management	Public Safety Administration
General Studies	Sociology
History	Telecommunications &
Human Development & Family	Film/Broadcasting
Studies	Theatre Arts

# ASSOCIATE OF SCIENCE (A.S.) DEGREE WORKSHEET

ORI 101 Orientation (1 Hour) \_\_\_\_\_

**Area I: English Composition (6 Hours)**

ENG 101 \_\_\_\_\_  
ENG 102 \_\_\_\_\_

**\*\*Area II: Literature, Humanities & Fine Arts**

**12 Credit Hours (9 Hours for Engineering)**

**Literature (3-6 Hours) Select from:**

ENG 251 \_\_\_\_\_  
ENG 252 \_\_\_\_\_  
ENG 261 \_\_\_\_\_  
ENG 262 \_\_\_\_\_  
ENG 271 \_\_\_\_\_  
ENG 272 \_\_\_\_\_

**Fine Arts (3 Hours) Select from:**

ART 100 \_\_\_\_\_  
ART 203 \_\_\_\_\_  
ART 204 \_\_\_\_\_  
MUS 101 \_\_\_\_\_  
THR 120 \_\_\_\_\_  
THR 126 \_\_\_\_\_

**Additional Humanities & Speech (3 Hours)**

**Select from:**

FRN 101 \_\_\_\_\_  
FRN 102 \_\_\_\_\_  
FRN 201 \_\_\_\_\_  
FRN 202 \_\_\_\_\_  
GRN 101 \_\_\_\_\_  
GRN 102 \_\_\_\_\_  
GRN 201 \_\_\_\_\_  
GRN 202 \_\_\_\_\_  
PHL 106 \_\_\_\_\_  
PHL 206 \_\_\_\_\_  
REL 100 \_\_\_\_\_  
REL 151 \_\_\_\_\_  
REL 152 \_\_\_\_\_  
SPA 101 \_\_\_\_\_  
SPA 102 \_\_\_\_\_  
SPA 201 \_\_\_\_\_  
SPA 202 \_\_\_\_\_  
SPH 107 \_\_\_\_\_

**Area III: Natural Science and Mathematics**

**11-12 Credit Hours**

**Mathematics (3-4 Hours) Select from:**

MTH 110 \_\_\_\_\_  
MTH 112 or higher \_\_\_\_\_  
(except MTH 116, 231, 232 or 265).

**Natural Sciences (8 Hours) Select from:**

AST 220 \_\_\_\_\_  
BIO 103 \_\_\_\_\_  
BIO 104 \_\_\_\_\_  
CHM 104 \_\_\_\_\_  
CHM 105 \_\_\_\_\_  
CHM 111 \_\_\_\_\_  
CHM 112 \_\_\_\_\_  
GEO 101 \_\_\_\_\_  
GEO 102 \_\_\_\_\_  
PHS 111 \_\_\_\_\_  
PHS 112 \_\_\_\_\_  
PHY 213 and PHS 216 \_\_\_\_\_  
PHS 214 and PHS 217 \_\_\_\_\_

**\*\*Area IV: History, Social, and Behavioral Sciences**

**12 Credit Hours (9 Hours for Engineering)**

**History (3-6 Hours) Select from:**

HIS 121 \_\_\_\_\_  
HIS 122 \_\_\_\_\_  
HIS 201 \_\_\_\_\_  
HIS 202 \_\_\_\_\_

**Additional History, Social & Behavioral Sciences (6-9 Hours) Select from:**

ANT 200 \_\_\_\_\_  
ANT 210 \_\_\_\_\_  
ANT 220 \_\_\_\_\_  
ANT 226 \_\_\_\_\_  
ANT 230 \_\_\_\_\_  
ECO 231 \_\_\_\_\_  
ECO 232 \_\_\_\_\_  
GEO 100 \_\_\_\_\_  
POL 200 \_\_\_\_\_  
POL 211 \_\_\_\_\_  
PSY 200 \_\_\_\_\_  
PSY 210 \_\_\_\_\_  
SOC 200 \_\_\_\_\_  
SOC 210 \_\_\_\_\_  
SPH 116 \_\_\_\_\_

**Total General Education Requirements (Areas I-IV):**

**41-42 Credit Hours (39 Hrs for Engineering)**

**\*\*\*Area V: Pre-Professional, Major, and Elective Courses**

**19-22 Credit Hours (25 Hrs for Engineering)**

Courses taken in AREA V are those that provide the student with the knowledge and experiences in his or her chosen major or area of concentration. The course requirements listed within AREA V of each program of study should be used as a guide and may vary depending upon the transfer institution. For guidance in the identification of the specific course requirements in the major or minor, the student should refer to the transfer institution's catalog or web page. Also the AGSC Transfer Guide (STARS Guide) for each public transfer institution in the State of Alabama is readily available on the web at <http://stars.troy.edu> and should be utilized.

**See Area V examples  
on pages 40, 41 and 42.**

**\*\* As a part of the General Studies Curriculum, student must complete a 6 semester hour sequence either in literature (Area II) or history (Area IV)**

**\*\*\* This course work is designed to serve as a basis to support the major at the transferring institution. Calhoun does not offer a major under the A.S. degree.**

**Total Credits Required for A.S. Degree (Areas I-V):  
60-64 Credit Hours**

## AREA V EXAMPLES OF DEGREE MAJORS/CONCENTRATIONS\*\*\*

### Accounting or Business or Economics or Management or Management Information Systems or Marketing

CIS 146	Microcomputer Applications .....	3 hours
BUS 241	Principles of Accounting I .....	3 hours
BUS 242	Principles of Accounting II .....	3 hours
BUS 263	Legal & Social Environment of Business .....	3 hours
BUS 271	Business Statistics I .....	3 hours
BUS 272	Business Statistics II .....	3 hours
<b>Additional Math Requirement (Choose one):</b>		
MTH 120	Calculus & Its Applications .....	3 hours
<b>OR</b>		
MTH 125	Calculus I .....	4 hours

**Total Hours:** .....21 to 22 hours

**NOTE:** ECO 231 and ECO 232 are recommended in Area IV

### Art

ART 113	Drawing I .....	3 hours
ART 114	Drawing II .....	3 hours
ART 121	Two-Dimensional Design I .....	3 hours
ART 127	Three-Dimensional Design .....	3 hours
ART 204	Art History II .....	3 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		

**Total Hours:** .....21 hours

**Note:** Students should take ART 203 - Art History I in Area II

### Biology

CHM 111	College Chemistry I .....	4 hours
CHM 112	College Chemistry II .....	4 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		
<b>Total Hours:</b> .....		20 hours

**Note:** Students should take BIO 103 and BIO 104 in Area III

### Biotechnology

BIO 105	Introduction to Biotechnology .....	4 hours
BIO 107	Cell Culture .....	4 hours
BIO 203	Techniques in Molecular Biology .....	4 hours
BIO 252	Directed Studies in Biotechnology .....	2 hours
BIO 254	Advanced Topics in Biotechnology .....	3 hours
BIO 256	Biotechnology Internship .....	2 hours
CHM 112	College Chemistry II .....	4 hours

**Total Hours:** .....23 hours

\*\*\* This course work is designed to serve as a basis to support the major at the transferring institution. Calhoun does not offer a major under the A.S. degree.

### Chemistry

MTH 125	Calculus I .....	4 hours
CHM 221	Organic Chemistry I .....	4 hours
CHM 222	Organic Chemistry II .....	4 hours
PHY 213/216	General Physics with Calculus I .....	5 hours
PHY 214/217	General Physics with Calculus II .....	5 hours

**Total Hours:** .....22 hours

**Note:** MTH 126 – Calculus II is recommended at most universities

**Students should take CHM 111 and CHM 112 in Area III**

### Communication Studies or Speech

Speech Elective Course .....	3 hours
Electives as identified through STARS and the chosen senior institution's requirements .....	18 hours

**Total Hours:** .....21 hours

### Computer Science

MTH 113	Pre-calculus Trigonometry .....	3 hours
MTH 125	Calculus I .....	4 hours
MTH 126	Calculus II .....	4 hours
CIS 251	C++ Programming .....	3 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		

**Total Hours:** .....21-22 hours

### Criminal Justice

CRJ 100	Introduction to Criminal Justice .....	3 hours
CRJ 110	Introduction to Law Enforcement .....	3 hours
CRJ 150	Introduction to Corrections .....	3 hours
CRJ 160	Introduction to Security .....	3 hours
CIS 146	Microcomputer Applications .....	3 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		

**Total Hours:** .....24 hours

### Elementary or Early Childhood Education

**4 SH in Science:** (Choose from the following courses not already taken in Area III. BIO 103, BIO 104, CHM 104, CHM 105, CHM 111, CHM 112, PHS 111, PHS 112, PHY 213/216, PHY 214/217.)

**9 SH in Math:** (Choose from the following courses not already taken in Area III. MTH 110, MTH 112, MTH 113, MTH 125, MTH 126, MTH 231, MTH 232)

Electives as identified through STARS and the chosen senior institution's requirements .....8-9 hours

**Total Hours:** .....21-22 hours

### Engineering

CIS 251*	<b>C++ Programming</b> .....	3 hours
CHM 111	<b>College Chemistry I</b> .....	4 hours
MTH 126	<b>Calculus II</b> .....	4 hours
MTH 227	<b>Calculus III</b> .....	4 hours
MTH 238**	<b>Applied Differential Equations I</b> .....	3 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		7 hours
* except Chemical Engineering		
** except Computer Science Engineering		

**Total Hours:** .....25 hours

**Note:** Students should take MTH 125 and PHY 213 with PHY 216 and PHY 214 and PHY 217 in Area III. (Exception: Biosystems Engineering at AU requires only Physics course)

Students are required to complete 9 hours each in Areas II and IV and 25 hours in Area V.

### English

Electives as identified through STARS and the  
chosen senior institution's requirements .....21 hours

### Health Education

HED 230	<b>Safety and First Aid OR</b>	
HED 231	<b>First Aid</b> .....	3 hours
HED 221	<b>Personal Health OR</b>	
HED 224	<b>Personal and Community Health</b> .....	3 hours
BIO 201	<b>Anatomy and Physiology I</b> .....	4 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		11-12 hours

**Total Hours:** .....21-22 hours

### Physical Education

HED 230	<b>Safety and First Aid OR</b>	
HED 231	<b>First Aid</b> .....	3 hours
HED 221	<b>Personal Health OR</b>	
HED 224	<b>Personal and Community Health</b> .....	3 hours
BIO 201	<b>Anatomy and Physiology I</b> .....	4 hours
PED 100	<b>Fundamentals of Fitness</b> .....	3 hours
PED 200	<b>Foundation of Physical Education</b> .....	3 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		5-6 hours

**Total Hours:** .....21-22 hours

\*\*\* This course work is designed to serve as a basis to support the major at the transferring institution. Calhoun does not offer a major under the A.S. degree.

### History

Additional History sequence not taken in Area IV. Choose from:

HIS 121	<b>World History I AND</b> .....	3 hours
HIS 122	<b>World History II</b> .....	3 hours
	<b>OR</b>	
HIS 201	<b>United States History I AND</b> .....	3 hours
HIS 202	<b>United States History II</b> .....	3 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		15 hours

**Total Hours:** .....24 hours

### Mathematics

MTH 126	<b>Calculus II</b> .....	4 hours
MTH 227	<b>Calculus III</b> .....	4 hours
MTH 237	<b>Linear Algebra</b> .....	3 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		10-11 hours

**Total Hours:** .....21-22 hours

**Note:** Students should take MTH 125 in Area III.

### Music or Music Education

MUS 111	<b>Music Theory I</b> .....	3 hours
MUS 112	<b>Music Theory II</b> .....	3 hours
MUS 113	<b>Music Theory Lab I</b> .....	1 hour
MUS 114	<b>Music Theory Lab II</b> .....	1 hour
MUL 180 or higher	.....	4 hours
<b>MUP courses</b> (must include sequence in 1 instrument) .....		5 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		4 hours

**Total Hours:** .....21 hours

### Nursing

BIO 201	<b>Human Anatomy &amp; Physiology I</b> .....	4 hours
BIO 202	<b>Human Anatomy &amp; Physiology II</b> .....	4 hours
BIO 220	<b>Microbiology</b> .....	4 hours
Electives as identified through STARS and the chosen senior institution's requirements .....		9 hours

**Total Hours:** .....21 hours

## Programs of Study

### Physics

Electives as identified through STARS and the  
chosen senior institution's requirements .....21 hours  
**Note: Students should take MTH 125, PHY 213/216, and PHY 214/217  
in Area III.**

### Pre-Law

Electives as identified through STARS and the chosen  
senior institution's requirements.....21 hours

### Pre-Medicine or Pre-Dentistry or Pre-Veterinary or Pre-Pharmacy

CHM 111 **College Chemistry I** .....4 hours  
CHM 112 **College Chemistry II** .....4 hours  
CHM 221 **Organic Chemistry I** .....4 hours  
CHM 222 **Organic Chemistry II** .....4 hours  
Electives as identified through STARS and the  
chosen senior institution's requirements .....5-6 hours

**Total Hours:.....21-22 hours**  
**Note: Students should take MTH 125, BIO 103, and BIO 104 in Area III.**

### Psychology

PSY 200 **General Psychology** .....3 hours  
PSY 210 **Human Growth & Development** .....3 hours  
Electives as identified through STARS and the  
chosen senior institution's requirements .....15 hours

**Total Hours: .....21 hours**

### Public Safety Administration & Health Administration

(Athens State Transfer)

CIS 146 **Microcomputer Applications** .....3 hours  
Electives should be taken in Fire Science  
Management (FCS), Criminal Justice (CRJ), or  
Emergency Medical Services (EMS).....18 hours

**Total Hours .....21 hours**

### Sociology

SOC 210 **Social Problems**.....3 hours  
SOC 247 **Marriage & Family**.....3 hours  
Electives as identified through STARS and the  
chosen senior institution's requirements .....15 hours

**Total Hours: .....21 hours**  
**Note: Students should take SOC 200 in Area IV.**

### Telecommunication and Film or Broadcasting

MCM 100 **Introduction to Mass Communications**.....3 hours  
MCM 102 **Writing for the Mass Media** .....3 hours  
SPH 107 **Fundamentals of Public Speaking**.....3 hours  
Electives as identified through STARS and the  
chosen senior institution's requirements .....12 hours

**Total Hours: .....21 hours**

### Theatre

THR 131 **Acting Techniques I** .....3 hours  
THR 113 **Theatre Workshop I**.....2 hours  
THR 114 **Theatre Workshop II** .....2 hours  
THR 241 **Voice & Speech for the Performer**.....3 hours  
Elective from Area II .....3 hours  
Electives as identified through STARS and the  
chosen senior institution's requirements .....6-9 hours

**Total Hours:.....19-22 hours**

\*\*\* This course work is designed to serve as a basis to support  
the major at the transferring institution. Calhoun does not  
offer a major under the A.S. degree.



# ASSOCIATE OF APPLIED SCIENCE DEGREES (A.A.S.) AND CERTIFICATES

**NOTE: Beginning Fall 2012, all first-time freshmen are required to enroll in ORI 101.**

## ADVANCED MANUFACTURING

The Associate of Applied Science Degree in Advanced Manufacturing will prepare graduates for employment in various technical career paths including aerospace technology, air conditioning & refrigeration, automation/robotics, design drafting, electrical technology, industrial maintenance (electrical, HVAC, instrumentation, and mechanical), machine tool technology, and process technology. Graduates will be prepared to work in a team-centered environment with demanding quality and safety standards. This program also provides enhancement training for individuals seeking skill advancement in their current positions. Graduates may also choose to pursue a baccalaureate degree in appropriate academic areas.

## AEROSPACE TECHNOLOGY

**With Concentration in Structures & Assembly or Welding**

The Associate of Applied Science Degree in Advanced Manufacturing with a major in Aerospace Technology will prepare graduates for employment in aerospace and related industries through classroom and laboratory instruction in propulsion structure and assembly or welding.

### AEROSPACE TECHNOLOGY/WELDING Associate of Applied Science Degree Advanced Manufacturing

**Program Code: AAS.ADMA.AERW**

**CIP CODE: 15.0613**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications .....	3

#### ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design .....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes .....	3
ADM 104 Introduction to Thermal/Electrical Principles .....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

#### AEROSPACE FUNDAMENTAL COURSE REQUIREMENTS:

MTT 121 Print Reading .....	3
ARS 151 Welding Principles/Theory/Symbols .....	3
ARS 176 Electrical/Electronic Assembly .....	3
ARS 178 Aerospace Mechanical Assembly .....	3
ARS 280 Surface Preparation & Coatings .....	3
MTT 147 Introduction to Machine Shop I .....	3

MTT 148 Introduction to Machine Shop I Lab .....	3
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#### AEROSPACE/WELDING COURSE REQUIREMENTS:

ARS 153 Gas Tungsten Arc & Plasma Arc Welding .....	3
ARS 251 Specialized Welding Processes .....	3
ARS 253 Welding Certification Preparation .....	3

**TOTAL .....**73

### AEROSPACE TECHNOLOGY/AEROSPACE FUNDAMENTALS Short Term Certificate

**Program Code: STC.ADM.AERF**

**CIP CODE: 15.0613**

#### AEROSPACE FUNDAMENTALS COURSE REQUIREMENTS:

ADM 100 Industrial Safety .....	3
ADM 106 Quality Control Concepts .....	3
MTT 121 Print Reading .....	3
ARS 151 Welding Principles/Theory/Symbols .....	3
ARS 176 Electrical/Electronic Assembly .....	3
ARS 178 Aerospace Mechanical Assembly .....	3
ARS 280 Surface Preparation & Coatings .....	3
MTT 147 Introduction to Machine Shop I .....	3
MTT 148 Introduction to Machine Shop I Lab .....	3

**TOTAL .....**27

### AEROSPACE TECHNOLOGY/STRUCTURES & ASSEMBLY Associate of Applied Science Degree Advanced Manufacturing

**Program Code: AAS.ADMA.AERS**

**CIP CODE: 15.0613**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications .....	3

#### ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design .....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes .....	3
ADM 104 Introduction to Thermal/Electrical Principles .....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

## Programs of Study

### AEROSPACE FUNDAMENTAL COURSE REQUIREMENTS:

MTT 121 Print Reading .....	3
ARS 151 Welding Principles/Theory/Symbols .....	3
ARS 176 Electrical/Electronic Assembly .....	3
ARS 178 Aerospace Mechanical Assembly .....	3
ARS 280 Surface Preparation & Coatings .....	3
MTT 147 Introduction to Machine Shop I .....	3
MTT 148 Introduction to Machine Shop I Lab .....	3

### AEROSPACE/STRUCTURES & ASSEMBLY COURSE REQUIREMENTS:

ARS 276 Instrumentation Attachments & Adhesive Bonding Procedures .....	3
ARS 278 Composite Materials Assembly .....	3
ARS 284 Specialized Coating Processes .....	3

**TOTAL .....**73

## AIR CONDITIONING & REFRIGERATION

**With Concentration in Advanced ACR,  
System Design, ACR Commercial, OR ACR Business**

The purpose of this program of study is to train the student to become an air conditioning and refrigeration technician. The student in the program learns to install and repair air conditioning and refrigeration equipment in office buildings, factories, homes, food stores, restaurants, theaters, and other establishments. The practical experiences provide proficiency in cutting pipe and repair and maintenance of refrigeration and air conditioning equipment along with load and duct design.

### AIR CONDITIONING & REFRIGERATION/ADVANCED ACR Associate of Applied Science Degree Advanced Manufacturing

**Program Code: AAS.ADMA.ACRA CIP CODE: 15.0613**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Humanities Elective .....	3
Social Science Electives .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications .....	3

#### ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design .....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes .....	3
ADM 104 Introduction to Thermal/Electrical Principles .....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

#### AIR CONDITIONING & REFRIGERATION FUNDAMENTALS COURSE REQUIREMENTS:

ACR 113 Refrigeration Piping Practices .....	3
ACR 119 Fundamentals of Gas Heating Systems .....	3
ACR 120 Fundamentals of Electric Heating Systems .....	3

ACR 121 Principles of Electricity for HVACR .....	3
ACR 122 HVACR Electrical Circuits .....	3

#### ADVANCED ACR COURSE REQUIREMENTS:

ACR 123 HVACR Electrical Components .....	3
ACR 132 Residential Air Conditioning .....	3
ACR 147 Refrigeration Transition & Recovery .....	3
ACR 148 Heat Pump Systems I .....	3
ACR 149 Heat Pump Systems II .....	3
ACR 205 System Sizing & Air Distribution .....	3

**TOTAL .....**76

### AIR CONDITIONING AND REFRIGERATION/ ACR FUNDAMENTALS Short Term Certificate

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.ADMX.ACRF CIP CODE: 15.0613**

#### AIR CONDITIONING & REFRIGERATION FUNDAMENTALS COURSE REQUIREMENTS:

ACR 113 Refrigeration Piping Practices .....	3
ACR 119 Fundamentals of Gas Heating Systems .....	3
ACR 120 Fundamentals of Electric Heating Systems .....	3
ACR 121 Principles of Electricity for HVACR .....	3
ACR 122 HVACR Electrical Circuits .....	3

**TOTAL .....**15

### AIR CONDITIONING AND REFRIGERATION/ADVANCED ACR Short Term Certificate

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.ADMX.ACRA CIP CODE: 15.0613**

#### ADVANCED ACR COURSE REQUIREMENTS:

ACR 123 HVACR Electrical Components .....	3
ACR 132 Residential Air Conditioning .....	3
ACR 147 Refrigeration Transition & Recovery .....	3
ACR 148 Heat Pump Systems I .....	3
ACR 149 Heat Pump Systems II .....	3
ACR 205 System Sizing & Air Distribution .....	3

**TOTAL .....**18

### AIR CONDITIONING & REFRIGERATION/SYSTEM DESIGN Associate of Applied Science Degree Advanced Manufacturing

**Program Code: AAS.ADMA.ACRS CIP CODE: 15.0613**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics .....	3

SPH 107 Fundamentals of Public Speaking.....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications.....	3

**ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement.....	3
ADM 102 Computer Aided Design.....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes.....	3
ADM 104 Introduction to Thermal/Electrical Principles.....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

**AIR CONDITIONING & REFRIGERATION FUNDAMENTALS COURSE REQUIREMENTS:**

ACR 113 Refrigeration Piping Practices .....	3
ACR 119 Fundamentals of Gas Heating Systems .....	3
ACR 120 Fundamentals of Electric Heating Systems.....	3
ACR 121 Principles of Electricity for HVAC .....	3
ACR 122 HVACR Electrical Circuits .....	3

**ACR-SYSTEM DESIGN COURSE REQUIREMENTS:**

ACR 128 Heat Load Calculations .....	3
ACR 135 Mechanical Gas Safety Codes.....	3
ACR 144 Basic Drawing & Blueprint Reading in HVAC.....	3
ACR 151 Duct Design & Fabrication.....	6
ACR 205 System Sizing & Air Distribution .....	3

**TOTAL .....**76

**AIR CONDITIONING AND REFRIGERATION/SYSTEM DESIGN  
Short Term Certificate**

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.ADMX.ACRS                      CIP CODE: 15.0613**

**ACR-SYSTEM DESIGN COURSE REQUIREMENTS:**

ACR 128 Heat Load Calculations .....	3
ACR 135 Mechanical Gas Safety Codes.....	3
ACR 144 Basic Drawing & Blueprint Reading in HVAC.....	3
ACR 151 Duct Design & Fabrication.....	6
ACR 205 System Sizing & Air Distribution .....	3

**TOTAL .....**18

**AIR CONDITIONING & REFRIGERATION/COMMERCIAL  
Associate of Applied Science Degree  
Advanced Manufacturing**

**Program Code: AAS.ADMA.ACRD                      CIP CODE: 15.0613**

**GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College.....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics.....	3
SPH 107 Fundamentals of Public Speaking.....	3
Humanities Elective .....	3

Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications.....	3

**ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement.....	3
ADM 102 Computer Aided Design.....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes.....	3
ADM 104 Introduction to Thermal/Electrical Principles.....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

**AIR CONDITIONING & REFRIGERATION FUNDAMENTALS COURSE REQUIREMENTS:**

ACR 113 Refrigeration Piping Practices .....	3
ACR 119 Fundamentals of Gas Heating Systems .....	3
ACR 120 Fundamentals of Electric Heating Systems.....	3
ACR 121 Principles of Electricity for HVAC .....	3
ACR 122 HVACR Electrical Circuits .....	3

**ACR-COMMERCIAL COURSES REQUIREMENTS**

ACR 126 Commercial Heating Systems.....	3
ACR 141 Environmental Systems.....	4
ACR 203 Commercial Refrigeration.....	3
ACR 209 Commercial Air Conditioning Systems .....	3

**TOTAL .....**71

**AIR CONDITIONING & REFRIGERATION/BUSINESS  
Associate of Applied Science Degree  
Advanced Manufacturing**

**Program Code: AAS.ADMA.ACRB                      CIP CODE: 15.0613**

**GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College.....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics.....	3
SPH 107 Fundamentals of Public Speaking.....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications.....	3

**ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement.....	3
ADM 102 Computer Aided Design.....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes.....	3
ADM 104 Introduction to Thermal/Electrical Principles.....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

**AIR CONDITIONING & REFRIGERATION FUNDAMENTALS COURSE REQUIREMENTS:**

ACR 113 Refrigeration Piping Practices .....	3
ACR 119 Fundamentals of Gas Heating Systems .....	3
ACR 120 Fundamentals of Electric Heating Systems.....	3
ACR 121 Principles of Electricity for HVAC .....	3
ACR 122 HVACR Electrical Circuits .....	3

## Programs of Study

### ACR-BUSINESS COURSE REQUIREMENTS:

ACR 112 HVAC Service Procedures .....	3
ACR 123 HVACR Electrical Components .....	3
ACR 200 Review for Contractors .....	3
ACR 138 Customer Relations in HVAC .....	3
BUS 100 Introduction to Business .....	3

**TOTAL .....**73

## AUTOMATION/ROBOTICS

The Associate of Applied Science Degree in Advanced Manufacturing with a Major in Automation/Robotics will prepare graduates for entry-level employment in industrial automation. Concepts covered in the major include electronics for electricians; programmable logic controllers; digital fundamentals; interfacing microcomputers to electro-mechanical devices; and flexible manufacturing cells.

### AUTOMATION/ROBOTICS Associate of Applied Science Degree Advanced Manufacturing

**Program Code: AAS.ADMA.AUTR                      CIP CODE: 15.0613**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications .....	3

#### ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design .....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes .....	3
ADM 104 Introduction to Thermal/Electrical Principles .....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

#### BASIC ELECTRICITY COURSE REQUIREMENTS:

ELT 108 DC Fundamentals .....	3
ELT 109 AC Fundamentals .....	3
ELT 117 AC/DC Machines .....	3
ELT 110 Wiring Methods .....	3

#### AUTOMATION FUNDAMENTALS COURSE REQUIREMENTS:

ELT 209 Motor Controls I .....	3
ELT 231 Introduction to Programmable Controllers .....	3
ELT 232 Advanced Programmable Controllers .....	3
ILT 163 Digital Fundamentals .....	3

#### AUTOMATION/ROBOTICS COURSE REQUIREMENTS:

ILT 235 Principles of Robotic Systems .....	3
ILT 236 Principles of Robotic Programming .....	2
ADM 250 Introduction to Flexible Manufacturing Cells .....	4

**TOTAL .....**76

### AUTOMATION/ROBOTICS Advanced Certificate

**Students must meet with Automation/Robotics instructors to determine if they have the credentials and competencies required to be eligible to start this certificate**

**Program Code: STC.ADM.AUAR**

**CIP CODE: 15.0613**

#### AUTOMATION FUNDAMENTALS COURSE REQUIREMENTS:

ELT 209 Motor Controls I .....	3
ELT 212 Motor Controls II .....	3
INT 117 Principles of Industrial Mechanics .....	3
MTT 139 Introduction to Computer Numeric Control .....	3
ARS 151 Welding Theory, Principles & Symbols .....	3
ADM 200 Industrial Robotic Safety .....	3
ADM 232, 233, 234, 235, 236, 237, 238, or 239 .....	6
Applied Industrial Robotics	

**TOTAL .....**24

### AUTOMATION/ROBOTICS Short Term Certificate

**Program Code: STC.ADM.AUTR**

**CIP CODE: 15.0613**

#### AUTOMATION/ROBOTICS COURSE REQUIREMENTS:

ELT 108 DC Fundamentals .....	3
ELT 109 AC Fundamentals .....	3
ELT 209 Motor Controls I .....	3
ELT 231 Introduction to Programmable Controllers .....	3
ELT 232 Advanced Programmable Controllers .....	3
ILT 163 Digital Fundamentals .....	3
ILT 235 Principles of Robotic Systems .....	3
ILT 236 Principles of Robotic Programming .....	2
ADM 250 Introduction to Flexible Manufacturing Cells .....	4

**TOTAL .....**27

## DESIGN DRAFTING TECHNOLOGY

**With Concentration in Engineering, Architectural Drafting or  
3D Design & Production**

The Associates Degree of Advanced Manufacturing with a Major in Design Drafting will prepare students to obtain an entry-level position in a high technology society. This degree offers foundational instructions that emphasize engineering, manufacturing, and architectural theories and concepts. Drafting concepts will be taught using industry standard practices such as: sketching and critical thinking, 2D, CAD, 3D Modeling, BIM and advanced problem solving skills. This drafting degree will intensify the students' learning by coupling theory instruction and demonstration and hands on application. Students will obtain the skills needed to be successful in planning and development and the skills to produce final construction documents. Students will enhance their abilities by learning the soft skills to obtain their position in the drafting career market. Graduates would look forward to seeking qualified positions in related drafting fields such as detailers, CAD drafter, architectural drafter, structural drafters, civil drafters, survey technician, electrical drafter, technical drafters, engineering drawing checker, drafting department supervisor and, technical illustrator project managers or Architectural ren-

derers. The advanced manufacturing (ADM) classes will enhance their skill set to obtain advance positions.

**DESIGN DRAFTING TECHNOLOGY/ENGINEERING**  
**Associate of Applied Science Degree**  
**Advanced Manufacturing**

Program Code: AAS.ADMA.DDEM CIP CODE: 15.0613

**GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications .....	3

**ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design* .....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes .....	3
ADM 104 Introduction to Thermal/Electrical Principles .....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

**BASIC DRAFTING COURSE REQUIREMENTS:**

DDT 111 Fundamentals of Drafting* .....	3
DDT 127 Intermediate CAD .....	3

**ENGINEERING DRAFTING COURSE REQUIREMENTS:**

DDT 124 Basic Technical Drafting .....	3
DDT 128 Intermediate Technical Drafting .....	3
DDT 131 Basic Machine Drafting .....	3
DDT 215 Geometric Dimensioning & Tolerancing .....	3
DDT 220 Advanced Technical Drafting .....	3
DDT 233 Solids Modeling .....	3
DDT 235 Specialized CAD .....	3
DDT 260 Portfolio .....	3

**TOTAL .....73**

**\*DESIGN DRAFTING STUDENTS SHOULD TAKE ADM 102 AND DDT 111 IN THEIR FIRST SEMESTER.**

**DESIGN DRAFTING TECHNOLOGY/ENGINEERING**  
**Short Term Certificate**

Program Code: STC.ADM.DDEM CIP CODE: 15.0613

**BASIC DRAFTING COURSE REQUIREMENTS:**

ADM 102 Computer Aided Drafting* .....	3
DDT 111 Fundamentals of Drafting* .....	3
DDT 127 Intermediate CAD .....	3

**ENGINEERING DRAFTING COURSE REQUIREMENTS:**

DDT 124 Basic Technical Drafting .....	3
DDT 128 Intermediate Technical Drafting .....	3

**Programs of Study**

DDT 215 Geometric Dimensioning & Tolerancing .....	3
DDT 220 Advanced Technical Drafting .....	3
DDT 233 Solids Modeling .....	3

**TOTAL .....24**

**\*DESIGN DRAFTING STUDENTS SHOULD TAKE ADM 102 AND DDT 111 IN THEIR FIRST SEMESTER.**

**DESIGN DRAFTING TECHNOLOGY/ARCHITECTURAL**  
**Associate of Applied Science Degree**  
**Advanced Manufacturing**

Program Code: AAS.ADMA.DDBA CIP CODE: 15.0613

**GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications .....	3

**ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design* .....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes .....	3
ADM 104 Introduction to Thermal/Electrical Principles .....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

**BASIC DRAFTING COURSE REQUIREMENTS:**

DDT 111 Fundamentals of Drafting* .....	3
DDT 127 Intermediate CAD .....	3

**ARCHITECTURAL DRAFTING COURSE REQUIREMENTS:**

DDT 132 Architectural Drafting .....	3
DDT 150 Residential Drawing & Design .....	3
DDT 155 Residential Drawing .....	4
DDT 213 Civil Drafting .....	3
DDT 222 Advanced Architectural Drafting .....	3
DDT 225 Structural Drafting .....	3
DDT 235 Specialized CAD .....	3
DDT 260 Portfolio .....	3

**TOTAL .....74**

**\*DESIGN DRAFTING STUDENTS SHOULD TAKE ADM 102 AND DDT 111 IN THEIR FIRST SEMESTER.**



## Programs of Study

### DESIGN DRAFTING TECHNOLOGY/ARCHITECTURAL Short Term Certificate

Program Code: STC.ADM.DDBA CIP CODE: 15.0613

#### BASIC DRAFTING COURSE REQUIREMENTS:

ADM 102 Computer Aided Drafting*	3
DDT 111 Fundamentals of Drafting*	3
DDT 127 Intermediate CAD	3

#### ARCHITECTURAL DRAFTING COURSE REQUIREMENTS:

DDT 132 Architectural Drafting	3
DDT 150 Residential Drawing & Design	3
DDT 155 Residential Drawing	4
DDT 213 Civil Drafting	3
DDT 222 Advanced Architectural Drafting	3

TOTAL .....25

\*DESIGN DRAFTING STUDENTS SHOULD TAKE ADM 102 AND DDT 111 IN THEIR FIRST SEMESTER.

### DESIGN DRAFTING TECHNOLOGY/3D DESIGN & PRODUCTION Associate of Applied Science Degree Advanced Manufacturing

Program Code: AAS.ADMA.DD3D CIP CODE: 15.0613

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College	1
ENG 101 English Composition	3
MTH 103 Introduction to Technical Mathematics	3
SPH 107 Fundamentals of Public Speaking	3
Humanities Elective	3
Social Science Elective	3
Natural Science or MTH Elective	3
CIS 146 Microcomputer Applications	3

#### ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:

ADM 100 Industrial Safety	3
ADM 101 Precision Measurement	3
ADM 102 Computer Aided Design*	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes	3
ADM 104 Introduction to Thermal/Electrical Principles	3
ADM 105 Fluid Systems	3
ADM 106 Quality Control Concepts	3

#### BASIC DRAFTING COURSE REQUIREMENTS:

DDT 111 Fundamentals of Drafting*	3
DDT 127 Intermediate CAD	3

#### 3D DESIGN & PRODUCTION COURSE REQUIREMENTS:

ADM 108 Intro. to 3D Modeling	3
DDT 124 Basic Technical Drafting	3
ADM 128 Plastic Material Processes	3
ADM 208 Intermediate 3D Modeling	3
DDT 233 Solids Modeling	3
DDT 234 3D Graphics and Animation	3
DDT 244 Advanced 3D Modeling	3
DDT 260 Portfolio	3

TOTAL .....73

\*DESIGN DRAFTING STUDENTS SHOULD TAKE ADM 102 AND DDT 111 IN THEIR FIRST SEMESTER.

### DESIGN DRAFTING TECHNOLOGY/3D DESIGN & PRODUCTION Short Term Certificate

Program Code: STC.ADM.DD3D CIP CODE: 15.0613

#### 3D DESIGN & PRODUCTION COURSE REQUIREMENTS:

ADM 102 Computer Aided Drafting*	3
DDT 111 Fundamentals of Drafting*	3
DDT 127 Intermediate CAD	3
ADM 108 Intro. to 3D Modeling	3
ADM 128 Plastic Material Processes	3
ADM 208 Intermediate 3D Modeling	3
DDT 233 Solids Modeling	3
DDT 234 3D Graphics and Animation	3
DDT 244 Advanced 3D Modeling	3

TOTAL .....27

\*DESIGN DRAFTING STUDENTS SHOULD TAKE ADM 102 AND DDT 111 IN THEIR FIRST SEMESTER.

## ELECTRICAL TECHNOLOGY

The Associate of Applied Science Degree in Advanced Manufacturing with a major in Electrical Technology will prepare graduates to be an entry-level electrician/electrician's helper. Concepts covered in the major include AC/DC theory, wiring methods, conduit bending, NEC Codes, fundamentals of programmable logic controllers, and distribution systems.

### ELECTRICAL TECHNOLOGY Associate of Applied Science Degree Advanced Manufacturing

Program Code: AAS.ADMA.ELT CIP CODE: 15.0613

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College	1
ENG 101 English Composition	3
MTH 103 Introduction to Technical Mathematics	3
SPH 107 Fundamentals of Public Speaking	3
Humanities Elective	3
Social Science Elective	3
Natural Science or MTH Elective	3
CIS 146 Microcomputer Applications	3

#### ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:

ADM 100 Industrial Safety	3
ADM 101 Precision Measurement	3
ADM 102 Computer Aided Design	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes	3
ADM 104 Introduction to Thermal/Electrical Principles	3
ADM 105 Fluid Systems	3
ADM 106 Quality Control Concepts	3

#### BASIC ELECTRICITY COURSE REQUIREMENTS:

ELT 108 DC Fundamentals	3
ELT 109 AC Fundamentals	3

ELT 110 Wiring Methods.....	3
ELT 117 AC/DC Machines.....	3

**ENTRY LEVEL ELECTRICIAN COURSE REQUIREMENTS:**

ELT 114 Residential Wiring .....	3
ELT 118 Commercial/Industrial Wiring.....	3
ELT 209 Motor Controls I.....	3
ELT 241 National Electric Code .....	3

**RESIDENTIAL/COMMERCIAL/INDUSTRIAL COURSE REQUIREMENTS:**

ELT 212 Motor Controls II.....	3
ELT 231 Programmable Controls I.....	3
ELT 232 Advanced Programmable Controllers.....	3

**TOTAL .....**76

**ELECTRICAL TECHNOLOGY  
ENTRY LEVEL ELECTRICIAN  
Short Term Certificate**

**Program Code: STC.ADM.ELTE                      CIP CODE: 15.0613**

**ENTRY LEVEL ELECTRICIAN COURSE REQUIREMENTS:**

ELT 108 DC Fundamentals .....	3
ELT 109 AC Fundamentals .....	3
ELT 110 Wiring Methods.....	3
ELT 114 Residential Wiring Methods .....	3
ELT 118 Commercial/Industrial Wiring.....	3
ELT 117 AC/DC Machines.....	3
ELT 209 Motor Controls I.....	3
ELT 241 National Electric Code .....	3

**TOTAL .....**24

**INDUSTRIAL MAINTENANCE**

The Associate of Applied Science Degree in Advanced Manufacturing with a major in Industrial Maintenance/Mechanical will prepare graduates for employment as entry level industrial mechanics and millwrights. Concepts covered in this program include pumps, motors, motor controls, mechanical drives, preventive/predictive maintenance concepts, hydraulics, pneumatics, prints and mechanical drawings, and related safety.

**INDUSTRIAL MAINTENANCE/MECHANICAL  
Associate of Applied Science Degree  
Advanced Manufacturing**

**Program Code: AAS.ADMA.IMMC                      CIP CODE: 15.0613**

**GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College.....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics.....	3
SPH 107 Fundamentals of Public Speaking.....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications.....	3

**ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design.....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes.....	3
ADM 104 Introduction to Thermal/Electrical Principles .....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

**BASIC ELECTRICITY COURSE REQUIREMENTS:**

ELT 108 DC Fundamentals .....	3
ELT 109 AC Fundamentals .....	3
ELT 110 Wiring Methods.....	3
ELT 117 AC/DC Machines.....	3

**ELECTRO/MECHANICAL COURSE REQUIREMENTS:**

ELT 209 Motor Controls I.....	3
INT 117 Principles of Industrial Mechanics .....	3
INT 127 Principles of Pumps & Piping .....	3
ARS 151 Welding Principles, Theory and Symbols .....	3
MTT 147 Introduction to Machine Shop I.....	3
MTT 148 Introduction to Machine Shop I Lab.....	3

**TOTAL .....**73

**INDUSTRIAL MAINTENANCE/ELECTRICAL  
Associate of Applied Science Degree  
Advanced Manufacturing**

**Program Code: AAS.ADMA.IMTE                      CIP CODE: 15.0613**

The Associate of Applied Science Degree in Advanced Manufacturing with a major in Industrial Maintenance/Electrical will prepare graduates for employment as entry level industrial electricians. Concepts covered in the major include basic electrical concepts, motor controls, programmable logic controllers, and basic instrumentation principles.

**GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College.....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics.....	3
SPH 107 Fundamentals of Public Speaking.....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications.....	3

**ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design.....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes.....	3
ADM 104 Introduction to Thermal/Electrical Principles .....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

**BASIC ELECTRICITY COURSE REQUIREMENTS:**

ELT 108 DC Fundamentals .....	3
ELT 109 AC Fundamentals .....	3
ELT 110 Wiring Methods.....	3

## Programs of Study

ELT 117 AC/DC Machines.....3

### **ELECTRO/ELECTRONICS COURSE REQUIREMENTS:**

ELT 118 Commercial/Industrial Wiring.....3  
ELT 209 Motor Controls I.....3  
ELT 212 Motor Controls II.....3  
ELT 231 Introduction to Programmable Controllers.....3  
ELT 232 Advanced Programmable Controllers.....3  
ILT 163 Digital Fundamentals.....3

**TOTAL .....73**

## **INDUSTRIAL MAINTENANCE/AIR CONDITIONING AND REFRIGERATION**

### **Associate of Applied Science Degree Advanced Manufacturing**

**Program Code: AAS.ADMA.IMTA**

**CIP CODE: 15.0613**

The Associate of Applied Science Degree in Advanced Manufacturing with a major in Industrial Maintenance/Air Conditioning & Refrigeration will prepare graduates for employment as entry level HVAC technicians. Concepts covered in the major include fundamentals of electric and gas heating systems, refrigerant transition and recovery, commercial/industrial wiring, and NEC codes.

### **GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College.....1  
ENG 101 English Composition.....3  
MTH 103 Introduction to Technical Mathematics.....3  
SPH 107 Fundamentals of Public Speaking.....3  
Humanities Elective.....3  
Social Science Elective.....3  
Natural Science or MTH Elective.....3  
CIS 146 Microcomputer Applications.....3

### **ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety.....3  
ADM 101 Precision Measurement.....3  
ADM 102 Computer Aided Design.....3  
ADM 103 Introduction to Computer  
Integrated Manufacturing/Materials & Processes.....3  
ADM 104 Introduction to Thermal/Electrical Principles.....3  
ADM 105 Fluid Systems.....3  
ADM 106 Quality Control Concepts.....3

### **BASIC ELECTRICITY COURSE REQUIREMENTS:**

ELT 108 DC Fundamentals.....3  
ELT 109 AC Fundamentals.....3  
ELT 110 Wiring Methods.....3  
ELT 117 AC/DC Machines.....3

### **HVAC COURSE REQUIREMENTS:**

ACR 113 Refrigeration Piping Practices.....3  
ACR 119 Fundamentals of Gas Heating Systems.....3  
ACR 120 Fundamentals of Electric Heating Systems.....3  
ACR 147 Refrigerant Transition & Recovery Theory.....3  
ACR 205 System Sizing & Air Distribution.....3  
ELT 118 Commercial/Industrial Wiring.....3  
ELT 241 National Electrical Code.....3

**TOTAL .....76**

## **INDUSTRIAL MAINTENANCE/ AIR CONDITIONING & REFRIGERATION HVAC Short Term Certificate**

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.ADMX.IMTH**

**CIP CODE: 15.0613**

### **HVAC COURSE REQUIREMENTS:**

ACR 113 Refrigeration Piping Practices.....3  
ACR 119 Fundamentals of Gas Heating Systems.....3  
ACR 120 Fundamentals of Electric Heating Systems.....3  
ACR 147 Refrigerant Transition & Recovery Theory.....3  
ACR 205 System Sizing & Air Distribution.....3  
ELT 118 Commercial/Industrial Wiring.....3  
ELT 241 National Electrical Code.....3

**TOTAL .....21**

## **INDUSTRIAL MAINTENANCE/INSTRUMENTATION Associate of Applied Science Degree Advanced Manufacturing**

**Program Code: AAS.ADMA.IMIN**

**CIP CODE: 15.0613**

The Associate of Applied Science Degree in Advanced Manufacturing with a major in Industrial Maintenance/Instrumentation will prepare graduates for employment as entry level instrumentation technicians. Concepts covered in the major include electronics for electricians; instrumentation circuits and systems; transducers; detectors; actuators; control devices; and fundamentals of pressure, force, weight, motion, liquid level, and fluid flow.

### **GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College.....1  
ENG 101 English Composition.....3  
MTH 103 Introduction to Technical Mathematics.....3  
SPH 107 Fundamentals of Public Speaking.....3  
Humanities Elective.....3  
Social Science Elective.....3  
Natural Science or MTH Elective.....3  
CIS 146 Microcomputer Applications.....3

### **ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety.....3  
ADM 101 Precision Measurement.....3  
ADM 102 Computer Aided Design.....3  
ADM 103 Introduction to Computer  
Integrated Manufacturing/Materials & Processes.....3  
ADM 104 Introduction to Thermal/Electrical Principles.....3  
ADM 105 Fluid Systems.....3  
ADM 106 Quality Control Concepts.....3

### **BASIC ELECTRICITY COURSE REQUIREMENTS:**

ELT 108 DC Fundamentals.....3  
ELT 109 AC Fundamentals.....3  
ELT 110 Wiring Methods.....3  
ELT 117 AC/DC Machines.....3

**INSTRUMENTATION COURSE REQUIREMENTS:**

ILT 104 Industrial Instrumentation.....	3
ILT 114 Instrumentation Operation and Calibration.....	3
ILT 214 Control and Troubleshooting Flow, Level, Temperature, Pressure, and Level Processes.....	3
ELT 209 Motor Control I.....	3
ELT 212 Motor Control II.....	3
ELT 231 Intro. to Programmable Controllers.....	3
ELT 232 Adv. Programmable Controllers .....	3
<b>TOTAL .....</b>	<b>76</b>

**INDUSTRIAL MAINTENANCE/INSTRUMENTATION  
Short Term Certificate**

**Program Code: STC.ADM.IMIN**

**CIP CODE: 15.0613**

**INSTRUMENTATION COURSE REQUIREMENTS:**

ELT 108 DC Fundamentals .....	3
ELT 109 AC Fundamentals .....	3
ILT 104 Industrial Instrumentation.....	3
ILT 114 Instrumentation Operation and Calibration.....	3
ILT 214 Control and Troubleshooting Flow, Level, Temperature, Pressure, and Level Processes.....	3
ELT 209 Motor Control I.....	3
ELT 212 Motor Control II.....	3
ELT 231 Intro. to Programmable Controllers.....	3
ELT 232 Adv. Programmable Controllers .....	3

**TOTAL .....27**

**MACHINE TOOL TECHNOLOGY**

The Machine Tool Technology program is a study of the process of using machine tools to manufacture useful products and parts. Students will acquire specialized knowledge and skills in many areas including mathematics, print reading, physics, measuring instruments, cutting tools, and machine tools. Graduates will have the ability to turn rough material into precision finished products and parts.

**Associate of Applied Science Degree  
Advanced Manufacturing**

**Program Code: AASADMA.MTT**

**CIP CODE: 15.0613**

**GENERAL EDUCATION CORE REQUIREMENTS:**

ORI 101 Orientation to College.....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics.....	3
SPH 107 Fundamentals of Public Speaking.....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications.....	3

**ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:**

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement.....	3
ADM 102 Computer Aided Design.....	3
ADM 103 Introduction to Computer .....	

Integrated Manufacturing/Materials & Processes.....	3
ADM 104 Introduction to Thermal/Electrical Principles.....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts.....	3

**MACHINE TOOL TECHNOLOGY REQUIREMENTS**

MTT 121 Basic Blueprint Reading for Machinist .....	3
MTT 140 Basic Computer Numerical Control Turning .....	3
MTT 141 Basic Computer Numerical Control Milling .....	3
MTT 147 Introduction to Machine Shop I.....	3
MTT 148 Introduction to Machine Shop I Lab.....	3
MTT 149 Introduction to Machine Shop II.....	3
MTT 150 Introduction to Machine Shop II Lab.....	3
MTT 212 Adv. Computer Numerical Control Turning .....	3
MTT 213 Adv. Computer Numerical Control Milling .....	3
MTT 241 CNC Milling Lab I .....	3
MTT 242 CLNC Milling Lab II .....	3

**TOTAL .....76**

**MACHINE TOOL TECHNOLOGY  
MANUAL MACHINING  
Short Term Certificate**

**This program is subject to the Credit to Clock Hour  
conversion as defined by Title IV and may not be fully funded  
with Title IV funds (Pell Grant, SEOG and Direct Student  
Loan)**

**Program Code: STC.ADM.MTM**

**CIP CODE: 15.0613**

MTT 107 Machining Calculations I.....	3
MTT 121 Basic Blueprint Reading for Machinist .....	3
MTT 138 Milling I Lab .....	3
MTT 147 Introduction to Machine Shop I.....	3
MTT 148 Introduction to Machine Shop I Lab.....	3
MTT 149 Introduction to Machine Shop II.....	3
MTT 150 Introduction to Machine Shop II Lab.....	3
MTT 162 Precision Grinding .....	3
MTT 163 Precision Grinding Lab.....	3

**TOTAL .....27**

**MACHINE TOOL TECHNOLOGY  
ADVANCED CNC  
Short Term Certificate**

**This program is subject to the Credit to Clock Hour  
conversion as defined by Title IV and may not be fully funded  
with Title IV funds (Pell Grant, SEOG and Direct Student  
Loan)**

**Students must see a MTT Instructor before starting this certificate**

**Program Code: STC.ADM.MTAC**

**CIP CODE: 15.0613**

## Programs of Study

MTT 212 Advanced Computer Numerical Control Turning .....	3
MTT 213 Advanced Computer Numerical Control Milling.....	3
MTT 219 Computer Numerical Control Graphics: Turning .....	3
MTT 220 Computer Numerical Control Graphics: Milling .....	3
MTT 242 CNC Milling Lab II .....	3
MTT 243 CNC Turning Lab .....	3
MTT 244 CNC Turning Lab II.....	3
MTT 281 Special Topics in Machine Tool Technology.....	3
MTT 282 Special Topics in Machine Tool Technology.....	3
<b>TOTAL .....</b>	<b>27</b>

## PROCESS TECHNOLOGY

This program is designed for individuals seeking employment in the process industry as a process technician. The process industry plays a significant role in U. S. businesses and our economy, serving the pharmaceutical, food and beverage, textile, chemical and petroleum processing, power production, plastic, paint, cosmetic, and other sectors.

### PROCESS TECHNOLOGY Associate of Applied Science Degree Advanced Manufacturing

**Program Code: AAS.ADMA.PCT** **CIP CODE: 15.0613**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics.....	3
SPH 107 Fundamentals of Public Speaking.....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications.....	3

#### ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design.....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes.....	3
ADM 104 Introduction to Thermal/Electrical Principles.....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

#### PROCESS TECHNOLOGY COURSE REQUIREMENTS:

PCT 100 Fundamentals of Process Technology .....	3
PCT 105 Process Tech I - Equipment.....	4
PCT 115 Instrumentation I .....	3
PCT 215 Instrumentation II .....	4
PCT 220 Process Tech II - Systems .....	4
PCT 230 Process Tech III - Operations.....	4
PCT 240 Process Troubleshooting.....	4
Natural Science or Technical Elective .....	3

**TOTAL .....** **72**

## RENEWABLE ENERGY

The Associate of Applied Science degree in Advanced Manufacturing with a major in Renewable Energy Technology will prepare graduates with the applicable principles and knowledge of solar, wind and hydropower energy technology and instill a broader understanding of the scientific, economic and political context of the industry. Calhoun Community College was recently awarded over \$3.4 million from the U.S. Department of Labor in order to train students and workers to meet the needs of the rapidly emerging green energy workforce. Students In the Renewable Energy program will learn and train in the brand new, state of the art, Alabama Center for Excellence in Clean Energy Technology (ACECET) facility on the Decatur campus, and will leave Calhoun prepared to excel in this rapidly expanding industry.

### RENEWABLE ENERGY Associate of Applied Science Degree Advanced Manufacturing

**Program Code: AAS.ADMA.REN** **CIP CODE: 15.0613**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition .....	3
MTH 103 Introduction to Technical Mathematics.....	3
SPH 107 Fundamentals of Public Speaking.....	3
Humanities Elective .....	3
Social Science Elective .....	3
Natural Science or MTH Elective .....	3
CIS 146 Microcomputer Applications.....	3

#### ADVANCED MANUFACTURING CORE COURSE REQUIREMENTS:

ADM 100 Industrial Safety .....	3
ADM 101 Precision Measurement .....	3
ADM 102 Computer Aided Design.....	3
ADM 103 Introduction to Computer Integrated Manufacturing/Materials & Processes.....	3
ADM 104 Introduction to Thermal/Electrical Principles.....	3
ADM 105 Fluid Systems .....	3
ADM 106 Quality Control Concepts .....	3

#### AIR CONDITIONING & ELECTRICAL COURSE REQUIREMENTS:

ELT 108 DC Electricity .....	3
ELT 109 AC Electricity .....	3
ACR 113 Refrigeration Piping Practices .....	3
ACR 187 Special Topics in ACR .....	5
REN 105 Renewable Technology Awareness.....	1
REN 115 Photovoltaic Systems Principles & Design.....	3
REN 205 Solar Thermal Principles .....	3
REN 215 Photovoltaic Systems Install. & Serv. Procedures.....	3
*ACR or ELT Electives .....	6

**TOTAL .....** **73**

\*Air Conditioning Concentration take ACR 119 and ACR 120

\*Electrical Concentration take ELT 110 and ELT 117

### RENEWABLE ENERGY Short Term Certificate

**Program Code: STC.ADM.REN** **CIP CODE: 15.0613**

ELT 108 DC Electricity .....	3
ELT 109 AC Electricity .....	3



ACR 113 Refrigeration Piping Practices .....	3
ACR 187 Special Topics in ACR .....	5
REN 105 Renewable Technology Awareness.....	1
REN 115 Photovoltaic Systems Principles & Design.....	3
REN 205 Solar Thermal Principles .....	3
REN 215 Photovoltaic Systems Install. & Serv. Procedures.....	3

**TOTAL .....**24

#### END OF ADVANCED MANUFACTURING PROGRAM OPTIONS

### BUSINESS ADMINISTRATION

**With concentrations in Business Administration, Accounting Technology, Paralegal and Entrepreneurship.**

This program is designed primarily for students who plan to seek employment in a business-related field. This program is also appropriate for students who are employed and wish to upgrade their business skills and knowledge. Although these programs are not designed to transfer, many of the courses are transferable to some senior institutions.

#### BUSINESS ADMINISTRATION Associate of Applied Science Degree

**Program Code: AAS.BSAD**

**CIP Code: 52.0201**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 112 or higher .....	3
ECO 231 Principles of Macroeconomics .....	3
SPH 107 Fundamentals of Public Speaking.....	3
CIS 146 Microcomputer Applications.....	3
Humanities/Fine Arts Elective .....	3

**Total .....**22

#### MAJOR COURSE REQUIREMENTS

BUS 215 Business Communications .....	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 272 Business Statistics II .....	3
BUS 275 Principles of Management.....	3
ECO 232 Principles of Microeconomics .....	3
BUS Business Electives .....	3
BUS 279 Small Business Management .....	3
BUS 285 Principles of Marketing.....	3
BUS 190 Workshops.....	7

**Total .....**40

**TOTAL CREDITS .....**62

## Programs of Study

### ACCOUNTING TECHNOLOGY Associate of Applied Science Degree

**Program Code: AAS.BSAD.BACT**

**CIP Code: 52.0201**

#### GENERAL EDUCATION CORE REQUIREMENTS:

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 112 or higher .....	3
ECO 231 Principles of Macroeconomics .....	3
SPH 107 Fundamentals of Public Speaking.....	3
CIS 146 Microcomputer Applications.....	3
Humanities/Fine Arts Elective .....	3

**Total .....**22

#### MAJOR COURSE REQUIREMENTS:

BUS 215 Business Communications .....	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 272 Business Statistics II .....	3
BUS 275 Principles of Management.....	3
ECO 232 Principles of Microeconomics .....	3
BUS Elective .....	3
BUS 246 Accounting on the Microcomputer .....	3
BUS 248 Managerial Accounting .....	3
*BUS 253 Individual Income Tax .....	3
CIS 113 Spreadsheet Software Applications .....	3
CIS 197V Microsoft Excel Expert.....	3

**Total .....**42

**TOTAL CREDITS .....**64

\*Course offered Spring Semester.

### ENTREPRENEURSHIP Certificate

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.ENTRE**

**CIP Code: 52.0201**

This certificate program is designed to give individuals essential skills for developing and operating a small business.

ORI 101 Orientation to College .....	1
BUS 190F Organizational Communications .....	1
BUS 190G Interpersonal Relationships .....	1
BUS 190J Ethics in the Workplace .....	1
BUS 190L Developing a Business Plan.....	1
BUS 190N Financing an Entrepreneurial Enterprise.....	1
BUS 190M Evaluating the Entrepreneurial Personality .....	1
BUS 190V Management for Entrepreneurs.....	1
BUS 190W Customer Service.....	1
BUS 190Y Leadership Skills .....	1

## Programs of Study

BUS 241 Principles of Accounting I .....	3
BUS 263 Legal and Social Environment of Business .....	3
BUS 279 Small Business Management .....	3
<b>TOTAL CREDITS</b> .....	<b>19</b>

### PARALEGAL Associate of Applied Science Degree

Program Code: AAS.BSAD.PRL CIP Code: 52.0201

#### GENERAL EDUCATION CORE REQUIREMENTS

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH Elective (to be selected from MTH 110-115 OR MTH 120-126) .....	3-4
ECO 231 Principles of Macroeconomics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
CIS 146 Microcomputer Applications .....	3
Humanities/Fine Arts Elective .....	3
<b>Total</b> .....	<b>22-23</b>

#### MAJOR COURSE REQUIREMENTS

BUS 215 Business Communications .....	3
BUS 241 Principles of Accounting I .....	3
BUS 263 The Legal and Social Environment of Business .....	3
BUS 275 Principles of Management .....	3
CIS Elective (CIS 111, 113, 115 or 117 recommended) .....	3
PRL 101 Introduction to Paralegal Studies .....	3
PRL 102 Basic Legal Research & Writing .....	3
PRL 160 Criminal Law and Procedure OR PRL 210 Real Property Law .....	3
PRL 230 Domestic Law .....	3
PRL 240 Wills, Trusts & Estates .....	3
PRL 262 Civil Law & Procedure .....	3
PRL Elective (Choose from PRL 150, 192, 193, 250, or 291) .....	6

**\*PRL 101 and PRL 102 must be taken prior to any other PRL courses. PRL 101 and PRL 102 may be taken together in the same semester.**

**\*\*ENG 101 must be completed prior to enrollment in PRL 102.**

Total .....42

**TOTAL CREDITS .....64-65**

## CHILD DEVELOPMENT

This program is designed primarily for students who plan to seek employment in preschool or school age programs. All students are required to complete the General Education Core Requirements and the Child Development Common Core courses.

### CHILD DEVELOPMENT Associate of Applied Science Degree

Program Code: AAS.CDVA CIP Code: 19.0708

#### GENERAL EDUCATION CORE REQUIREMENTS

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
Fine Arts Elective (Choose from ART 100, ART 203, ART 204, MUS 101, THR 120) .....	3
SPH 107 Fundamentals of Public Speaking .....	3
MTH 116 Mathematical Applications <u>OR</u> MTH 112 Pre-calculus Algebra .....	3
BIO 103 Principles of Biology I .....	4
CIS 146 Microcomputer Applications .....	3
History Elective .....	3
PSY 200 General Psychology .....	3

Total General Credit Hours .....29

#### MAJOR COURSE REQUIREMENTS

CHD 202 Children's Creative Experiences .....	3
CHD 203 Children's Literature and 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 209 Infant and Toddler Education Programs .....	3
CHD 210 Educating Exceptional Children .....	3
CHD 215 Supervised Practical Experiences in Child Development .....	3
PSY 211 Child Growth and Development Principles .....	3
Child Development Electives .....	6
Choose <u>two</u> (2) of the following:	
CHD 100 Introduction of Early Care and Education of Children .....	3
CHD 214 Families and Communities in Early Childcare and Education Programs .....	3
CHD 220 Parenting Skills .....	3
General Electives .....	6

Total Credit Hours .....39

**TOTAL CREDITS .....68**

Students also have the option of completing the following specialty course requirements for additional professional training.

#### Administration

CHD 208 Administration of Child Development Programs .....	3
BUS 263 The Legal and Social Environment of Business .....	3
BUS 275 Principles of Management .....	3
BUS 279 Small Business Management .....	3

Total Administration Credit Hours .....12

**CHILD DEVELOPMENT**  
**Short Term Certificate**

**Program Code: STC.CDV**

**CIP Code: 19.0708**

This program is designed to enrich the child care student/worker and serve as an intermediate step for those individuals continuing their work toward an associate degree in Child Development.

**GENERAL EDUCATION CORE REQUIREMENTS**

ORI 101 Orientation to College.....	1
*COM 100 Introductory Technical English OR	
ENG 101 English Composition I .....	3
MTH 116 Mathematical Applications OR	
MTH 112 Pre-calculus Algebra .....	3
CIS 146 Microcomputer Applications .....	3

**MAJOR COURSE REQUIREMENTS**

PSY 211 Child Growth and Development Principles.....	3
CHD 202 Children's Creative Experiences.....	3
CHD 204 Methods and Materials for	
Teaching Children.....	3
CHD 205 Program Planning for Educating Young Children .....	3
CHD 210 Educating Exceptional Children .....	3
Total Credits .....	25

\*Students who may want to pursue the Child Development Associate of Applied Science degree should take ENG 101.

**CLINICAL LABORATORY TECHNICIAN (CLT)**

A clinical (or medical) laboratory technician is an integral part of the healthcare team. The responsibilities of a CLT (or MLT) include processing and analyzing blood, body fluid or other specimens in order to provide accurate and timely information to the ordering physician. The clinical information produced by the clinical laboratory technician is utilized to make diagnostic and treatment decisions. The program can be completed in five (5) semesters for a total of 76 semester hours.

The College is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) for the clinical laboratory technician program. Graduates, upon successful completion of an accredited program, will be eligible to take a nationally-recognized certificate exam, the ASCP (American Society for Clinical Pathologists) Medical Laboratory Technician (MLT) certification exam. Be advised that a criminal and/or drug history could result in denial of permission to take the credentialing examination. The address for NAACLS is as follows: 5600 N. River Road, Suite 72D, Rosemont, IL. website: [www.naacls.org](http://www.naacls.org)

**DRUG TESTING/BACKGROUND CHECKS**

As stipulated by the health agencies with which the Allied Health Department contracts for clinical experience, each student enrolled in any clinical experiences at Calhoun Community College will undergo health screen, drug, alcohol testing and/or background checks as a precondition to beginning a clinical rotation. The fee for testing/checks is the responsibility of the student. Written guidelines for the process will be provided to the student at the beginning of the program.

**POLICIES AND CURRICULUM**

Policies and Curriculum for the Associate Degree Clinical Laboratory Technician program are subject to change at any time. Written notice will be given to all students enrolled in CLT courses prior to implementation of change.

**CLINICAL LABORATORY TECHNICIAN (CLT)**  
**Associate of Applied Science Degree**

**Program Code: AAS.CLT**

**CIP Code: 51.1004**

**GENERAL EDUCATION CORE REQUIREMENTS**

ORI 101 Orientation to College.....	1
ENG 101 English Composition I .....	3
ENG 102 English Composition II OR	
Humanities Elective .....	3
MTH 100 Intermediate College Algebra or Higher .....	3
BIO 103 Principles of Biology.....	4
CHM 104 Intro. to Inorganic Chemistry.....	4
Speech Elective (Choose from SPH 106 OR 107 OR 116).....	3
PSY 200 General Psychology .....	3
TOTAL .....	24

**MAJOR COURSE REQUIREMENTS**

CLT 100 Phlebotomy.....	2
CLT 111 Urinalysis & Body Fluids .....	4
CLT 121 Hematology.....	5
CLT 131 Laboratory Techniques.....	4
CLT 141 Microbiology I.....	5
CLT 142 Microbiology II.....	4
CLT 151 Clinical Chemistry .....	5
CLT 161 Integrated Laboratory Simulation.....	2
CLT 181 Immunology.....	2
CLT 191 Immunohematology .....	5
CLT 293 Clinical Seminar .....	2
CLT 294 Practicum I (U/A & Heme) .....	3
CLT 295 Practicum II (Micro).....	3
CLT 296 Practicum III (Blood Bank).....	3
CLT 297 Practicum IV (Chemistry).....	3
TOTAL .....	52

**TOTAL CREDITS.....76**

**ADMISSION REQUIREMENTS**

Applicants must meet the minimum admission standards to be considered for selection. Class enrollment is limited and applicants are rank-ordered using a 100-point system. Applicants not meeting minimum admission standards *will not be considered*. Minimum admission standards for the Associate Degree Clinical Laboratory Technician Program are listed on the CLT website.

**SELECTION PROCESS**

Since class size is limited, the Admission Committee will evaluate each applicant's academic performance and select applicants with the strongest academic record. A 100-point system is used to evaluate academic standing based on the calculation of points for students meeting Minimum Admission Requirements.

## Programs of Study

### ENROLLMENT REQUIREMENTS FOR CLT AAS DEGREE PROGRAM

Once enrolled in the CLT program but prior to being scheduled for any clinical experience, the student must

1. Provide a current Student Health Form (to be provided) that has been completed by a licensed physician or nurse practitioner which will include documentation of
  - Two-step Mantoux skin test (PPD) or chest X-ray,
  - Immunity or vaccination for rubella, tetanus, and varicella-zoster, and
  - Ability to perform essential functions as listed on health form.
2. Present proof that they have received the three (3) Hepatitis B vaccinations or proof of immunity to the Hepatitis B virus. If a student chooses not to receive the Hepatitis B vaccine, they must sign a form indicating their refusal (waiver form).
3. Provide proof of purchase of professional liability insurance through the College as required by CLT program.
4. In addition to the above College requirements, the contracts between Calhoun Community College and area healthcare providers require proof of the following prior to students being scheduled for or attending a clinical experience:
  - Current cardiopulmonary resuscitation (CPR) course completion, professional level,
  - Drug and / or alcohol abuse testing, and
  - Criminal background check.
5. Fees / costs for all of the above enrollment requirements will be the sole responsibility of the student.

### ESSENTIAL FUNCTIONS

Students enrolling and completing the CLT program must meet the following essential function skills:

1. Accurately observe demonstrations and exercises including functional use of senses of vision, smell, touch, and hearing.
2. Communicate orally, in writing, and with computer functions using the English language.
3. Perform psychomotor skills including specimen collections, instrument manipulation, manual laboratory procedures, lifting, standing, sitting, and walking.
4. Use intellectual and cognitive skills to measure, calculate, analyze, integrate, and apply information.
5. Possess emotional, behavioral, and social health to participate collaboratively and flexibly as a professional team member.
6. Apply ethical standards to peers, faculty, staff and patients.
7. Perform academically to obtain relevant information from various teaching methods, laboratory exercises, and clinical practicums.

### PROGRESSION IN THE PROGRAM

Students are expected to meet co-requisite requirements to progress in the program. Students must maintain a minimum of a 2.0 GPA in all courses taken and/or transferred to Calhoun to continue in the program. Once accepted into the CLT program, all coursework requires a grade of C or better to progress.

The course curriculum must be followed as listed on current schedules.

### ENROLLMENT REQUIREMENTS FOR CLT 100 – PHLEBOTOMY COURSE ONLY

1. Applications for the Phlebotomy program are accepted each semester. See the Phlebotomy webpage for application, deadlines and other information.
2. Each student accepted into the following semester is required to attend the Orientation session, which is scheduled at the end of the preceding semester. Enrollment, course, and clinical information will be given at that time.
3. Only complete applications will be considered for acceptance.
4. Accepted applicants are notified by mail with the Orientation date.

## COMPUTER GRAPHICS

### With concentrations in Graphic Design, Electronic Imaging and Graphic Animation

This program is for those interested in refining artistic talents and in preparing a professional quality portfolio in order to strengthen employment possibilities. Courses in graphic design, advertising, computer graphics, technical illustration, multi-media design and production, and animation are emphasized under various concentrations within this program. Some courses are offered only once a year in the day program at the Decatur campus. Students should plan schedules with the advice of the Art faculty.

A formal review of a professional quality portfolio of the student's work is required upon completion of the program of study.

### COMPUTER GRAPHICS

#### Graphic Design

#### Associate of Applied Science Degree

Program Code: AAS.CGFX.GFXD

CIP Code: 50.0401

#### Year I (Fall)

ART 113 Drawing I.....	3
ART 121 Two Dimensional Composition I.....	3
ART 221 Computer Graphics I.....	3
VCM 180 Introduction to Graphic Design.....	3
ORI 101 Orientation to College.....	1
Choose one (1) General Education Core Requirement from below.....	3
<b>Total.....</b>	<b>16</b>

#### Year I (Spring)

ART 114 Drawing II.....	3
ART 253 Graphic Design I.....	3
VCM 150 Typography.....	3
VCM 232 Advanced Computer Graphics .....	3
ART 203 Art History I .....	3
Choose one (1) General Education Core Requirement from below .....	3
<b>Total.....</b>	<b>18</b>

#### Year II (Fall)

VCM 250 Introduction to Technical Illustration .....	3
ART 254 Graphic Design II.....	3
ART 216 Printmaking I .....	3
VCM 145 Introduction to Digital Photography.....	3
Choose two (2) General Education Core Requirements from below .....	6
<b>Total.....</b>	<b>18</b>

**Year II (Spring)**

VCM 251 Technical Illustration.....	3
ART 204 Art History II .....	3
ART 126 Color .....	3
VCM 146 Digital Photography .....	3
ART 291 Supervised Study I .....	1
ART 299 Portfolio.....	1
<b>Total.....</b>	<b>14</b>

**General Education Core Requirements**

ENG 101 English Composition I .....	3
MTH Elective (to be selected from MTH 100-116 OR MTH 120-MTH 126) .....	3
Humanities Elective .....	3
SPH 107 Fundamentals of Public Speaking.....	3
Social Science Elective .....	3

**TOTAL CREDITS .....66**

**COMPUTER GRAPHICS**  
**Electronic Imaging**  
**Associate of Applied Science Degree**

**Program Code: AAS.CGFX.GFXI**

**CIP Code: 50.0401**

**Year I (Fall)**

ART 113 Drawing I .....	3
ART 121 Two Dimensional Composition I.....	3
ART 221 Computer Graphics I.....	3
VCM 180 Introduction to Graphic Design.....	3
ORI 101 Orientation to College.....	1
ART 203 Art History I .....	3
<b>Total.....</b>	<b>16</b>

**Year I (Spring)**

ART 253 Graphic Design I .....	3
VCM 150 Typography.....	3
VCM 232 Advanced Computer Graphics .....	3
ART 204 Art History II .....	3
Choose two (2) General Education Core Requirements from below ..	6
<b>Total.....</b>	<b>18</b>

**Year II (Fall)**

VCM 250 Introduction to Technical Illustration .....	3
VCM 145 Introduction to Digital Photography.....	3
VCM 281 Digital Design .....	3
VCM 285 Multimedia Production .....	3
Choose two (2) General Education Core Requirements from below ..	6
<b>Total.....</b>	<b>18</b>

**Year II (Spring)**

VCM 251 Technical Illustration.....	3
VCM 286 Advanced Multimedia Production.....	3
VCM 282 Advanced Digital Design .....	3
ART 254 Graphic Design II .....	3
ART 299 Portfolio.....	1
VCM 146 Digital Photography .....	3
<b>Total.....</b>	<b>16</b>

**General Education Core Requirements**

ENG 101 English Composition I .....	3
MTH Elective (to be selected from MTH 100-116 OR MTH 120-MTH 126) .....	3
SPH 107 Fundamentals of Public Speaking.....	3
Social Science Elective .....	3

**TOTAL CREDITS .....68**

**COMPUTER GRAPHICS**

**Graphic Animation**

**Associate of Applied Science Degree**

**Program Code: AAS.CGFX.GFXA**

**CIP Code: 50.0401**

**Year I (Fall)**

ART 113 Drawing I .....	3
ART 121 Two Dimensional Composition I .....	3
ART 221 Computer Graphics I .....	3
VCM 180 Introduction to Graphic Design .....	3
ORI 101 Orientation to College.....	1
Choose one (1) General Education Core Requirement from below ....	3
<b>Total.....</b>	<b>16</b>

**Year I (Spring)**

ART 253 Graphic Design I .....	3
CAT 182 3D (Graphics and Animation).....	3
VCM 232 Advanced Computer Graphics .....	3
ART 203 Art History I .....	3
Choose one (1) General Education Core Requirement from below ....	3
<b>Total.....</b>	<b>15</b>

**Year II (Fall)**

VCM 250 Introduction to Technical Illustration .....	3
VCM 145 Introduction to Digital Photography.....	3
VCM 281 Digital Design .....	3
VCM 285 Multimedia Production .....	3
ART 283 Graphic Animation I .....	3
Choose one (1) General Education Core Requirement from below ....	3
<b>Total.....</b>	<b>18</b>

**Year II (Spring)**

VCM 251 Technical Illustration.....	3
VCM 286 Advanced Multimedia Production .....	3
VCM 282 Advanced Digital Design .....	3
ART 284 Graphic Animation II .....	3
ART 299 Portfolio.....	1
ART 204 Art History II .....	3
Choose one (1) General Education Core Requirement from below ....	3
<b>Total.....</b>	<b>19</b>

**General Education Core Requirements**

ENG 101 .....	3
MTH Elective: 100-116 or 120-126 (Choose one).....	3-4
SPH 107 Fundamentals of Public Speaking.....	3
Social Science Elective .....	3

**TOTAL CREDITS .....68**

**COMPUTER INFORMATION SYSTEMS**

**With concentrations in Microcomputer Applications, Programming, Networking Technology, CISCO Preparation, Computer Technician, Software Applications, Adobe Certified Associate, and Information Assurance.**

This program is designed for students seeking employment in the field of Computer Information Systems with a technical concentration. The program is not designed for transfer, although many of the courses are transferable to some senior institutions. Please note that some required courses may not be offered every semester. Due to limited course offerings, degree seeking students may find it necessary to extend completion timelines and attend both day and evening classes.



## Programs of Study

### COMPUTER INFORMATION SYSTEMS Microcomputer Applications Associate of Applied Science Degree

Program Code: AAS.CIS.MCRO

CIP Code: 11.0101

#### GENERAL EDUCATION CORE REQUIREMENTS

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 110 or higher (excluding MTH 116) .....	3
ECO 231 Principles of Macroeconomics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
CIS 146 Microcomputer Applications .....	3
Humanities/Fine Arts Elective .....	3
Total .....	22

#### MAJOR COURSE REQUIREMENTS

BUS 215 Business Communications .....	3
BUS 241 Principles of Accounting I .....	3
CIS 201 <b>Intro to Computer Programming Concepts</b> .....	3
CIS 268 Software Support .....	3
CIS 269 Hardware Support .....	3
CIS 270 <b>Cisco I</b> .....	3
BUS 246 Accounting on the Micro .....	3
CIS 111 Word Processing Software Applications .....	3
CIS 113 Spreadsheet Software Applications .....	3
CIS 115 Presentation Software Applications .....	3
CIS 117 Database Software Applications .....	3
CIS 147 Advanced Microcomputer Applications .....	3
CIS 197C Dreamweaver .....	3
<b>CIS Elective (Choose from CIS 197C, 197D, or 197H)</b> .....	3
Total .....	42

**TOTAL CREDITS** .....64

### COMPUTER INFORMATION SYSTEMS Programming Associate of Applied Science Degree

Program Code: AAS.CIS.PROG

CIP Code: 11.0101

#### GENERAL EDUCATION CORE REQUIREMENTS

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 110 or higher (excluding MTH 116) .....	3
ECO 231 Principles of Macroeconomics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
CIS 146 Microcomputer Applications .....	3
Humanities/Fine Arts Elective .....	3
Total .....	22

#### MAJOR COURSE REQUIREMENTS

BUS 215 Business Communications .....	3
BUS 241 Principles of Accounting I .....	3

CIS 201 <b>Intro to Computer Programming Concepts</b> .....	3
CIS 268 Software Support .....	3
CIS 269 Hardware Support .....	3
CIS 270 <b>Cisco I</b> .....	3
CIS 222 Database Management Systems .....	3
CIS 251 C++ Programming .....	3
CIS 252 Advanced C++ Programming .....	3
CIS Programming Electives (Choose from CIS 207, 212 214, 215, 245, 246, <b>249</b> , 255, <b>276</b> ) .....	12
Total .....	42

**TOTAL CREDITS** .....61

### COMPUTER INFORMATION SYSTEMS Networking Technology Associate of Applied Science Degree

Program Code: AAS.CIS.NTWK

CIP Code: 11.0101

#### GENERAL EDUCATION CORE REQUIREMENTS

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
ENG 102 English Composition II .....	3
MTH 110 or higher (excluding MTH 116) .....	3
ECO 231 Principles of Macroeconomics .....	3
SPH 107 Fundamentals of Public Speaking .....	3
CIS 146 Microcomputer Applications .....	3
Humanities/Fine Arts Elective .....	3
Total .....	22

#### MAJOR COURSE REQUIREMENTS

BUS 215 Business Communications .....	3
CIS 201 <b>Intro to Computer Programming Concepts</b> .....	3
CIS 268 Software Support .....	3
CIS 269 Hardware Support .....	3
CIS 270 <b>Cisco I</b> .....	3
CIS 251 C++ Programming .....	3
CIS 271 <b>Cisco II</b> .....	3
CIS 272 <b>Cisco III</b> .....	3
CIS 273 <b>Cisco IV</b> .....	3
CIS 279 Network Infrastructure Design .....	3
CIS 280 Network Security .....	3
CIS Elective (Choose from: CIS 171, 172, <b>249</b> , <b>276</b> , 282, 296, 297, 299) .....	6
Total .....	42

**TOTAL CREDITS** .....61

### COMPUTER INFORMATION SYSTEMS Cisco Preparation Certificate

This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)

Program Code: STC.CIS.CSTC

CIP Code: 11.0101

This certificate option provides courses preparing students for the

CCNA (Cisco Certified Network Associate) exam series. CCNA certification is one of the most prestigious and in-demand IT certifications in the nation and is widely respected by network professionals. Completion of this certificate indicates a foundation in and apprentice knowledge of Cisco networking.

CIS 270 <b>Cisco I</b> .....	3
CIS 271 <b>Cisco II</b> .....	3
CIS 272 <b>Cisco III</b> .....	3
CIS 273 <b>Cisco IV</b> .....	3
CIS Elective (Choose from CIS 280, 289 or 296).....	3

**TOTAL CREDITS .....15**

### **COMPUTER INFORMATION SYSTEMS** **Computer Technician Preparation Certificate**

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.CIS.COMT                      CIP Code: 11.0101**

This certificate is preparation for the A+ Certification Exam.

CIS 171 Fundamentals of UNIX/LINUX I.....	3
CIS 172 Fundamentals of UNIX/LINUX II.....	3
CIS 268 Software Support.....	3
CIS 269 Hardware Support.....	3
CIS 270 <b>Cisco I</b> .....	3

**TOTAL CREDITS .....15**

### **COMPUTER INFORMATION SYSTEMS** **Software Applications Certificate**

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.CIS.SFTW                      CIP Code: 11.0101**

The Software Applications Certificate is designed for students seeking instruction in various types of Microsoft software in preparation for the Microsoft Office Specialist exams. Instruction is designed for those seeking to be more employable in the job market or to enhance current computer skills. While the certificate focuses on Microsoft Office Specialist objectives, vendor-sponsored testing is not a requirement for certificate completion.

CIS 111 Word Processing Software Applications.....	3
CIS 113 Spreadsheet Software Applications.....	3
CIS 197V Microsoft Word Expert.....	3
CIS 197Y Microsoft Excel Expert.....	3
CIS 115 Presentation Graphics Software Applications.....	3
CIS 117 Database Management Software Applications.....	3

**TOTAL CREDITS .....18**

## **Programs of Study**

### **COMPUTER INFORMATION SYSTEMS** **Adobe Certified Associate (ACA)**

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.CIS.CISA**

**CIP Code: 11.0101**

An Adobe Certified Associate (ACA) credential certifies individuals have the entry-level skills to plan, design, build, and maintain effective communications using different forms of digital media. The Adobe Certified Associate (ACA) is designed for students seeking instruction in Adobe software in preparation for the associate-level certification exams. The certification exams developed and deployed by Certiport correspond to each Adobe application used for digital communication. These are Web Communication using Adobe® Dreamweaver®, Rich Media Communication using Adobe Flash®, Visual Communication using Adobe Photoshop®. While the certificate focuses on Adobe Certified Associate (ACA) objectives, vendor-sponsored testing is neither provided as part of the courses nor is it a requirement for certification completion.

CIS 197C Dreamweaver.....	3
CIS 197D Flash.....	3
CIS 197H Photoshop.....	3

**TOTAL CREDITS .....9**

### **COMPUTER INFORMATION SYSTEMS** **Information Assurance**

**This program is subject to the Credit to Clock Hour  
conversion as defined by Title IV and may not be fully funded with  
Title IV funds (Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.CIS.INFA**

**CIP Code: 11.0101**

This certificate develops and validates skills in the areas of securing networks, combating cyber-terrorism, investigating computer attacks, and identifying computer vulnerabilities that could allow system penetration. Students will learn to identify and combat intrusion, identity theft, hacking, and denial of service attacks, as well as other emerging security concerns. Industry Certifications credit will be handled on a case-by-case basis by the BUS/CIS Division Dean.

CIS 214 Security Analyst (PEN Testing).....	3
CIS 245 Cyber-terrorism.....	3
CIS 246 Ethical Hacking.....	3
CIS 268 Software Support.....	3
CIS 269 Hardware Support.....	3
CIS 282 Computer Forensics.....	3

**TOTAL CREDITS .....18**

## Programs of Study

### COSMETOLOGY

This program has been constructed to give the student knowledge and skills that are required to become a licensed cosmetologist. The length of the program is 1200 credit unit hours. Students entering cosmetology must have a high school diploma or hold an equivalency certificate and have the approved health card. A Skin Test is required to meet State Cosmetology Board regulations.

#### COSMETOLOGY Certificate

**This program is subject to the Credit to Clock Hour conversion as defined by Title IV and may not be fully funded with Title IV funds (Pell Grant, SEOG and Direct Student Loan)**

**Program Code: CT.COS**

**CIP Code: 12.0401**

#### GENERAL EDUCATION CORE REQUIREMENTS

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
SPH 107 Fundamentals of Public Speaking OR	
SPH 116 Introduction to Interpersonal Communication .....	3
MTH 100 Intermediate College Algebra OR	
MTH 116 Mathematical Applications .....	3
CIS Computer Information Systems Elective .....	3
Total .....	13

#### MAJOR COURSE REQUIREMENTS

COS 111 Introduction to Cosmetology .....	3
COS 112 Introduction to Cosmetology Lab .....	3
COS 113 Theory of Chemical Services .....	3
COS 114 Chemical Services Lab .....	3
COS 115 Hair Coloring Theory .....	3
COS 116 Hair Coloring Lab .....	3
COS 117 Basic Spa Techniques .....	3
COS 118 Basic Spa Techniques Lab .....	3
COS 119 Business of Cosmetology .....	3
COS 123 Cosmetology Salon Practices .....	3
COS 141 Applied Chemistry for Cosmetology .....	3
COS 142 Applied Chemistry for Cosmetology Lab .....	3
COS 143 Specialty Hair Prep Techniques .....	3
COS 144 Hair Shaping and Design .....	3
COS 167 State Board Review .....	3
Total .....	45

**TOTAL CREDITS .....58**

#### COSMETOLOGY/INSTRUCTOR TRAINING Certificate

**This program is subject to the Credit to Clock Hour conversion as defined by Title IV and may not be fully funded with Title IV funds (Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.COS.COSI**

**CIP Code: 12.0499**

This certificate is a teacher-training program for licensed cosmetologists. Upon completion of this program, the graduate is eligible to

take the Alabama Instructor Examination.

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
MTH 100 Intermediate College Algebra OR	
MTH 116 Mathematical Applications .....	3

Total .....7

CIT 211 Teaching and Curriculum Development .....	3
CIT 212 Teacher Mentorship .....	3
CIT 213 Lesson Plan Development .....	3
CIT 214 Lesson Plan Methods .....	3
CIT 221 Lesson Plan Implementation .....	3
CIT 222 Audio Visual Materials and Methods .....	3
CIT 223 Audio Visual Materials and Methods Applications .....	3

Total .....21

**TOTAL CREDITS .....28**

#### COSMETOLOGY/NAIL TECHNOLOGY Certificate

**This program is subject to the Credit to Clock Hour conversion as defined by Title IV and may not be fully funded with Title IV funds (Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.COS.NAIL**

**CIP Code: 12.0410**

This program of training is designed for the student who is preparing for a career in manicuring, pedicuring, and artificial nail application.

#### GENERAL EDUCATION CORE REQUIREMENTS

ORI 101 Orientation to College .....	1
SPH 107 Fundamentals of Public Speaking OR	
SPH 116 Introduction to Interpersonal Communication .....	3
MTH Elective (numbered 100 or higher) .....	3-4
CIS Computer Information Systems Elective .....	3

Total .....10-11

#### MAJOR COURSE REQUIREMENTS

COS 151 Nail Care .....	3
COS 152 Nail Care Applications .....	3
COS 153 Nail Art .....	3
COS 154 Nail Art Applications .....	3
COS 119 Business of Cosmetology .....	3
COS 167 State Board Review .....	3

Total .....18

**TOTAL CREDITS .....28-29**

## DENTAL ASSISTING

Ms. Karen Chockley, Program Director  
256-306-2812 ksp@calhoun.edu

Additional information and applications are available on the DA program website under "Division of Health".

Dental assistants are valuable members of the dental health care team. Students in the DA program learn to perform a variety of patient care, laboratory, and office functions. DA responsibilities may include assisting the dentist during patient treatment, taking & developing X-rays, working in the dental laboratory, providing oral hygiene instruction, &/or performing office managerial duties. Dental assisting requires excellent communication abilities, proficiency in a wide array of technical skills, and personal flexibility.

The dental assisting program is committed to student success and strives to graduate knowledgeable, skilled, and comprehensively prepared entry level dental assistants for the provision of safe, effective, and compassionate care that meets the needs of employers and the general public.

The DA program offers students two educational options. An **Associate of Applied Science (AAS) Degree**, which can be achieved in 4 semesters, is awarded to those who complete the general education requirements and all dental assisting courses in the curriculum plan. A three semester **Certificate** is also available. Graduates of both programs are eligible to apply to take the Certified Dental Assistant (CDA) exam from the Dental Assisting National Board.

DA classes are only offered during the day, Monday through Friday, on the Decatur campus. The coursework is progressive, requiring a grade of 75% or higher in each DAT course and a "C" or higher in the required general education courses. Students participate in 24 weeks of part-time clinical practice experiences.

The program in dental assisting is accredited by the Commission on Dental Accreditation (CODA) which is a specialized accrediting body recognized by the United States Department of Education.

The Commission on Dental Accreditation will review complaints that relate to a program's compliance with the accreditation standards. The Commission is interested in the sustained quality and continued improvement of dental and dental-related education programs but does not intervene on behalf of Individuals or act as a court of appeal for treatment received by patients, for individuals in matters of admission, appointment, promotion or dismissal of faculty, staff or students. A copy of the appropriate accreditation standards and/or the Commission's policy and procedure for submission of complaints may be obtained by contacting: Commission on Dental Accreditation, 211 East Chicago Avenue, Chicago, IL 60611-2678, 1-800-621-8099, extension 4653.

### Admission to the Program

A new class of DA students is admitted once a year. Applicants must minimally:

1. Meet all admission requirements of CCC
2. Submit a current year DA program application
3. Submit a COMPASS or ACT reading score
4. Have a cumulative GPA of 2.5 or >
5. Submit an unofficial CCC transcript documenting all applicable course work taken at CCC or accepted in transfer by the Office of Admissions & Records

6. Have completed 8 hours of dental assisting observation experience, signed by dental office staff
7. Submit a typed essay discussing observation experiences, why you want to be a DA and goals related to dental assisting
8. Submit two (2) letters of professional recommendation in the requested format

It is the responsibility of the applicant to ensure the application is complete; incomplete applications will not be considered.

### Selection Process

Meeting minimum requirements does not guarantee acceptance into the DA program. Class size is limited and therefore the application process is competitive. After meeting minimum requirements, applicants are rank-ordered using a 100 point scale. The Admissions Committee meets in June and all applicants are notified by mail no later than July 15<sup>th</sup>.

### Dental Assisting Student Requirements

After students are enrolled in the DA program and prior to the first clinical experience, they are required to:

1. Provide evidence of current cardiopulmonary resuscitation (CPR) course completion at the healthcare provider level
2. Submit a current CCC Student Health Form signed by a licensed physician or nurse practitioner
3. Provide medical verification of a two-step Mantoux skin test (chest x-ray if positive) indicating he/she is free of tuberculosis
4. Provide documentation of immunity to mumps & rubella
5. Provide verification of immunization against hepatitis B &/or positive antibodies &/or sign a waiver
6. Purchase professional liability insurance through the College
7. Arrange for reliable transportation to and from clinical facilities assigned by the Program
8. Abide by the policies of the College and the DA Program Student Policy Manual.
9. Submit to drug testing and a background check

### Drug Testing / Background Check

As stipulated by the health facilities with which the DA program contracts for clinical education, each student enrolled in the program will undergo drug and alcohol testing and background checks as a pre-condition to beginning clinical experiences. The fees are the responsibility of the student. Policies for the screening process are provided to the student upon enrollment in the program or may be obtained by contacting the program director.

### Essential Functions

The DA Essential Functions can be found on the website and in the program application. Their purpose is to outline the cognitive, affective, and psychomotor skills deemed the minimal necessary for admission, progression, and graduation and for the provision of safe and effective patient care. If a student cannot demonstrate the skill and abilities delineated in the essential functions, it is the responsibility of the student to request appropriate accommodations through the CCC Office of Disabled Students.

### Program Costs (approximate & in addition to tuition):

Textbooks .....	\$400.00
Malpractice insurance .....	\$10.00
CPR certification .....	\$135.00
Uniforms .....	\$150.00
Lab supplies .....	\$100.00

## Programs of Study

Lab supplies.....	\$100.00
Drug Testing / Background Check.....	\$75.00
Health Exam, PPD, Immunizations .....	varies
National Certification Exam (DANB) optional.....	\$375.00

### DA Policies / Curriculum

Information contained in this Catalog and the policies and curriculum of the DA program are subject to change at any time. Written notice will be given to all students enrolled in the program prior to the implementation of a change. Please see the dental assisting program website for the most current information.

**Readmission to the Program:** A student may be readmitted to a DA program one time following a failure of or withdrawal from a DAT course. Students who are currently returning following a failure are considered to be using their second and final opportunity to complete the DA program. Students may apply for re-admittance within one year of original entry by submitting a letter of intent to the Program Director.

The readmission of a student is based on the availability of space and the student-teacher ratio, provided the student is eligible to return. Any student requesting readmission must have a minimum Grade Point Average of 2.5 on all course work attempted and should contact the Program Director at 256-306-2812 to schedule an appointment to discuss re-admission requirements. All conditions for students newly enrolling in the program will apply to students returning to the program. Students who re-enter the program may be subject to following the current curriculum and will be required to validate lab skills.

## DENTAL ASSISTING Associate of Applied Science Degree

**Program Code: AAS.DNT**

**CIP Code: 51.0601**

### Fall Cr. Hrs.

ORI 101 Orientation to College.....	1
DAT 100 Introduction to Dental Assisting .....	2
DAT 101 Preclinical Procedures I .....	3
DAT 102 Dental Materials.....	3
DAT 103 Anatomy and Physiology for Dental Assistants .....	3
DAT 104 Basic Sciences for Dental Assisting.....	2
*PSY 200 General Psychology .....	3

### Spring Cr. Hrs.

DAT 111 Clinical Practice I .....	5
DAT 112 Dental Radiology .....	3
DAT 113 Dental Health Education.....	2
DAT 116 Preclinical Procedures II.....	3
*MTH Elective (May choose from the following).....	3
MTH 100 Intermediate College Algebra	
MTH 112 Pre-calculus Algebra	
MTH 116 Mathematical Applications	
*SPH 107 Fundamentals of Public Speaking.....	3

### Summer Cr. Hrs.

DAT 114 Dental Office Administration .....	4
DAT 122 Clinical Practice II .....	4
DAT 123 Dental Assisting Seminar.....	4
*ENG 101 English Composition I .....	3

General Education Core Requirements in addition to courses listed above (required for AAS Degree):

*Natural Science elective.....	4
*CIS elective.....	3
*Humanities/Fine Arts elective .....	3
*History or Social Science or Behavioral Science elective.....	3

**TOTAL CREDITS.....64**

\* General Education Core Courses may be completed prior to entering the program.

## DENTAL ASSISTING Certificate

**Program Code: CT.DNT**

**CIP Code: 51.0601**

### Fall Cr. Hrs.

ORI 101 Orientation to College.....	1
DAT 100 Introduction to Dental Assisting .....	2
DAT 101 Preclinical Procedures I .....	3
DAT 102 Dental Materials.....	3
DAT 103 Anatomy and Physiology for Dental Assistants .....	3
DAT 104 Basic Sciences for Dental Assisting.....	2
*PSY 200 General Psychology.....	3

### Spring Cr. Hrs.

DAT 111 Clinical Practice I .....	5
DAT 112 Dental Radiology .....	3
DAT 113 Dental Health Education.....	2
DAT 116 Preclinical Procedures II.....	3
*MTH Elective (May choose from the following).....	3
MTH 100 Intermediate College Algebra	
MTH 112 Pre-calculus Algebra	
MTH 116 Mathematical Applications	
*SPH 107 Fundamentals of Public Speaking.....	3

### Summer Cr. Hrs.

DAT 114 Dental Office Administration .....	4
DAT 122 Clinical Practice II .....	4
DAT 123 Dental Assisting Seminar.....	4
*ENG 101 English Composition I .....	3

**TOTAL CREDITS.....51**

\* General Education Core Courses may be completed prior to entering the program.

## EMERGENCY MEDICAL SERVICES (EMS)

The Emergency Medical Services (EMS) program, approved by the Alabama Department of Public Health, and accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), utilizes nationally-recognized standards to provide students not only knowledge about the critical differences between the physiology, the pathophysiology, and the clinical symptoms of infants, children, adolescents, adults, and the elderly as they relate to pre-hospital emergency patient care situations, but also skills in the emergency medical care of these patients. EMS education includes legal/ethical considerations and treatment modalities/protocols within the scope of practice of the Emergency Medical Technician (EMT),



Advanced Emergency Medical Technician (AEMT), and Paramedic (NRP). The central goal of Calhoun Community College's EMS program is to prepare competent entry-level EMTs AEMTs and Paramedics in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

Students enrolled in the Emergency Medical Services Program may choose to earn a certificate or to earn the Associate of Applied Science degree in Emergency Medical Services. The first certificate of completion is the EMT Level (EMT) and the second is the Advanced EMT level (AEMT). In addition to an Associate's of Applied Science in EMS for the Paramedic, the program also offers a long certificate for the Paramedic level. Upon successful completion of each certificate, the student is eligible to apply to take the National Registry Examination at his/her respective level of training. Upon successful completion of the examination, the student will be eligible to apply for licensure to practice in the State of Alabama as an EMT, AEMT, or Paramedic.

To be granted an Associate in Applied Science degree, a student must successfully complete all three levels of Emergency Medical Services Technician training and complete the general education course requirements as outlined for the program. The Emergency Medical Services programs are fully approved by the Alabama State Department of Public Health, Emergency Medical Services Division.

As vital members of the Emergency Medical Services (EMS) team, EMTs provide pre-hospital emergency care to the ill and injured patient, continuing that care until the patient is under the care of a higher level of licensure.

EMTs have the knowledge and skills to provide basic life support to all patients whether the problem is trauma, cardiac, or medical. EMTs can splint fractures, bandage wounds, and stabilize a patient for transport to a medical facility.

Advanced EMTs can establish intravenous lines, insert blind intubation devices as well as administer certain pre-hospital medications. Paramedics are the highest level of pre-hospital care in the EMS system. Paramedics record and interpret EKG findings, treat cardiac arrests with defibrillation and cardioversion, reduce shock by intravenous fluid administration, provide ventilations and airway protection by endotracheal intubation and administer pharmacological therapy. Paramedics serve as team leaders on EMS units.

The EMS curriculum for EMT, AEMT, and Paramedic follows the National EMS Education Standards as developed by the National Highway and Traffic Safety Administration and meets the approval of the Alabama Department of Public Health, Office of Emergency Medical Services and Trauma (OEMST). EMS courses are open to qualified students who meet the general admission and entry-level requirements. All students must complete the COMPASS or ACT prior to admission into the Paramedic Program. All EMS students must be certified in CPR at the Health Care Provider level (or equivalent) and have completed OSHA Bloodborne Pathogens before entering the clinical areas. Passing score for all EMS courses is 75%. Graduates are eligible to apply for the National Registry Examination, passing of which is required for state licensure in Alabama.

Graduates of the EMS program find employment with ambulance services, hospitals, fire departments, rescue squads and industrial safety. Other opportunities for employment include emergency clinics, insurance companies, fire service agencies and law enforcement agencies.

In order to be eligible to attend clinicals, each student must attend a clinical orientation session. Date, time and location for clinical orientation sessions will be published each semester. All students are subject to background checks and drug screens. For more information on these, please contact the EMS Office at 256-306-2786.

It is recommended that all students enrolling in EMS courses and REQUIRED that students registering for Paramedic courses make an appointment with a member of the EMS faculty prior to enrollment for counseling.

For more information, visit [www.calhoun.edu](http://www.calhoun.edu). or contact the EMS secretary at 256-306-2786, e-mail [atl@calhoun.edu](mailto:atl@calhoun.edu) or Mark Branon at (256) 306-2854, e-mail [msb@calhoun.edu](mailto:msb@calhoun.edu). Information about CAAHEP accreditation can be found at [www.CAAHEP.org](http://www.CAAHEP.org), or by calling 727-210-2350, or writing CAAHEP at 1361 Park Street, Clearwater, Florida 33756.

### **EMERGENCY MEDICAL SERVICES EMT CERTIFICATE**

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.EMT.EMTB**

**CIP Code: 51.0904**

The EMT portion of the program is one semester in length and consists of the following courses, which are taught concurrently three days/evenings per week and must be successfully completed for eligibility for NREMT exam.

EMS 118 Emergency Medical Technician .....	9
EMS 119 Emergency Medical Technician Clinical .....	1

**Total hours for EMT Certificate .....10**

### **ADVANCED EMT CERTIFICATE**

**This certificate program is not eligible for Title IV funding  
(Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.EMT.EMSA**

**CIP Code: 51.0904**

EMS 155 Advanced EMT Theory and Lab .....	8
EMS 156 Advanced EMT Clinical Competencies .....	2

**Total hours for Advanced EMT Certificate .....10**

### **EMERGENCY MEDICAL SERVICES PARAMEDIC Associate in Applied Science**

**Program Code: AAS.EMS**

**CIP Code: 51.0904**

**Program Code: CT.EMS**

#### **EMS Course Requirements**

#### **EMT (one semester)**

EMS 118 Emergency Medical Technician .....	9
EMS 119 Emergency Medical Technician Clinical .....	1
*EMS 100 CPR (optional) .....	1

## Programs of Study

EMS 107 (optional) Emergency Vehicle Operations (EVOC) .....1

**Semester Total (with EMS 100 and EMS 107) .....12**

\*EMS 100 for those not certified at the professional level

### **Advanced EMT (one semester)\***

EMS 155 Advanced Emergency Medical Technician .....8

EMS 156 Adv. Emergency Med. Tech. Clinical (45 clinical hours) .....2

BIO 201 Human Anatomy and Physiology I .....4

**Semester Total (with Bio 201).....14**

\*Admission into the AEMT Program requires meeting with an EMS faculty member prior to registration and students admitted to the AEMT program **MUST** possess an Alabama EMT license.

### **Paramedic - First Semester\***

EMS 240 Paramedic Operations .....2

EMS 241 Paramedic Cardiology .....3

EMS 242 Paramedic Patient Assessment .....2

EMS 243 Paramedic Pharmacology .....1

EMS 244 Paramedic Clinical 1 (45 clinical hours) .....1

MTH 100 Intermediate College Algebra .....3

BIO 202 Human Anatomy and Physiology II .....4

**Semester Total (with MTH 100 & BIO 202) .....16**

\*Successful completion of BIO 201 required **PRIOR** to admission

### **Paramedic - Second Semester**

EMS 245 Paramedic Medical Emergencies .....3

EMS 246 Paramedic Trauma Management .....3

EMS 247 Paramedic Special Populations .....2

EMS 248 Paramedic Clinical II (135 clinical hours) .....3

ENG 101 English Composition .....3

PSY 200 General Psychology .....3

**Semester Total (with ENG 101 & PSY 200) .....17**

### **Paramedic - Third Semester**

EMS 253 Paramedic Transition to the Workforce .....2

EMS 254 Advanced Competencies for the Paramedic .....2

EMS 255 Paramedic Field Preceptorship (225 clinical hours) .....5

EMS 256 Paramedic Team Leadership (45 clinical hours) .....1

SPH 107 Fundamentals of Public Speaking .....3

\*Fine Arts/Humanities Elective .....3

**Semester Total (with SPH 107 & Fine Arts/Humanities Elective) .....16**

**Total hours for Paramedic Long Certificate .....63**

**Total hours for Associate of Applied Science Degree .....73**

**NOTE:** All clinical hours for all clinical courses are minimum clock hours. Students are still required to achieve minimum competencies in each class. Additional time may be required to achieve minimum competency.

\*Fine Arts/Humanities Elective - 3 semester hours (choose one from: Art, Literature, Music, Philosophy, Religion, Theater, or Foreign Language)

## EMERGENCY MEDICAL SERVICES PARAMEDIC EMT, Advanced EMT, and Paramedic GENERAL ADMISSION REQUIREMENTS

There are Essential Functions required for students entering and participating in the EMT, Advanced EMT, and Paramedic curricula. As a student, you must

### **PHYSICAL DEMANDS**

1. have the physical ability to walk, climb, crawl, bend, push, pull, or lift and balance over less than ideal terrain;
2. have good physical stamina and endurance, which would not be adversely affected by having to lift, carry, and balance at times, in excess of 125 pounds (250 pounds with assistance);
3. see different color spectrums;
4. have good eye-hand coordination and manual dexterity to manipulate equipment, instrumentation, and medications;

### **PROBLEM SOLVING ABILITIES (Data Collection, Judgment, Reasoning)**

5. be able to send and receive verbal messages as well as operate appropriate communication equipment of current technology;
6. be able to collect facts and to organize data accurately, communicate clearly both orally and in writing in the English language at the ninth-grade reading level or higher;
7. be able to differentiate between normal and abnormal findings in human physical conditions by using visual, auditory, olfactory, and tactile observations;
8. be able to make good judgment decisions and exhibit problem-solving skills under stressful situations;
9. be attentive to detail and be aware of standards and rules that govern practice;
10. implement therapies based on mathematical calculations;
11. demonstrate competency in the use of computers;

### **WORKER CHARACTERISTICS**

12. possess emotional stability to be able to perform duties in life-or-death situations and in potentially dangerous social situations, including responding to calls in districts known to have high crime rates;
13. be able to handle stress and work well as part of a team;
14. be oriented to reality and not be mentally impaired by mind-altering substances;
15. not be addicted to drugs or alcohol;
16. be able to work shifts of 12 hours in length;
17. be able to tolerate being exposed to extremes in the environ-

ment including variable aspects of weather, hazardous fumes, and noise;

18. possess eyesight of a minimum of one eye correctable to 20/20 vision and be able to determine directions according to a map; students who desire to drive an ambulance must possess approximately 180 degrees peripheral vision capacity; and
19. possess a valid driver's license, and be able to safely and competently operate a motor vehicle in accordance with State Law.

### **ENTRY LEVEL REQUIREMENTS**

#### **EMT and Advanced EMT**

Entry level requirements for students entering and participating in EMS education are as follows:

1. Possess a GED or high school diploma;
2. Complete the COMPASS;
3. Meet all institutional admission requirements;
4. Successfully complete within the last 12 months Basic Cardiac Life Support for the Health Care Provider;
5. Comply with "Essential Functions" of the program or attach documentation to the program application form of those essential functions of which the student is not in compliance (for review by Calhoun's American Disabilities Coordinator);
6. Provide an acceptable physical examination by a licensed medical doctor or doctor of osteopathy to include:
  - a. Written documentation (on a form provided by the program) of the physician's opinion regarding the prospective student as follows:
    - have emotional and physical ability to carry out the normal activities of prehospital emergency care;
    - compliance with the "Essential Functions" for the program; and
    - health history.
  - b. Up-to-date immunizations to include:
    - Tetanus/D within the past 10 years;
    - MMR Vaccine prior to 1969 or Rubella Titer of 1:8 or above is sufficient in lieu of MMR;
    - Two-step TB Skin test (Chest x-ray, if positive); and
    - Begin or have had the series of Hepatitis B vaccinations, or sign a waiver regarding the series of Hepatitis B vaccinations;

Health care workers who have direct patient contact or handle potentially infective materials have an increased risk for contracting Hepatitis B. A series of vaccinations for Hepatitis B is recommended by the Centers for Disease Control (CDC) and the Alabama Department of Public Health for persons who are at increased risk of infection from Hepatitis B. Cost of vaccinations is the student's responsibility.
  - c. Visual/auditory/verbal ability to include:
    - vision corrected in one eye to 20/20 (students who desire to drive an ambulance must also possess approximately 180 degrees peripheral vision capacity);
    - Color Perception; and

- being able to send and receive verbal messages.

7. Each student enrolled in EMS education must have verification of the following:
  - a. current professional liability insurance which is added to the tuition fee (**This fee is NOT covered by PELL Grants**); and
  - b. current health/hospitalization/accident insurance and/or waiver of liability.
  - c. a negative background check and drug screen completed by the college's selected agency at the student's expense.
8. All Advanced EMT students must possess an Alabama EMT license prior to registration for the AEMT program.

### **PARAMEDIC**

Requirements for students entering the courses at the Paramedic level are

1. Complete all Advanced EMT entry requirements.
2. Minimum cumulative GPA of 2.5 on a 4.0 scale.
3. Complete SPH 107, ENG 101 and MTH 100 or equivalent with a grade of "C" or higher prior to the third semester of the paramedic program and BIO 201 before entering the program.
4. Have a current Alabama license as an Advanced EMT or EMT - Intermediate.
5. Acceptance is granted to the most qualified applicants, with preference given to students progressing through Calhoun's EMS Program.

The number of students admitted to each level of EMS education is limited according to the faculty and clinical facilities available. Priority is given to students progressing through Calhoun's program.

#### **Licensure**

Upon successful completion of the Paramedic courses, the student is eligible to apply for the respective National Registry examination administered by the State of Alabama, Department of Public Health. Licensure applicants must be at least 18 years of age.

All students entering EMS education courses may be required to comply with specific licensure requirements as set forth by the National Registry of EMTs and the Alabama Department of Public Health to become licensed as an EMT, AEMT, or Paramedic. Situations which may affect their licensure compliance include, but are not limited to

1. Not being 18 years of age or older;
2. Convicted of any criminal act, including any DUI convictions;
3. Addicted to the use of intoxicating liquors or controlled substances at the present or in the past; and
4. Not possessing 180 degrees peripheral vision capacity or a valid driver's license (for licensure as an EMT Driver).

#### **PROGRESSION BETWEEN LEVELS**

To complete individual certificates in the EMS curriculum, students must

## Programs of Study

1. Progress through the required courses of the EMS curriculum in the prescribed sequence;
2. Attain an average of 75% in all coursework to include didactic, laboratory, clinical, and/or field internship training;
3. Submit acceptable physical examinations at intervals not to exceed 12 months;
4. Maintain current professional liability, health, and hospitalization insurance while enrolled in the EMS courses;
5. Maintain annual Basic Cardiac Life Support Certification at the Health Care Provider level or equivalent;
6. Comply with the "Essential Functions" required for EMT and Paramedic courses;
7. Comply with all institutional and any cooperating health agency policies, procedures, and rules of behavior as published for the students.

### Readmission:

To be readmitted to the EMS program, the student must meet the criteria for readmission to the EMS program and college as stated in the catalog and must contact the Allied Health Department to schedule an appointment with EMS faculty to discuss options for successful academic achievement.

The readmission of a student is based on availability of space and student-teacher ratio provided the student is eligible to return. The student will be readmitted one time only when he/she fails to progress for academic reasons or a student withdraws from the program.

Any student requesting readmission must have a minimum Grade Point Average of 2.50 on all course work attempted.

An EMS Program Application Form will be required if the time and need indicated is evident as well as liability insurance renewal, tuberculin skin testing (PPD) and CPR course completion. A background and drug screen will be required if it is over one calendar year old or will become so during the readmission semester.

When there is probable cause, the Allied Health Department reserves the right to require a prospective student, a student currently enrolled in the program, or a returning student to submit to psychological testing/counseling, a drug screening and/or a physical examination by a licensed physician at the student's expense and to submit a report of the outcomes to the Allied Health Department. The Allied Health Department will provide a specific form for this purpose, when applicable. All reports will be reviewed by the Allied Health Department to determine if a student may be admitted, readmitted, or retained in the EMS/EMP courses.

Continuing education courses may be offered by individual request. Those interested should contact the EMS office at 256/306-2852.

Policies for the EMS program are subject to change at any time. Written notice will be given to students enrolled in EMS courses prior to implementation of policy change.

More information about the program's CAAHEP accreditation can be

found by contacting CAAHEP directly at 727-210-2350 or online at [www.caahep.org](http://www.caahep.org) or by mail at 1361 Park Street, Clearwater, Florida 33756.

## MUSIC INDUSTRY COMMUNICATIONS

This program is for those interested in specializing in coursework which has application to the recording and publishing industries as well as to contemporary performance. Students are required to complete six credits of music performance electives and should consult a faculty advisor about this requirement.

### MUSIC INDUSTRY COMMUNICATIONS Associate of Applied Science Degree

Program Code: AAS.MUIC

CIP Code: 50.0999

### GENERAL EDUCATION CORE REQUIREMENTS

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
Math elective .....	3
SPH 107 Fundamentals of Public Speaking .....	3
MIC 253 Computer Lit. for Musician I .....	3
Humanities elective .....	3
Natural Science/Math elective .....	3
Social Science elective .....	3
Total .....	22

### MAJOR COURSE REQUIREMENTS

MIC 100 Introduction to Mass Communications .....	3
MIC 153 Introduction to Recording Technology .....	3
MIC 201 Publishing for the Recording Industry .....	3
MIC 250 Mass Communications Practicum .....	3
MIC 251 Recording Studio Production .....	3
MIC 254 Computer Literacy for the Musician II .....	3
MIC 255 Digital Recording .....	3
MIC 293 Music Notation .....	3
MUS 101 Music Appreciation .....	3
MUS 103 Survey of Pop Music .....	2
MUS 110 Basic Musicianship .....	3
MUS 291 Musical Acoustics .....	3
MUS 292 Song Writing .....	3
MUP/MUL Electives .....	6
Total .....	44

**TOTAL CREDITS .....**66



## NURSING

### Decatur Campus

Associate Degree Nursing (ADN)

Part-time Evening ADN (PTE)

LPN to RN Career Mobility ADN (CM), Track 1, Track 2 and Online

Paramedic to RN Mobility ADN

Practical Nursing (PN)

Nursing Assistant (NAS)

The philosophy of the nursing programs is consistent with the mission, goals and objectives of The Alabama Community College System and Calhoun Community College. The nursing department offers curricula to develop the knowledge, skills, and abilities necessary for entry level employment in practical (PN) and professional (RN) nursing.

Please visit our website at [www.calhoun.edu](http://www.calhoun.edu) for more information including admission requirements, applications to programs, and curriculum options.

### General Information

#### Accreditation Status

Nursing programs have the full approval of the Alabama Board of Nursing and are accredited by the Accreditation Commission for Education in Nursing (ACEN). Accreditation information regarding the nursing program may be obtained from the Accreditation Commission for Education in Nursing, 3343 Peachtree Rd. NE, Suite 850, Atlanta, GA 30326. Telephone: 404-975-5000. [www.acenursing.org](http://www.acenursing.org)

#### Licensure Information

Upon graduation from a nursing program an individual will be eligible to apply to write the National Council Licensure Examination for Practical Nurse (NCLEX-PN) or for Registered Nurse (NCLEX-RN) and apply to any state board of nursing for licensure as a practical or registered nurse. However, completion of an academic program in nursing in no way assures an individual of licensure. Legal requirements for licensure may be found in the Alabama Board of Nursing (ABN) Administrative Code ([www.abn.state.al.us](http://www.abn.state.al.us)) and include being of good moral character. Applicants who have been found guilty of any offenses listed in the Code may be denied licensure by the ABN and any other state board of nursing. The ABN, as well as other state boards of nursing, has the power to deny eligibility for licensure to any candidate who is guilty of fraud or deceit in attempting to procure a licensure; has been convicted of a felony; is guilty of a crime involving moral turpitude or gross immorality that would tend to bring reproach upon the nursing profession; is unfit or incompetent due to the use of alcohol, or is addicted to the use of habit forming drugs to such an extent as to render him or her unsafe or unreliable as a licensee; has been convicted of any violation of a federal or state law relating to controlled substances; is mentally incompetent; is guilty of unprofessional conduct of a character likely to deceive, defraud or injure the public in matters pertaining to health or has willfully or repeatedly violated any of the provisions of this article as defined by board rules and regulations.

### ALABAMA BOARD OF NURSING

#### REGULATORY QUESTIONS FOR EXAM APPLICANTS

1. Have you ever been arrested for, been charged with, been convicted of, entered a plea of guilty to, entered a plea of nolo contendere or no contest for, received deferred prosecution or adjudication for, had judgment withheld for, received pretrial diversion for, or pleaded not guilty by reason of insanity or mental defect to any crime other than a minor traffic violation in any state, territory, or country? Any crime related to driving while impaired or while under the influence of any substance is not a "minor traffic violation".
2. In the past five years, have you abused alcohol, drugs (whether legal or illegal, prescribed or unauthorized), and/or other chemical substances or received treatment or been recommended for treatment for dependency to alcohol, drugs (whether legal or illegal, prescribed or unauthorized) and/or other chemical substances?
3. Have you ever been arrested or convicted for driving under the influence of drugs/alcohol?
4. In the past five years, have you had, or do you now have, a physical or mental health problem that may impair your ability to provide safe nursing care?
5. Has the licensing authority of any state, territory, or country denied, revoked, suspended, reprimanded, fined, accepted your surrender of, restricted, limited, placed on probation, or in any other way disciplined your nursing and/or any other occupational license, registration, certification, or approval?
6. Is the Board of Nursing or other licensing authority of any state, territory, or country, including but not limited to the Alabama Board of Nursing currently investigating you?
7. Is disciplinary action pending against you with the Board of Nursing or other licensing authority of any state, territory, or country, including but not limited to the Alabama Board of Nursing?
8. Have you ever been placed on a state and/or federal abuse registry?
9. Has any branch of the armed services ever administratively discharged you with any characterization of service besides "Honorable" and/or court-martialed you?

An applicant who answers "YES" to a question is not automatically denied licensure but must provide the ABN with a detailed, written explanation and the appropriate court/treatment records must accompany the application for examination and licensure. If the documents are not received along with the application, the applicants can expect to be delayed in taking the examination. By a full explanation, the Board expects more than a statement naming the crime for which the applicant was convicted. The explanation should contain a full recitation of whom and why the crime occurred and the applicant's history since the crime. If the applicant has indicated a history of mental illness or chemical dependency, a full explanation including treatment records, urine screens, doctor's statements, etc. must be received with the application. Applicants also should be aware that they must disclose arrests that did not result in convictions and attach those court records. Misdemeanors also must be disclosed. These include checks written on accounts with insufficient funds and DUI. Minor traffic violations are excluded. If the Board of Nursing later learns of arrests or convictions not originally disclosed, such will be considered to be fraud and deceit in procuring a license and disciplinary action will be forthcoming.

The Alabama Board of Nursing will determine whether or not the applicant may write the examination for licensure and be licensed as a



## Programs of Study

registered nurse. Any questions regarding this matter should be directed to the ABN.

### Student Standards of Conduct

The nursing student shall comply with the legal, ethical, moral, and legislative standards, which determine acceptable behavior of a nurse and shall avoid those behaviors which may be cause for denial of licensure to practice as a nurse, in accordance with Alabama law regulating practice of Registered and Practical Nursing and the ABN Administrative Code.

When there is probable cause, the nursing department faculty reserves the right to require a prospective student, a student currently enrolled in a program, or a returning student to submit to psychological testing/counseling, drug screening, and/or a physical examination by a licensed physician at the student's expense and to submit a report of the outcome to the nursing faculty. The department will provide a specific form for this purpose, when applicable. All reports may be reviewed by the department faculty to determine if a student may be admitted, readmitted, or retained in the nursing program.

### Drug Testing and Background Checks

As stipulated by the health agencies with which the health division contracts for clinical education, each student accepted in any nursing program will undergo drug testing and a criminal background check as a precondition to clinical experiences. Students will also be subject to random drug or alcohol testing for "cause". All testing fees are the responsibility of the student. Related policy is provided to the student upon enrollment in a program. Students who test positive for drugs or alcohol and/or are denied clinical access by a clinical affiliate based on the criminal background check will be disallowed from clinical learning experiences, which will result in a failure of the course.

### Essential Functions for Nursing Programs

The purpose of the Essential Functions is to outline the cognitive, affective and psychomotor skills deemed minimally necessary for admission, progression, and graduation and for the provision of safe and effective patient care. The Alabama Community College System endorses the American's with Disabilities Act. If a student cannot demonstrate the skills and abilities delineated in the essential functions, it is the responsibility of the student to request an appropriate accommodation through the Office of **Services to Special Populations**, in accordance with College policy, when requested, reasonable accommodations may be provided for individuals with disabilities. The Essential Functions can be found on the nursing website and program applications.

### NURSING PROGRAM POLICIES

**\*NOTE:** Subject to change due to statewide standardization of nursing programs.

#### Admission Requirements for Nursing Programs

Minimum admission standards for all nursing programs include:

1. Unconditional admission to the College.
2. Receipt of a complete application by the deadline posted on the program application.
3. Official score on the Test of Essential Academic Skills (TEAS-V) examination. The TEAS-V score is good for three (3) years. Students must wait at least 6 weeks between testing dates. Applicants are responsible for the testing fees. See [www.atitest-ing.com](http://www.atitest-ing.com)
4. A minimum 2.5 cumulative GPA based on the following:

- Most recent 24 credit hours of undergraduate work (if applicable).
- Most recent 24 credit hours of graduate work (if applicable).
- If less than 24 credit hours at graduate level, the most recent 24 undergraduate credits will be used. Graduate credit hours will be ignored.

5. Eligibility for:
  - a. English 101 as determined by college policy, and
  - b. BIO 201 during the first term of nursing courses
  - c. Math 100 for associate degree nurse applicants
  - d. Math 116 for practical nurse applicants
6. There is no time limit for previously taken courses such as Anatomy, Physiology, Math or English.
7. Good standing with the College.
8. Possess certain physical and mental abilities to meet the Essential Functions for the nursing program. A list of Essential Functions is available in the nursing office, on the website and on the application.
9. Admission to any nursing program is competitive, and the number of students is limited by the number of faculty and the availability of clinical learning

### Application Process

Prospective students will find more information on the website including specific nursing program applications, admission requirements, and the applicant selection process.

1. After meeting all minimum admission requirements, applicants are rank-ordered using a point system based on the TEAS-V score, points for selected college (BIO) courses or high school courses for students with no prior college coursework, and additional points as described on the application. Point calculation is subject to change as dictated by college policy and/or as dictated by the Department of Postsecondary Education.
2. Applicants to a nursing program will be notified in writing regarding admission decisions.
3. Students selected for enrollment must respond to confirm their plans; if not their place will be given to another deserving applicant.
4. If not selected for admission, a new application must be submitted the following cycle.

### Enrollment Requirements

Prior to registration in nursing courses, students selected for admission to a nursing program will be required to:

1. Provide documentation of current cardiopulmonary resuscitation (CPR) course completion - must be American Heart Association Health Care Provider, American Health and Safety Institute CPR Pro, or American Red Cross CPR for the Professional Rescuer.
2. Submit a current CCC Student Health Form and Essential Functions Form that has been completed in its entirety by a licensed physician or nurse practitioner, verifying a state of physical and mental health such that the student is able to complete all program requirements without presenting undue risk/harm to the student or other persons. (Form will be furnished when student is notified of admission.)
3. Provide verification up-to-date immunizations to include:
  - Two-step TB Mantoux skin test (or chest x-ray if positive) OR three consecutive annual negative skin tests. Annual update is required; and
  - MMR Vaccine or titer verifying immunity; and
  - Varicella (chicken pox) Vaccine or titer verifying immunity; and

- Tetanus/Diphtheria Vaccination; and
- Hepatitis B immunization series, or titer verifying immunity or sign a waiver. It is recommended that all nursing students be immunized against Hepatitis B.
- 4. Purchase professional liability insurance through the college.
- 5. Verification of current health/hospitalization/accident insurance and/or waiver of liability.
- 6. Provide a "clear" background check and drug screen completed by the college's selected agency at the student's expense. Annual update is required.
- 7. Arrange reliable transportation to and from clinical facilities assigned by the nursing department.
- 8. Comply with the "Essential Functions" of the program
- 9. Abide by the policies of the College and Nursing Department Student Policy Manual.

### Grading

A grade of "C" or above is required in all general education courses required in a nursing program curriculum plan taken and/or transferred to Calhoun. To graduate from a nursing program a student must successfully complete the prescribed program of study with a 2.00 overall Grade Point Average (GPA).

The grading policy for nursing programs is more stringent than the general college grading. A passing score for all nursing courses (NUR) is a grade of "C" which is 75-79%. It is the belief of faculty that having a strict grading policy helps to better ensure knowledge and competency and holding nursing students to more rigorous standards is necessary due to the nature of the profession relative to patient safety.

### Nursing Progression Policies

**NOTE: Subject to change due to statewide standardization of nursing programs**

### Progression Requirements

In order to continue in the nursing program, the student must:

1. Maintain a grade of "C" or better in all required general education and nursing courses and maintain a 2.0 cumulative GPA.
2. Be accepted by all clinical agencies for clinical learning experiences.
3. Complete all required general education courses according to the Alabama Community College System (ACCS) Nursing Education curriculum unless completed prior to admission. Any exceptions must be approved by the Nursing Program Director.
4. Maintain ability to meet Essential Functions for nursing with or without reasonable accommodations.
5. Maintain current CPR; American Heart Association at the Healthcare Provider Level and other required health documents for clinical rotation.
6. Complete all nursing courses in the prescribed sequence. Students with a grade of "W", "D" or "F" in a nursing course, the student cannot progress in the nursing course sequence until the course is repeated successfully. Reinstatement into a course is based on the ability to meet the reinstatement guidelines, instructor availability and program resources.
7. Students receiving an "I" in a NUR course must complete all course requirements before the time to start clinical learning experiences in the next semester. Any exceptions made must have the approval of the Nursing Department Chair.
8. Students currently enrolled in any Calhoun nursing program may not apply for another nursing program at the college. Students must complete the track selected on admission into

the nursing program. Any exceptions must have the approval of the Nursing Department Chair.

### Nursing Progression Policy

1. A total of two (2) unsuccessful attempts in two separate semesters (W, D or F) in the nursing program will result in dismissal from the program.
2. A student may be reinstated to the nursing program only one time. The reinstatement is not guaranteed due to limitations in clinical spaces. All nursing program admissions standards must be met.
3. A student must have a 2.0 cumulative GPA at the current institution for reinstatement.
4. If a student has a documented extenuating circumstance that should be considered related to a withdrawal or failure, then this student may request a hearing before the Admission Committee or other appropriate college committee for a decision on repeating a course or readmission to the program.

### Definitions

Reinstatement - Students who have a withdrawal or failure in a nursing course and are eligible to return to that course will be considered for reinstatement to the program.

Readmission - Students not eligible for program reinstatement may apply for program admission as a new student. If accepted as a new student, the student must take or retake all nursing program courses.

Students must reapply as a new student and repeat all nursing courses if they have:

1. Withdrawal (W) in two different semesters
2. Two unsuccessful attempts (D or F) in two different semesters
3. Withdrawal, "D" or "F" in a first semester course (NUR 102, NUR 111 or NUR 200).

If a student is unsuccessful in the associate degree nursing program during the last semester of that program, the student may opt to enroll in the last semester of the practical nursing program. If a student has been dismissed from the mobility program, the student may apply for admission to the traditional program. Acceptance is based on space availability.

### Reinstatement & Readmission

#### Definitions

Eligible students whose progression through the nursing program is interrupted will:

1. Schedule an appointment with the Nursing Department secretary at (256-306-27940 for advising prior to application deadline for the current admission cycle. Deadlines are found on the nursing webpage.
2. Obtain and provide a current, unofficial copy of his/her transcript through MyCalhoun or from the office of admissions for review with the nursing faculty advisor.
3. Submit to the Nursing Department an application for reinstatement or readmission to the nursing program by the published deadline for the current admission cycle.
4. Acceptance for readmission or reinstatement to the nursing program is based on fulfillment of admissions criteria and space availability.

## Programs of Study

- Notification of readmission or reinstatement decision is made in writing.

In order to be reinstated, a student must

- Apply for admission to the college if not currently enrolled.
- Apply to the nursing program for reinstatement within one year from the term of withdrawal or failure in the nursing program.
- Demonstrate competency in all previous nursing courses successfully completed with validation of clinical nursing skills and/or written/computerized exams.
- Meet acceptable criteria for placement at all clinical agencies for clinical experiences.
- Adhere to nursing curriculum or program policies and procedures in effect at the time of reinstatement.
- Demonstrate current, accepted CPR course completion at the Healthcare Provider Level.
- Agree that reinstatement to the nursing program is not guaranteed. Reinstatement may be denied. Possible reasons for denial include, but are not limited to, the following:
  - Grade point average is less than 2.0 from courses completed at current institution
  - Refusal by clinical agencies to accept the student for clinical experiences
  - Over twelve months have elapsed since the student was enrolled in a nursing course
  - Failure to demonstrate competency in all previous nursing courses successfully completed.
  - Space unavailability in a course in which the student wishes to be reinstated.
  - Student has been dismissed from the program.
- Agree that dismissal from the previous program for disciplinary reasons and/or unsafe and or unsatisfactory client care in the clinical area prohibits reinstatement to the nursing program.
- Understand that additional requirements for remediation or satisfactory completion of a student success seminar may be required by the nursing program.

### Transfer Requirements

Alabama Community College System Standardized Nursing Curriculum courses will be transferred without review of the course syllabus. Nursing courses from any other institution outside of the Alabama Community College System are accepted only after review by the accepting institution to ensure content consistency. Acceptance of transfer students into nursing programs is based on space availability in class and clinicals. Meeting minimal standards does not guarantee acceptance.

- Contact the Nursing Department secretary (256-306-2794) to schedule an appointment prior to the application deadline for the current admission cycle. Deadlines are found on the nursing webpage.
- Provide a current, unofficial copy of his/her transcript demonstrating a grade of "C" or better in all required general education taken at another institution.
- Possess a minimum 2.0 GPA at time of transfer.
- Be in good standing and eligible to return to the previous nursing program.
- Provide a letter of recommendation from the Dean/Director of the previous program.
- Complete at least 25% of the total program at the accepting institution.
- Transfer students must meet the same admission, progression

and enrollment requirements for immunizations, student health examination, and evidence of current CPR course completion, drug testing and professional liability insurance as other Calhoun Nursing students.

- Validation of skills and knowledge may be required to determine program placement.

### GRADUATION

To graduate, a student must successfully complete the prescribed program of study with a 2.0 overall Grade Point Average (GPA).

Policies/Curriculum for the Nursing Department Programs are subject to change at any time. Written notice will be given to all students enrolled in nursing courses prior to implementation of change.

### Career Description

The practice of nursing is for individuals who are service oriented, intellectually mature with a strong sense of self-direction and motivation and who are able to work and interact with people of all ages and from various backgrounds. Registered Nurses (RN) assess the current health status of clients, plan care, administer treatments and medications, and provide education and emotional support for clients and their families. They perform a variety of nursing functions requiring communication skills, critical thinking, decision making, and sound judgment. RNs work in hospitals, long term care facilities, home health care, physician offices, outpatient clinics and other settings and play a vital role in the quality and effectiveness of health care. RNs can specialize in a variety of areas of patient care, and with additional education, RNs have the opportunity to function in advance practice roles such as nurse practitioner, nurse anesthetist, nurse midwife, or nurse educator. The CCC ADN program is designed to educate individuals in providing nursing care to patients of all ages in a variety of health care settings. Nursing is a collaborative and/or independent process in which the nurse interacts with individuals applying documented, scientific knowledge through the use of the nursing process. Nursing courses provide sequential nursing knowledge, experience and skills for the safe practice of nursing. Ethical and legal accountability are stressed.

### Associate Degree Nursing Program Costs (approximate)

After entry into the nursing program the student is required to purchase a Nurse Pack (equipment/supplies) through the Calhoun College Bookstore. Students are responsible to provide their own transportation to area clinical facilities.

Malpractice Insurance .....	\$10.00 per year
Standardized testing resources .....	\$110.00 per semester
Graduation Fees .....	\$20.00
NCLEX Fee .....	\$200.00
Licensure Fee .....	\$85.00
Temporary License (optional) .....	\$50.00
Textbooks (approximate) .....	\$800.00 per year
Student Response Device .....	\$70.00
Nurse Pacs .....	\$135.00
Uniforms/program patch .....	\$200.00
CPR Class .....	\$136.00
Drug Testing/Background Check .....	\$71.00
Graduation Pictures .....	\$25.00
Health Exams, PPD and immunizations .....	see current semester schedule

Tuition.....see current semester schedule

The CCC nursing department offers 6 different tracks for the attainment of an associate of applied science degree in nursing:

- Traditional
- Part-Time Evening
- LPN Career Mobility Track I
- LPN Career Mobility Track 2
- LPN Online Career Mobility
- Paramedic to RN Mobility

Graduates are eligible to apply to write the National Council Licensure Examination for Registered Nurses (NCLEX-RN®) and apply to a state board of nursing for licensure as a registered nurse.

**NURSING**  
**Associate of Applied Science Degree**

**Program Code: AAS.NURS      CIP Code: 51.3801**

**Associate Degree Nursing / Traditional Track**

The traditional ADN track is 5 semesters in length incorporating both nursing and general education classes. All courses must be taken and successfully completed in order, though any or all of the general education requirements may be fulfilled earlier. Classes meet in the Health Sciences Center on the Decatur campus approximately 3 to 5 days per week for up to six hours per day. In addition, clinical education takes place at area health care facilities each semester. The required number of hours varies with each nursing course. These experiences are primarily scheduled weekdays between the hours of 6:00 AM and 6:00 PM. Health facility assignments are based on the learning needs of the student, not geographical proximity to their home. Graduates receive an Associate of Applied Science degree in Nursing and are eligible to apply to write the National Council Licensure Examination for Registered Nurses (NCLEX-RN®) and apply to a state board of nursing for licensure as a registered nurse. Calhoun offers a fall and spring admission in the Traditional Track.

**Traditional ADN Curriculum Plan**

**First Term**

<b>Course</b>	<b>Semester Hours</b>
MTH 100 Intermediate College Algebra .....	3
BIO 201 Human Anatomy and Physiology I .....	4
NUR 102 Fundamentals of Nursing .....	6
NUR 103 Health Assessment .....	1
NUR 104 Introduction to Pharmacology .....	1
<b>Total .....</b>	<b>15</b>

**Second Term**

ENG 101* English Composition I .....	3
BIO 202 Human Anatomy and Physiology II .....	4
NUR 105 Adult Nursing .....	8
NUR 106 Maternal and Child Nursing .....	5
<b>Total .....</b>	<b>20</b>

**Third Term**

PSY 200 General Psychology .....	3
BIO 220 General Microbiology .....	4

NUR 201 Nursing Through the Lifespan I .....	5
<b>Total .....</b>	<b>12</b>

**Fourth Term**

SPH 107 Fundamentals of Public Speaking <b>OR</b>	
SPH 116 Interpersonal Communication .....	3
PSY 210 Human Growth and Development .....	3
NUR 202 Nursing Through the Lifespan II .....	6
<b>Total .....</b>	<b>12</b>

**Fifth Term**

HUMANITIES ELECTIVE	
(Art, Music, Literature, Religion, Philosophy,	
Foreign Language, or Drama/Theatre Course) .....	3
NUR 203 Nursing Through the Lifespan III .....	6
NUR 204 Transition into Nursing Practice .....	4
<b>Total .....</b>	<b>13</b>

**TOTAL CREDITS.....72**

Nursing courses are offered only on the Decatur campus.

**Associate Degree Nursing / Part-Time Evening Track**

The Part-Time Evening (PTE) track has a 7 semester curriculum plan. A hybrid distance education model is used in order that enrolled students view archived nursing lecture online. The PTE class meets on campus once weekly during evening hours for face to face time with nursing faculty, skills development and evaluation. The majority of clinical education experiences are scheduled on weekends or during the late afternoon and evening. Students are required to complete the same 72 credit hours but at a delayed pace. Class size is limited and students are enrolled once per year to begin fall semester.

**First Term**

<b>Course</b>	<b>Semester Hours</b>
MTH 100 Intermediate College Algebra .....	3
BIO 201 Human Anatomy and Physiology I .....	4
NUR 103 Health Assessment .....	1
NUR 104 Introduction to Pharmacology .....	1
<b>Total .....</b>	<b>9</b>

**Second Term**

NUR 102 Fundamentals of Nursing .....	6
BIO 202 Human Anatomy and Physiology II .....	4
<b>Total .....</b>	<b>10</b>

**Third Term**

NUR 106 Maternal and Child Nursing .....	5
BIO 220 General Microbiology .....	4
<b>Total .....</b>	<b>9</b>

**Fourth Term**

NUR 105 Adult Nursing .....	8
ENG 101 .....	3
<b>Total .....</b>	<b>11</b>

**Fifth Term**

NUR 201 Nursing through the Lifespan I .....	5
SPH 107 Fundamentals of Public Speaking <b>OR</b>	
SPH 116 Interpersonal Communication .....	3
PSY 200 General Psychology .....	3
<b>Total .....</b>	<b>11</b>

## Programs of Study

### Sixth Term

PSY 210 Human Growth and Development.....	3
NUR 202 Nursing Through the Lifespan II .....	6
<b>Total .....</b>	<b>9</b>

### Seventh Term

#### HUMANITIES ELECTIVE

(Art, Music, Literature, Religion, Philosophy, Foreign Language, or Drama/Theatre Course).....	3
NUR 203 Nursing Through the Lifespan III .....	6
NUR 204 Transition into Nursing Practice.....	4
<b>Total .....</b>	<b>13</b>

**TOTAL CREDITS .....**72

Nursing courses are offered only on the Decatur campus.

### Nursing/Career Mobility for the Licensed Practical Nurse Associate of Applied Science Degree

**Program Code: AAS.NURCM      CIP Code: 51.3801**

#### Admission Requirements

In addition to the general admission requirements for the college, admission to the LPN to RN Mobility option requires:

1. applicant meets all nursing program general admission requirements.
2. an unencumbered or unrestricted license as a Practical Nurse in Alabama.
3. documentation of 500 hours work experience as a LPN. Letter of employer verification required.
4. receipt of application for the Career Mobility option by published deadline.
5. completion of the prerequisite general education courses with a grade of "C" or better:

#### Prerequisites:

MTH 100 Intermediate College Algebra (or higher) .....	3 hours
ENG 101 English Composition .....	3 hours
BIO 201 Human Anatomy & Physiology I .....	4 hours
BIO 202 Human Anatomy & Physiology II .....	4 hours
<b>Total Prerequisites: .....</b>	<b>14 credit hours prior to NUR 201</b>

#### Associate Degree Nursing/LPN to RN Career Mobility, Track 1

CM1 is a 4-semester program to prepare licensed practical nurses to obtain an associate in applied science degree in nursing. Applications are taken in the fall for spring semester admission. CM1 is for LPNs that graduated from a PN program outside of Alabama or from any PN program more than two (2) years prior to application for admission into a CM track.

#### Associate Degree Nursing/LPN to RN Career Mobility, Track 2

CM2 is a 3 semester program for Licensed Practical Nurses who have graduated from an Alabama Community College System Practical Nursing program within the past two years and hold a current. Students admitted to this program will not be required to take NUR 200 and will enter in the *second term* of the curriculum plan. Applications are taken in the fall for summer semester admission.

#### Associate Degree Nursing/ONLINE LPN to RN Career Mobility Track

The Online Career Mobility (OCM) track is a third option for practical nurses to obtain an associate's degree. It is a 4 semester, 27 nursing credit hour plan. Students are required to attend 2-3 sessions on the

CCC Decatur campus each of 4 semesters for the purpose of orientation, testing, and clinical skills validation. Nursing lecture is archived online and other instructional methods include self-directed study assignments and discussion forums. Clinical education requirements are the same as in other ADN tracks but are accomplished utilizing a preceptor model at an approved clinical facility near to where the student resides. In addition to expenses listed for associate degree nursing, the Online Career Mobility student is required to purchase a secure remote exam proctoring device at an approximate cost of \$250. Applicants for this track must have high-speed internet access, ready access to a computer with Windows XP or later operating system, the ability to use a computer, Microsoft Office applications, the internet, and send/receive email with attachments.

### Career Mobility for the Licensed Practical Nurse Curriculum Plan

#### First Term

Course	Semester Hours
NUR 200 Nursing Career Mobility Assessment .....	6
<b>Total .....</b>	<b>6</b>

#### Second Term

PSY 200 General Psychology .....	3
BIO 220 General Microbiology .....	4
NUR 201 Nursing through the Lifespan I .....	5
<b>Total .....</b>	<b>12</b>

#### Third Term

SPH 107 Fundamentals of Public Speaking <b>OR</b> SPH 116 Interpersonal Communication .....	3
PSY 210 Human Growth & Development.....	3
NUR 202 Nursing Through the Lifespan II .....	6
<b>Total .....</b>	<b>12</b>

#### Fourth Term

HUMANITIES ELECTIVE (Art, Music, Literature, Religion, Philosophy, Foreign Language, or Drama/Theatre Course).....	3
NUR 203 Nursing Through the Lifespan III .....	6
NUR 204 Transition into Nursing Practice.....	4
<b>Total .....</b>	<b>13</b>

**TOTAL CREDITS (including prerequisites) .....**72

Nursing courses are offered only on the Decatur campus.

### Nursing / LPN Career Mobility Track 2 Associate of Applied Science Degree

If an individual has graduated from an Alabama Community College System Practical Nursing program within the past two years and holds a current license they are eligible to enroll in Track 2 Career Mobility which is 3 semesters in length. Applications are taken in the fall for summer semester admission.

#### Prerequisites:

MTH 100 Intermediate College Algebra or higher level math .....	3 hours
ENG 101 English Composition .....	3 hours
BIO 201 Human Anatomy & Physiology.....	4 hours
BIO 202 Human Anatomy & Physiology II .....	4 hours



**Career Mobility 2 Curriculum Plan**

**First Term**

Course	Semester Hours
PSY 200 General Psychology .....	3
BIO 220 General Microbiology .....	4
NUR 201 Nursing through the Lifespan I .....	5
<b>Total</b> .....	<b>12</b>

**Second Term**

SPH 107 Fundamentals of Public Speaking <b>OR</b> SPH 116 Interpersonal Communication .....	3
PSY 210 Human Growth & Development .....	3
NUR 202 Nursing through the Lifespan II .....	6
<b>Total</b> .....	<b>12</b>

**Third Term**

HUMANITIES ELECTIVE (Art, Music, Literature, Religion, Philosophy, Foreign Language, or Drama/Theatre Course) .....	3
NUR 203 Nursing Through the Lifespan III .....	6
NUR 204 Transition into Nursing Practice .....	4
<b>Total</b> .....	<b>13</b>

**TOTAL CREDITS (including prerequisites) .....72**

Nursing courses are offered only on the Decatur campus.

**Nursing / Online LPN Career Mobility Track  
Associated of Applied Science Degree**

The Online Career Mobility (OCM) track is a third option for practical nurses to obtain an associate's degree. It is a 4 semester, 27 nursing credit hour plan. Students are required to attend 2-3 sessions on the CCC Decatur campus each of 4 semesters for the purpose of orientation, testing, and clinical skills validation. Nursing lecture is archived online and other instructional methods include self-directed study assignments and discussion forums. Clinical education requirements are the same as in other ADN tracks but are accomplished utilizing a preceptor model at an approved clinical facility near to where the student resides. In addition to expenses listed for associate degree nursing, the Online Career Mobility student is required to purchase a secure remote exam proctoring device at an approximate cost of \$250. Applicants for this track must have high-speed internet access, ready access to a computer with Windows XP or later operating system, the ability to use a computer, Microsoft Office applications, the internet, and send/receive email with attachments.

**Prerequisites:**

MTH 100 Intermediate College Algebra or higher level mat .....	3 hours
ENG 101 English Composition .....	3 hours
BIO 201 Human Anatomy & Physiology .....	4 hours
BIO 202 Human Anatomy & Physiology II .....	4 hours

**Online Career Mobility Curriculum Plan**

**First Term**

Course	Semester Hours
NUR 200 Nursing Career Mobility Assessment .....	6
<b>Total</b> .....	<b>6</b>

**Second Term**

PSY 200 General Psychology .....	3
BIO 220 General Microbiology .....	4
NUR 201 Nursing through the Lifespan I .....	5
<b>Total</b> .....	<b>12</b>

**Third Term**

SPH 107 Fundamentals of Public Speaking <b>OR</b> SPH 116 Interpersonal Communication .....	3
PSY 210 Human Growth & Development .....	3
NUR 202 Nursing through the Lifespan II .....	6
<b>Total</b> .....	<b>12</b>

**Fourth Term**

HUMANITIES ELECTIVE (Art, Music, Literature, Religion, Philosophy, Foreign Language, or Drama/Theatre Course) .....	3
NUR 203 Nursing Through the Lifespan III .....	6
NUR 204 Transition into Nursing Practice .....	4
<b>Total</b> .....	<b>13</b>

**TOTAL CREDITS (including prerequisites) .....72**

Nursing courses are offered only on the Decatur campus.

**Nurse / Paramedic to RN Mobility Track  
Associate of Applied Science Degree**

Paramedic to RN is a mobility track which prepares licensed paramedics to obtain their ADN. Applicants must have completed 20 hours of prerequisite general education coursework. The three semester curriculum plan includes 37 credit hours; 9 hours of additional general education and 28 hours of nursing. The first semester course NUR 111 Paramedic to RN Mobility assists the experienced EMT-P in transition to the role of the nurse with emphasis placed on skills, the nursing process, communications, and the role of the registered nurse. If successful in NUR 111 students articulate into the third semester of the ADN curriculum plan and are awarded 15 non-traditional hours of credit at the completion of the paramedic mobility curriculum. Applications are accepted in the fall semester for spring admission. Students in this track have a December graduation.

**Prerequisites:**

MTH 100 Intermediate College Algebra or higher level math .....	3 hours
ENG 101 English Composition .....	3 hours
BIO 201 Human Anatomy & Physiology .....	4 hours
BIO 202 Human Anatomy & Physiology II .....	4 hours
BIO 220 General Microbiology .....	4 hours

**Paramedic to RN Mobility Curriculum**

**First Term**

Course	Semester Hours
NUR 111 Paramedic to RN Mobility .....	12
<b>Total</b> .....	<b>12</b>

**Second Term**

SPH 107 Fundamentals of Public Speaking <b>OR</b> SPH 116 Interpersonal Communication .....	3
PSY 210 Human Growth & Development .....	3
NUR 202 Nursing through the Lifespan II .....	6
<b>Total</b> .....	<b>12</b>

## Programs of Study

### Third Term

#### HUMANITIES ELECTIVE

(Art, Music, Literature, Religion, Philosophy, Foreign Language, or Drama/Theatre Course).....	3
NUR 203 Nursing Through the Lifespan III .....	6
NUR 204 Transition into Nursing Practice.....	4
<b>Total .....</b>	<b>13</b>

**TOTAL CREDITS (including prerequisites) .....72**

Nursing courses are offered only on the Decatur campus.

### Practical Nursing Program Certificate

**Program Code: CT.LPN**

**CIP Code: 51.3901**

**This program is subject to the Credit to Clock Hour conversion as defined by Title IV and may not be fully funded with Title IV funds (Pell Grant, SEOG and Direct Student Loan)**

**PN students must maintain 37.5 contact hours/week to be considered full-time for financial aid purposes.**

#### Career Description

Licensed Practical Nurses (LPNs) represent the second largest health care providing group in America, after RNs. LPNs provide direct patient care under the supervision of an RN, physician or dentist. They perform a variety of nursing functions requiring communication skills, critical thinking, decision making, and sound judgment. LPNs work in hospitals, long term care facilities, home health care, schools, physician / dentist offices and other settings. Practical nurses have a vital role in the delivery of quality and effective health care. The curriculum revolves around technical excellence using the nursing process as a means by which students relate theory to practice. It incorporates the knowledge, values, and skills required for safe, effective patient care. Ethical and legal accountability are stressed. The practice of nursing is for individuals who are service oriented, intellectually mature with a strong sense of self direction and motivation and who are able to work and interact with people of all ages and from various backgrounds.

**Note: Nursing courses are offered only on the Decatur campus. Students entering the PN program must complete the PN program. Students may not transfer into the ADN program; however, students may apply for admission to the ADN program as a new student.**

#### Practical Nursing Program Costs (approximate)

**Note: Students are required to provide his/her own transportation to assigned clinical facility**

Malpractice Insurance .....	\$ 10.00
Standardized testing resources.....	\$110.00 per semester
Graduation Fees.....	\$ 20.00
NCLEX Fee.....	\$200.00
Licensure Fee .....	\$ 85.00
Temporary License (optional).....	\$ 50.00
Textbooks (approximate).....	\$800.00
Student Response Device .....	\$ 70.00
Nurse Packs .....	\$135.00
Uniforms (approximate) .....	\$175.00
CPR Class.....	\$136.00
Drug Testing/Background Check .....	\$ 71.00
Graduation Pictures .....	\$ 25.00
Health Exams, PPD and Immunizations .....	varies
Tuition .....	see current semester schedule

### Practical Nurse Curriculum Plan

The practical nursing program curriculum plan is three semesters in length with a total of 49 credit hours; 14 hours in general education and 35 hours in nursing. All courses must be taken and successfully completed in order, though any or all of the general education requirements may be fulfilled prior to enrollment in the PN program. Enrolled students attend NUR classes in the Health Sciences Center on the Decatur campus approximately 3 days per week for up to six hours per day. In addition, clinical education takes place at area health care facilities each semester. The required number of hours varies with each nursing course. These experiences are primarily scheduled weekdays between the hours of 6:00 AM and 6:00 PM. Health facility assignments are based on the learning needs of the student, not geographical proximity to their home. Graduates receive a certificate and are eligible to apply to write the National Council Licensure Examination for Practical Nurses (NCLEX-PN®) and apply to a state board of nursing for licensure as a practical nurse.

#### First Term

Course	Semester Hours
MTH 116 (or higher)Mathematical Applications .....	3
BIO 201 Human Anatomy & Physiology I.....	4
NUR 102 Fundamentals of Nursing .....	6
NUR 103 Health Assessment .....	1
NUR 104 Introduction to Pharmacology .....	1
<b>Total .....</b>	<b>15</b>

#### Second Term

ENG 101 English Composition I .....	3
BIO 202 Human Anatomy & Physiology II.....	4
NUR 105 Adult Nursing.....	8
NUR 106 Maternal & Child Nursing.....	5
<b>Total .....</b>	<b>20</b>

#### Third Term

NUR 107 Adult/Child Nursing.....	8
NUR 108 Psychosocial Nursing .....	3
NUR 109 Role Transition for the PN.....	3
<b>Total .....</b>	<b>14</b>

**TOTAL CREDITS (including prerequisites) .....49**

Nursing courses are offered only on the Decatur campus.

### NURSING ASSISTANT

The Nursing Assistant course (NAS100) will prepare a person to work under the supervision of an registered nurse (RN) or Licensed Practical Nurse (LPN) and give direct patient care in variety of health-care settings. Successful completion of the course allows eligibility to write the State Nursing Assistant Certification exam through PROMISSOR. The Nursing Assistant curriculum at Calhoun Community College is approved by the Alabama Department of Public Health.

#### Admission requirements

Unconditional admission to the College.

#### Enrollment Requirements/Background Checks/Drug Testing

See information provided under Nursing, General Information.

**Program Costs**

**Students will be required to provide his/her own transportation to assigned clinical facility**

**Additional expenses include:**

Textbooks .....	\$100.00
Uniforms and Supplies .....	\$70.00
Malpractice Insurance (per year) .....	\$10.00
Drug Testing/Background Check .....	\$71.00
CPR class .....	\$30.00
Certification Examination through PROMISSOR .....	\$95.00
Health exams, PPD and Immunizations .....	varies
Tuition .....	(See Semester Class Schedule)

**CAREER OPPORTUNITIES**

Nursing Assistants may be employed by hospitals, nursing homes, long-term health care facilities, and other community health care agencies.

**PHYSICAL THERAPIST ASSISTANT**

A Physical Therapist Assistant (PTA) is an educated, skilled, licensed health care team member who works under the direction and supervision of a physical therapist. The PTA helps people of all ages with health-related conditions that limit their ability to move and perform functional activities in their daily lives. Job activities may include helping a person to exercise, teaching the use of assistive devices or providing treatments such as electrical stimulation, traction, and ultrasound. PTAs work in a variety of settings including hospitals, outpatient clinics, home health, nursing homes, schools, and sports facilities.

The PTA program seeks to provide students with the knowledge to demonstrate technical competence in entry level physical therapy skills, make sound clinical decisions, and provide safe, effective, compassionate, and professional physical therapy care to a diverse patient population.

The program is designed to be completed in 5 terms. PTA classes are only offered during the day, Monday-Friday, on the Decatur campus. The coursework is progressive, requiring a grade of 75% or higher in each PTA course and a "C" or higher in the required general education courses. Students must participate in a total of 18 weeks of full-time (40 hours/week) clinical experiences.

**PHYSICAL THERAPIST ASSISTANT  
Associate of Applied Science**

**Program Code: AAS.PTA**

**CIP Code: 51.0806**

Dr. Heather MacKrell, Program Director  
hlm@calhoun.edu, 256-306-2805

Additional information and applications are available on the PTA Program Website found under "Programs of Study" and "Division of Health" at [www.calhoun.edu](http://www.calhoun.edu)

**GENERAL EDUCATION REQUIREMENTS**

ORI 101 Orientation to College .....	1
ENG 101 English Composition I .....	3
SPH 107 Fundamentals of Public Speaking OR	
SPH 116 Introduction to Interpersonal Communication .....	3

CIS 146 Microcomputer Applications .....	3
MTH 100 Intermediate College Algebra .....	3
PSY 200 General Psychology .....	3
PSY 210 Human Growth and Development .....	3
BIO 201 Human Anatomy and Physiology I .....	4
BIO 202 Human Anatomy and Physiology II .....	4
Elective (Choose from Humanities, Religion, Foreign Language, Fine Arts) .....	3
EMS 106 Medical Terminology .....	2
<b>Total .....</b>	<b>32</b>

**PTA Course Requirements**

PTA 200 Physical Therapy Issues & Trends .....	2
PTA 220 Functional Anatomy & Kinesiology .....	3
PTA 221 Kinesiology Lab .....	1
PTA 250 Therapeutic Procedures I .....	4
PTA 202 PTA Communication Skills .....	2
PTA 230 Neuroscience .....	2
PTA 232 Orthopedics for the PTA .....	2
PTA 240 Physical Disabilities I .....	2
PTA 251 Therapeutic Procedures II .....	4
PTA 252 Physical Agents & Therapeutic Modalities .....	2
PTA 290 Therapeutic Exercise .....	1
PTA 266 Clinical Fieldwork I .....	2
PTA 231 Rehabilitation Techniques .....	2
PTA 241 Physical Disabilities II .....	2
PTA 260 Clinical Education I .....	1
PTA 267 Clinical Fieldwork II .....	2
PTA 261 Clinical Education II .....	1
PTA 263 Clinical Affiliation I .....	3
PTA 201 PTA Seminar .....	2
<b>Total Credits .....</b>	<b>72</b>

PTA students are required to comply with legal, moral, and legislative standards in accordance with **Rule No. 700-X-2-02 of the Alabama State Board of Physical Therapy Administrative Code**, which states the following:

*The Board shall refuse licensure to any applicant who is of other than good moral character. The determination as to what constitutes other than good moral character and reputation shall be solely within the judgment of the Board. Each applicant shall be required to submit references from two professional sources addressing, but not being limited to, moral character. These references shall be submitted on forms prescribed by the Board and shall be mailed to the executive director. Grounds for refusal may include, but are not limited to: (1) history of using drugs or intoxicating liquors to an extent that affects professional competency, (2) conviction of a felony or crime involving moral turpitude, (3) attempt to obtain or obtaining a license by fraud or deception, (4) guilt of conduct unbecoming a person registered as a physical therapist or licensed as a physical therapist assistant or of conduct detrimental to the best interest of the public, and (5) conviction of violating any state or federal narcotic law.*

**ACCREDITATION STATUS**

The Physical Therapist Assistant Program at Calhoun Community College is accredited by the Commission on Accreditation In Physical Therapy Education (CAPTE), 1111 North Fairfax Street, Alexandria, Virginia 22314; telephone: (703) 706-3245; email:

## **Programs of Study**

accreditation@apta.org; website: www.capteonline.org.

### **Admission to the Program**

A new class of PTA students is admitted once a year in the fall semester. Applicants must minimally:

1. Meet all admission requirements of Calhoun Community College.
2. Submit a current year PTA Program Application.
3. Have completed 24 hours of physical therapy observation experience which is documented and signed by licensed PT personnel.
4. Submit a 2 - 3 page typed essay of this experience.
5. Submit two (2) letters of professional recommendation in the requested format.
6. Submit an ACT reading score or COMPASS reading placement test from the past three (3) years.
7. Submit an unofficial Calhoun Community College transcript documenting all previously completed applicable course work taken at Calhoun or accepted in transfer by the Calhoun Community College Office of Admissions and Records.

Applications are accepted January through March. It is the responsibility of the applicant to ensure the application is complete. All requested information must be included for the application to be complete. Missing documentation will result in the application not being considered for admission. Each time an applicant applies to the program an application packet must be completed in its entirety. Copies of all items submitted should be retained as information will not be released from previous application packets.

### **Selection Process**

Meeting the minimum requirements does not guarantee acceptance. Class size is limited and there is a selective application process. After meeting the minimum requirements, applicants are rank-ordered using a 100 point scale. An application and more information on the selection process are available on the PTA website.

**After** students are enrolled in the PTA program and prior to first clinical assignment they will be required to:

1. Provide evidence of current cardiopulmonary resuscitation course completion at the healthcare provider level.
2. Submit a current Calhoun Community College Allied Health Examination Form completed by a licensed physician or nurse practitioner.
3. Provide medical verification of a two- step Mantoux skin test (chest x-ray if positive) indicating he/she is free of tuberculosis.
4. Provide documentation of immunity to mumps and rubella.
5. Provide verification of immunization for hepatitis B and/or show positive antibodies and/or sign a waiver.
6. Purchase professional liability insurance through the college

prior to the first clinical rotation.

7. Arrange reliable transportation to and from clinical facilities assigned by the program.
8. Abide by the policies of the College and PTA Program Student Policy Manual.
9. Submit to drug and alcohol testing and background checks.

### **Drug Testing / Background Checks**

As stipulated by the health facilities with which the PTA program contracts for clinical education, each student enrolled in the program will undergo drug and alcohol testing and a background check as a precondition to beginning clinical experiences. The fees are the responsibility of the student. Policies for the screening process are provided to the student upon enrollment in the program.

### **Essential Functions**

Essential Functions can be found on the program application. The purpose of the PTA Program Essential Functions is to outline the cognitive, affective and psychomotor skills deemed the minimal necessary for admission, progression, and graduation and for the provision of safe and effective patient care. If a student cannot demonstrate the skills and abilities delineated in the essential functions, it is the responsibility of the student to request an appropriate accommodation through the Office of Disabled Students.

### **Policies/Curriculum**

Information contained in the Catalog and the policies and curriculum for the PTA program are subject to change at any time. Written notice will be given to all students enrolled in the program prior to implementation of change. Please see website for most current info.

### **Approximate Program Costs**

In-state tuition + fees (72 hours) = \$9432 + \$2,500 (additional expenses) = \$11,932  
 Textbooks = \$1800  
 Background check & drug screening = \$100  
 CPR certification = \$50-100  
 Physical exam, TB testing, required blood work & immunizations = \$250  
 Uniforms = \$150  
 Alabama Licensure Exam Fees = \$537

## SECURITY

The Certificate in Security prepares students to enter many of the varied fields of private security, or may be used to improve the competencies of professionals already employed in the field.

### SECURITY Certificate

**This program is subject to the Credit to Clock Hour conversion as defined by Title IV and may not be fully funded with Title IV funds (Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.SECURITY**

**CIP Code: 43.0107**

ORI 101 Orientation to College.....	1
COM 100 Introductory Technical English I OR ENG 101 English Composition I .....	3
CIS 146 Microcomputer Applications.....	3
CRJ 160 Introduction to Security .....	3
CRJ 166 Private and Retail Security .....	3
CRJ 168 International Security.....	3
CRJ 169 Security Management.....	3
CRJ 170 Introduction to Physical Security .....	3
CRJ 171 Security Risk Management .....	3
CRJ 290 Special Topics.....	2
<b>TOTAL CREDITS .....</b>	<b>27</b>

## SURGICAL TECHNOLOGY

This program is designed to prepare graduates for employment and careers in this rapidly growing technical field. The Surgical Technology program is directed towards men and women who have the capability and interest to become surgical technologists. The program provides the student with knowledge and skills to function as an integral part of a team providing surgical care to patients in a variety of settings. Under medical supervision, the surgical technologist will assist with safe and effective delivery of invasive surgical procedures.

### SURGICAL TECHNOLOGY Certificate

**This program is subject to the Credit to Clock Hour conversion as defined by Title IV and may not be fully funded with Title IV funds (Pell Grant, SEOG and Direct Student Loan)**

**Program Code: STC.SURGICAL**

**CIP Code: 51.0909**

The educational program in Surgical Technology is designed to develop the student's cognitive, affective and psychomotor abilities and to assist the surgical technologist in acquiring the knowledge and critical judgment essential for decision making as well as skill oriented delivery of surgical techniques. The goal of this program is to prepare competent entry level surgical technologist in the cognitive (knowledge), psychomotor (skills) and affective (behavior) learning domains.

Completion of this program requires three semesters of classroom/laboratory instruction and clinical experience for a total of 1050 contact hours.

The objectives of the program, which the graduates must successfully demonstrate, flow from the College mission statement, the program philosophy, and the program goal.

Upon successful completion of the Surgical Technology program, the student will demonstrate the following objectives:

1. Comprehension, application and evaluation of clinical information relevant to his or her role as a surgical technologist. (Cognitive Domain)
2. Technical proficiency in all skills necessary to fulfill the role as a surgical technologist. (Psychomotor Domain)
3. Personal behaviors (Communications) consistent with professional and employer expectations for the surgical technologist. (Affective Domain)

Further, graduates of the Calhoun Community College Surgical Technology Program are expected to meet the following student learning outcomes:

1. Participate in basic cases in a variety of surgical specialties.
2. Determine an appropriate setup for core procedures.
3. Demonstrate entry level knowledge of surgical anatomy and physiology.
4. Employ principles of aseptic technique.
5. Anticipate the needs of the surgeon and patient during the surgical procedure.
6. Demonstrate professional behaviors with surgeon and other surgical team members.
7. Manage time effectively as a member of the surgical team.
8. Demonstrate preparedness for successfully completing the CST exam.

### SURGICAL TECHNOLOGY CERTIFICATE = 44 SEMESTER HOURS PROGRAM OUTLINE

#### SEMESTER 1

ENG 101 English Composition I.....	3 credits
EMS 106 Medical Terminology .....	2 credits
Math Elective (MTH 100, 110 or 112).....	3 credits
	8 credits

#### SEMESTER 2

SUR 100 Principles of Surgical Technology .....	5 credits
SUR 102 Applied Surgical Techniques .....	4 credits
SUR 107 Surgical Anatomy and Pathophysiology .....	3 credits
SUR 108 Pharmacology for the Surgical Technologist.....	2 credits
	14 credits



## **Programs of Study**

### **SEMESTER 3**

SUR 103	Surgical Procedures .....	5 credits
SUR 104	Surgical Practicum I .....	4 credits
SPH 107	Public Speaking (or ENG 102) .....	<u>3 credits</u>
		9 credits

### **SEMESTER 4**

SUR 105	Surgical Practicum II .....	5 credits
SUR 106	Role Transition in Surgical Technology .....	1 credits
SUR 204	Surgical Practicum III .....	<u>4 credits</u>
		10 credits

**TOTAL CREDITS .....44 credits**

### **SURGICAL TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE = 62 SEMESTER HOURS PROGRAM OUTLINE**

### **SEMESTER 1**

ORI 101	Orientation to College .....	1 credit
ENG 101	English Composition I .....	3 credits
EMS 106	Medical Terminology .....	2 credits
BIO 201	Anatomy & Physiology I .....	4 credits
	Math Elective (MTH 100, 110 or 112) .....	<u>3 credits</u>
		13 credits

### **SEMESTER 2**

BIO 202	Anatomy & Physiology II .....	4 credits
PSY 200	Intro. to Psychology .....	3 credits
SPH 107	Public Speaking (or ENG 102) .....	3 credits
	Humanities/Fine Arts Elective .....	<u>3 credits</u>
		13 credits

### **SEMESTER 3**

SUR 100	Principles of Surgical Technology .....	5 credits
SUR 102	Applied Surgical Technology .....	4 credits
SUR 107	Surgical Anatomy and Pathophysiology .....	3 credits
SUR 108	Pharmacology for the Surgical Tech. ....	<u>2 credits</u>
		14 credits

### **SEMESTER 4**

SUR 103	Surgical Procedures .....	5 credits
SUR 104	Surgical Practicum I .....	4 credits
PSY 210	Human Growth and Development .....	<u>3 credits</u>
		12 credits

### **SEMESTER 5**

SUR 105	Surgical Practicum II .....	5 credits
SUR 106	Role Transition for the Surgical Tech. ....	1 credit
SUR 204	Surgical Practicum III .....	<u>4 credits</u>
		10 credits

**TOTAL CREDITS ..... 62 credits**

## **ACCREDITATION STATUS**

The Calhoun Community College surgical technology program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 1361 Park Street, Clearwater, Florida 33756, www.caahep.org, (727) 210-2350.

Upon the recommendation of the Accreditation Review Council on

Education in Surgical Technology and Surgical Assisting (ARC/STSA), 6 West Dry Creek Circle, Suite 110, Littleton, Colorado 80120, www.arcsta.org, (303) 694-9262.

Graduates of CAAHEP accredited programs are eligible to sit for the National Certified Surgical Technologist exam. The CST exam is managed by the National Board of Surgical Technology and Surgical Assisting (NBSTSA).

## **Admissions Requirements**

Acceptance into Calhoun Community College is granted to most applicants, but this does NOT constitute nor guarantee admission to the SUR program. Students interested in admission to the SUR program should complete an application (available on the Surgical Technology Program website) and submit it to the Allied Health Department office in the Health Sciences Building, Room 308.

The minimum requirements for admission into the SUR program include:

- Submit a completed application form to the Admissions & Registrar's Office at Calhoun Community College and be accepted for enrollment by the College.
- Attend an information session.
- Submit a completed Surgical Technology Application Form to the Department of Allied Health (Forms are made available at information sessions).
- Possess a high school diploma or equivalent.
- Complete ENG 101 with a grade of "C" or better.
- Complete Medical Terminology (EMS 106 or HPS 105) with a grade of "C" or better.
- Complete MTH 100, 110 or 112 with a grade of "C" or better.
- A cumulative GPA of 2.5 or higher on any college coursework completed
- Current Compass score of 75 or higher.

## **Selection Process**

Meeting minimum requirements above does NOT guarantee admission into the SUR program. Students meeting the minimum requirements will be presented to the SUR Admission Committee with a score of "10". Additional points are added to the application by the committee when students have:

- Completed EMS 106 OR HPS 105 with a grade of
  - "A" = 2 points added
  - "B" = 1 points added
- Work experience in a patient care setting - up to 3 points added
- Completed a handwritten statement (on the application) and a manual dexterity exam.
  - Statement = up to 3 points added
  - Manual dexterity exam (completed at the Information Session) = up to 3 points added
- One year or more of work experience in surgery - 1 point added

Complete BIO 201 or 202

- 2 points added for each "A" or "B" for a maximum total of 4 points
- 1 point added for each "C", up to 2 points

Complete PSY 200, PSY 210, SPH 107 or ENG 101

- 1 point added for each "A", "B", or "C" for a maximum total of 4 points

Admission is granted to a maximum of 28 students with the highest application scores. In situations where two or more students have tie scores for the final position, the date the application was submitted will determine the student awarded the seat.

**Upon enrollment in the program**

1. Submit to the Allied Health Department a satisfactory Student Health Form completed by a licensed physician or nurse practitioner (form will be furnished when student is accepted for admission). Health form is due by **first day of class**. Form is valid for one year. Evidence of good health is required for placement in the program.
2. Provide evidence of vaccination for Hepatitis B and/or positive antibodies or sign a waiver.
3. Provide documentation of two-step Mantoux skin test (PPD), or chest x-ray, if positive, indicating he/she is free of tuberculosis.
4. Provide documentation of Immunity for Rubeola (Measles), Mumps, Rubella (German Measles) through one of the following:
  - a. History of having had the disease
  - b. Titer that shows immunity
  - c. Immunization record
5. Provide evidence of current certification in BCLS/Healthcare Provider cardiopulmonary resuscitation (CPR) prior to clinical experience. Students are responsible for obtaining and maintaining current CPR Certification while enrolled in the program.
6. Purchase professional liability insurance through the College by the **first day of class** (forms available in the Allied Health Department).
7. Meet requirements for criminal background check and drug screen per Allied Health Department and/or clinical affiliate policies.

**PROGRESSION IN THE PROGRAM**

Students must fulfill all course requirements as stated in each SUR syllabus

Achieve a minimum grade of "C" (75%) in each SUR course.

First scrub a minimum of 140.

Successfully complete all lab, practical, and clinical components of each SUR course.

Meet Surgical Technology program Essential Competencies of Candidates for Admission, Continuance & Graduation.

Successfully complete NBSTSA - Certified Surgical Technologist Practice Exam with a score of 65% or better.

Complete the Certified Surgical Technologist Exam.

Specific questions concerning the program can be answered by calling the Surgical Technology program (Monday-Thursday at 256/306-2786/306-2950).

**SURGICAL TECHNOLOGY PROGRAM ESTIMATED COSTS**

Tuition: See college catalog section covering financial information.

Malpractice Insurance (per year).....	\$10.00
Drug Screen/Background Check.....	\$71.50
Graduation Fee .....	\$25.00
Certification Exam .....	\$265.00
Textbooks.....	\$600.00
Health Exams, PPD, Immunizations .....	Cost Varies
CPR Course .....	Cost Varies
Uniforms .....	\$200.00
NBSTSA Practice Exam .....	\$40.00

**READMISSION POLICY**

A student may be readmitted to a SUR course ONE TIME following a failure of or withdrawal from an SUR course. Students who are currently returning following a failure are considered to be using their second and final opportunity to complete the Surgical Technology program. Requests for readmission will be considered competitively with new applications and is not guaranteed.

**Following withdrawal:**

If a student withdraws from a SUR course or is temporarily ineligible to progress (see progression requirements), readmission to the SUR program requires

1. written notification at least three months in advance to the SUR Program Director that the student desires to reenter the SUR program.
2. a minimum cumulative grade point average of 2.5.
3. no longer than twelve (12) months may elapse between completion of a SUR course and enrollment in the subsequent course for successful completion of a series of advanced courses.
4. Successful completion (with a passing score of 75% or better) of all final and practical exams completed by students currently enrolled in the program.

**All students who withdraw from or are temporarily ineligible to progress through a program of study in the Allied Health Department will be readmitted under the College Catalog, and program policies and procedures, in effect the year of readmission.**



# *Course Descriptions*



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## CREDIT HOUR EQUIVALENCIES

**CREDIT HOUR EQUIVALENCIES** – The ratio of weekly contact hours to credit hours varies with the type of instruction being used. The College will recognize the following methods or types of instruction:

**THEORY. (T)** One hour of theory instruction under the supervision of an instructor plus an average of two hours of out-of-class study per week. 1:1

**EXPERIMENTAL LABORATORY. (E)** Two hours of experimental laboratory under the supervision of an instructor plus an average of one hour of out-of-class assignments per week. 2:1

**PED ACTIVITY. (A)** Two hours of physical education class activity/practice under the supervision of an instructor with out-of-class assignments per week. 2:1

**MANIPULATIVE LABORATORY. (M)** – Three hours of practice/manipulative laboratory under the supervision of an instructor with no out-of-class assignments per week. 3:1

**SKILLS LABORATORY/CLINICAL PRACTICE. (S or C)** - Three hours of skills laboratory or clinical practice under the supervision of an instructor. 3:1

*Skills Laboratory/Clinical Practice* is the term for skills laboratory (S) and clinical experiences (C) which are under the direct supervision of faculty. There may be out-of-class assignments per week, but they are not required. For example, skills laboratory and clinical experiences may have out-of-class assignments whereas a computer laboratory may not require an out-of-class assignment.



**PRECEPTORSHIP. (P3 or P5)** - Three or five hours of clinical experience per week under the supervision of a health care professional who is currently licensed, has expertise in the selected clinical area, and serves as a facilitator of learning. 3:1 or 5:1.

*Preceptorship* is the term used for clinical experiences which are supervised by currently licensed health care professionals who have expertise in a selected clinical area. Preceptors are employees of a clinical agency who are approved by faculty of the program and the administration of the clinical agency. Objectives for the preceptorship are specified. A designated faculty member is readily available (by telecommunication devices, for example) to the preceptor and student during the *preceptorship* experiences. Students enrolled in fields of study for which programmatic accreditation and/or licensing bodies require an 8:1 preceptorship ratio must comply with discipline-specific time-to-credit criteria.

As the contact hours for courses using preceptorship clinical experiences are entered, specify in the column for “clinical” the actual number of contact hours per week followed by a bold (P3) or (P5).

**INTERNSHIP (I)** - Five hours of experimental internship per week under the control and supervision of the employer on the job with coordinated employer/college representative planning. 5:1

*Internship* is the term used to include cooperative education, practicums, and sponsored work instruction. *Internship* involves the development of job skills by providing the student with a structured employment situation that is directly related to, and coordinated with, the educational program. Student activity in “internship” is planned and coordinated jointly by an institutional representative and the employer, with the employer having the responsibility for control and supervision of the student on the job. Students enrolled in fields of study for which programmatic accreditation and/or licensing bodies require a 10:1 internship ratio, must comply with field-specific time-to-credit criteria.

The number of clock hours of each type of instruction is stated in each course description. Types of instruction may be mixed within one course. In that event, the number of contact hours for each type of instruction is spelled out in the following order: Theory (T), Experimental Laboratory (E), PED Activity (A), Manipulative Laboratory (M), Skills Laboratory/Clinical Practice (S or C), Preceptorship (P3 or P5), and Internship (I). On the right side of the column, the number of credit hours for the entire course is given.

## Course Descriptions

### ADVANCED MANUFACTURING (ADM)

#### **ADM 100 INDUSTRIAL SAFETY (3T)**

**3 credits**

This course is an introduction to general issues, concepts, procedures, hazards, and safety standards found in an industrial environment. This safety course is designed to make technicians aware of safety issues associated with their changing work environment and attempt to eliminate industrial accidents. This supports CIP code 15.0613. This is a CORE course.

#### **ADM 101 PRECISION MEASUREMENT (2T, 3M)**

**3 credits**

This course covers the use of precision measuring instruments and an introduction to basic geometric dimensioning and tolerancing (GD&T) concepts. Emphasis is placed on the inspection of machine parts and use of a wide variety of measuring instruments. Upon completion students should be able to demonstrate correct use of measuring instruments. This supports CIP code 15.0613. This is a CORE course and is aligned with NIMS certification standards.

#### **ADM 102 COMPUTER AIDED DESIGN (1T, 4E)**

**3 credits**

**It is recommended that students have basic computer skills before taking this class.**

This course provides an introduction to basic Computer Aided Drafting and Design (CADD) functions and techniques, using "hands-on" applications. Topics include terminology, hardware, basic CADD and operating system functions, file manipulation, and basic CADD software applications in producing softcopy and hardcopy. This is a CORE course. This course supports CIP code 15.0613.

#### **ADM 103 INTRODUCTION TO COMPUTER INTEGRATED MANUFACTURING (CIM)/MATERIALS & PROCESSES (2T, 3M )**

**3 credits**

This course is a basic introduction to concepts related to the computer integrated manufacturing (CIM) process and provides a basic overview of the materials and processes used in the industrial manufacturing of products. In addition, this course covers basic computer numeric control (CNC) principles including fundamental CNC programming concepts and the components and capabilities of machines commonly used for CNC applications. Emphasis is placed on process evaluation techniques that can be extrapolated to other system areas such as new products and new technology. Students cover the design requirements associated with a CIM cell (center), how a center is integrated into the full system, and the technician's role in the process improvement of not only the cell but the full CIM system. Related safety and inspection and process adjustment are also covered. This is a CORE course.

#### **ADM 104 INTRODUCTION TO THERMAL/ELECTRICAL PRINCIPLES (1T, 4E)**

**3 credits**

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. In addition, this course covers electrical/electronic fundamentals and principles. Emphasis is placed on electrical theory and science, semiconductor

devices, motors, transformers, digital concepts, programmable logic controllers, and circuit analysis of resistive, capacitive, resonant, and tuned circuits. Upon completion, students will have knowledge of basic electricity and electronics and be able to 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 supports CIP code 15.0613. This is a CORE course.

#### **ADM 105 FLUID SYSTEMS (1T, 4E)**

**3 credits**

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. This course supports CIP code 15.0613.

#### **ADM 106 QUALITY CONTROL CONCEPTS (2T,3M)**

**3 credits**

This course covers quality assurance principles including the history of the quality movement, group problem solving, data collection, control charts, and statistical methods such as statistical process control (SPC), process capability studies, and the concepts associated with lean manufacturing. This supports CIP code 15.0613. This is a CORE course.

#### **ADM 108 INTRO. TO 3D MODELING (1T, 4E)**

**3 credits**

##### **RECOMMENDED TO TAKE DDT 111 FIRST**

**It is recommended that students have basic computer skills before taking this class.**

This course provides an introduction to basic 3Dimensional (3D) modeling functions and techniques. The parametric concept will be introduced. "Hands-on" class structure utilizes various 3D software applications. Topics include terminology, hardware, basic 3D modeling involving sketching and 3D feature creations, feature application and operating system functions. Students will be able to generate basic 3D parts and associated working drawings in soft and hard copy format.

#### **ADM 128 PLASTIC MATERIAL PROCESSES (1T, 4E)**

**3 credits**

**It is recommended that students have basic computer skills before taking this class.**

This course in plastic materials and processes includes the basic principles and methodology of various material types and manufacturing processes. Comparison of selecting the best type of manufacturing for product will be discussed. Student will learn proper instruction on safety operations, set-up and maintenance and production of parts on a Fused Deposition Manufacturing (FDM) printer or Rapid Prototype (RP) System. Emphasis is directed on 3D modeling software program (such as Solid works) and Insight software 2/3D sketches, RP manufacturing technologies, FDM usages and processing with various types of manufactured plastics. Upon completion, students should be able to dis-

cuss and understand the significance of materials properties and structure, basic rapid prototyping, and express and interpret material specifications and be able to select the best process for the type of product being produced.

**ADM 150 -155 TECHNICAL CO-OPERATIVE**

**EDUCATION (1T)**

**1credit (each)**

**PREREQUISITE:** Permission of instructor

Students work on a part-time basis in a job directly related to applied technologies. The employer and supervising instructor evaluate students' progress. Upon course completion, students will be able to apply skills and knowledge in an employment setting.

**ADM 200 INDUSTRIAL ROBOTICS SAFETY (3T)**

**3 credits**

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.

**ADM 208 INTERMEDIATE 3D MODELING (1T, 4E)**

**3 credits**

**PREREQUISITES:** DDT 124 & ADM 108

In this course students will receive instruction on intermediate 3D modeling concepts, such as sheet metal modeling, intermediate assemblies, 3D sketching and weldments. Students will explore an introduction to prototyping and design concepts in a 3D environment. 3D software will be utilized to produce properly detailed construction drawings, using multi-views, section views, and auxiliary views. Proper, industry standard dimensioning with basic tolerances will be discussed and applied to parts. Emphasis will be placed on the theory as well as the mechanics of concepts using 3D and 2D applications. Upon completion, student will produce 3D models in a CAD environment, simple prototype models and working drawings based on proper industry standards.

**ADM 232 APPLIED INDUSTRIAL ROBOTICS**

**(ABB) (1T, 6M)**

**3 credits**

**PREREQUISITE:** Permission of instructor

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.

**ADM 233 APPLIED INDUSTRIAL ROBOTICS (CLOOS)**

**(1T, 6M)**

**3 credits**

**PREREQUISITE:** Permission of instructor

This course covers the basic techniques used to write, execute, test, and modify a basic robotic program for an appli-

cation-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.

**ADM 234 APPLIED INDUSTRIAL ROBOTICS (FANUC)**

**(1T, 6M)**

**3 credits**

**PREREQUISITE:** Permission of instructor

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.

**ADM 235 APPLIED INDUSTRIAL ROBOTICS (KAWASAKI)**

**(1T, 6M)**

**3 credits**

**PREREQUISITE:** Permission of instructor

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.

**ADM 236 APPLIED INDUSTRIAL ROBOTICS (KUKA)**

**(1T, 6M)**

**3 credits**

**PREREQUISITE:** Permission of instructor

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.

**ADM 237 APPLIED INDUSTRIAL ROBOTICS (MOTOMAN)**

**(1T, 6M)**

**3 credits**

**PREREQUISITE:** Permission of instructor

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.

**ADM 238 APPLIED INDUSTRIAL ROBOTICS**

**(MITSUBISHI) (1T, 6M)**

**3 credits**

**PREREQUISITE:** Permission of instructor

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.

## Course Descriptions

**ADM 239 APPLIED INDUSTRIAL ROBOTICS (OTC)**  
(1T, 6M) **3 credits**  
**PREREQUISITE:** Permission of instructor  
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.

**ADM 250 INTRODUCTION TO FLEXIBLE MANUFACTURING CELLS (2T, 4E)** **4 credits**  
**PREREQUISITES:** ELT 231 and ELT 232 or Permission of instructor  
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.

## AIR CONDITIONING AND REFRIGERATION (ACR)

**ACR 111 PRINCIPLES OF REFRIGERATION** **3 credits**  
(1T, 6M)  
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. **(Taught on Demand)**

**ACR 112 HVAC SERVICE PROCEDURES** **3 credits**  
(1T, 6M)  
**PREREQUISITE:** Permission of instructor  
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.

**ACR 113 REFRIGERATION PIPING PRACTICES** **3 credits**  
(1T, 6M)  
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.

**ACR 119 FUNDAMENTALS OF GAS HEATING SYSTEMS** **3 credits**  
(1T, 6M)  
This course provides instruction on general service and installation for common gas furnace system components. Upon completion, students will be able to install and service gas furnaces in a wide range of applications.

**ACR 120 FUNDAMENTALS OF ELECTRIC HEATING SYSTEMS** **3 credits**  
(1T, 6M)  
This course covers the fundamentals of electric furnace systems. Emphasis is placed on components, general service procedures, and basic installation. Upon completion, students should be able to install and service electric furnaces, heat pumps, and solar and hydronics systems.

**ACR 121 PRINCIPLES OF ELECTRICITY FOR HVACR** **3 credits**  
(1T, 6M)  
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.

**ACR 122 HVACR ELECTRICAL CIRCUITS** **3 credits**  
(1T, 4E)  
This course introduces the student to electrical circuits and diagrams. Electrical symbols and basic wiring diagrams are constructed in this course. Upon completion, students should understand standard wiring diagrams and symbols.

**ACR 123 HVACR ELECTRICAL COMPONENTS** **3 credits**  
(1T, 4E)  
This course introduces students to electrical components and controls. Emphasis is placed on the operations of motors, relays, contractors, starters, and other HVAC controls. Upon completion, students should be able to understand motor theory and control functions in HVACR equipment.

**ACR 126 COMMERCIAL HEATING SYSTEMS (1T, 4E)** **3 credits**  
**PREREQUISITES:** ACR 119, ACR 120  
This course covers the theory and application of larger heating systems. Emphasis is placed on larger heating systems associated with commercial applications such as gas heaters, boilers, unit heaters, and duct heaters. Upon completion, students should be able to troubleshoot and perform general maintenance on commercial heating systems.

**ACR 128 HEAT LOAD CALCULATIONS (3T)** **3 credits**  
**PREREQUISITE:** Permission of instructor  
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.

**ACR 130 COMPUTER ASSISTED HVAC TROUBLESHOOTING (2E)** **1 credit**  
**PREREQUISITE:** Permission of instructor



This course focuses on troubleshooting procedures. Emphasis is placed on the proper use of test equipment and machine/electrical malfunctions. Upon completion, students should be able to diagnosis and repair service problems in HVAC equipment.

**ACR 132 RESIDENTIAL AIR CONDITIONING (1T, 6M) 3 credits**

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 should be able to service and repair residential air conditioning systems.

**ACR 135 MECHANICAL GAS SAFETY CODES (3T) 3 credits**  
**PREREQUISITE: Permission of instructor**

This course is to enhance the student knowledge of the Southern Mechanical and Gas 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.

**ACR 138 CUSTOMER RELATIONS IN HVAC (3T) 3 credits**

This course covers the basic aspects of customer relations needed by the HVAC technician. Topics include employability skills associated with job performance, record keeping, service invoices, certification requirements, local ordinances, and business ethics.

**ACR 139 AUTOMOTIVE AIR CONDITIONING (1T, 6E) 3 credits**

This course focuses on commercial refrigeration systems. Emphasis is placed on overall operation, troubleshooting and maintenance of commercial refrigeration systems. Upon completion, students should be able to service and repair commercial refrigeration systems. **(Taught on Demand)**

**ACR 141 ENVIRONMENTAL SYSTEMS (2T, 4E) 4 credits**  
**PREREQUISITE: Permission of instructor**

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.

**ACR 144 BASIC DRAWING & BLUEPRINT READING IN HVAC (3T) 3 credits**  
**PREREQUISITE: Permission of instructor**

This course covers basic drawing and blueprint reading as applied to the HVAC industry. Emphasis is on three-view drawings, basic duct systems, and isometric piping. Upon course completion, students should be able to perform basic drawings related to HVAC systems and read pertinent blueprints.

**ACR 147 REFRIGERATION TRANSITION AND RECOVERY (3T) 3 credits**

This course is EPA-approved and covers material relating to the requirements necessary for types I, II, III and universal

certification. Upon completion, students should be able to take the EPA/608 refrigerant certification exam. **(Taught on Demand)**

**ACR 148 HEAT PUMP SYSTEMS I (1T, 6M) 3 credits**

Instruction received in this course centers around the basic theory and application of heat pump systems and components. Upon completion, students will be able to install and service heat pumps in a wide variety of applications.

**ACR 149 HEAT PUMP SYSTEMS II (1T, 6M) 3 credits**

This is a continuation course of the basic theory and application of heat pump systems. Topics include the electrical components of heat pumps and their function. Upon completion, students should be able to install and service heat pumps.

**ACR 151 DUCT DESIGN & FABRICATION (2T, 8E) 6 credits**  
**PREREQUISITE: Permission of instructor**

This course provides instruction related to blueprints, layouts, and design ducts. Topics include all aspects of fabrication including straight duct, offsets and various other fittings needed to perform a certain task.

**ACR 181 SPECIAL TOPICS IN AIR CONDITIONING AND REFRIGERATION (3T) 3 credits**

This course provides specialized instruction in various areas related to the air conditioning and refrigeration industry. Emphasis is placed on meeting the students' needs.

**ACR 187 SPECIAL TOPICS IN ACR (3T, 6M) 5 credits**

This course provides students with opportunities to experience hands-on application of specialized instruction in various areas related to the air conditioning and refrigeration industry.

**ACR 200 REVIEW FOR CONTRACTORS EXAM (3T) 3 credits**

This course prepares students to take the State Certification Examination. Emphasis is placed on all pertinent codes, piping procedures, duct design, load calculation, psychometrics, installation procedures, and air distribution. Upon completion, students should be prepared to take the contractors exam. **(Taught on Demand)**

**ACR 202 SPECIAL REFRIGERATION SYSTEMS (3T) 3 credits**

This course is designed to give the students the basic knowledge of a variety of commercial refrigeration systems. Topics include expandable refrigeration evaporator systems, combination spray and compressor system, open cycle ammonia, CO2 pellets, vortex tubes, reach in coolers, and soft serve ice cream machines. Upon completion, students should be able to perform general troubleshooting and maintenance on various commercial refrigeration systems. **(Taught on Demand)**

**ACR 203 COMMERCIAL REFRIGERATION (1T, 4E) 3 credits**

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.

**ACR 205 SYSTEM SIZING AND AIR DISTRIBUTION  
(1T, 6M)**

**3 credits**

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.

**ACR 209 COMMERCIAL AIR CONDITIONING  
SYSTEMS (1T, 4E)**

**3 credits**

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.

**ACR 210 TROUBLESHOOTING HVACR SYSTEMS  
(1T, 4E)**

**3 credits**

**PREREQUISITE:** Permission of instructor

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 measures, methods of leak detection, system evacuation, charging and performance checks. Upon completion, students should be able to perform basic troubleshooting of mechanical and electrical components of HVAC/R systems.

### AEROSPACE TECHNOLOGY (ARS)

**ARS 151 WELDING PRINCIPLES, THEORY AND SYMBOLS  
(1T, 4E)**

**3 credits**

This is a theory and skill-based course in basic welding (gas and arc), plasma arc, brazing, soldering, and cutting processes used in maintenance and manufacturing. Other theory topics include forge, submerged arc, electroslag, stud arc, resistance, ultrasonic, electron beam, and laser beam welding. Students use welding symbols, joint designs, and weld positions to prepare specimens. The course also covers terminology, standards for welding acceptable and unacceptable welds, safety, and qualification tests.

**ARS 153 GAS TUNGSTEN ARC AND PLASMA ARC WELDING  
(2T, 2E)**

**3 credits**

**PREREQUISITE:** ARS 151

This course describes processes, methods, and skills required to produce acceptable welds with gas tungsten arc welding (GTAW) and plasma arc welding (PAW) equipment for aerospace hardware; the standard of acceptability is AWS D17.1:2001 (or latest revision). Topics include equipment, tooling, shielding gases, arc characteristics, welding techniques, non-consumable electrodes, filler metals, base materials, and related safety. Instruction covers manual, semi-automatic, and automatic welding procedures.

**ARS 176 ELECTRICAL/ELECTRONIC ASSEMBLY  
(2T, 3M)**

**3 credits**

This mechanics of electrical/electronics assembly course covers materials and wire configurations, tools for wire preparation and assembly, wire stripping, connection requirements, terminal assembly, solder connections, crimp connections, solder splices, shield terminations, tying and lacing, hardware installation, inspection, testing, safety, and industry specifications/standards. Worker proficiency certification in IPC/WHMA-A-620, "Requirements for Acceptance for Cable and Wire Harness Assemblies," is covered but certification testing is not a requirement to receive credit for the class.

**ARS 178 AEROSPACE MECHANICAL ASSEMBLY  
(2T, 3M)**

**3 credits**

This course is a study of mechanical assembly processes applied in aerospace and related manufacturing industries. Topics include orbital tube welding (setup, programming, and tube preparation, drilling techniques, torquing techniques, fastener installation, related attachments, and safety.)

**ARS 251 SPECIALIZED WELDING PROCESSES  
(2T, 2E)**

**3 credits**

**PREREQUISITE:** ARS 153

This course is an overview of the basics of metals joining using processes other than electric arc. Topics include safety; brazing; soldering; diffusion bonding; and welding processes such as resistance, laser, electron beam, ultrasonic, friction, inertia, explosion, upset, thermite, and forge.

**ARS 253 WELDING CERTIFICATION PREPARATION  
(1T, 4E)**

**3 credits**

**PREREQUISITE:** ARS 251

This course details the requirements for welder/welding operator certification in the aerospace industry. Training includes gas tungsten arc welding (GTAW) and plasma arc welding (PAW) processes and equipment and related safety. Emphasis is on materials in Groups I, II, III, and IV as defined in AWS D17.1:2001.

**ARS 276 INSTRUMENTATION ATTACHMENTS AND ADHESIVE  
BONDING PROCEDURES  
(2T, 2E)**

**3 credits**

This course covers the use and installation techniques of instruments such as thermocouples, temperature sensors, and strain gages on different types of aircraft and structures. Topics include bonding materials, soldering techniques, electrical testing of temperature sensors and strain gages, mixing and applying adhesives for pressure, the effects of corrosion and weather, fuel tank sealing, adhesive selection, and safety.

**ARS 278 COMPOSITE MATERIALS FABRICATION AND  
ASSEMBLY (2T, 2E)**

**3 credits**

This is a course in composite materials manufacturing. Topics include design and manufacturing techniques such as wet layups, prepregs, vacuum bagging, and filament winding. The course also covers the history of composite manufacturing, types of materials used in composite component fabrication, drilling and repair techniques, and related safety.

**ARS 280 SURFACE PREPARATION AND COATINGS**

(2T, 2E)

**3 credits**

This course is a study of component surface preparation for various coating and painting applications. The content includes color development, paint booth operation (electrical and air system), wet and dry coating thickness measurement, manual and automated coating techniques, and general and hazardous material handling safety.

**ARS 284 SPECIALIZED COATING PROCESSES**

(2T, 2E)

**3 credits**

This course is a study in special coatings for aerospace structures. Topics include mixing, applying, and curing of coating materials, environmental effects on coating materials, and general and hazardous material handling safety. The course also covers equipment used in these processes.

**ART (ART)**

**ART 100 ART APPRECIATION (3T)**

**3 credits**

This course is designed to help the student find personal meaning in works of art and develop a better understanding of the nature and validity of art. Emphasis is on the diversity of form and content in original artwork. Upon completion, students should understand the fundamentals of art, the materials used and have a basic overview of the history of art.

**ART 101 ART WORKSHOP I (6E)**

**3 credits**

**PREREQUISITE: Permission of Instructor**

This course provides an art experience for both non-art and art majors who are interested in a variety of art projects concerned with community or college related activities. Emphasis is placed on the organization of ideas in advancing their creative process. Upon completion, students should be able to present visual evidence of the activities involved and explain how the experience advanced their artistic skills.

**ART 102 ART WORKSHOP II (6E)**

**3 credits**

**PREREQUISITES: Art Workshop I, Permission of Instructor**

This course provides an art experience for both non-art and art majors who are interested in a variety of art projects concerned with community or college related activities. Emphasis is placed on the organization of ideas in advancing their creative process. Upon completion, students should be able to present visual evidence of the activities involved and explain how the experience advanced their artistic skills.

**ART 109 ART MUSEUM SURVEY (3T)**

**3 credits**

This course covers the art experience through supervised visits to museums and art galleries. Emphasis is placed on learning through critical study. Upon completion, students should be able to write a critical analysis of the artwork experienced that demonstrates an understanding of aesthetics.

**ART 113 DRAWING I (6E)**

**3 credits**

This course provides the opportunity to develop perceptual and technical skills in a variety of media. Emphasis is placed on communication through experimenting with com-

position, subject matter and technique. Upon completion, students should demonstrate and apply the fundamentals of art to various creative-drawing projects.

**ART 114 DRAWING II (6E)**

**3 credits**

**PREREQUISITE: ART 113, Permission of Instructor**

This course advances the student's drawing skills in various art media. Emphasis is placed on communication through experimentation, composition, technique and personal expression. Upon completion, students should demonstrate creative drawing skills, the application of the fundamentals of art, and the communication of personal thoughts and feelings.

**ART 121 TWO-DIMENSIONAL COMPOSITION I**

(6E)

**3 credits**

This course introduces the basic concepts of two-dimensional design. Topics include the elements and principles of design with emphasis on the arrangements and relationships among them. Upon completion, students should demonstrate an effective use of these elements and principles of design in creating two-dimensional compositions.

**ART 122 TWO-DIMENSIONAL COMPOSITION II**

(6E)

**3 credits**

**PREREQUISITE: ART 121**

This course covers the theory and practice of composing two-dimensional images. Emphasis is placed on the relation between the basic elements and principles of design and their impact on the visual message. Upon completion, students should, through personal expression, demonstrate an effective use of these elements and principles of design in creating two-dimensional compositions.

**ART 126 COLOR (6E)**

**3 credits**

This course introduces the student to fundamentals of color and color uses. Topics include various color theories, technical skills in mixing color, types of pigment and the expressive uses of color. Upon completion, students should be able to explain and demonstrate a fundamental understanding of color as it is used in the development of assigned color problems.

**ART 127 THREE-DIMENSIONAL COMPOSITION (6E)**

**3 credits**

**PREREQUISITES: ART 113 or ART 121**

This course introduces art materials and principles of design that acquaint the beginner with the fundamentals of three-dimensional art. Emphasis is placed on the use of art fundamentals and the creative exploration of materials in constructing three-dimensional artworks. Upon completion, students should demonstrate basic technical skills and a personal awareness of the creative potential inherent in three-dimensional art forms.

**ART 133 CERAMICS I (6E)**

**3 credits**

This course introduces methods of clay forming as a means of expression. Topics may include hand building, wheel throwing, glazing, construction, design, and the functional and aesthetic aspects of pottery. Upon completion, students should demonstrate through their work, a knowledge of their methods, as well as an understanding of the craftsmanship and aesthetics involved in ceramics.

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**ART 134 CERAMICS II (6E) 3 credits**

This course develops the methods of clay forming as a means of expression. Topics may include hand building, glazing, design, and the functional and aesthetic aspects of pottery, although emphasis will be placed on the wheel throwing method. Upon completion, students should demonstrate improved craftsmanship and aesthetic quality in the production of pottery.

**ART 173 PHOTOGRAPHY I (6E) 3 credits**

This course is an introduction to the art of photography. Emphasis is placed on the technical and aesthetic aspects of photography with detailed instruction in darkroom techniques. Upon completion, students should understand the camera as a creative tool, understand the films, chemicals and papers, and have a knowledge of composition and history.

**ART 174 PHOTOGRAPHY II (6E) 3 credits**  
**PREREQUISITE: Permission of instructor**

This is a sequence to Photography I and serves as an introductory photography course. Emphasis is placed on aesthetic as well as technical aspects of photography. Upon completion, the student will be able to produce well composed photographs.

**ART 175 DIGITAL PHOTOGRAPHY (1T, 2E) 3 credits**

This course introduces students to digital imaging techniques. Emphasis is placed on the technical application of the camera, digital photographic lighting methods, and overall composition. Upon completion, students should be able to take digital images and understand the technical aspects of producing high quality photos. This course is also taught as RTV 125.

**ART 176 FILMMAKING (6E) 3 credits**

This course provides a knowledge of the basics of filmmaking. Emphasis is placed on procedure, equipment, editing and sound. Upon completion, students should demonstrate a basic knowledge of filmmaking through critical analysis and film projects.

**ART 177 COLOR PHOTOGRAPHY (6E) 3 credits**  
**PREREQUISITE: ART 173 or ART 176 or Permission of instructor**

This course covers the primary materials and processes of color photography. Emphasis is placed on the correct exposure, processing, creative color usage, and printing of both positive/negative color materials through exploration of films, filters, processes, and color temperature. Upon completion, students should be able to correctly execute the technical controls of color materials and explore the creative possibilities of color photography.

**ART 178 AUDIO-VISUAL TECHNIQUES (6E) 3 credits**

This course is an exploration of the area of linkage between the visual and auditory senses. Work with sound and recording equipment, projected images and multimedia hardware and software is included. Students will produce finished multimedia pieces.

**ART 187 PHOTOGRAPHY, FILM, AND MEDIA I (6E) 3 credits**  
**PREREQUISITE: ART 173 or PFC 177 or Permission of instructor**

This course is designed to help the student explore creative approaches to photography, film, and related media. Problems in darkroom techniques, laboratory techniques, and special effects are included. Upon completion, the student should be able to apply these techniques to professional quality finished pieces.

**ART 188 PHOTOGRAPHY, FILM, AND MEDIA II (6E) 3 credits**  
**PREREQUISITE: ART 187 or Permission of instructor**

This course is designed to help the student explore creative approaches to photography, film, and related media in greater depth. Problems in darkroom techniques, laboratory techniques, and special effects are included. Upon completion, the student should be able to apply these techniques to professional quality finished pieces.

**ART 190 ART: LEGAL AND FINANCIAL MANAGEMENT (3T) 3 credits**

This course is designed to acquaint the student with funding sources, business procedures, and project planning for the visual artist. Topics may include grants, budgeting, legal contracts, and self-promotion. Upon completion, students should demonstrate a knowledge of the basics of managing an art related business.

**ART 203 ART HISTORY I (3T) 3 credits**

This course covers the chronological development of different forms of art, such as sculpture, painting and architecture. Emphasis is placed on history from the ancient period through the Renaissance. Upon completion, students should be able to communicate a knowledge of time period and chronological sequence including a knowledge of themes, styles, and of the impact of society on the arts.

**ART 204 ART HISTORY II (3T) 3 credits**

This course covers the chronological development of different forms of art, such as sculpture, painting and architecture. Emphasis is placed on history from the Baroque to the present. Upon completion, students should be able to communicate a knowledge of time period and chronological sequence including a knowledge of themes, styles and of the impact of society on the arts.

**ART 216 PRINTMAKING I (6E) 3 credits**

This course introduces various printmaking processes. Topics include relief, intaglio, serigraphy, or lithography and the creative process. Upon completion, students should have a basic understanding of the creative and technical problems associated with printmaking.

**ART 217 PRINTMAKING II (6E) 3 credits**  
**PREREQUISITE: ART 216 or Permission of instructor**

This course provides the opportunity for the student to study a printmaking process beyond the introductory level. Emphasis is placed on creativity, composition, and technique in the communication of ideas through printmaking. Upon completion, students should demonstrate an understanding of the printmaking process as a creative tool for the expression of ideas.

**ART 221 COMPUTER GRAPHICS I (6E) 3 credits**  
This course is designed to enhance the student's ability to produce computer generated graphics. Emphasis is on the application of original design to practical problems using a variety of hardware and software. Upon completion, students should have an understanding of professional computer graphics.

**ART 231 WATERCOLOR PAINTING I (6E) 3 credits**  
This course introduces materials and techniques appropriate to painting on paper with water-based medium. Emphasis is placed on developing the technical skills and the expressive qualities of watercolor painting. Upon completion, students should be able to demonstrate a basic proficiency in handling the techniques of watercolor and how it can be used for personal expression.

**ART 232 WATERCOLOR II (6E) 3 credits**  
**PREREQUISITE: ART 231**  
This course advances the skills and techniques of painting on paper using water-based medium. Emphasis is placed on exploring the creative uses of watercolor and developing professional skills. Upon completion, students should demonstrate and compile a body of original paintings that reflects a personal awareness of the media's potential.

**ART 233 PAINTING I (6E) 3 credits**  
This course is designed to introduce the student to fundamental painting processes and materials. Topics include art fundamentals, color theory, and composition. Upon completion, students should be able to demonstrate the fundamentals of art and discuss various approaches to the media and the creative processes associated with painting.

**ART 234 PAINTING II (6E) 3 credits**  
**PREREQUISITE: ART 233**  
This course is designed to develop the student's knowledge of the materials and procedures of painting beyond the introductory level. Emphasis is placed on the creative and technical problems associated with communicating through composition and style. Upon completion, students should be able to demonstrate the application of the fundamentals of painting and the creative process to the communication of ideas.

**ART 243 SCULPTURE I (6E) 3 credits**  
This course provides a study of three-dimensional form by familiarizing students with sculpting media and techniques. Topics include the fundamentals of art and sculpting media with emphasis on the creative process. Upon completion, students should understand the fundamentals of art and three-dimensional form, as well as the various media and processes associated with sculpture.

**ART 244 SCULPTURE II (6E) 3 credits**  
**PREREQUISITE: ART 243**  
This course is designed to sharpen skills in the media and processes of sculpture. Emphasis is placed on personal expression through three-dimensional form. Upon completion, students should be able to apply the fundamentals of art, their knowledge of form, and the sculptural processes to communicating ideas.

**ART 253 GRAPHIC DESIGN I (6E) 3 credits**  
**PREREQUISITE: VCM 180**  
This course is designed to introduce the study of visual communication through design. Emphasis is placed on the application of design principles to projects involving such skills as illustration, layout, typography, and production technology. Upon completion, students should demonstrate a knowledge of the fundamentals of art and understanding of the relationship between materials, tools and visual communication.

**ART 254 GRAPHIC DESIGN II (6E) 3 credits**  
**PREREQUISITE: VCM 180 or ART 253**  
This course further explores the art of visual communication through design. Emphasis is placed on the application of design principles to projects involving such skills as illustration, layout, typography, and production technology. Upon completion, students should be able to apply the knowledge of the fundamentals of art, material and tools to the communication of ideas.

**ART 258 PHOTOGRAPHIC AND MEDIA PROBLEMS (6E) 3 credits**  
This course deals with special problems in the student's area of interest. Emphasis is placed on design, technique and results. Upon completion, the student will be able to produce professional quality photographs in one particular area of photography.

**ART 263 MUSEUM PRACTICE I (2-8E) 1-4 credits**  
**PREREQUISITE: Permission of instructor**  
This course provides an introduction to a variety of museum works, with practical training supervised by museum staff. Topics may include promotion, shipping, labeling and hanging of a museum exhibit as well as the study of the work itself. Upon completion, students should understand the activities surrounding a museum exhibit and be able to explain how the experience advanced their knowledge of communicating through art.

**ART 264 MUSEUM PRACTICE II (2-8E) 1-4 credits**  
**PREREQUISITE: ART 263 or Permission of instructor**  
This course provides further study of museum artworks, with practical training supervised by museum staff. Topics may include promotion, shipping, labeling and hanging of a museum exhibit as well as the study of the work itself. Upon completion, students should understand the activities surrounding a museum exhibit and be able to explain how the experience advanced their knowledge of communicating through art.

**ART 273 STUDIO PHOTOGRAPHY I (6E) 3 credits**  
**PREREQUISITE: ART 174 or Permission of instructor**  
This course stresses image-making problems requiring studio or other controlled environment solutions. Lights, props, and related equipment and techniques are utilized. The student will produce quality photographs using studio techniques.

**ART 274 STUDIO PHOTOGRAPHY II (6E) 3 credits**  
**PREREQUISITE: ART 273 or Permission of instructor**  
This course deals with advanced problems requiring studio or other controlled environment solutions. Lights, props,



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and related equipment and techniques are utilized. The student will produce quality photographs using studio techniques.

### **ART 275 ADVANCED DIGITAL PHOTOGRAPHY (1T, 2E) 3 credits**

This course explores various uses of digital photography. Subjects may include studio, portrait, landscape and other areas of photography. Upon completion, the student should be able to apply the techniques necessary to produce professional photographs of a variety of subjects.

### **ART 283 GRAPHIC ANIMATION I (6E) 3 credits** **PREREQUISITE: ART 221**

This course is designed to teach the art of animation as a continuation of the study of visual communication. Topics include story development, drawing, layout, story boarding, directing, motion control, sound synchronization, lighting and camera operation. Upon completion, students should understand the creative process as it relates to animation and demonstrate this knowledge through various projects.

### **ART 284 GRAPHIC ANIMATION II (6E) 3 credits** **PREREQUISITE: ART 283**

This course advances the students' technical and aesthetic knowledge of animation beyond the introductory level. Topics include story development, drawing, layout, story boarding, directing, motion control, sound synchronizing, lighting and camera operation. Upon completion, students should advance his or her understanding of the creative process as it relates to animation and demonstrate this knowledge through various projects.

### **ART 291 SUPERVISED STUDY IN STUDIO ART I (2-8E) 1-4 credits**

This course is designed to enable the student to continue studio experiences in greater depth. Topics are to be chosen by the student with the approval of the instructor. Upon completion, the student should have a greater expertise in a particular area of art.

### **ART 292 SUPERVISED STUDY IN STUDIO ART II (2-8E) 1-4 credits**

This course is designed to enable the student to continue studio experiences in greater depth. Topics are chosen by the student with the approval of the instructor. Upon completion, the student should have greater expertise in a particular area of art.

### **ART 293 DIRECTED READINGS IN ART I (3T) 3 credits**

This course offers supervised readings in the literature of visual art. Emphasis is placed on in-depth analysis of the chosen area of study. Upon completion, students should have an extensive knowledge of an advanced area in art and evidence of their work in the form of research.

### **ART 294 DIRECTED READINGS IN ART II (3T) 3 credits** **PREREQUISITE: ART 293**

This course offers supervised readings in the literature of visual art. Emphasis is placed on an in-depth analysis of the chosen area of study. Upon completion, students should have an extensive knowledge of an advanced area in art and evidence of their work in the form of research.

### **ART 299 ART PORTFOLIO (2-8E) 1-4 credits**

This course is designed to help the art major in the preparation and presentation of an art portfolio. Emphasis is placed on representing the student's potential as an artist in order to interest employers, clients or schools. Upon completion, students should be able to make a professional presentation of their design and communication skills.

## ASTRONOMY (AST)

### **AST 220 INTRODUCTION TO ASTRONOMY (3T, 2E) 4 credits**

This course covers the history of astronomy and the development of astronomical thought leading to the birth of modern astronomy and its most recent development. Emphasis is placed on the coverage of astronomical instruments and measuring technologies, the solar system, the Milky Way galaxy, important extra-galactic objects, and cosmology. Laboratory is required.

## BIOLOGY (BIO)

### **BIO 103 PRINCIPLES OF BIOLOGY I (3T, 2E) 4 credits**

**It is recommended that students have a Basic Skills Reading score of 67 or higher, or have an equivalent ACT or SAT score, or have completed English 093.**

This is an introductory course for both 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 protists. Laboratory is required.

### **BIO 104 PRINCIPLES OF BIOLOGY II (3T, 2E) 4 credits** **PREREQUISITE: BIO 103**

This course is an introduction to basic ecological and evolutionary relationships of plants and animals and a survey of plant and animal diversity including classification, morphology, physiology, and reproduction. Laboratory is required.

### **BIO 105 INTRODUCTION TO BIOTECHNOLOGY (3T, 2E) 4 credits** **CO-REQUISITE: BIO 103**

**Admission to this course requires completion of a written application and personal interview. The top candidates each fall semester will be admitted to BIO 105. The application can be accessed from the Calhoun website at: <http://www.calhoun.edu>. Locate the link to the Natural Science Department and then the link to the Biotechnology Program web page.**

This course is an introduction to biotechnology, including career exploration, historical development and current applications in the areas of medicine, forensics, agriculture, and the environment. Students will learn laboratory safety and documentation while acquiring skills in the maintenance and calibration of basic lab equipment, calculation, and preparation of lab solutions and media.



**BIO 107 CELL CULTURE (2T, 4E) 4 credits**  
**PREREQUISITE: A grade of "C" or better in both BIO 103 and BIO 105**

The overall objective of this course is to provide a basic understanding of the growth requirements and methodologies associated with the propagation of organisms important to the field of biotechnology. Instruction will focus on growing techniques and long-term maintenance of various cell cultures, including both attached and suspension cell lines. Microbial life cycle and cell culture will be emphasized, including discussion of pathogenic aspects and utilization of microbial transformation and protein production for use in biotechnological processes.

**BIO 201 HUMAN ANATOMY AND PHYSIOLOGY I (3T, 2E) 4 credits**

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, gross anatomy, and physiology are featured in the laboratory experience. Laboratory is required.

**BIO 202 HUMAN ANATOMY AND PHYSIOLOGY II (3T, 2E) 4 credits**  
**PREREQUISITE: BIO 201**

Human Anatomy and Physiology II covers the structure and function of the human body. Included is a study of basic nutrition; basic principles of water; electrolyte; acid-base balance; and the endocrine, respiratory, digestive, excretory, cardiovascular, lymphatic and reproductive systems. Dissection, histological studies, gross anatomy, and physiology are featured in the laboratory experience. Laboratory is required.

**BIO 203 TECHNIQUES IN MOLECULAR BIOLOGY (2T, 4E) 4 credits**

**PREREQUISITE: A grade of "C" or better in BIO 107**  
**The Biotechnology instructors strongly recommend that students complete Math 100 and/or be eligible to take Math 112 prior to registering for this course. Completion of Chemistry 111 before taking this course is also highly encouraged.**

This course is an introduction to the major topics in biochemistry and molecular biology. Topics include the major classes of biological molecules, an overview of the major metabolic pathways, advancing technologies, and bioethical issues. The laboratory will provide experience in the isolation and manipulation of DNA and RNA, DNA and protein electrophoresis, and enzymatic and immunological assays.

**BIO 220 GENERAL MICROBIOLOGY (2T, 4E) 4 credits**  
**RECOMMENDED PREREQUISITES: BIO 201 and BIO 202**

This course includes historical perspectives, cell structure and function, microbial genetics, infectious diseases, immunology, distribution, physiology, culture, identification, classification, and control of microorganisms. The laboratory experience includes micro-techniques, distribution, culture, identification, and control. Laboratories are required.

**BIO 250 DIRECTED STUDIES IN BIOLOGY (2-8E) 1-4 credits**  
**PREREQUISITE: Permission of instructor**

This course is designed for independent study in specific areas of biology chosen by the student in consultation with a faculty member and carried out under faculty supervision.

**BIO 251 DIRECTED STUDIES IN BIOLOGY (2-8E) 1-4 credits**  
**PREREQUISITES: BIO 250 and Permission of instructor**

This course is designed for independent study in specific areas of biology chosen by the student in consultation with a faculty member and carried out under faculty supervision.

**BIO 252 DIRECTED STUDIES IN BIOTECHNOLOGY (1T, 2E) 2 credits**  
**PREREQUISITE/CO-REQUISITE: A grade of "C" or better in BIO 107**

**The Biotechnology instructors strongly recommend that students complete English 101 prior to registering for this course.**

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. Typical projects will expose the student to the industry and provide practical application of laboratory procedures. Upon completion, the student will be able to demonstrate knowledge of the topics as specified by the instructor.

**BIO 254 ADVANCED TOPICS IN BIOTECHNOLOGY (1T, 2E) 2-3 credits**  
**PREREQUISITE: A grade of "C" or better in BIO 252**

In this advanced course, the student will design and implement an independent study that utilizes biotechnological methods relevant to local industry or to expand the scope of previous laboratory experience. The projects will include an expansion of previous experiences to design and implement an application as found in local biotechnology industries.

**BIO 256 BIOTECHNOLOGY INTERNSHIP (10E) 2 credits**

***To be eligible for the internship opportunities available in BIO 256, students must have a 2.5 GPA or better in all coursework applicable to the Biotechnology degree program, and all prior Biotechnology courses (including BIO 203) must be completed with a grade of "C" or better.***

The internship will provide advanced students the opportunity to develop job and career-related skills while in a work setting. Upon successful completion of this course, the student should be able to apply classroom knowledge to an actual work situation. The work will be developed cooperatively with academic, industrial, and private institutional biotechnology laboratories.

### BUSINESS (BUS)

**BUS 190 MANAGEMENT WORKSHOP (1-3T) 1 - 3 credits**  
This course is a part of a series of workshops wherein current topics of interest are presented. They are offered upon demand and can be tailored to the needs of individuals, business and industry.

**BUS 190B PROBLEM SOLVING (1T) 1 credit**  
The goal of this course is to help students improve problem-solving skills. Emphasis is placed on developing the five-step process for problem solving: Defining the Situation, Stating the Goal, Identifying a Solution, Preparing a Plan, and Taking Action.

**BUS 190C TEAMBUILDING (1T) 1 credit**  
The goal of this course is to help students identify factors and develop the skills necessary for becoming part of a successful team. Emphasis is placed on developing skills in communication, shared leadership, and conflict resolution.

**BUS 190D SELF-MANAGEMENT (1T) 1 credit**  
The goal of this course is to help students build skills necessary to take responsibility and adjust to the changing demands of the workplace. Emphasis is placed on developing abilities to adjust to new technologies or processes, upgrading skills, career planning, and personal transitions.

**BUS 190E EMPLOYABILITY SKILLS (1T) 1 credit**  
The goal of this course is to help students develop skills to make them more employable. Emphasis is placed on developing a professional resumé and cover letter, organizing a job search campaign, interviewing, resigning from a position, and accepting new positions.

**BUS 190F ORGANIZATIONAL COMMUNICATIONS (1T) 1 credit**  
The goal of this course is to help students build personal skills that allow them to communicate effectively in the workplace. Emphasis is placed on verbal, nonverbal, and written communications as they relate to professional work habits.

**BUS 190G INTERPERSONAL RELATIONS FOR MANAGEMENT (1T) 1 credit**  
The goal of this course is to help students achieve better interpersonal relationships on the job. Emphasis is placed on the concepts of professional treatment of customers, managing diversity, commitment to quality, managing office politics, developing positive attitudes, and self-discipline.

**BUS 190H TIME/PROJECT MANAGEMENT (1T) 1 credit**  
The goal of this course is to assist students in developing effective time management skills. Emphasis is placed on learning to set priorities, making decisions, delegating, concentrating on specific tasks, and increasing personal productivity.

**BUS 190I DIRECTED READINGS IN MANAGEMENT (1T) 1 credit**  
The goal of this course is to allow students to research a current topic of interest. Topics chosen should benefit the student's professional development or allow for gathering beneficial research for the student's place of work.

**BUS 190J ETHICS IN THE WORKPLACE (1T) 1 credit**  
The goal of this course is to allow students to explore the arena of ethics in the workplace. Emphasis is placed on ethics case studies.

**BUS 190K STRESS MANAGEMENT (1T) 1 credit**  
This course is designed to help students develop skills in managing stress associated with careers in business. Emphasis is placed on developing coping skills such as conflict resolution, delegation, and identifying problems early to avoid unnecessary stress.

**BUS 190L DEVELOPING A BUSINESS PLAN (1T) 1 credit**  
This course is designed to give students the opportunity to develop a personal business plan. The course focuses on the following areas: purpose of a business plan, mechanics of writing a business plan, components of a business plan, and research techniques.

**BUS 190M EVALUATING THE ENTREPRENEURIAL PERSONALITY (1T) 1 credit**  
This course is designed to allow students to identify in themselves and others characteristics that are favorable for the successful entrepreneur. Self-analysis and a study of entrepreneurial traits are included.

**BUS 190N FINANCING AN ENTREPRENEURIAL ENTERPRISE (1T) 1 credit**  
This course is designed to inform students about the options available for financing an entrepreneurial enterprise. The course allows students to investigate possible sources of financing and to study topics such as break-even analysis, fixed and variable costs, and financial statements.

**BUS 190P PLANNING FOR SUPERVISING HUMAN RESOURCES (1T) 1 credit**  
This course is designed to offer insight into the employee relation side of conducting business. Emphasis is placed on identifying employment needs, training, supervising, and motivating employees.

**BUS 190Q PLANNING MARKET STRATEGY (1T) 1 credit**  
This course is designed to allow owners of businesses to develop a market strategy. Included is a discussion of market analysis, competition, sales and distribution, and pricing strategies.

**BUS 190R PROMOTIONAL STRATEGIES (1T) 1 credit**  
This course allows students to look specifically at two kinds of promotional strategies: Advertising and Public Relations. Students explore how each of these strategies strongly affects the success of a business.

**BUS 190S CHOOSING A LOCATION FOR A BUSINESS (1T) 1 credit**

This course is designed to help students planning to start their own business to choose a suitable location and facility. Course content focuses on site location, purchasing or leasing an existing facility, and arranging layout.

**BUS 190T STATISTICAL PROCESS CONTROL (SPC) - VARIABLE DATA (1T) 1 credit**

This course covers descriptive statistics, types of data, and how to calculate, plot, and analyze various variable charts such as average and range, median and range, and standard deviations. Variable charts are used with measurable data.

**BUS 190U STATISTICAL PROCESS CONTROL (SPC) - ATTRIBUTE DATA (1T) 1 credit**

This course addresses the development of non-measurable data into attribute charts for analysis of a process capability. Type of charts covered are P, NP, C and U with emphasis given to development of P-type charts.

**BUS 190V MANAGEMENT FOR ENTREPRENEURS (1T) 1 credit**

This course is an overview of the principles of management as they relate to small and self-owned businesses. Emphasis is placed on planning, organizing, and controlling.

**BUS 190W CUSTOMER SERVICE STRATEGIES (1T) 1 credit**

This course is an overview of the principles of customer service. Emphasis is placed on determining elements of customer satisfaction, creating a customer-focused culture, soliciting and using customer feedback, and building a "relationship" with the customer.

**BUS 190X WORKPLACE READINESS (1-3T) 1-3 credits**

This course is designed to assess students' workplace skills and help them identify areas of weakness. Skills assessment tools such as WorkKeys will be utilized. Other components of workplace readiness will be included as needed.

**BUS 190Y LEADERSHIP SKILLS (1T) 1 credit**

This course is an overview of the characteristics of leadership. Emphasis is placed on what effective leaders do, leadership styles, and the differences between leadership and management.

**BUS 193 BUSINESS CO-OP I (1T) 1 credit**  
**PREREQUISITE: Permission of Instructor**

This course is part of a series wherein the student works in a degree/program related job. Emphasis is placed on student's work experience as it integrates academic knowledge with practical application through exposure to business and related practices in the working environment. The grade is based on the employer's evaluation of each student's productivity, content of a descriptive report submitted by the student, and student development and assessment of a learning contract. Students enrolling in this course must have successfully completed two (2) business courses.

**BUS 194 BUSINESS CO-OP II (1T) 1 credit**  
**PREREQUISITE: BUS 193**

This course is a part of a series wherein the student works in a degree/program related job. Emphasis is placed on student's work experience as it integrates academic knowledge with practical application through exposure to business and related practices in the working environment. The grade is based on the employer's evaluation of each student's productivity, content of a descriptive report submitted by the student, and student development and assessment of a learning contract.

**BUS 195 BUSINESS CO-OP III (1T) 1 credit**  
**PREREQUISITE: BUS 194**

This course is a part of a series wherein the student works in a degree/program related job. Emphasis is placed on student's work experience as it integrates academic knowledge with practical application through exposure to business and related practices in the working environment. The grade is based on the employer's evaluation of each student's productivity, content of a descriptive report submitted by the student, and student development and assessment of a learning contract.

**BUS 196 BUSINESS CO-OP IV (1T) 1 credit**  
**PREREQUISITE: BUS 195**

This course is a part of a series wherein the student works in a degree/program related job. Emphasis is placed on student's work experience as it integrates academic knowledge with practical application through exposure to business and related practices in the working environment. The grade is based on the employer's evaluation of each student's productivity, content of a descriptive report submitted by the student, and student development and assessment of a learning contract.

**BUS 197 BUSINESS CO-OP V (1T) 1 credit**  
**PREREQUISITE: BUS 196**

This course is a part of a series wherein the student works in a degree/program related job. Emphasis is placed on student's work experience as it integrates academic knowledge with practical application through exposure to business and related practices in the working environment. The grade is based on the employer's evaluation of each student's productivity, content of a descriptive report submitted by the student, and student development and assessment of a learning contract.

**BUS 215 BUSINESS COMMUNICATIONS (3T) 3 credits**  
**PREREQUISITE: ENG 101**

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.

**BUS 241 PRINCIPLES OF ACCOUNTING I (3T) 3 credits**

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 statement preparation and analysis.

## Course Descriptions

<b>BUS 242</b>	<b>PRINCIPLES OF ACCOUNTING II (3T)</b> <b>PREREQUISITE: BUS 241</b> This course is a continuation of BUS 241. In addition to a study of financial accounting, this course also places emphasis upon managerial accounting, with coverage of corporations, statement analysis, introductory cost accounting, and use of information for planning, control, and decision making.	<b>3 credits</b>	<b>BUS 272</b>	<b>BUSINESS STATISTICS II (3T)</b> <b>PREREQUISITE: BUS 271</b> This course is a continuation of BUS 271. Topics include sampling theory, statistical inference, regression and correlation, chi square, analysis of variance, time series index numbers, and decision theory.	<b>3 credits</b>
<b>BUS 246</b>	<b>ACCOUNTING ON THE MICROCOMPUTER (3T)</b> <b>PREREQUISITE: BUS 241</b> 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.	<b>3 credits</b>	<b>BUS 275</b>	<b>PRINCIPLES OF MANAGEMENT (3T)</b> This course provides a basic study of the principles of management. Topics include planning, organizing, staffing, directing, and controlling with emphasis on practical business applications.	<b>3 credits</b>
<b>BUS 248</b>	<b>MANAGERIAL ACCOUNTING (3T)</b> <b>PREREQUISITE: BUS 241</b> <b>(Course offered only in Spring and Summer Semesters)</b> 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.	<b>3 credits</b>	<b>BUS 279</b>	<b>SMALL BUSINESS MANAGEMENT (3T)</b> 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.	<b>3 credits</b>
<b>BUS 253</b>	<b>INDIVIDUAL INCOME TAX (3T)</b> This course is intended to familiarize the student with the fundamentals of the federal income tax laws with primary emphasis on those affecting the individual. Emphasis is placed 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. <b>Course offered on Decatur Campus Spring Semester.</b>	<b>3 credits</b>	<b>BUS 280</b>	<b>INDUSTRIAL MANAGEMENT (3T)</b> This course provides an overview of management in an industrial setting. Topics include operations analysis, research and development, physical facilities, production planning, productivity improvement, product flow, quality control, jobs and wages, and employee motivation.	<b>3 credits</b>
<b>BUS 263</b>	<b>THE LEGAL AND SOCIAL ENVIRONMENT OF BUSINESS (3T)</b> This course provides an overview of the legal and social environment for business operations with emphasis on contemporary issues and their subsequent impact on business. Topics include the Constitution, the Bill of Rights, the legislative process, civil and criminal law, administrative agencies, trade regulations, consumer protection, contracts, employment and personal property.	<b>3 credits</b>	<b>BUS 285</b>	<b>PRINCIPLES OF MARKETING (3T)</b> This course provides a general overview of the field of marketing. Topics include marketing strategies, channels of distribution, marketing research, and consumer behavior.	<b>3 credits</b>
<b>BUS 271</b>	<b>BUSINESS STATISTICS I (3T)</b> <b>PREREQUISITE: MTH 110 or MTH 112</b> 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, elementary probability, sampling, estimating and introduction to hypothesis testing.	<b>3 credits</b>	<b>BUS 291</b>	<b>ALTERNATING BUSINESS CO-OP I (1-3T)</b> <b>PREREQUISITE: Permission of instructor</b> This two-course sequence allows students to alternate semesters of full-time work in a job closely related to the student's academic major with semesters of full-time academic work. Emphasis is placed on a student's work experience as it integrates academic knowledge with practical applications in the business environment. The grade is based on the employer's evaluation of student productivity, evaluative reports submitted by the student, and the development and assessment by the student of a learning contract.	<b>1-3 credits</b>
			<b>BUS 292</b>	<b>ALTERNATING BUSINESS CO-OP II (1-3T)</b> <b>PREREQUISITE: Permission of instructor</b> This two-course sequence allows students to alternate semesters of full-time work in a job closely related to the student's academic major with semesters of full-time academic work. Emphasis is placed on a student's work experience as it integrates academic knowledge with practical applications in the business environment. The grade is based on the employer's evaluation of student productivity, evaluative reports submitted by the student, and the development and assessment by the student of a learning contract.	<b>1-3 credits</b>



**BUS 296 BUSINESS INTERNSHIP I (3T) 3 credits**  
**PREREQUISITE:** Permission of Instructor  
 This two-course sequence allows the student to work part-time on a job closely related to his or her academic major while attending classes on a full-time basis. Emphasis is placed on a student's work experience as it integrates academic knowledge with practical applications in the business environment. The grade is based on a term paper, 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. Students must have successfully completed a minimum of 6 semester hours and have a minimum GPA of 2.0 (C).

**BUS 297 BUSINESS INTERNSHIP II (3T) 3 credits**  
**PREREQUISITE:** Permission of Instructor  
 This two-course sequence allows the student to work part-time on a job closely related to his or her academic major while attending classes on a full-time basis. Emphasis is placed on a student's work experience as it integrates academic knowledge with practical applications in the business environment. The grade is based on a term paper, 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. Students must have successfully completed a minimum of 6 semester hours and have a minimum GPA of 2.0 (C).

## CHEMISTRY (CHM)

**CHM 104 INTRODUCTION TO INORGANIC CHEMISTRY (3T, 2E) 4 credits**  
**PREREQUISITE:** MTH 098 or equivalent math placement score.  
 This is a survey course of general chemistry for students who do not intend to major in science or engineering and 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, pH, and equilibrium reactions. Laboratory is required.

**CHM 105 INTRODUCTION TO ORGANIC CHEMISTRY (3T, 2E) 4 credits**  
**PREREQUISITE:** CHM 104  
 (Course taught irregularly, on demand, generally in the Spring semester)  
 This is a survey course of organic chemistry and biochemistry for students who do not intend to major in science or engineering. Topics will include basic nomenclature, classification of organic compounds, typical organic reactions, reactions involved in life processes, function of biomolecules, and the handling and disposal of organic compounds. Laboratory is required.

**CHM 111 COLLEGE CHEMISTRY I (3T, 2E) 4 credits**  
**PREREQUISITE:** MTH 112, Precalculus Algebra  
 This is the first course in a two-semester sequence designed for the science or engineering major who is expected to have a strong background in mathematics. Topics in this course include measurements, nomenclature, stoichiometry, atomic structure, equations and reactions, basic concepts of thermochemistry, chemical and physical properties, bonding, molecular structure, gas laws, kinetic-molecular theory, condensed matter, solutions, colloids, and some descriptive chemistry topics. Laboratory is required.

**CHM 112 COLLEGE CHEMISTRY II (3T, 2E) 4 credits**  
**PREREQUISITE:** CHM 111  
 This is the second course in a two-semester sequence designed primarily for the science and engineering student who is expected to have a strong background in mathematics. Topics in this course include chemical kinetics, chemical equilibria, acids and bases, ionic equilibria of weak electrolytes, solubility product principle, chemical thermodynamics, electrochemistry, oxidation-reduction, nuclear chemistry, an introduction to organic chemistry and biochemistry, atmospheric chemistry, and selected topics in descriptive chemistry including the metals, nonmetals, semi-metals, coordination compounds, transition compounds, and post-transition compounds. Laboratory is required.

**CHM 221 ORGANIC CHEMISTRY I (3T, 2E) 4 credits**  
**PREREQUISITE:** CHM 112  
 This is the first course in a two-semester sequence. Topics in this course include nomenclature, structure, physical and chemical properties, synthesis, and typical reactions for aliphatic, alicyclic, and aromatic compounds with special emphasis on reaction mechanisms, spectroscopy, and stereochemistry. Laboratory is required and will include the synthesis and confirmation of representative organic compounds with emphasis on basic techniques.

**CHM 222 ORGANIC CHEMISTRY II (3T, 2E) 4 credits**  
**PREREQUISITE:** CHM 221  
 This is the second course in a two-semester sequence. Topics in this course include nomenclature, structure, physical and chemical properties, synthesis, and typical reactions for aliphatic, alicyclic, aromatic, and biological compounds, polymers and their derivatives, with special emphasis on reaction mechanisms, spectroscopy, and stereochemistry. Laboratory is required and will include the synthesis and confirmation of representative organic compounds with emphasis on basic techniques.

**CHM 250 DIRECTED STUDIES IN CHEMISTRY (1-3T) 1-3 credit**  
**PREREQUISITE:** Permission of the instructor.  
 This course is designed for independent study in specific areas of chemistry chosen in consultation with a faculty member and carried out under faculty supervision. This course may be repeated three (3) times for credit.



**CHILD DEVELOPMENT (CHD)****CHD 100 INTRODUCTION OF EARLY CARE****AND EDUCATION OF CHILDREN (3T)****3 credits**

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. 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.

**CHD 201 CHILD GROWTH AND DEVELOPMENT****PRINCIPLES (3T)****3 credits**

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 on 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 support the physical, social, emotional, language, cognitive, and aesthetic development. PSY 211 may be used as a suitable substitute for this course for the AAS degree program.

**CHD 202 CHILDREN'S CREATIVE EXPERIENCES****(3T)****3 credits**

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. On completion, students will be able to select and implement creative and age-appropriate experiences for young children.

**CHD 203 CHILDREN'S LITERATURE AND  
LANGUAGE DEVELOPMENT (3T)****3 credits**

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.

**\*CHD 204 METHODS AND MATERIALS FOR TEACHING  
CHILDREN (3T)****3 credits**

This course introduces basic methods and materials used in teaching young children. Emphasis is placed on student's compiling a professional resource file of activities used for teaching math, language arts, and science and social studies concepts. Upon completion, students will be able to demonstrate basic methods of creating learning experiences using developmentally appropriate techniques, materials and realistic expectations. Course includes observations of young children in a variety of childcare environments.

**CHD 205 PROGRAM PLANNING FOR EDUCATING  
YOUNG CHILDREN (3T)****3 credits**

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.

**CHD 206 CHILDREN'S HEALTH AND SAFETY (3T)****3 credits**

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.

**CHD 208 ADMINISTRATION OF CHILD DEVELOPMENT  
PROGRAMS (3T)****3 credits**

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.

**CHD 209 INFANT AND TODDLER EDUCATION  
PROGRAMS (3T)****3 credits**

This course focuses on child development from infancy to thirty-five 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.

**CHD 210 EDUCATING EXCEPTIONAL CHILDREN (3T)****3 credits**

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 children.

**CHD 214 FAMILIES AND COMMUNITIES IN EARLY  
CHILDCARE AND EDUCATION PROGRAMS (3T)****3 credits**

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.

**CHD 215 SUPERVISED PRACTICAL EXPERIENCES IN  
CHILD DEVELOPMENT (3E)****3 credits****PREREQUISITE: Permission of instructor**

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

experiences gained during this course.

**CHD 220 PARENTING SKILLS (3T) 3 credits**

This course introduces childcare providers to important issues in parenting education, beginning with prenatal concerns and continuing through childhood years. Emphasis is placed on using effective parenting and childrearing practices including appropriate guidance methods. Students learn to apply parenting skills for diverse families. Upon completion, students will be more effective in working with families and young children.

**\*Courses required in the Child Development Associate (CDA) Certification for employees currently employed within the industries.**

**COMPUTER INFORMATION SYSTEMS (CIS)**

**CIS 111 WORD PROCESSING SOFTWARE APPLICATIONS (3T) 3 credits**

This course provides students with hands-on experience using word processing software. Students will develop skills common to most word processing software by developing a wide variety of documents. Emphasis is on planning, developing, and editing functions associated with word processing. This course will help prepare students for Microsoft Office Specialist certification.

**CIS 113 SPREADSHEET SOFTWARE APPLICATIONS (3T) 3 credits**

This course provides students with hands-on experience using spreadsheet software. Students will develop skills common to most spreadsheet software by developing a wide variety of spreadsheets. Emphasis is on planning, developing, and editing functions associated with spreadsheets. This course will help prepare students for Microsoft Office Specialist certification.

**CIS 115 PRESENTATION GRAPHICS SOFTWARE APPLICATIONS (3T) 3 credits**

This course provides students with hands-on experience using presentation graphics software. Students will develop skills common to most presentation graphics software by developing a wide variety of presentations. Emphasis is on planning, developing, and editing functions associated with presentations. This course will help prepare students for Microsoft Office Specialist certification.

**CIS 117 DATABASE MANAGEMENT SOFTWARE APPLICATIONS (3T) 3 credits**

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. This course will help prepare students for Microsoft Office Specialist certification.

**CIS 130 INTRODUCTION TO INFORMATION SYSTEMS (3T) 3 credits**

This course is an introduction to computers that reviews computer hardware and software concepts such as equipment, operations, communications, programming

and their past, present and future impact on society. Topics include computer hardware, various types of computer software, communication technologies and program development using computers to execute software packages and/or to write simple programs. Upon completion, students should be able to describe and use the major components of selected computer software and hardware.

**CIS 146 MICROCOMPUTER APPLICATIONS (3T) 3 credits**

This course is an introduction to the most common microcomputer software applications. These software packages should include typical features of applications, such as word processing, spreadsheets, database management, and presentation software. Upon completion, students will be able to utilize selected features of these packages.

**CIS 147 ADVANCED MICROCOMPUTER APPLICATIONS (3T) 3 credits**  
**PREREQUISITE: CIS 146**

This course is a continuation of CIS 146 in which students utilize the advanced features of topics covered in CIS 146. Advanced functions and integration of word processing, spreadsheets, database, and presentation packages among other topics are generally incorporated into the course and are to be applied to situations found in society and business. Upon completion, the student should be able to apply the advanced features of selected software appropriately to typical problems found in society and business.

**CIS 151 GRAPHICS FOR THE WORLD WIDE WEB (3T) 3 credits**

This course will provide an overview to the theory, tools and techniques necessary for creating high-quality graphics using design software tools.

**CIS 171 FUNDAMENTALS OF UNIX/LINUX I (2T, 2E) 3 credits**  
**PREREQUISITE: CIS 201**

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.

**CIS 172 FUNDAMENTALS OF UNIX/LINUX II (2T, 2E) 3 credits**  
**PREREQUISITE: CIS 171**

This course is a continuation of CIS 171 and includes advanced features of Unix/Linux. Included in this course are web applications, integrated network configurations, file transfer, server administration, system controls, iptables/firewall to secure Unix/Linux systems, and strategic user-group applications specific to administration network control.

**CIS 197V MICROSOFT WORD EXPERT (3T) 3 credits**  
**PREREQUISITE: CIS 111**

This course is designed to prepare students to take the Microsoft Office Specialist certification exam in Microsoft Word (expert level). Topics emphasized are

## Course Descriptions

Microsoft Office Specialist exam objectives and test-taking skills. The student will demonstrate mastery of expert level word processing skills through hands-on, performance-based lab exercises. Practice test software will provide immediate feedback on areas where additional practice is needed. Calhoun is an authorized Microsoft testing center.

**CIS 197Y MICROSOFT EXCEL EXPERT (3T) 3 credits**  
**PREREQUISITE: CIS 113**

This course is designed to prepare students to take the Microsoft Office Specialist certification exam in Microsoft Excel (expert level). Topics emphasized are Microsoft Office Specialist exam objectives and test-taking skills. The students will demonstrate mastery of expert level spreadsheet skills through hands-on, performance-based lab exercises. Practice test software will provide immediate feedback on areas where additional practice is needed. Calhoun is an authorized Microsoft testing center.

**CIS 197C DREAMWEAVER (3T) 3 credits**

This course introduces Adobe Dreamweaver, a web authoring tool. Topics include developing and publishing a basic web page, working with text and graphics, building links and tables, collecting data, using layers, adding multimedia elements, and managing library files.

**CIS 197D FLASH (3T) 3 credits**

This course introduces Adobe Flash, a software tool used in designing web pages. Topics include creating animation, drawing, creating special effects, preparing and publishing movies, importing graphics, adding sounds, and using basic ActionScript. Students will build and publish web pages, and learn to work with style sheets.

**CIS 197G WEB PAGE SCRIPTING (Perl) (3T) 3 credits**  
**PREREQUISITE: CIS 146**

This course introduces Perl, a popular and widely used cross-platform programming language. Topics include fundamentals of Perl, including data types, control structures, I/O operations, regular expressions, arrays, and functions. The course also explores the use of Perl in developing CGI (Common Gateway Interface) programs.

**CIS 197H PHOTOSHOP (3T) 3 credits**

This course introduces Adobe Photoshop, a software tool for photo editing and compositing. Topics include correcting and enhancing digital photos, working with layers and masks, creating image composites, transforming images in perspective, combining images for extended depth of field and preparing images for print and the web.

**CIS 201 INTRODUCTION TO COMPUTER PROGRAMMING CONCEPTS (3T) 3 credits**

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.

**CIS 207 INTRODUCTION TO WEB DEVELOPMENT (3T) 3 credits**  
**PREREQUISITE: CIS 146**

This course is an introduction to Web page development techniques. Topics in this course include techniques and strategies for creating good Web pages. Upon completion, the student will be able to demonstrate knowledge of the topics through Web page development projects and appropriate tests.

**CIS 209 ADVANCED WEB DEVELOPMENT (3T) 3 credits**  
**PREREQUISITE: CIS 207 and CIS 255**

This course will introduce students to a scripting language. Topics include objects, arrays, methods, and functions. Students will use a scripting language to add interactivity to HTML pages. Upon completion, the student will demonstrate knowledge of the topics through projects and appropriate tests.

**CIS 212 VISUAL BASIC PROGRAMMING (3T) 3 credits**  
**PREREQUISITE: CIS 201**

This course emphasizes Basic programming using a graphical user interface. The course will introduce 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 programming projects and appropriate tests.

**CIS 213 ADVANCED VISUAL BASIC PROGRAMMING (3T) 3 credits**  
**PREREQUISITE: CIS 212**

This course is a continuation of CIS 212, Visual Basic. It is designed to enhance student skills in Visual Basic, with an emphasis on understanding techniques and procedures for developing projects using an object-oriented language.

**CIS 214 SECURITY ANALYST (PEN Testing) (3T) 3 credits**  
**PREREQUISITE: CIS 146**

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.

**CIS 215 C# PROGRAMMING (3T) 3 credits**  
**PREREQUISITE: CIS 201**

This course is an introduction to the C# programming language. The goal of this course is to provide students with the knowledge and skills they need to develop C# applications for the Microsoft.NET Platform. Topics include program structure, language syntax, and implementation details. Upon completion, the student will be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests. At the end of the course, students will be able to: 1) analyze the basic structure of a C# application and be able to document, debug, compile, and run a simple application; 2) create, name, and assign values to vari-

ables; 3) use common statements to implement flow control, looping, and exception handling; 4) create methods (functions and subroutines) that can return values and take parameters; 5) create, initialize, and use arrays; 6) explain the basic concepts and terminology of object-oriented programming; 7) use common objects and reference types; and 8) build new C# classes from existing classes.

**CIS 222 DATABASE MANAGEMENT SYSTEMS (3T) 3 credits**  
This course will discuss database system architectures. It will teach students how to design, normalize and use a database, and link these to the Web. Students will design and build a database-enabled Web site. Upon completion, the student will be able to demonstrate knowledge of the topics through projects and appropriate tests.

**CIS 245 CYBERTERRORISM (3T) 3 credits**  
**PREREQUISITE: CIS 146 or CIS 201**  
This course focuses on ways that computers can be used to assist in terrorist activity. Students will learn to assess the potential of various kinds of cyber attacks and will learn to devise plans and contingencies against future attacks. Topics include current U.S. policy regarding infrastructure protection and various avenues of addressing threats.

**CIS 246 ETHICAL HACKING (3T) 3 credits**  
**PREREQUISITE: CIS 146**  
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.

**CIS 249 MICROCOMPUTER OPERATING SYSTEMS (3T) 3 credits**  
**PREREQUISITE: CIS 146 or CIS 201**  
This course provides an introduction to microcomputer operating systems. Topics include a description of the operating system, system commands, and effective and efficient use of the microcomputer with the aid of its system programs. Upon completion, students should understand the function and role of the operating system, its operational characteristics, its configuration, how to execute programs, and efficient disk and file management.

**CIS 251 C++ PROGRAMMING (3T) 3 credits**  
**PREREQUISITE: CIS 201**  
This course is an introduction to the C++ programming language. This course is intended as a first course in problem-solving and program design. Topics covered include program style, algorithm and data structuring and modularization. Upon completion, the student will be able to demonstrate knowledge of the topics through the completion of programming projects and appropriate tests.

**CIS 252 ADVANCED C++ PROGRAMMING (3T) 3 credits**  
**PREREQUISITE: CIS 251**  
This course is an advanced object-oriented program-

ming course and covers advanced program development techniques and concepts in the context of an object-oriented language. Subject matter includes object-oriented analysis, 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.

**CIS 255 JAVA PROGRAMMING (3T) 3 credits**  
**PREREQUISITE: CIS 201**

This course is a first course sequence in program design and implementation in the Java programming language using hands-on programming assignments, class demonstrations, and lectures. Topics include basic features of Java program structures, Java's built-in class libraries, data types, programming control structures, and object-oriented programming concepts.

**CIS 267 ENTERPRISE VIRTUALIZATION (3T) 3 credits**  
This course is designed to provide students with the knowledge and skills required to implement enterprise virtualization. Students will gain hands-on experience installing, configuring, and managing enterprise virtualization technologies.

**CIS 268 SOFTWARE SUPPORT (3T) 3 credits**  
**PREREQUISITE: CIS 146**  
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.

**CIS 269 HARDWARE SUPPORT (3T) 3 credits**  
**PREREQUISITE: CIS 268**  
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.

**CIS 270 CISCO I (3T) 3 credits**  
This course is the first part of a four-part curriculum leading to Cisco Certified Network Associate (CCNA) certification. This course concentrates on the physical part of networking including basic electronics, computer basics, network basics, addressing, number conversions, cabling, and planning. After completing this course, the student will be able to identify the functions of each layer of the OSI reference model; describe data link and network addresses; define and describe the function of the MAC address; explain the five conversion steps of data encapsulation; describe the different classes of IP addresses and subnetting; and identify the functions of the TCP/IP network-layer protocols.

**CIS 271 CISCO II (3T) 3 credits**  
**Prerequisite: CIS 270**  
This course is the second part of a four-part curriculum leading to Cisco Certified Network Associate (CCNA) certification. This course concentrates on router configura-



tion. After completing this course the student will be able to prepare the initial configuration of a router and enable IP; control router passwords and identification; configure IP addresses; and add the RIP and IGRP routing protocols to a configuration.

**CIS 272 CISCO III (3T) 3 credits**  
**PREREQUISITE: CIS 270**

This course is the third part of a four-part curriculum leading to Cisco Certified Network Associate (CCNA) certification. This course concentrates on LAN design, routing, switching, and network administration. After completing this course the student will be able to describe LAN segmentation using bridges, routers, and switches; distinguish between cut-through and store and forward LAN switching; describe the operation of the Spanning Tree Protocol and its benefits; and describe the benefits of virtual LANs.

**CIS 273 CISCO IV (3T) 3 credits**  
**PREREQUISITE: CIS 272**

This course is the fourth part of a four-part curriculum leading to Cisco Certified Network Associate (CCNA) certification. This course concentrates on WANs and WAN design. After completing this course, the student will be able to differentiate between LAPB, Frame Relay, ISDN, HDLC, PPP, and DDR; list commands to configure Frame Relay LMI, maps, and sub interfaces; identify PPP operations to encapsulate WAN data on Cisco routers; identify ISDN protocols, function groups, reference points, and channels; and describe Cisco's implementation of ISDN BRI.

**CIS 279 NETWORK INFRASTRUCTURE DESIGN (3T) 3 credits**  
**PREREQUISITE: CIS 146**

This course provides a study of network infrastructure design. Topics included in this course are strategies for planning, implementing, and maintaining server availability and security, client addressing schemes, name resolution, routing, remote access, and network security. Students gain experience by designing plans for implementing common network infrastructure and protocols.

**CIS 280 NETWORK SECURITY (3T) 3 credits**

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, 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.

**CIS 282 COMPUTER FORENSICS 3 credits**  
**PREREQUISITE: CIS 146**

This course introduces students to methods of computer forensics and investigations. This course helps prepare students for the International Association of Computer Investigative Specialists (IACIS) Certification.

**CIS 296 SPECIAL TOPICS (6E) 3 credits**  
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 specified skills.

**CIS 297 CO-OP FOR CIS II (3T) 3 credits**

This course is part of a series wherein the student works in a degree/program related job. Emphasis is placed on student's work experience as it integrates academic knowledge with practical application through exposure to computer practices in an informational technologies environment. The grade is based on the employer's evaluation of each student's productivity, content of a descriptive report submitted by the student, and student development and assessment of a learning contract.

**CIS 299 DIRECTED STUDIES IN COMPUTER SCIENCE (3T) 3 credits**  
**PREREQUISITE: Permission of instructor**

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.

### CLINICAL LABORATORY TECHNICIAN (CLT)

**CLT 100 PHLEBOTOMY (1T, 3C) 2 credits**

**PREREQUISITES: Admission to the Program**

This course covers the basic techniques used in the collection of blood specimens. Presentation includes equipment and additives, basic anatomy, and techniques for safe and effective venipuncture. Upon completion, students should be able to correctly perform venipuncture.

**CLT 111 URINALYSIS & BODY FLUIDS (2T, 4E) 4 credits**

**PREREQUISITE: Admission to the Program**

**COREQUISITE: CLT 142**

This course focuses on the theory and techniques in the examination of urine and other body fluids. The student is introduced to the physical and chemical properties of these fluids as well as microscopic examination of sediment and the identification of cells and crystals. Upon completion, students should be able to perform basic urinalysis and correlate laboratory results to renal disorders and other disease states. **CORE**

**CLT 121 CLT HEMATOLOGY (3T, 4E) 5 credits**

**PREREQUISITE: Admission to the Program**

**COREQUISITE: CLT 131**

In this course, the theory and techniques of hematology are covered. The student is presented with blood components, normal and abnormal cell morphology, hemostasis, and selected automated methods. Upon completion, students should be able to perform various procedures including preparation and examination of hematologic slides and relate results to specific disorders. **CORE**



**CLT 131 LABORATORY TECHNIQUES (3T, 2E) 4 credits**  
**PREREQUISITE:** Admission to the Program  
**COREQUISITE:** CLT 121

This course covers the basic principles and techniques used in the clinical laboratory. Emphasis is placed on terminology, basic microscopy, safety, and computations. Upon completion, students should be able to perform various basic laboratory analyses and utilize basic theories of laboratory principles. **CORE**

**CLT 141 CLT MICROBIOLOGY I (3T, 4E) 5 credits**  
**PREREQUISITE:** Admission to the Program  
**COREQUISITE:** CLT 151 and CLT 181

The student is presented with the theories, techniques, and methods used in basic bacteriology. Focus is on bacterial isolation, identification, and susceptibility testing. Upon completion, students should be able to select media, isolate and identify microorganisms, and discuss modern concepts of epidemiology. **CORE**

**CLT 142 CLT MICROBIOLOGY II (3T, 2E) 4 credits**  
**PREREQUISITE:** CLT 141  
**COREQUISITE:** CLT 111

The student is presented with the theories, techniques, and methods used in basic parasitology, mycology, and virology. Emphasis is placed on special bacteria, identification, life cycles, culture growth, and pathological states of infection and infestation. Upon completion, students should be able to identify certain parasites, demonstrate various staining and culture procedures, and discuss the correlation of certain microorganisms to pathological conditions. **CORE**

**CLT 151 CLT CLINICAL CHEMISTRY (3T, 4E) 5 credits**  
**PREREQUISITE:** Admission to the Program  
**COREQUISITE:** CLT 141 and CLT 181

This course emphasizes theories and techniques in basic and advanced clinical chemistry. Coverage includes various methods of performing biochemical analyses on clinical specimens. Upon completion, students should be able to apply the principles of clinical chemistry, evaluate quality control, and associate abnormal test results to clinical significance. **CORE**

**CLT 161 CLT INTEGRATED LABORATORY SIMULATION (4E) 2 credits**  
**PREREQUISITE:** Admission to the Program  
**COREQUISITE:** CLT 191

This course provides an opportunity for the student to perform clinical laboratory procedures in all phases of laboratory testing as a review of previous laboratory courses. Emphasis is placed on organization of tasks, timing, accuracy, and simulation of routine operations in a clinical laboratory. Upon completion, students should be able to organize tasks and perform various basic laboratory analyses with accuracy and precision. **CORE**

**CLT 181 CLT IMMUNOLOGY (1T, 2E) 2 credits**  
**PREREQUISITES:** Admission to the Program  
**COREQUISITES:** CLT 141 and CLT 151

Theory and techniques in immunology are presented to the student. Emphasis is placed on the basic principles of the immune system, serologic testing, the production of specific antibodies and their use in the identification of infectious organisms. Upon completion, students should be able to relate basic principles of immunology, describe techniques

for analytical methods utilizing immunological concepts, and correlate results of analyses to certain disease states. **CORE**

**CLT 191 CLT IMMUNOHEMATOLOGY (3T, 4E) 5 credits**  
**PREREQUISITE:** Admission to the Program  
**COREQUISITE:** CLT 161

Theory and techniques in immunohematology are presented to the student. In this course coverage includes antigen and antibody reactions including blood typing, antibody detection and identification, and compatibility testing. Upon completion, students should be able to apply theories and principles of immunohematology to procedures for transfusion and donor services and correlate blood banking practices to certain disease states and disorders. **CORE**

**CLT 293 CLINICAL LABORATORY SEMINAR (2T) 2 credit**  
**PREREQUISITE:** Admission to the Program

This course is a cumulative review of clinical laboratory science theory. The seminar consists of an on-campus summation of previous classes emphasizing recall, application of theory, correlation, and evaluation of all areas of clinical laboratory science. Upon completion, students should be able to apply theory of analytical methods, recognize normal, abnormal, and erroneous results, and relate laboratory results to pathological conditions.

**CLT 294 CLINICAL LABORATORY PRACTICUM I (9C) 3 credits**  
**PREREQUISITE:** Admission to the Program and Permission of Instructor

This supervised practicum is within the clinical setting and provides laboratory practice in hematology and urinalysis. Emphasis is placed on clinical skills and performance in areas such as specimen preparation and examination, instrumentation, reporting of results, management of data and quality control. Upon completion, students should be able to process specimens, perform analyses utilizing various methods including instrumentation, report results, manage data and quality control using information systems. **CORE**

**CLT 295 CLINICAL LABORATORY PRACTICUM II (9C) 3 credits**  
**PREREQUISITE:** Admission to the Program and Permission of Instructor

This supervised practicum is within the clinical setting and provides laboratory practice in microbiology. Emphasis is placed on clinical skills and performance in areas such as recovery, isolation, culturing and identification of microorganisms. Upon completion, students should be able to isolate, culture, analyze microorganisms utilizing various methods, report results, manage data and quality control using information systems. **CORE**

**CLT 296 CLINICAL LABORATORY PRACTICUM III (9C) 3 credits**  
**PREREQUISITE:** Admission to the Program and Permission of Instructor

This supervised practicum is within the clinical setting and provides laboratory practice in serology and immunohematology. Emphasis is placed on clinical skills and performance in areas such as the detection and identification of antibodies, the typing of blood, and compatibility testing of blood and blood components. Upon completion, students should be able to perform the screening for and identification of antibodies, compatibility testing, record and manage data and quality control using information systems. **CORE**

## Course Descriptions

### **CLT 297 CLINICAL LABORATORY PRACTICUM IV (9C) 3 credits**

**PREREQUISITE:** Admission to the Program and Permission of Instructor

This supervised practicum is within the clinical setting and provides laboratory practice in clinical chemistry. Emphasis is placed on clinical skills and performance in areas such as computerized instrumentation and the ability to recognize technical problems. Upon completion, students should be able to perform biochemical analyses by various methods, including testing utilizing computer-oriented instrumentation, report test results, manage patient data and quality control statistics using information systems. **CORE**

## COSMETOLOGY INSTRUCTOR TRAINING (CIT)

### **CIT 211 TEACHING & CURRICULUM DEVELOPMENT (3T) 3 credits**

**PREREQUISITE:** Licensed managing cosmetologist; 1 year experience

This course focuses on the principles of teaching, teaching maturity, personality conduct, and the development of a cosmetology curriculum. Emphasis is placed on teacher roles, teaching styles, teacher challenges, aspects of curriculum development, and designing individual courses. Upon completion, the student should be able to describe the role of teacher, identify means of motivating students, develop a course outline, and develop lesson plans.

### **CIT 212 TEACHER MENTORSHIP (9M) 3 credits**

**COREQUISITE:** CIT 211 or Permission of instructor  
**PREREQUISITE:** Licensed managing cosmetologist; 1 year experience

This course is designed to provide the practice through working with a cosmetology instructor in a mentoring relationship. Emphasis is placed on communication, student assessment, and assisting students in the lab. Upon completion, the student should be able to communicate with students, develop a course of study, and apply appropriate teaching methods.

### **CIT 213 LESSON PLAN DEVELOPMENT (3T) 3 credits**

**COREQUISITE:** CIT 211, 212, or Permission of instructor  
**PREREQUISITE:** Licensed managing cosmetologist; 1 year experience

The course introduces students to methods for developing lesson plans. Emphasis is placed on writing lesson plans and on the four-step teaching plan. Upon completion, students should be able to write daily lesson plans and demonstrate the four-step teaching method.

### **CIT 214 LESSON PLAN METHODS (1T, 2M) 3 credits**

During this course students have the opportunity to further apply knowledge of lesson planning and lesson delivery by using lesson plans they have developed from previous courses or this course. Emphasis is placed on the use of lesson plans in various classroom and laboratory settings. Upon completion, students will be able to teach a variety of cosmetology classes using various techniques.

### **CIT 221 LESSON PLAN IMPLEMENTATION (9M) 3 credits**

**PREREQUISITE:** Licensed managing cosmetologist; 1 year experience

This course is designed to provide practice in preparing

and using lesson plans. Emphasis is placed on organizing, writing and presenting lesson plans using the four-step teaching method. Upon completion, students should be able to prepare and present a lesson using the four-step teaching method.

### **CIT 222 AUDIO VISUAL MATERIALS AND METHODS (3T) 3 credits**

**COREQUISITE:** CIT 223 or Permission of instructor  
**PREREQUISITE:** Licensed managing cosmetologist; 1 year experience

This course focuses on visual and audio aids and materials. Emphasis is placed on the use and characteristics of instructional aids. Upon completion, the student should be able to prepare teaching aids and determine their most effective use.

### **CIT 223 AUDIO VISUAL MATERIALS AND METHODS APPLICATIONS (9M) 3 credits**

**COREQUISITE:** CIT 222 or Permission of instructor  
**PREREQUISITE:** Licensed managing cosmetologist; 1 year experience

This course is designed to provide practice in preparing and using visual and audio aids and materials. Emphasis is placed on the preparation and use of different categories of instructional aids. Upon completion, the student should be able to prepare and effectively present different types of aids for use with a four-step lesson plan.

## COSMETOLOGY (COS)

### **COS 111 INTRODUCTION TO COSMETOLOGY (3T) 3 credits**

**COREQUISITE:** COS 112 or Permission of instructor

This course is designed to provide students with an overview of the history and development of cosmetology and standards of professional behavior. Students receive basic information regarding principles and practices of infection control, diseases, and disorders. Additionally, students receive introductory information regarding hair design. The information presented in this course is enhanced by hands-on application performed in a controlled lab environment. Upon completion, students should be able to apply safety rules and regulations and write procedures for skills identified in this course.

### **COS 112 INTRODUCTION TO COSMETOLOGY LAB (9M) 3 credits**

**COREQUISITE:** COS 111 or Permission of instructor

In this course, students are provided the practical experience for sanitation, shampooing, hair shaping, and hairstyling. Emphasis is placed on disinfection, shampooing, hair shaping, and hairstyling for various types of hair for men and women. This course offers opportunities for students to put into practice concepts learned in the theory component from COS 111.

### **COS 113 THEORY OF CHEMICAL SERVICES (1T, 2E, 3M) 3 credits**

**COREQUISITE:** COS 114 or COS 115, or Permission of instructor

During this course students learn concepts of theory of chemical services related to chemical hair texturing. Specific topics include basics of chemistry and electricity, properties of the hair and scalp, and chemical texture services. Safety considerations are emphasized throughout this course. This course is foundational for other courses

providing more detailed instruction on these topics.

**COS 114 CHEMICAL SERVICES LAB (9M) 3 credits**

**COREQUISITE: COS 113 or Permission of instructor**

During this course students perform various chemical texturing activities. Emphasis is placed on cosmetologist and client safety, chemical use and handling, hair and scalp analysis, and client consulting.

**COS 115 HAIR COLORING THEORY (3T) 3 credits**

**COREQUISITE: COS 116**

In this course, students learn the techniques of hair coloring and hair lightening. Emphasis is placed on color application, laws, levels and classifications of color and problem solving. Upon completion, the student will be able to identify all classifications of hair coloring and the effects on the hair.

**COS 116 HAIR COLORING LAB (9M) 3 credits**

**COREQUISITE: COS 115**

In this course, students apply hair coloring and hair lightening techniques. Topics include consultation, hair analysis, skin test and procedures and applications of all classifications of hair coloring and lightening. Upon completion, the student will be able to perform procedures for hair coloring and hair lightening.

**COS 117 BASIC SPA TECHNIQUES (3T) 3 credits**

**COREQUISITE: COS 118**

This course is the study of cosmetic products, massage, skin care, and hair removal, as well as identifying the structure and function of various systems of the body. Topics include massage skin analysis, skin structure, disease and disorder, light therapy, facials, facial cosmetics, anatomy, hair removal, and nail care. Upon completion, the student will be able to state procedures for analysis, light therapy, facials, hair removal, and identify the structures, functions, disorders of the skin, and nail care.

**COS 118 BASIC SPA TECHNIQUES LAB (9M) 3 credits**

**COREQUISITE: COS 117**

This course provides practical applications related to the care of the skin and related structure. Emphasis is placed on facial treatments, product application, skin analysis, massage techniques, facial make-up, hair removal, and nail care. Upon completion, the student should be able to prepare clients, assemble sanitized materials, follow procedures for product application, recognize skin disorders, demonstrate facial massage movement, cosmetic application, and hair removal using safety and sanitary precautions, and nail care.

**COS 119 BUSINESS OF COSMETOLOGY (3) 3 credits**

This course is designed to develop job-seeking and entry-level management skills for the beauty industry. Topics include job seeking, leader and entrepreneurship development, business principles, business laws, insurance, marketing, and technology issues in the workplace. Upon completion, the student should be able to list job-seeking and management skills and the technology that is available for use in the salon.

**COS 123 COSMETOLOGY SALON PRACTICES (9M) 3 credits**

This course is designed to allow students to practice all

phases of cosmetology in a salon setting. Emphasis is placed on professionalism, receptionist duties, hairstyling, hair shaping, chemical, and nail and skin services for clients. Upon completion, the student should be able to demonstrate professionalism and the procedures of cosmetology in a salon setting.

**COS 125 CAREER AND PERSONAL DEVELOPMENT (3T) 3 credits**

This course provides the study and practice of personal development and career building. Emphasis is placed on building and retaining clientele, communication skills, customer service, continuing education, and goal setting. Upon completion, the student should be able to communicate effectively and practice methods for building and retaining clientele.

**COS 133 SALON MANAGEMENT TECHNOLOGY (1T, 6M) 3 credits**

This course is designed to develop entry-level management skills for the beauty industry. Topics include job-seeking, leader and entrepreneurship development, business principles, business laws, insurance, marketing, and technology issues in the workplace. Upon completion, the student should be able to list job-seeking and management skills and the technology that is available for use in the salon.

**COS 134 ADVANCED ESTHETICS (1T, 6M) 3 credits**

This course includes an advanced study of anatomy and physiology relating to skin care, cosmetic chemistry, histology of the skin, and massage and facial treatments. Upon completion, the student should be able to discuss the functions of the skin, effects of chemicals on skin, different types of massage and benefits, and key elements of the basic facial treatment.

**COS 135 ADVANCED ESTHETICS APPLICATIONS (9M) 3 credits**

This course provides advanced practical applications related to skin care. Principal topics include massage techniques, various facial treatments, proper product application through skin analysis, and introduction to ingredients and treatments used by the esthetician. Upon completion, the student should be able to perform various massage techniques, prescribe proper type of facial treatment and product, and demonstrate facials using any of the eight functions of the facial machine.

**COS 141 APPLIED CHEMISTRY FOR COSMETOLOGY (9M) 3 credits**

This course focuses on chemistry relevant to professional hair and skin care products, hair and its related structures, permanent waving, chemical hair relaxing, and hair coloring. Topics include knowledge of basic chemistry, pH scale measurements, water, shampooing and cosmetic chemistry, physical and chemical changes in hair structure. Upon completion, the student should be able to define chemistry, types of matter, and describe chemical and cosmetic reactions as related to the hair and skin structure.

**COS 142 APPLIED CHEMISTRY FOR COSMETOLOGY LAB (9M) 3 credits**

This course provides practical applications of the knowledge and skin learned in reference to chemical reactions, as well as the chemical application to the hair and skin. Emphasis is placed on knowledge of basic chemistry, pH scale, cosmetic chemistry, and physical and chemical changes in the hair and skin structure. Upon completion,

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the student should be able to determine the proper chemical product for each prescribed service.

ferent types of sculptured nails and recognize the different techniques of nail art.

### **COS 143 SPECIALTY HAIR PREPARATION TECHNIQUES (1T, 6M)**

**3 credits**

This course focuses on the theory and practice of hair designing. Topics include creating styles using basic and advanced techniques of back combing, up sweeps and braiding. Upon completion, the student should be able to demonstrate the techniques and procedures for hair designing.

### **COS 144 HAIR SHAPING AND DESIGN (1T, 6M)**

**3 credits**

In this course, students learn the art and techniques of hair shaping. Topics include hair sectioning, correct use of hair shaping implements, and elevations used to create design lines. Upon completion, the student should be able to demonstrate the techniques and procedures for creating hair designs.

### **COS 145 HAIR SHAPING LAB (9M)**

**3 credits**

This covers the study of the art and techniques of hair shaping. Topics include hair sectioning, correct use of hair shaping implements, and elevations used to create design lines. Upon completion, the student should be able to demonstrate the techniques and procedures for creating hair designs using safety and sanitary precautions.

### **COS 146 HAIR ADDITIONS (2T, 2E, 3M)**

**4 credits**

This course focuses on the practice of adding artificial hair. Topics include hair extensions, weaving, and braiding. Upon completion, the student should be able to demonstrate the techniques and procedures for attaching human hair and synthetic hair.

### **COS 150 MANICURING (1T, 6M)**

**3 credits**

This course focuses on the theory and practice of nail care. Topics include sanitation, nail structure, nail disorders and diseases, manicuring, pedicuring, nail wrapping, sculptured nails and acrylic overlays.

### **COS 151 NAIL CARE (3T)**

**3 credits**

**COREQUISITE: COS 152 or Permission of instructor**

This course focuses on all aspects of nail care. Topics include salon conduct, professional ethics, sanitation, nail structure, manicuring, pedicuring, nail disorders, and anatomy and physiology of the arm and hand. Upon completion, the student should be able to demonstrate professional conduct, recognize nail disorders and diseases, and identify the procedures for sanitation and nail care services.

### **COS 152 NAIL CARE APPLICATIONS (9M)**

**3 credits**

**COREQUISITE: COS 151 or Permission of instructor**

This course provides practice in all aspects of nail care. Topics include salon conduct, professional ethics, bacteriology, sanitation and safety, manicuring and pedicuring. Upon completion, the student should be able to perform nail care procedures.

### **COS 153 NAIL ART (3T)**

**3 credits**

**COREQUISITE: COS 154 or Permission of instructor**

This course focuses on advanced nail techniques. Topics include acrylic, gel, fiberglass nails, and nail art. Upon completion, the student should be able to identify the dif-

### **COS 154 NAIL ART APPLICATIONS (9M)**

**3 credits**

**COREQUISITE: COS 153 or Permission of instructor**

This course provides practice in advanced nail techniques. Topics include acrylic, gel, fiberglass nails, and nail art. Upon completion, the student should be able to perform the procedures for nail sculpturing and nail art.

### **COS 158 EMPLOYABILITY SKILLS (3T)**

**3 credits**

This course provides the study of marketable skills to prepare the student to enter the world of work. Emphasis is placed on resumes, interviews, client and business relations, personality, computer literacy and attitude. Upon completion, the student should be prepared to obtain employment in the field for which they have been trained.

*The following labs are designed for students in need of additional lab hours or services in preparation for licensure exams. The labs will be directed by instructors according to the student's area of specialty and may be taken during the course of the program as needed.*

### **COS 161 SPECIAL TOPICS IN COSMETOLOGY (1T)**

**1 credit**

**PREREQUISITE: Permission of instructor**

This course is designed to allow students to explore issues relevant to the profession of cosmetology. Upon completion, students should have developed new skills in areas of specialization for the cosmetology profession.

### **COS 162 SPECIAL TOPICS IN COSMETOLOGY (9M)**

**3 credits**

**PREREQUISITE: Permission of instructor**

This course is designed to allow students to explore issues relevant to the profession of cosmetology. Upon completion, students should have developed new skills in areas of specialization for the cosmetology profession.

### **COS 163 FACIAL TREATMENTS (1T, 6M)**

**3 credits**

This course includes all phases of facial treatments in the study of skin care. Topics include treatments for oily, dry, and special skin applications. Upon completion, students will be able to apply facial treatments.

### **COS 164 FACIAL MACHINE (9M)**

**3 credits**

This is a course designed to provide practical experience using the vapor and facial machine with hydraulic chair. Topics include the uses of electricity and safety practices, machine and apparatus, use of the magnifying lamp, and light therapy. Upon completion, the student will be able to demonstrate an understanding of electrical safety and skills in the use of facial machines.

### **COS 165 RELATED SUBJECTS ESTHETICIANS (9M)**

**3 credits**

This course includes subjects related to the methods for removing unwanted hair. This course includes such topics as electrolysis information and definitions, safety methods of permanent hair removal, the practice of removal of superfluous hair, and the use of depilatories. Upon completion of this course, students will be able to apply depilatories and practice all safety precautions.

### **COS 167 STATE BOARD REVIEW (1T, 6M)**

**3 credits**

Students are provided a complete review of all procedures



and practical skills pertaining to their training in the program. Upon completion, the student should be able to demonstrate the practical skills necessary to complete successfully the required State Board of Cosmetology examination and entry-level employment.

**COS 169 SKIN FUNCTIONS (9M) 3 credits**

This course introduces skin functions and disorders. Topics include practical application for skin disorder treatments, dermabrasion, and skin refining. Upon completion of this course, the student will be able to demonstrate procedures for acne, facials and masks for deeper layers and wrinkles.

**COS 168 BACTERIOLOGY AND SANITATION (3T) 3 credits**

In this skin care course, emphasis is placed on the decontamination, infection control and safety practiced in the esthetics facility. Topics covered include demonstration of sanitation, sterilization methods and bacterial prevention. Upon completion, the student will be able to properly sanitize facial implements and identify non-reusable items.

**COS 181 SPECIAL TOPICS (3T) 3 credits**

This course is designed to allow students to explore issues relevant to the profession of cosmetology. Upon completion, students should have developed new skills in areas of specialization for the cosmetology profession.

**COS 182 SPECIAL TOPICS (9M) 3 credits**

This course is designed to allow students to explore issues relevant to the profession of cosmetology. Upon completion, students should have developed new skills in areas of specialization for the cosmetology profession.

**COS 190 INTERNSHIP IN COSMETOLOGY (9M) 3 credits**  
**PREREQUISITE: Permission of instructor**

This course is designed to provide exposure to cosmetology practices in non-employment situations. Emphasis is on dependability, attitude, professional judgment, and practical cosmetology skills. Upon completion, the student should have gained skills necessary for entry-level employment.

**COS 291 CO-OP (9M) 3 credits**

This course provides work experience with a college-approved employer in an area related to the student's program of study. Emphasis is placed on integrating classroom learning with related work experience. Upon completion, students should be able to evaluate career selection, demonstrate employability skills, and satisfactorily perform work-related competencies.

**CRIMINAL JUSTICE (CRJ)**

**CRJ 100 INTRODUCTION TO CRIMINAL JUSTICE (3T) 3 credits**

This course surveys the entire criminal justice process from law enforcement to the administration of justice through corrections. It discusses the history and philosophy of the system and introduces various career opportunities.

**CRJ 110 INTRODUCTION TO LAW ENFORCEMENT (3T) 3 credits**

This course examines the history and philosophy of law enforcement, as well as the organization and jurisdiction of local, state, and federal agencies. It includes the duties and functions of law enforcement officers.

**CRJ 130 INTRODUCTION TO LAW AND JUDICIAL PROCESS (3T) 3 credits**

This course provides an introduction to the basic elements of substantive and procedural law and the stages in the judicial process. It includes an overview of state and federal court structure.

**CRJ 140 CRIMINAL LAW AND PROCEDURE (3T) 3 credits**

This course examines both substantive and procedural law. The legal elements of various crimes are discussed, with emphasis placed on the contents of the Alabama Code. Areas of criminal procedure essential to the criminal justice profession are covered.

**CRJ 146 CRIMINAL EVIDENCE (3T) 3 credits**

This course considers the origins of the law of evidence and current rules of evidence. Types of evidence, their definitions and uses are covered, as well as the functions of the court regarding evidence.

**CRJ 150 INTRODUCTION TO CORRECTIONS (3T) 3 credits**

This course provides an introduction to the philosophical and historical foundations of corrections in America. Incarceration and some of its alternatives are considered.

**CRJ 157 COMMUNITY BASED CORRECTIONS (3T) 3 credits**

This course examines various forms of community corrections and alternative sentences. Probation, parole, halfway houses, work release, community service, electronic monitoring and camps are among the programs considered.

**CRJ 160 INTRODUCTION TO SECURITY (3T) 3 credits**

This course surveys the operation, organization and problems in providing safety and security to business enterprises. Private, retail and industrial security are covered.

**CRJ 166 PRIVATE AND RETAIL SECURITY (3T) 3 credits**

This course surveys the legal foundations, regulations, training, and other issues in private security. Typical offenses, laws, and law enforcement strategies common in the field are covered. Methods of loss prevention are examined.

**CRJ 168 INTERNATIONAL SECURITY (3T) 3 credits**

This course provides an understanding of the security implications of international programs, commercial sales, the interrelationship of the information disclosure and technology transfer, the International Traffic in Arms Regulations, and the Export Administration Regulations.

**CRJ 169 SECURITY MANAGEMENT (3T) 3 credits**

This course introduces the student to sound security management theories, principles, budgeting, communications, and education.



## Course Descriptions

- CRJ 170 INTRODUCTION TO PHYSICAL SECURITY (3T) 3 credits**  
This course provides an overview of the protection of people, property, and facilities through the use of security forces, systems, and procedures.
- CRJ 171 SECURITY RISK MANAGEMENT (3T) 3 credits**  
This course deals with the identification of assets, threats, and vulnerabilities, and the development of countermeasures.
- CRJ 208 INTRODUCTION TO CRIMINOLOGY (3T) 3 credits**  
This course delves into the nature and extent of crime in the United States as well as criminal delinquent behavior and theories of causation. The study includes criminal personalities, principles of prevention, control and treatment.
- CRJ 209 JUVENILE DELINQUENCY (3T) 3 credits**  
This course examines the causes of delinquency. It also reviews programs of prevention and control of juvenile delinquency as well as the role of the courts.
- CRJ 216 POLICE ORGANIZATION AND ADMINISTRATION (3T) 3 credits**  
This course examines the principles of organization and administration of law enforcement agencies. Theories of management, budgeting, and various personnel issues are covered.
- CRJ 220 CRIMINAL INVESTIGATION (3T) 3 credits**  
This course explores the theory and scope of criminal investigation. The duties and responsibilities of the investigator are included. The techniques and strategies used in investigation are emphasized.
- CRJ 230 CRIMINALISTICS (3T) 3 credits**  
This course surveys the different techniques of scientific investigation. Emphasis is given to ballistics, photography, fingerprints, DNA, trace evidence, body fluids, casts and the like.
- CRJ 256 CORRECTIONAL REHABILITATION (3T) 3 credits**  
This course surveys the different methods used in the rehabilitation of public offenders. Topics include individual and group counseling, education, recreation, religion, drug treatment, and vocational programs.
- CRJ 280 INTERNSHIP IN CRIMINAL JUSTICE (1-3T) 1-3 credits**  
**PREREQUISITE: Permission of instructor**  
This course involves practical experience with a criminal justice agency under faculty supervision. Permission of the instructor is required. This course may be repeated with the approval of the department head.
- CRJ 290 SELECTED TOPICS - SEMINAR IN CRIMINAL JUSTICE (1-3T) 1-3 credits**  
This course involves reading, research, writing, and discussion of selected subjects relating to criminal justice. Various contemporary problems in criminal justice are analyzed. This course may be repeated with approval of the department head.

## DENTAL ASSISTING (DAT)

- DAT 100 INTRODUCTION TO DENTAL ASSISTING (2T) 2 credits**  
**PREREQUISITE: Admission to the Dental Assisting Program**  
**COREQUISITE: DAT 101, DAT 102, DAT 103, and DAT 104**  
This course is designed to provide an introduction to dentistry and the history of dentistry, dental equipment, dental auxiliaries, psychology application to dentistry, personal and certification requirements, legal and ethical considerations, and work ethics and communication skills. Emphasis is placed on the Alabama Dental Practice Act and OSHA Standards. Upon completion, students should be able to discuss basic aspects of dentistry.
- DAT 101 PRE-CLINICAL PROCEDURES I (2T, 1S) 3 credits**  
**PREREQUISITE: Admission to the Dental Assisting Program**  
**COREQUISITES: DAT 100, DAT 102, DAT 103, and DAT 104**  
This course is designed to introduce chairside assisting including concepts of four-handed dentistry, sterilization techniques, dental instruments, anesthesia, and operative dentistry. 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.
- DAT 102 DENTAL MATERIALS (2T, 1S) 3 credits**  
**PREREQUISITE: Admission to the Dental Assisting Program**  
**COREQUISITES: DAT 100, DAT 101, DAT 103, and DAT 104**  
This course is designed to study 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 alginate impressions, trim study models, construct custom trays and temporary crowns, prepare and place restorative material, and manipulate cements and impression materials.
- DAT 103 ANATOMY AND PHYSIOLOGY FOR DENTAL ASSISTING (3T) 3 credits**  
**PREREQUISITE: Admission to Dental Assisting Program**  
**COREQUISITE: DAT 100, DAT 101, DAT 102, and DAT 104**  
This course is designed to study dental anatomy and the structure 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 will provide 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.
- DAT 104 BASIC SCIENCES FOR DENTAL ASSISTING (2T) 2 credits**  
**PREREQUISITE: Admission to Dental Assisting Program**  
**COREQUISITE: DAT 100, DAT 101, DAT 102, DAT 103**  
This course is designed to study basic microbiology, pathology, pharmacology, and medical emergencies.

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.

Emphasis is placed on dental specialties. Upon completion, the student should be able to discuss and identify dental specialty procedures and instrumentation.

**DAT 111 CLINICAL PRACTICE I (1T, 4C) 5 credits**  
**PREREQUISITE: DAT 100, DAT 101, DAT 102, DAT 103 and DAT 104**

**COREQUISITE: DAT 112, DAT 113, and DAT 116**  
This course is designed to allow the student the opportunity for clinical observation and practical work experience in clinical settings under the supervision of a licensed dentist. Emphasis will be placed on the basic skills of chairside assisting. Upon completion, students should be able to demonstrate basic skills in the area of chairside assisting.

**DAT 122 CLINICAL PRACTICE II (4C) 4 credits**  
**PREREQUISITE: DAT 100, DAT 101, DAT 102, DAT 103, DAT 104, DAT 111, DAT 112, DAT 113 and DAT 116**  
**COREQUISITE: DAT 121 and DAT 123**

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.

**DAT 112 DENTAL RADIOLOGY (2T, 1S) 3 credits**  
**PREREQUISITE: DAT 100, DAT 101, DAT 102, DAT 103 and DAT 104**

**COREQUISITE: DAT 111, DAT 113, and DAT 116**  
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, 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.

**DAT 123 DENTAL ASSISTING SEMINAR (4T) 4 credits**  
**PREREQUISITE: DAT 100, DAT 101, DAT 102, DAT 103, DAT 104, DAT 111, DAT 112, DAT 113 and DAT 116**  
**COREQUISITE: DAT 121 and DAT 122**

This course is designed to discuss and evaluate the students' clinical experiences and the resume 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.

**DAT 113 DENTAL HEALTH EDUCATION (2T) 2 credits**  
**PREREQUISITE: DAT 100, DAT 101, DAT 102, DAT 103 and DAT 104**

**COREQUISITE: DAT 111, DAT 112, and DAT 116**  
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.

**DDT 111 FUNDAMENTALS OF DRAFTING AND DESIGN TECHNOLOGY (1T, 4E) 3 credits**

This course serves as an introduction to the field of drafting and design and provides a foundation for the entire curriculum. Topics include safety, lettering, tools and equipment, geometric constructions, orthographic sketching, and drawing.

**DAT 114 DENTAL OFFICE ADMINISTRATION (3T, 1L) 4 credits**  
**PREREQUISITE: DAT 100, DAT 101, DAT 102, DAT 103, DAT 104, DAT 111, DAT 112, DAT 113 and DAT 116**  
**COREQUISITE: DAT 122 and DAT 123**

This course is designed to introduce basic dental office procedures. Emphasis includes appointment and recall systems, financial records, accounting procedures, insurance claims, filing systems, purchasing and inventory supplies and equipment, and the utilization of computers to perform business office procedures. Upon completion, students should be able to demonstrate efficiency in dental office administrative procedures.

**DDT 124 BASIC TECHNICAL DRAWING (1T,4E) 3 credits**  
**PREREQUISITE: ADM 102 and DDT 111**

This course covers sections, auxiliary views, and basic space geometry. Emphasis will be placed on the theory as well as the mechanics of applying sections, basic dimensioning, auxiliary views, and basic space geometry.

**DDT 127 INTERMEDIATE COMPUTER AIDED DRAFTING AND DESIGN (1T, 4E) 3 credits**  
**PREREQUISITE: ADM 102 and DDT 111**

This course covers intermediate-level concepts and applications of CADD. Emphasis will be placed on intermediate-level features, commands, and applications of CADD software.

**DAT 116 PRECLINICAL PROCEDURES II (3T) 3 credits**  
**PREREQUISITE: DAT 100, DAT 101, DAT 102, DAT 103 and DAT 104**

**COREQUISITE: DAT 111, DAT 112, and DAT 113,**  
This course is a continuation of Pre-Clinical Procedures I.

**DDT 128 INTERMEDIATE TECHNICAL DRAWING (1T,4E) 3 credits**  
**PREREQUISITE: ADM 102 and DDT 111**

This course is designed to develop a strong foundation in common drafting and design practices and procedures. Topics include dimensioning concepts and pictorial drawings.

**DESIGN DRAFTING TECHNOLOGY (DDT)**

## Course Descriptions

**DDT 131 MACHINE DRAFTING BASICS (1T, 4E) 3 credits**

**PREREQUISITE: DDT 124, ADM 102**

This course in machine drafting and design provides instruction in the largest specialty area of drafting in the United States in terms of scope and job opportunities. Emphasis will be placed on the applications of multi-view drawings, including drawing organization and content, title blocks and parts lists, assembly drawings, detail drawings, dimensioning and application of engineering controls in producing industrial-type working drawings. Upon completion, students should be able to organize, layout, and produce industrial-type working drawings, including the application of title blocks, parts lists, assemblies, details, dimensions, and engineering controls.

**DDT 132 ARCHITECTURAL DRAFTING (1T, 4E) 3 credits**

**PREREQUISITE: ADM 102 and DDT 111**

This course in architectural design and drafting introduces basic terminology, concepts and principles of architectural design and drawing. Topics include design considerations, lettering, terminology, site plans, and construction drawings. Upon completion, students should be able to draw, dimension, and specify basic residential architectural construction drawings.

**DDT 150 THEORY OF RESIDENTIAL DRAWING AND DESIGN (3T) 3 credits**

**COREQUISITE: DDT 155**

This course provides the theory of residential drawing and design. Topics include architectural styles, house design, site and space planning, climate, drawing requirements, construction materials and process, terminology, and specific types of drawings required to complete a full set of construction documents. Introductory, intermediate, and advanced topics are covered. Emphasis is placed on an understanding of the various requirements essential to the field of residential drawing and design.

**DDT 155 DRAWING FOR RESIDENTIAL CONSTRUCTION (8E) 4 credits**

**COREQUISITE: DDT 150**

This course is a direct applications lab to the topics covered within DDT 150. Emphasis is placed upon the production of quality construction documents.

**DDT 193 DRAFTING INTERNSHIP (6E) 3 credits**

**PREREQUISITE: Permission of Instructor**

This course is limited to those who are involved in a structured employment situation that is directly related to the field of drafting and design and is coordinated with the drafting instructor. The student must spend at least 15 hours per week in an activity planned and coordinated jointly by the instructor and the employer. Upon completion, the student will have gained valuable work experience in a well-planned, coordinated training/work situation.

**DDT 213 CIVIL DRAFTING, PLAT MAPS (1T, 4E) 3 credits**

**PREREQUISITE: ADM 102 and DDT 111**

This course introduces the drafting practices, symbols, conventions, and standards utilized in civil engineering contract documents. Topics include site planning, land surveying, topographic surveys, along with civil terminology. Upon completion, students should be able to draw accurate plat maps giving legal descriptions of land

parcels, draw simple site plans, and identify and use proper symbols and conventions on civil engineering drawings.

**DDT 215 GEOMETRIC DIMENSIONING & TOLERANCING (6E) 3 credits**

**PREREQUISITE: DDT 124 & DDT 127**

This course is designed to teach fundamental concepts of size description by geometric methods including appropriate engineering controls. Emphasis is placed on the drawing and application of common geometric dimensioning and tolerancing symbols to engineering drawings as designated by the latest ANSI/ASME Standards. Upon completion, students should be able to use geometric dimensioning and tolerancing symbols in applying size information and manufacturing controls to working drawings.

**DDT 220 ADVANCED TECHNICAL DRAWING (1T, 4E) 3 credits**

**PREREQUISITE: DDT 124 and DDT 127**

This course covers the methods of providing size description and manufacturing information for production drawings. Emphasis will be placed on accepted dimensioning and tolerancing practices including Geometric Dimensioning and Tolerancing for both the Customary English System and the ISO System. Upon completion, students should be able to apply dimensions, tolerances, and notes to drawings to acceptable standards, including Geometric Dimensioning and Tolerancing, and produce drawings using the specifying common threads and various fasteners, including welding methods.

**DDT 222 ADVANCED ARCHITECTURAL DRAFTING (1T, 4E) 3 credits**

**PREREQUISITE: DDT 155**

This third course in architectural design and drafting continues with advanced architectural plans, including a slant toward light commercial construction. Topics include climate control plans, application of building codes, building materials and finish specifications, cost estimating, and bid specifications. Upon completion, students should be able to apply current techniques in producing advanced-level architectural plans, including residential and light commercial applications.

**DDT 225 STRUCTURAL STEEL DRAFTING (1T, 4E) 3 credits**

**PREREQUISITE: ADM 102 and DDT 111**

This course covers the theory and practical applications necessary to understand the basic design and terminology of structural steel components used in light commercial buildings. Emphasis is placed on structural steel drafting techniques, bolted and welded connections, framing plans, sections, fabrication and connection details, and bills of material. Upon completion, students should be able to produce engineering and shop drawings incorporating standard shapes, sizes, and details using the A.I.S.C. Manual and incorporating safety practices.

**DDT 233 3D MODELING (2T, 3M) 3 credits**

**PREREQUISITE: DDT 111**

This course provides instruction in 3D capabilities of CAD software. Emphasis is placed on 3D wire-frame, surface and solids modeling along with the development of 2D detail drawings from 3D models. Upon completion, students should be able to generate 3D surface and solid models and 2D orthographic production drawings from

created solid models.

**DDT 234 3D GRAPHICS AND ANIMATION (2T, 3M) 3 credits**  
**PREREQUISITE: ADM 108**

This course is designed to challenge the imagination of the student in 3-dimensional problem solving environment. The student will be given a basic introduction to the concepts of 3D design and animation, then apply those concepts to a design project. Upon completion, students should be able to create and animate objects in a 3-dimensional environment.

**DDT 235 SPECIALIZED CAD (1T, 4E) 3 credits**  
**PREREQUISITE: Permission of Instructor**

This course allows the student to plan, execute, and present results of individual projects in specialized CAD topics. Emphasis is placed on enhancing skill attainment in specialized CAD skill sets. The student will be able to demonstrate and apply competencies identified by the instructor.

**DDT 244 ADVANCED 3D MODELING (1T, 4E) 3 credits**  
**PREREQUISITES: ADM 208**

This course is designed to challenge the imagination of the student in a 3-dimensional problem-solving environment. The student will develop to scale computer generated parts in the 3D computer environment. They will apply modeling concepts as Constraints, Photorealistic rendering, motion activated views, introduction to 3D part libraries, add-in software components, plastic model technology and simulations. They will be introduced to the concepts of 3D design and animation, then apply those concepts to a design project. Upon completion, students should be able to create parts in 3D models, produce working drawings and understand basic simulations. Students will also print files to ".stl" format and create parts on a Direct Digital Manufacturing system or prototype.

**DDT 260 PORTFOLIO (1T, 4E) 3 credits**  
**PREREQUISITE: Permission of Instructor**

This course includes the preparation of technical and/or architectural drawings for a portfolio presentation and a resume for portfolio presentation. Hard copy as well as electronic drawings will be discussed, finalized and developed for presentation. Topics include production of a resume and portfolio for presentation during the last semester of coursework. Upon completion, students should be able to prepare and produce a resume and portfolio for presentation in both hard copy as well as electronic copy. **This course should be taken in the student's last two (2) semester in design drafting.**

**ECONOMICS (ECO)**

**ECO 231 PRINCIPLES OF MACROECONOMICS (3T) 3 credits**

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.

**ECO 232 PRINCIPLES OF MICROECONOMICS (3T) 3 credits**  
**PREREQUISITE: ECO 231**

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.

**ENGINEERING (EGR)**

**EGR 100 ENGINEERING ORIENTATION (1T) 1 credit**

This course is designed to make beginning engineering students aware of the many facets of engineering, of their relation to society, and of the objectives of the engineering curriculum. It is designed to stimulate interest in engineering and student-instructor dialogue.

**EGR 101 ENGINEERING FOUNDATIONS (2T, 2E) 3 credits**  
**COREQUISITE: MTH 113 or MTH 115**

This course introduces students to engineering as a profession, basic engineering skills, and the design process. The course includes components to develop teaming and oral and written communication skills. The course also provides an introduction to computer tools used by engineers (e.g., spreadsheet, word processing, presentation software, Internet).

**EGR 125 MODERN GRAPHICS FOR ENGINEERS (1T, 4E) 3 credits**

This course provides an introduction to manual and computer-assisted techniques of graphic communication employed by professional engineers. Topics include lettering; instrumental and computer-aided drafting; technical sketching; orthographic projection; pictorial, sectional, and auxiliary views; and dimensioning.

**EGR 156 COMPUTER METHODS FOR ENGINEERS (3T) 3 credits**  
**PREREQUISITE: MTH 125**

This course consists of engineering applications using the FORTRAN IV computer programming language.

**EGR 157 COMPUTER METHODS FOR ENGINEERS USING MATLAB (2T, 2E) 3 credits**  
**PREREQUISITE: MTH 125**

This course introduces students to the concepts and practices involved in using high-level computer environments to solve engineering problems. Programming environments such as MATLAB will be used.



## Course Descriptions

**EGR 220 ENGINEERING MECHANICS-STATICS (3T) 3 credits**  
**COREQUISITE: MTH 227**  
**PREREQUISITE: PHY 213**  
 This course includes vector algebra, force and moment systems, equilibrium of force systems, trusses, friction and property of surfaces.

**EGR 236 ENGINEERING MECHANICS-DYNAMICS (3T) 3 credits**  
**PREREQUISITE: EGR 220**  
 This course includes kinematics of particles, plane kinematics of rigid bodies, kinetics of particles and rigid bodies by Newton's Laws; principles of work-energy and impulse-momentum.

**EGR 258 ELECTRIC CIRCUITS (3T) 3 credits**  
**PREREQUISITE: MTH 227 and PHY 214**  
 This course is an introduction to electrical circuit theory, voltage-current relationships in linear circuit elements. Kirchoff's laws, with applications to simple networks, and loop and node equations. Complex power, power factor correction, and network analysis techniques.

**EGR 260 MECHANICS OF MATERIALS (3T) 3 credits**  
**PREREQUISITE: EGR 220**  
 This course includes the study of the variation of stress and strain at a point; Mohr's circle, strain gage rosettes; stresses and strains resulting from axial and torsional loads, shear and moment in beams; beam stresses; beam deflection; combined stresses.

**EGR 276 THERMODYNAMICS (3T) 3 credits**  
**PREREQUISITE: MTH 126, PHY 214, EGR 156**  
 This course includes the study of the basic laws of thermodynamics; unsteady and steady states; properties of matter; processes of fluids; first and second laws; availability of energy; irreversibility.

### ELECTRICAL TECHNOLOGY (ELT)

**ELT 108 DC FUNDAMENTALS (1T, 4E) 3 credits**  
**PREREQUISITE: MTH 092 OR MTH 098**  
**COREQUISITE: ELT 109**  
 This course provides a study of atomic theory, direct current (DC), properties of conductors and insulators, direct current 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 circuits variables and to use basic electronic test equipment.

**ELT 109 AC FUNDAMENTALS (1T, 4E) 3 credits**  
**PREREQUISITE: MTH 092 or MTH 098**  
**COREQUISITE: ELT 108**  
 This course provides a study of the theory of alternating current (AC). Students are prepared to analyze complex AC circuit configurations with resistor, capacitors, and inductors in series and parallel combinations. Upon completion, students should be able to design AC circuits and explain the function of alternating circuits such as RLC, impedance, phase relationships and power factor. This is a CORE course.

**ELT 110 WIRING METHODS (1T, 4E) 3 credits**  
**PREREQUISITE: ELT 108 AND ELT 109**  
 This course is a study of various tasks, wiring methods, materials, and associated NEC (National Electric Code) requirements that students will be required to work with in residential and commercial wiring courses.

**ELT 114 RESIDENTIAL WIRING METHODS (2T, 3M) 3 credits**  
**PREREQUISITE: ELT 110**  
 This course is a study of residential wiring practices and methods, the NEC requirements and residential blueprint interpretations.

**ELT 117 AC/DC MACHINES (1T, 4E) 3 credits**  
**PREREQUISITES: ELT 108 AND ELT 109**  
 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 lab. This is a CORE course.

**ELT 118 COMMERCIAL/INDUSTRIAL WIRING I (1T, 4E) 3 credits**  
**PREREQUISITE: ELT 110**  
 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.

**ELT 209 MOTOR CONTROLS 1 (1T, 5M) 3 credits**  
**PREREQUISITE: ELT 108 AND ELT 109**  
 This course covers the use of motor control symbols, magnetic motor starters, running overload protection, push-button stations, sizing of magnetic motor starters and overload protection, and complex ladder diagrams of motor control circuits. Topics include sizing magnetic starters and overload protection, the use of push-button stations, ladder diagrams, and magnetic motor starters in control of electric motors, wye-delta starting, part start winding, resistor starting and electric starting devices. Upon completion, students should be able to understand the operation of motor starters, overload protection, interpret ladder diagrams using push-button stations and understand complex motor control diagrams.

**ELT 212 MOTOR CONTROLS II (1T, 4E) 3 credits**  
**PREREQUISITE: ELT 209**  
 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.

**ELT 231 INTRODUCTION TO PROGRAMMABLE CONTROLLERS (2T, 3M) 3 credits**  
**PREREQUISITE: ELT 209 or ILT 163**  
 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.

**ELT 232 ADVANCED PROGRAMMABLE CONTROLLERS (2T, 3M) 3 credits**  
**PREREQUISITES: ELT 231**

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.

**ELT 241 NATIONAL ELECTRIC CODE (3T) 3 credits**  
**PREREQUISITE: ELT 108 and ELT 109**

This course introduces students to the National Electric Code. Emphasis is placed on locating and interpreting needed information within the NEC code manual. Upon completion, students should be able to locate code requirements for a specific electrical installation.

**EMERGENCY MEDICAL SERVICES (EMS)**

**EMS 100 CARDIOPULMONARY RESUSCITATION I (1T) 1 credit**  
**PREREQUISITE: As required by program.**

This course provides students with concepts as related to areas of basic life support to include coronary artery disease, prudent heart living, symptoms of heart attack, adult one-and-two rescuer CPR, first aid for choking, pediatric basic life support, airway adjuncts, EMS system entry access, automated external defibrillation (AED), and special situations for CPR. Upon course completion, students should be able to identify situations requiring action related to heart or breathing conditions and effectively implement appropriate management for each condition. Students successfully completing this course will receive appropriate documentation of course completion.

**EMS 103 FIRST AID (1T) 1 credit**  
**PREREQUISITE: Current training in CPR and/or as required by program.**

This course introduces students to initial first aid care. Topics include scene safety, universal precautions, activation of the EMS system, assessment, airway/breathing/circulation, shock/injuries/bleeding, medical emergencies, and altered level of consciousness. Upon course completion, students should have knowledge to manage various emergencies requiring first aid techniques.

**EMS 106 MEDICAL TERMINOLOGY FOR HEALTH PROFESSIONS (2T) 2 credits**  
**PREREQUISITE: As required by program.**

This course provides students with a survey of words, terms, and descriptions commonly used in health related professions. The course includes spelling, pronunciation, and meaning of prefixes, suffixes, roots, and terms. Students may have the opportunity to utilize computer assisted instruction for learning various medical terms.

**EMS 107 EMERGENCY VEHICLE OPERATOR AMBULANCE (1T) 1 credit**  
**PREREQUISITE: Must present a valid driver's license as required by program.**

The Emergency Vehicle Operator Course - Ambulance provides the student with training as contained in the current National Standard Training Curriculum (NSTC) for the Emergency Vehicle Operator Course (EVOC) Ambulance. The course provides the knowledge and skill practice necessary for individuals to learn how to safely operate all types of ambulances. Topics include introduction to the NSTC for ambulance operators; legal aspects of ambulance operation; communication and reporting; roles and responsibilities; ambulance types and operation; ambulance inspection, maintenance, and repair; navigation and route planning; basic maneuvers and normal operating situations; operations in emergency mode and unusual situations, special considerations in safety; and the run. Completion of specific student competencies, utilizing NSTC guidelines, are required for successful completion of this course. NOTE: To qualify for licensure status as an ambulance driver in the State of Alabama, students must successfully complete this course and meet additional requirements as required by the Alabama Department of Public Health.

**EMS 118 EMERGENCY MEDICAL TECHNICIAN (6T, 3L) 9 credits**  
This course is required to apply for certification as an Emergency Medical Technician. This course provides students with insights into the theory and application of concepts related to the profession of emergency medical services. Specific topics include: EMS preparatory, airway maintenance, patient assessment, management of trauma patients, management of medical patients, treating infants and children, and various EMS operations. This course is based on the NHTSA National Emergency Medical Services Education Standards.

**EMS 119 EMERGENCY MEDICAL TECHNICIAN CLINICAL (1C) 1 credit**  
This course is required to apply for certification as an EMT. This course provides students with clinical education experiences to enhance knowledge and skills learned in the EMS 118, Emergency Medical Technician Theory and Lab. This course helps students prepare for the National Registry Exam.

**EMS 150 24 HOUR EMT REFRESHER (2T) 2 credits**  
This course provides students with theory in review of the current National Standard Training Curriculum (NSTC) for the EMT. It also serves as a transition or bridge course when a new national curriculum is adopted. This course contains specific content areas as defined by the NHTSA. Students are required to complete specific competencies, as outlined by the NHTSA, for successful course completion.

## Course Descriptions

### EMS 155 ADVANCED EMERGENCY MEDICAL

TECHNICIAN (5T, 3L)

8 credits

**PREREQUISITE:** EMS 118 and EMS 119

**COREQUISITE:** EMS 156

This course is required to apply for certification as an Advanced Emergency Medical Technician (AEMT). This course introduces the theory and application of concepts related to the profession of the AEMT. The primary focus of the AEMT is to provide basic and limited advanced emergency medical care and transportation for critical and emergent patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide patient care and transportation. Topics include: extending the knowledge of the EMT to a more complex breadth and depth, intravenous access and fluid therapy, medication administration, blind insertion airway devices, as well as the advanced assessment and management of various medical illnesses and traumatic injuries. This course is based on the NHTSA National Emergency Medical Services Education Standards. Requires licensure or eligibility for licensure at the EMT level and EMS 156 must be taken as a co-requisite.

### EMS 156 ADVANCED EMERGENCY MEDICAL

TECHNICIAN CLINICAL (2C)

2 credits

**PREREQUISITES:** EMS 118 and EMS 119

**COREQUISITE:** EMS 155

This course is required to apply for certification as an Advanced Emergency Medical Technician (AEMT). This course provides students with clinical education experiences to enhance knowledge and skills learned in EMS 155. This course helps prepare students for the National Registry AEMT exam. The student will have the opportunity to use the basic and advanced skills of the AEMT in the clinical and field settings under the direct supervision of licensed healthcare professionals. Requires licensure or eligibility for licensure at the EMT level and EMS 155 must be taken as a co-requisite.

### EMS 240 PARAMEDIC OPERATIONS (1T, 1L)

2 credits

**PREREQUISITE:** EMS 189 or BIO 201

**COREQUISITES:** EMS 241, EMS 242, EMS 243 and EMS 244

This course focuses on the operational knowledge and skills needed for safe and effective patient care within the paramedic's scope of practice. Content areas include: research, paramedic roles and responsibilities, well-being of the paramedic, illness and injury prevention, medical-legal-ethical issues, therapeutic communications, medical terminology, life span development, ambulance operations, medical incident command, rescue awareness and operations, hazardous materials incidents, crime scene awareness, and Alabama EMS laws and rules.

### EMS 241 PARAMEDIC CARDIOLOGY (2T, 1L)

3 credits

**PREREQUISITES:** EMS 189 or BIO 201

**COREQUISITES:** EMS 240, EMS 242, EMS 243 and EMS 244

This course introduces the cardiovascular system, cardiovascular electrophysiology, and electrocardiographic monitoring. This course further relates pathophysiology and assessment findings to the formulation of field impressions and implementation of treatment plans for specific cardio-

vascular conditions. Content areas include: cardiovascular anatomy and physiology, cardiovascular electrophysiology, electrocardiographic monitoring, rhythm analysis, and pre-hospital 12-lead electrocardiogram monitoring and interpretation, assessment of the cardiovascular patient, pathophysiology of cardiovascular disease and techniques of management including appropriate pharmacologic agents and electrical therapy.

### EMS 242 PARAMEDIC PATIENT ASSESSMENT (2T, 1L)

3 credits

**PREREQUISITES:** EMS 189 or BIO 201

**COREQUISITES:** EMS 240, EMS 241, EMS 243 and EMS 244

This course provides the knowledge and skills needed to perform a comprehensive patient assessment, make initial management decisions, and to communicate assessment findings and patient care verbally and in writing. Content areas include: airway management, history taking, and techniques of the physical examination, patient assessment, clinical decision making, communications, documentation and assessment based management.

### EMS 243 PARAMEDIC PHARMACOLOGY (1L)

1 credit

**PREREQUISITES:** EMS 189 or BIO 201

**COREQUISITES:** EMS 240, EMS 241, EMS 242 and EMS 244

This course introduces basic pharmacological agents and concepts with an emphasis on drug classifications and the knowledge and skills required of a paramedic for safe, effective medication administration. Content areas include: general principles of pharmacology and pharmacologic pathophysiology; venous and intraosseous access techniques, the metric and apothecary system; computation of dosage and solution problems, administration of pharmacologic agents; pharmacokinetics and pharmacodynamics, and nasogastric tube placement.

### EMS 244 PARAMEDIC CLINICAL I (1C)

1 credit

**PREREQUISITES:** EMS 189 or BIO 201

**COREQUISITES:** EMS 240, EMS 241, EMS 242 and EMS 243

This course is directed toward the application of knowledge and skills developed in didactic and skills laboratory experiences to the clinical setting. Theory and skills are applied to a variety of patient situations in the clinical setting, with a focus on patient assessment and management, advanced airway management, electro-therapy, I.V./I.O. initiation and medication administration.

### EMS 245 PARAMEDIC MEDICAL EMERGENCIES (2T, 1L)

3 credits

**PREREQUISITES:** EMS 240, EMS 241, EMS 243 and EMS 244

**COREQUISITES:** EMS 246, EMS 247 and EMS 248

This course relates pathophysiology and assessment findings to the formulation of field impressions and implementation treatment plans for specific medical conditions. Content areas include: pulmonology, neurology, gastroenterology, renal/urology, toxicology, hematology, environmental conditions, infectious and communicable diseases, abuse and assault, patients with special challenges, and acute interventions for the chronic care patient.

**EMS 246 PARAMEDIC TRAUMA MANAGEMENT (2T, 1L) 3 credits**  
**PREREQUISITES:** EMS 240, EMS 241, EMS 243 and EMS 244

**COREQUISITES:** EMS 245, EMS 247 and EMS 248

This course relates pathophysiology and assessment findings to the formulation of field impressions and implementation of treatment plans for trauma patients. Content areas include the pathophysiology, assessment, and management of trauma as related to: trauma systems; mechanisms of injury; hemorrhage and shock; soft tissue injuries; burns; and head, facial, spinal, thoracic, abdominal, and musculoskeletal trauma.

**EMS 247 PARAMEDIC SPECIAL POPULATIONS (1T, 1L) 2 credits**  
**PREREQUISITES:** EMS 240, EMS 241, EMS 242, EMS 243, EMS 244

**COREQUISITE:** EMS 245, EMS 246 and EMS 248

This course relates pathophysiology and assessment findings to the formulation of field impressions and implementation of treatment plans for specific medical conditions. Content areas include: endocrinology, allergies and anaphylaxis, behavioral/psychiatric conditions, gynecology, obstetrics, neonatology, pediatrics, and geriatrics. In the clinical setting, theory and skills are applied to a variety of medical situations across the life span of the patient, with a focus on communication with and management of cardiac, acute care, psychiatric/behavioral, obstetrical, newborn, pediatric, geriatric, and acute interventions for chronic care patients, and patients with special challenges.

**EMS 248 PARAMEDIC CLINICAL II (3C) 3 credits**  
**PREREQUISITES:** EMS 240, EMS 241, EMS 242, EMS 243, EMS 244

**COREQUISITE:** EMS 245, EMS 246 and EMS 247

This course is directed toward the application of knowledge and skills developed in didactic and skills laboratory experiences to the clinical setting. Theory and skills are applied to a variety of medical and trauma situations across the life span of the patient, with a focus on communication with and management of trauma, cardiac, acute care, psychiatric/behavioral, obstetrical, newborn, pediatric, geriatric, and acute interventions for chronic care patients, and patients with special challenges.

**EMS 253 PARAMEDIC TRANSITION TO THE WORKFORCE (1T, 1L) 2 credits**  
**PREREQUISITES:** EMS 240, EMS 241, EMS 242, EMS 243, EMS 244, EMS 245, EMS 246, EMS 247 AND EMS 248

**COREQUISITES:** EMS 254, EMS 255 and EMS 256

This course is designed to meet additional state and local educational requirements for paramedic practice. Content may include: pre-hospital protocols, transfer medications, topics in critical care and transport, systems presentation, and/or national standard certification courses as dictated by local needs or state requirement.

**EMS 254 ADVANCED COMPETENCIES FOR THE PARAMEDIC (1T, 1L) 2 credits**  
**PREREQUISITES:** EMS 240, EMS 241, EMS 242, EMS 243, EMS 244, EMS 245, EMS 246, EMS 247 AND EMS 248

**COREQUISITES:** EMS 253, EMS 255 and EMS 256  
This course is designed to assist students in preparation for the paramedic licensure examination. Emphasis is placed

on validation of knowledge and skills through didactic review, skills lab performance, and/or computer simulation and practice testing. Upon course completion, students should be sufficiently prepared to sit for the paramedic licensure examination.

**EMS 255 PARAMEDIC FIELD PRECEPTORSHIP (5C) 5 credits**  
**PREREQUISITES:** EMS 240, EMS 241, EMS 242, EMS 243, EMS 244, EMS 245, EMS 246, EMS 247 AND EMS 248

**COREQUISITES:** EMS 253, EMS 254 and EMS 256

This course provides field experiences in the pre-hospital setting with advanced life support EMS units. Under the direct supervision of a field preceptor, students synthesize cognitive knowledge and skills developed in the skills laboratory and hospital clinical to provide safe and effective patient care in the pre-hospital environment. Upon course completion, students should have refined and validated their patient care practices to provide safe and effective patient care over a broad spectrum of patient situations and complaints.

**EMS 256 PARAMEDIC TEAM LEADERSHIP (1C) 1 credit**  
**PREREQUISITES:** EMS 240, EMS 241, EMS 242, EMS 243, EMS 244, EMS 245, EMS 246, EMS 247 AND EMS 248

**COREQUISITES:** EMS 253, EMS 254 and EMS 255

This course is designed to evaluate students' ability to integrate didactic, psychomotor skills, clinical, and field internship instruction to serve as a competent entry-level paramedic. This final evaluative (rather than instructional) course focuses on students' professional attributes and integrative competence in clinical decision-making and team leadership in the pre-hospital setting. Upon course completion, students should have demonstrated adequate knowledge and skills, professional attitudes and attributes, clinical decision-making and team leadership abilities to effectively function as a competent entry-level paramedic.

**ENGLISH (ENG)**

**ENG 092 BASIC ENGLISH I (3T) 3 credits**

This course is a review of basic writing skills and basic grammar. Emphasis is placed on the composing process of sentences and paragraphs in standard American written English. Students will demonstrate these skills chiefly through the writing of well-developed, multi-sentence paragraphs.

**ENG 093 BASIC ENGLISH II (3T) 3 credits**  
**PREREQUISITE:** A grade of "C" or better in ENG 092 or satisfactory placement score

This course is a review of composition skills and grammar. Emphasis is placed on coherence and the use of a variety of sentence structures in the composing process and on standard American written English usage. Students will demonstrate these skills chiefly through the writing of paragraph blocks and short essays.

**ENG 101 ENGLISH COMPOSITION I (3T) 3 credits**  
**PREREQUISITE:** Grade of "C" or better in ENG 093 or satisfactory ACT, SAT, or placement score

English Composition I provides instruction and practice in the writing of at least six (6) extended compositions and the



## Course Descriptions

development of 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.

**ENG 102 ENGLISH COMPOSITION II (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 101 or equivalent**

English Composition II provides instruction and practice in the writing of six (6) formal, analytical essays, at least one of which 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.

**ENG 130 TECHNICAL REPORT WRITING (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 101 or equivalent**

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.

**ENG 251 AMERICAN LITERATURE I (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent**

This course is a survey of American literature from its inception to the middle of the 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. Upon completion and in written compositions, students will be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

**ENG 252 AMERICAN LITERATURE II (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent**

This course is a survey of American literature from the middle of the nineteenth 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. Upon completion and in written composition, students will be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

**ENG 261 ENGLISH LITERATURE I (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent**

This course is a survey of English literature from the Anglo-Saxon period to the Romantic Age. 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. Upon completion and in written compositions, students will be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

**ENG 262 ENGLISH LITERATURE II (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent**

This course is a survey of English literature from the Romantic Age 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. Upon completion and in written compositions, students will be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

**ENG 271 WORLD LITERATURE I (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent**

This course is a study of selected literary masterpieces from Homer to the Renaissance. Emphasis is placed on major 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.



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Upon completion and in written compositions, students will be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

**ENG 272 WORLD LITERATURE II (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent**

This course is a study of selected literary masterpieces from the Renaissance to the present. Emphasis is placed on major 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. Upon completion and in written compositions, students will be able to interpret the aesthetic and thematic aspects of these works, relate the works to their historical and literary contexts, and understand relevant criticism and research.

**ENG 297 AFRICAN-AMERICAN LITERATURE (3T) 3 credits**  
**PREREQUISITE: A grade of "C" or better in ENG 102 or equivalent**

This course is a study of literature produced by representative African Americans from the eighteenth century to the present. The course emphasizes the diversity of themes and techniques found in these works and examines the historical, cultural, literary and philosophical forces that shaped these works and that are reflected in them. Students will demonstrate the ability to interpret the literature and to relate the works to their historical and literary contexts.

**ENG 298 SPECIAL TOPICS IN LANGUAGE AND LITERATURE (1-2T) 1-2 credits**

This course, which may be repeated for credit as long as the topics differ, permits a student to study with an instructor a topic in English language or in literature. Emphasis is placed on a narrowly focused topic in which the instructor has special expertise, knowledge, or interest. Students will demonstrate through a research paper and/or a literary critique an understanding of the topic.

**ENG 299 DIRECTED STUDIES IN LANGUAGE AND LITERATURE (1-3T) 1-3 credits**

This course, which may be repeated for credit as long as the topics differ, provides the student the opportunity to study an English language or literary topic chosen by the student in consultation with the instructor. Emphasis is placed on the student's investigating the topic and reporting the results of the investigation. The student will demonstrate knowledge of the topic through either a written or an oral presentation.

**FRENCH (FRN)**

**FRN 101 INTRODUCTORY FRENCH I (4T) 4 credits**  
This course provides an introduction to French. Topics include the development of basic communication skills and the acquisition of basic knowledge of the cultures of French-speaking areas.

**FRN 102 INTRODUCTORY FRENCH II (4T) 4 credits**  
**PREREQUISITE: FRN 101 or equivalent.**

This continuation course includes the development of basic communication skills and the acquisition of basic knowledge of the cultures of French-speaking areas.

**FRN 201 INTERMEDIATE FRENCH I (3T) 3 credits**  
**PREREQUISITE: FRN 102 or equivalent**

This course includes a review and further development of communication skills. Topics include readings of literary, historical, and/or cultural texts.

**FRN 202 INTERMEDIATE FRENCH II (3T) 3 credits**  
**PREREQUISITE: FRN 201 or equivalent**

This continuation course includes a review and further development of communication skills. Topics include readings of literary, historical, and/or cultural texts.

**GEOGRAPHY (GEO)**

**GEO 100 WORLD REGIONAL GEOGRAPHY (3T) 3 credits**

This course surveys various countries and major regions of the world with respect to location and landscape, world importance and political status, population, type of economy, external and internal organization and relations, problems and potentials.

**GEO 101 PRINCIPLES OF PHYSICAL GEOGRAPHY I (3T, 2E) 4 credits**

**This course qualifies as a Natural Science elective.**  
Physical Geography I is the first in a two-part sequence including topics such as weather and climate relative to the earth and relationships between the earth and sun. Laboratory is required.

**GEO 102 PRINCIPLES OF PHYSICAL GEOGRAPHY II (3T, 2E) 4 credits**

**This course qualifies as a Natural Science elective.**  
Physical Geography II is the second in a two-part sequence including topics such as landforms, landscapes, soil and vegetation of the earth. Laboratory is required.

**GEO 200 GEOGRAPHY OF NORTH AMERICA (3T) 3 credits**  
**PREREQUISITE: GEO 100**

This course is a survey of the geography of the United States and Canada with special emphasis on land usage, mineral resources, industrial development, and social and economic adaptation of man and the natural environment.

**GEO 201 PRINCIPLES OF HUMAN GEOGRAPHY (3T) 3 credits**  
**PREREQUISITE: GEO 100**

This course surveys the science of location, with emphasis on human activities as it relates to agricultural and industrial activities, and cities as market and production centers. Emphasis will be placed on human networks.

**GEO 220 PRINCIPLES OF PHYSICAL GEOGRAPHY (3T) 3 credits**

This course is an introduction to natural features of the earth. It concentrates on weather, climate, soil, and vegetation associations, on landforms and on the forces that have been active in shaping the earth's surface.



## Course Descriptions

### GERMAN (GRN)

**GRN 101 INTRODUCTORY GERMAN I (4T) 4 credits**  
This course provides an introduction to German. Topics include the development of basic communication skills and the acquisition of basic knowledge of the cultures of German-speaking areas.

**GRN 102 INTRODUCTORY GERMAN II (4T) 4 credits**  
**PREREQUISITE: GRN 101 or equivalent**  
This continuation course includes the development of basic communication skills and the acquisition of basic knowledge of the cultures of German-speaking areas.

**GRN 201 INTERMEDIATE GERMAN I (3T) 3 credits**  
**PREREQUISITE: GRN 102 or equivalent**  
This course includes a review and further development of communication skills. Topics include readings of literary, historical, and/or cultural texts.

**GRN 202 INTERMEDIATE GERMAN II (3T) 3 credits**  
**PREREQUISITE: GRN 201 or equivalent**  
This continuation course includes a review and further development of communication skills. Topics include readings in literary, historical and/or cultural texts.

### HEALTH EDUCATION (HED)

**HED 221 PERSONAL HEALTH (3T) 3 credits**  
This course introduces principles and practices of personal and family health. It includes human reproduction, growth and development, psychological dimensions of health, human sexuality, nutrition and fitness, aging, death and dying.

**HED 222 COMMUNITY HEALTH (3T) 3 credits**  
This course introduces principles and practices of community health. It includes drug use and abuse, communicable diseases, cardiovascular diseases, cancer, consumer health, health organization, and environmental concerns.



**HED 226 WELLNESS (1-3T) 1-3 credits**  
This course provides health-related education to those individuals seeking advancement in the area of personal wellness. This course has 5 major components: (1) fitness and health assessment, (2) physical work capacity, (3) education, (4) reassessment and (5) retesting.

**HED 230 SAFETY AND FIRST AID (3T) 3 credits**  
HED 230 is divided into two parts. The first part concerns itself with the development of a safety education program within an organization (i.e. school, office, shop, etc.). The second part deals with physical injuries, emergency care, and treatment of those injuries. CPR certification and Standard Red Cross and/or American Heart Association cards are given upon successful completion of American Red Cross requirements.

**HED 231 FIRST AID (3T) 3 credits**  
This course provides instruction to the immediate, temporary care which should be given to the victims of accidents and sudden illnesses. It also includes standard and advanced requirements of the American Red Cross and/or the American Heart Association. CPR training also is included.

**HED 277 CPR RECERTIFICATION (1T) 1 credit**  
In this course, instruction and review of up-dated information concerning cardio-pulmonary resuscitation (CPR) is presented. The student must satisfactorily execute skills needed to meet requirements for recertification in Basic Cardiac Life Support (BCLS) as required by the American Heart Association.

### HISTORY (HIS)

**HIS 121 WORLD HISTORY I (3T) 3 credits**  
**PREREQUISITE: ENG 093 with a "C" or better or satisfactory ACT, SAT, or RDG placement score**  
This course surveys social, intellectual, 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.

**HIS 122 WORLD HISTORY II (3T) 3 credits**  
**PREREQUISITE: ENG 093 with a "C" or better or satisfactory ACT, SAT, or RDG placement score**  
This course is a continuation of HIS 121; it covers world history, both western and non-western, from the early modern era to the present.

**HIS 201 UNITED STATES HISTORY I (3T) 3 credits**  
**PREREQUISITE: ENG 093 with a "C" or better or satisfactory ACT, SAT, or RDG placement score**  
This course surveys United States history during colonial, Revolutionary, early national, and antebellum periods. It concludes with the Civil War.

**HIS 202 UNITED STATES HISTORY II (3T) 3 credits**  
**PREREQUISITE: ENG 093 with a "C" or better or satisfactory ACT, SAT, or RDG placement score**  
This course is a continuation of HIS 201; it surveys United States history from the Reconstruction era to the present.

**HIS 216 HISTORY OF WORLD RELIGIONS (3T) 3 credits**  
This course presents a comparison of the major religions of the world from an historical perspective. Emphasis is placed on the origin, development, and social influence of Christianity, Judaism, Islam, Hinduism, Buddhism, and others.

**HIS 220 CONTEMPORARY STUDIES (3T) 3 credits**  
This course provides a survey of contemporary problems and issues within an historical context. Topics might include nationalism, the rise of Islam as a powerful influence in the post-Cold War environment, environmental issues, and the impact of colonialism on modern, Third World society.

**HIS 256 AFRICAN-AMERICAN HISTORY (3T) 3 credits**  
This course focuses on the experience of African-American people in the Western Hemisphere, particularly in the United States. It surveys the period from the African origins of the slave trade during the period of exploration and colonization to the present. The course presents a comparison between the African experience in the United States and in Mexico and South America.

**HIS 260 ALABAMA HISTORY (3T) 3 credits**  
This course surveys development of the state of Alabama from its prehistoric times to the present. The course presents material on the discovery, exploration, colonization, territorial period, antebellum Alabama, Reconstruction, and modern history.

**HIS 299 DIRECTED STUDIES IN HISTORY (1-3T) 1-3 credits**  
This course affords students opportunities to study selected topics of a historical nature under the direction of an instructor either as part of class or on an individual basis. Internships with historical and preservation organizations, thesis development, and the analysis of secondary monographs are examples of activities for this course. HIS 299 may be repeated for credit.

## HEALTH SCIENCE (HPS)

**HPS 100 SAFETY ISSUES FOR CLINICAL PRACTICE (1T) 1 credit**  
**PREREQUISITE:** ENG 101, SPH 107, PSY 200, MTH 100 or MTH 112 or MTH 116 (FOR NUR STUDENTS ONLY) or Permission of instructor.  
**COREQUISITE:** BIO 201, PSY 210, NUR 110, NUR 131, NUR 241 (FOR NUR STUDENTS ONLY).

This course focuses on microbial and physical safety for clinical practice. Emphasis is placed on guidelines established by the Occupational Safety and Health Administration (OSHA) and the Alabama State Department of Public Health; topics include prevention of transmission of blood-borne and air-borne pathogens as well as prevention of injuries during clinical practice. Upon completion of this course, the student should be able to participate in the clinical setting implementing measures which will prevent injuries and using appropriate universal precautions.

**HPS 105 MEDICAL TERMINOLOGY (2T, 2E) 3 credits**  
**PREREQUISITE:** As required by program.  
This course is an application for the language of medicine. Emphasis is placed on terminology associated with health

care, spelling, pronunciation, and meanings associated with prefixes, suffixes, and roots as they relate to anatomical body systems. Upon completion of this course, the student should be able to correctly abbreviate medical terms and appropriately use medical terminology in verbal and written communication.

**HPS 113 SPANISH FOR HEALTH CARE PROFESSIONALS (3T) 3 credits**

This course provides an introduction to Spanish with a focus on the basic communication skills and vocabulary needed by health professionals when a non-English speaking Hispanic enters a health care setting. Topics include soliciting identification information, history taking, performance of physical exam and giving instructions on general care and follow-up.

**HPS 114 BASIC PHARMACOLOGY (2T) 2 credits**  
**PREREQUISITE:** As required by program.

This course is an introduction to basic pharmacology. Content includes classifications, indications, contraindications, desired effects, and side effects of medications used during diagnostic procedures and the prevention and treatment of common illnesses. Upon completion of the course, the student should be able to relate basic pharmacological concepts to the maintenance of health.

## INDUSTRIAL ELECTRONICS TECHNOLOGY (ILT)

**ILT 104 INDUSTRIAL INSTRUMENTATION (3T) 3 credits**  
**PREREQUISITE:** ILT 114

This course provides a study of instrumentation circuits/systems. Topics include the use of transducers, detectors, actuators, and/or other devices and equipment in industrial applications. Upon completion, the student should be able to apply principles of instrumentation circuits and systems.

**ILT 105 INDUSTRIAL INSTRUMENTATION LAB (4E) 2 credits**  
**COREQUISITE:** ILT 104

A companion to ILT 104, this lab includes the use of transducers, detectors, actuators, and/or other devices and equipment in industrial application. Upon completion of the course, the student should be able to apply principles of instrumentation circuits and systems.

**ILT 114 INSTRUMENTATION OPERATION AND CALIBRATION (2T, 2E) 3 credits**  
**PREREQUISITE:** ELT 108 and ELT 109

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.

**ILT 163 DIGITAL FUNDAMENTALS (1T, 4E) 3 credits**  
**PREREQUISITE:** ELT 108 and ELT 109  
This course provides instruction on basic logic gates, flip-

flops, registers, counters, microprocessor/computer fundamentals, analog to digital conversion, and digital analog conversion. Emphasis is placed on number systems, Boolean algebra, combination logic circuits, sequential logic circuits, and typical microprocessor data manipulation and storage. This course also has an embedded lab with exercises designed to develop skills required by industry. Upon completion, students should be able to analyze digital circuits, draw timing diagrams, determine output of combinational and sequential logic circuits and diagnose and troubleshoot electronic components as well as demonstrate knowledge of microprocessor and computer circuits.

**ILT 214 CONTROL AND TROUBLESHOOTING FLOW, LEVEL, TEMPERATURE, PRESSURE AND LEVEL PROCESSES (2T, 2E) 3 credits**

**PREREQUISITE:** ILT 104 and ILT 105

The student is introduced to analog and digital process control systems. The student is also introduced to process control techniques commonly found in industrial processes used to maintain control of process variables. The student gains knowledge and experience in the design and selection of equipment used in troubleshooting of control loops on actual equipment in the lab.

**ILT 235 PRINCIPLES OF ROBOTIC SYSTEMS (3T) 3 credits**  
**PREREQUISITE:** ELT 108 and ELT 109  
**COREQUISITE:** ILT 236

This course is an overview of basic robotic systems and classifications used in industry. An emphasis is placed on safety elements particular to automation. Topics include the principles and concepts associated with robotic system components. Upon completing this course, students should be able to classify robots and explain the various components of a safe robotic system and how these components interact.

**ILT 236 PRINCIPLES OF ROBOTIC PROGRAMMING (1T, 2E) 2 credits**  
**COREQUISITE:** ILT 235

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 to 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.

### INDUSTRIAL MAINTENANCE TECHNOLOGY (INT)

**INT 117 PRINCIPLES OF INDUSTRIAL MECHANICS (2T, 3M) 3 credits**

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.

**INT 127 PRINCIPLES OF INDUSTRIAL PUMPS AND PIPING SYSTEMS (2T, 2E) 3 credits**

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.

### MACHINE TOOL TECHNOLOGY (MTT)

**MTT 107 MACHINING CALCULATIONS I (3T) 3 credits**

This course introduces basic calculations as they relate to machining occupations. Emphasis is placed on basic calculations and their applications in the machine shop. Upon completion, students should be able to perform basic shop calculations. This course is aligned with NIMS certification standards.

**MTT 108 MACHINIST HANDBOOK FUNCTIONS I (3T) 3 credits**  
**PREREQUISITES:** MTT 107

This course covers the machinist's handbook. Emphasis is placed on formulas, tables, usage and related information. Upon completion, students should be able to use the handbook in the calculation and set-up of machine tools. This course is aligned with NIMS certification standards.

**MTT 109 ORIENTATION TO COMPUTER ASSISTED MANUFACTURING (3T) 3 credits**  
**PREREQUISITE:** MTT 139, MTT 140 and MTT 141

This course serves as an overview and introduction to computer assisted manufacturing (CAM) and prepares students for more advanced CAM courses. Topics covered are basic concepts and terminology, CAM software environments, navigation commands and file management, 2-D geometry, construction modification, and toolpath generation for CAM machining processes.

**MTT 121 BASIC BLUEPRINT READING FOR MACHINISTS (3T) 3 credits**

This course covers the basic principles of blueprint reading and sketching. Topics include multi-view drawings; interpretation of conventional lines; and dimensions, notes, and thread notations. Upon completion, students should be able to interpret basic drawings, visualize parts, and make pictorial sketches. This is a CORE course and is aligned with NIMS certification standards.

**MTT 128 GEOMETRIC DIMENSIONING AND TOLERANCING I (3T) 3 credits**  
**PREREQUISITES:** MTT 121

This course is designed to teach students how to interpret engineering drawings using modern conventions, symbols, datums, datum targets, and projected tolerance zones. Special emphasis is placed upon print reading skills, and industry specifications and standards. This course is aligned with NIMS certification standards.

**MTT 134 LATHE OPERATIONS I (2T, 2E) 3 credits**  
**PREREQUISITE:** MTT 149 and MTT 150  
**COREQUISITE:** MTT 135

This course includes more advanced lathe practices such as set-up procedures, work planning, inner- and outer-diameter operations, and inspection and process improvement. Additional emphasis is placed on safety procedures. Upon completion, students will be able to apply advanced lathe techniques. This course is aligned with NIMS standards.

**MTT 135 LATHE OPERATIONS I LAB (6E) 3 credits**

**PREREQUISITE:** MTT 149 and MTT 150

**COREQUISITE:** MTT 134

This course includes more advanced lathe practices such as set-up procedures, work planning, inner- and outer-diameter operations, and inspection and process improvement. Additional emphasis is placed on safety procedures. Upon completion, students will be able to apply advanced lathe techniques. This course is aligned with NIMS standards.

**MTT 138 MILLING I LAB (9M) 3 credits**

**PREREQUISITE:** MTT 149 and MTT 150 or Permission of instructor

This course provides basic knowledge of milling machines. Emphasis is placed on types of milling machines and their uses, cutting speed, feed calculations, and set-up procedures. Upon completion, students should be able to apply milling techniques to produce machine tool projects. This course is aligned with NIMS certification criteria.

**MTT 139 BASIC COMPUTER NUMERICAL CONTROL (2T, 3M) 3 credits**

**PREREQUISITES:** MTT 138 or Permission of instructor

This course introduces the concepts and capabilities of computer numeric control (CNC) machine tools. Topics include set-up, operation, and basic applications. Upon completion, students should be able to develop a basic CNC program to safely operate a lathe and milling machine. This course is aligned with NIMS certification standards.

**MTT 140 BASIC CNC TURNING I (1T, 6M) 3 credits**

**PREREQUISITES:** MTT 139 or Permission of instructor

**COREQUISITE:** MTT 243

This course covers concepts associated with basic programming of a computer numerical control (CNC) turning center. Topics include basic programming characteristics, motion types, tooling, workholding devices, set-up documentation, tool compensations, and formatting. Upon completion, students should be able to write a basic CNC turning program that will be used to produce a part. This course is aligned with NIMS certification standards.

**MTT 141 BASIC CNC MILLING I (1T, 6M) 3 credits**

**PREREQUISITES:** MTT 138 AND MTT 139 or Permission of instructor

This course covers concepts associated with basic programming of a computer numerical control (CNC) milling center. Topics include basic programming characteristics, motion types, tooling, workholding devices, setup documentation, tool compensations, and formatting. Upon completion, students should be able to write a basic CNC milling program that will be used to produce a part. This course is aligned with NIMS certification standards.

**MTT 144 ELECTRICAL DISCHARGE MACHINING I (1T, 4E) 3 credits**

**PREREQUISITE:** Permission of instructor

This course introduces the student to the concepts of

Electrical Discharge Machining (EDM) and the importance of EDM in an industrial setting. Emphasis is placed on safety procedures and machinist responsibility in the set-up and operation of EDM machines and electrode selection. Upon completion, students should be able to produce basic machine products using both the wire-type and plunge-type EDM machines. This course is aligned with NIMS certification standards.

**MTT 147 INTRODUCTION TO MACHINE SHOP I (2T, 3M) 3 credits**

**COREQUISITE:** MTT 148

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.

**MTT 148 INTRODUCTION TO MACHINE SHOP I LAB (6E) 3 credits**

**COREQUISITE:** MTT 147

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. This course is aligned with NIMS certification standards.

**MTT 149 INTRODUCTION TO MACHINE SHOP II (2T, 3M) 3 credits**

**PREREQUISITE:** MTT 147 AND MTT 148

**COREQUISITE:** MTT 150

This course provides additional instruction and practice in the use of measuring tools, lathes, milling machines, and grinders. Emphasis is placed on set-up and operation of machine tools including the selection of work holding devices, speeds, feeds, cutting tools and coolants. Upon completion, students should be able to perform intermediate level procedures of precision grinding, measuring, layout, drilling, sawing, turning, and milling. This is a CORE course and is aligned with NIMS certification standards.

**MTT 150 INTRODUCTION TO MACHINE SHOP II LAB (6E) 3 credits**

**PREREQUISITE:** MTT 147 AND MTT 148

**COREQUISITE:** MTT 149

This course provides additional instruction and practice in the use of measuring tools, lathes, milling machines, and grinders. Emphasis is placed on set-up and operation of machine tools including the selection of work holding devices, speeds, feeds, cutting tools and coolants. Upon completion, students should be able to perform intermediate level procedures of precision grinding, measuring, layout, drilling, sawing, turning, and milling. This is a CORE course and is aligned with NIMS certification standards.

**MTT 162 PRECISION GRINDING (2T, 2E) 3 credits**

**PREREQUISITE:** MTT 138

This course includes more advanced precision grinder practices such as set-up procedures, work planning, surface grinding, cylindrical grinding, tool and cutter grinding, and inspection and process improvement. Additional emphasis is placed on safety procedures. Upon completion, students



## Course Descriptions

will be able to apply advanced precision grinding techniques. This course is aligned with NIMS standards.

**MTT 163 PRECISION GRINDING LAB (6E) 3 credits**  
**COREQUISITE: MTT 162**

This course provides practical application of the concepts and principles of precision grinding learned in MTT 161. Topics include set-up procedures, work planning, surface grinding, cylindrical grinding, tool and cutter grinding, and inspection and process improvement. Additional emphasis is placed on safety procedures. Upon completion, students will be able to apply advanced precision grinding techniques. This course is aligned with NIMS standards.

**MTT 212 ADVANCED COMPUTER NUMERICAL CONTROL TURNING (1T, 6M) 3 credits**  
**PREREQUISITE: MTT 139, MTT 140, MTT 243 or Permission of instructor**

This course details the use of canned cycles and subprograms in computer numerical control (CNC) turning programs. Upon completing this course, the student should be able to write CNC turning programs using canned cycles and subprograms.

**MTT 213 ADVANCED COMPUTER NUMERICAL CONTROL MILLING (1T, 6M) 3 credits**  
**PREREQUISITE: MTT 139, MTT 141, MTT 241 or Permission of instructor**

This course details the use of canned cycles and subprograms in computer numerical control (CNC) milling programs. Upon completing this course, the student should be able to write CNC milling programs using canned cycles and subprograms.

**MTT 219 COMPUTER NUMERICAL CONTROL GRAPHICS: TURNING (1T, 6M) 3 credits**  
**PREREQUISITES: MTT 140 or Permission of Instructor**

This course covers techniques involved in writing a program for a multi-axis computerized numeric control (CNC) turning machine using computer assisted manufacturing (CAM) software. In addition, CNC turning machine set-up, programming, and operation are detailed. Upon completion, the student should be able to set-up, program, and operate a 3-axis CNC turning machine to produce a 2-axis part using CAM software. This course is aligned with NIMS certification standards.

**MTT 220 COMPUTER NUMERICAL CONTROL GRAPHICS: MILLING (1T, 6M) 3 credits**  
**PREREQUISITES: MTT 140 or Permission of Instructor**

This course covers techniques involved in writing a program for a multi-axis computerized numeric control (CNC) milling machine using computer assisted manufacturing (CAM) software. In addition, CNC milling machine set-up, programming, and operation are detailed. Upon completion, the student should be able to set-up, program, and operate a 3-axis CNC milling machine to produce a 2-axis part using CAM software. This course is aligned with NIMS certification standards.

**MTT 241 CNC MILLING LAB I (6E) 3 credits**  
**PREREQUISITE: MTT 138 and MTT 139 or Permission of instructor**  
**COREQUISITE: MTT 141**

This course covers basic (3-axis) computer numeric control (CNC) milling machine setup and operating procedures. Upon completion, the student should be able to load a CNC program and set-up and operate a 3-axis CNC milling machine to produce a specified part. Related safety, inspection, and process adjustment are also covered.

**MTT 242 CNC MILLING LAB II (6E) 3 credits**  
**PREREQUISITE: MTT 139, MTT 141 and MTT 241 or Permission of instructor**  
**COREQUISITES: MTT 213**

This course covers advanced (including 4-axis) computer numeric control (CNC) milling machine set-up and operating procedures. Upon completion, the student should be able to load a CNC program and set-up and operate a CNC milling machine (including 4-axis) to produce a specified part. Related safety and inspection and process adjustment are also covered.

**MTT 243 CNC TURNING LAB I (6E) 3 credits**  
**PREREQUISITE: MTT 139 or Permission of instructor**  
**COREQUISITE: MTT 140**

This course covers basic computer numeric control (CNC) turning machine set-up and operating procedures (inner diameter and outer diameter). Upon completion, the student should be able to load a CNC program and set-up and operate a CNC turning machine to produce a simple part. Related safety and inspection and process adjustment are also covered.

**MTT 244 CNC TURNING LAB II (6E) 3 credits**  
**COREQUISITE: MTT 212 or Permission of instructor**

This course covers advanced computer numeric control (CNC) turning machine set-up and operating procedures. Upon completion, the student should be able to load a CNC program and set-up and operate a CNC turning machine to produce a specified part. Related safety and inspection and process adjustment are also covered.

**MTT 281 SPECIAL TOPICS IN MACHINE TOOL TECHNOLOGY (1T, 6M) 3 credits**  
**Permission of instructor**

This course is a guided study of special projects in machine tool technology. Emphasis is placed on student needs. Upon completion, students should be able to demonstrate skills developed to meet specific needs.

**MTT 282 SPECIAL TOPICS IN MACHINE TOOL TECHNOLOGY (1T, 6M) 3 credits**  
**PREREQUISITE: Permission of instructor**

This course is a guided study of special projects in machine tool technology. Emphasis is placed on student needs. Upon completion, students should be able to demonstrate skills developed to meet specific needs.



## MASS COMMUNICATIONS (MCM)

### **MCM 100 INTRO TO MASS COMMUNICATIONS (3T) 3 credits**

This course provides the student with general study of mass communication and journalism. The course includes theory, development, regulation, operation, and effects upon society.

### **MCM 130 NEWS REPORTING (3E) 3 credits**

**PREREQUISITE:** Typing ability

This course includes instruction and practice in newsgathering and news writing techniques including methodology, observation, interviews, and use of sources.

### **MCM 250 MASS COMMUNICATIONS PRACTICUM (3T) 3 credits**

This course provides practical experience in media through supervised part or full-time employment with a newspaper, radio or television station, or public relations/advertising agency.

## MATHEMATICS (MTH)

**MATHEMATICS COURSE NUMBERS DO NOT NECESSARILY REFLECT THE DIFFICULTY OF THE COURSE.**

### **MTH 090 BASIC MATHEMATICS (3T) 3 credits**

**PREREQUISITE:** None

This is a developmental course reviewing arithmetical principles and computations designed to help the student's mathematical proficiency for selected curriculum entrance.

### **MTH 098 ELEMENTARY ALGEBRA (3T) 3 credits**

**PREREQUISITE:** A grade of "C" or better in MTH 090 (Basic Mathematics) or appropriate mathematics placement score

This course is a review of the fundamental arithmetic and algebra operations. The topics include the numbers of ordinary arithmetic and their properties; integers and rational numbers; the solving of equations; polynomials and factoring; and an introduction to systems of equations and graphs.

### **MTH 100 INTERMEDIATE COLLEGE ALGEBRA (3T) 3 credits**

**PREREQUISITE:** A grade of "C" or better MTH 098 or appropriate mathematics placement score

This course provides a study of algebraic techniques such as linear equations and inequalities, quadratic equations, systems of equations, and operations with exponents and radicals. Functions and relations are introduced and graphed with special emphasis on linear and quadratic functions. This course does not apply toward the general core requirement for mathematics.

### **MTH 103 INTRODUCTION TO TECHNICAL MATHEMATICS (3T) 3 credits**

**PREREQUISITE:** A grade of "C" or better in MTH 098 or appropriate mathematics placement score

This course is designed for the student in technology needing simple arithmetic, algebraic, and right triangle trigonometric skills.

### **MTH 110 FINITE MATHEMATICS (3T) 3 credits**

**PREREQUISITE:** A minimum prerequisite of high school Algebra I, Geometry, and Algebra II with an appropriate mathematics placement score. An alternative to this is that the student should successfully pass with a "C" or higher (S if taken as pass/fail) MTH 100 - Intermediate College Algebra

This course is intended to give an overview of topics in finite mathematics together with their applications, and is taken primarily by students who are not majoring in science, engineering, commerce or mathematics (i.e., students who are not required to take Calculus). This course will draw on and significantly enhance the student's arithmetic and algebraic skills. The course includes sets, counting, permutations, combinations, basic probability (including Bayes' Theorem), and introduction to statistics (including work with Binomial Distributions and Normal Distributions), matrices and their applications to Markov chains and decision theory. Additional topics may include symbolic logic, linear models, linear programming, the simplex method and applications.

### **MTH 112 PRECALCULUS ALGEBRA (3T) 3 credits**

**PREREQUISITE:** A minimum prerequisite of high school Algebra I, Geometry, and Algebra II with an appropriate mathematics placement score. An alternative to this is that the student should successfully pass with a "C" or higher (S if taken as pass/fail) MTH 100- Intermediate College Algebra.

This course emphasizes the algebra of functions—including polynomial, rational, exponential, and logarithmic functions. The course also covers systems of equations and inequalities, quadratic inequalities, and the binomial theorem. Additional topics may include matrices, Cramer's Rule, and mathematical induction.

### **MTH 113 PRECALCULUS TRIGONOMETRY (3T) 3 credits**

**PREREQUISITE:** A minimum prerequisite of high school Algebra I, Geometry, and Algebra II with an appropriate mathematics placement score is required. An alternative to this is that the student should successfully pass with a "C" or higher (S if taken as a pass/fail) MTH 112- Precalculus Algebra

This course includes the study of trigonometric (circular functions) and inverse trigonometric functions, and includes extensive work with trigonometric identities and trigonometric equations. The course also covers vectors, complex numbers, DeMoivre's Theorem, and polar coordinates. Additional topics may include conic sections, sequences, and using matrices to solve linear systems.

### **MTH 116 MATHEMATICAL APPLICATIONS (3T) 3 credits**

**PREREQUISITE:** MTH 090 (Basic Mathematics) or appropriate mathematics placement score

This course provides practical applications of mathematics and includes selected topics from consumer math and algebra. Some topics included are integers, percent, interest, ratio and proportion, metric system, probability, linear equations, and problem solving.

### **MTH 120 CALCULUS AND ITS APPLICATIONS (3T) 3 credits**

**PREREQUISITE:** A minimum prerequisite of high school Algebra I, Geometry, and Algebra II with an appropriate

**mathematics placement score is required. An alternative to this is that the student should successfully pass with a "C" or higher MTH 112-Precalculus Algebra.**

This course is intended to give a broad overview of calculus and is taken primarily by students majoring in Commerce and Business Administration. It includes differentiation and integration of algebraic, exponential, and logarithmic functions and applications to business and economics. The course should include functions of several variables, partial derivatives (including applications), Lagrange Multipliers, L'Hopital's Rule, and multiple integration (including applications).

### **MTH 125 CALCULUS I (4T) 4 credits**

**PREREQUISITE: A minimum prerequisite of high school Algebra I, Geometry and Algebra II with an appropriate mathematics placement score is required. An alternative to this is that the student should successfully pass with a "C" or higher MTH 113 (Precalculus Trigonometry) or MTH 115 (Precalculus Algebra & Trigonometry).**

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.

### **MTH 126 CALCULUS II (4T) 4 credits**

**PREREQUISITE: A minimum prerequisite of high school Algebra I, Geometry, and Algebra II with an appropriate mathematics placement score is required. An alternative to this is that the student should successfully pass with a "C" or higher MTH 125 (Calculus I).**

This is the second of three courses in the basic calculus sequence. Topics include vectors in the plane and in space, lines and planes in space, applications of integration (such as volume, arc length, work and average value), techniques of integration, infinite series, polar coordinates, and parametric equations.

### **MTH 227 CALCULUS III (4T) 4 credits**

**PREREQUISITE: A grade of "C" or better in MTH 126 (Calculus II)**  
This is the third of three courses in the basic calculus sequence. Topics include vector functions, functions of two or more variables, partial derivatives (including applications), quadratic surfaces, multiple integration, and vector calculus (including Green's Theorem, Curl and Divergence, surface integrals, and Stokes' Theorem).

### **MTH 231 MATHEMATICS FOR THE ELEMENTARY TEACHER I (3T) 3 credits**

**PREREQUISITE: MTH 090 (Basic Mathematics)**  
This course is designed to provide appropriate insights into mathematics for students majoring in elementary education and to ensure that students going into elementary education are more than proficient at performing basic arithmetic operations. Topics include logic, sets and functions, operations and properties of whole numbers and integers including number theory, and use of manipulatives by teachers to demonstrate abstract concepts and by students

while learning these abstract concepts as emphasized in the class. Upon completion, students are required to demonstrate proficiency in each topic studied as well as to learn teaching techniques that are grade level and subject matter appropriate, and test for mathematical proficiency and the learning of teaching concepts.

### **MTH 232 MATHEMATICS FOR THE ELEMENTARY TEACHER II (3T) 3 credits**

This course is the second of a two-course sequence and is designed to provide appropriate insights into mathematics for students majoring in elementary education and to ensure that students going into elementary education are more than proficient at performing basic arithmetic operations. Topics include numeration skills with fractions, decimals and percentages, elementary concepts of probability and statistics, and analytic geometry concepts associated with linear equations and inequalities. The use of manipulatives and calculators in the teaching and learning process is stressed. Upon completion, students will test for mathematical proficiency and the learning of teaching concepts. Students also will demonstrate an appropriate teaching technique by preparing a lesson and teaching it to the class for their final exam grade.

### **MTH 237 LINEAR ALGEBRA (3T) 3 credits**

**PREREQUISITE: A grade of "C" or better in MTH 126 (Calculus II)**  
This course introduces the basic theory of linear equations and matrices, real vector spaces, bases and dimension, linear transformations and matrices, determinants, eigenvalues and eigenvectors, inner product spaces, and the diagonalization of symmetric matrices. Additional topics may include quadratic forms and the use of matrix methods to solve systems of linear differential equations.

### **MTH 238 APPLIED DIFFERENTIAL EQUATIONS I (3T) 3 credits**

**COREQUISITE: MTH 227 (Calculus III)**  
An introduction to numerical methods, qualitative behavior of first order differential equations, techniques for solving separable and linear equations analytically, and applications to various models (e.g. populations, motion, chemical mixtures, etc.); techniques for solving higher order linear differential equations with constant coefficients (general theory, undetermined coefficients, reduction of order and the method of variation of parameters), with emphasis on interpreting the behavior of solutions, and applications to physical models whose governing equations are of higher order; the Laplace transform as a tool for the solution of initial value problems whose inhomogeneous terms are discontinuous.

### **MTH 265 ELEMENTARY STATISTICS (3T) 3 credits**

**PREREQUISITE: MTH 100 (Intermediate College Algebra) or appropriate mathematics placement score**  
This course provides an introduction to methods of statistics, including the following topics: sampling, frequency distributions, measures of central tendency, graphic representation, reliability, hypothesis testing, confidence intervals, analysis, regression, estimation, and applications. Probability, permutations, combinations, binomial theorem, random variables, and distributions may be included.

**MUSIC (MUL) (MUP) (MUS)**

**MUL 101-02 CLASS PIANO I, II (2E) 1 credit**  
These courses, to be taken in sequence, present fundamentals of keyboard technique for students with little or no previous training. Emphasis is placed on the rudiments of music, basic performance technique and general musicianship. Upon completion of one or a sequence of courses, students should be able to demonstrate a basic proficiency in playing and a knowledge of music fundamentals.

**MUL 111-12 CLASS VOICE I, II (2E) 1 credit**  
These courses must be taken in sequence. Emphasis is placed on fundamentals of correct breathing, tone production, and diction for students with little or no previous voice training. Literature appropriate for class level is studied. Upon completion of one or a sequence of courses, students should be able to demonstrate a basic proficiency in singing and a knowledge of music fundamentals. A minimum grade of "C" is required to progress to next level.

**MUL 161-63 CLASS FRETTED INSTRUMENTS I, II, III (2E) 1 credit**  
These courses must be taken in sequence. These courses include basic techniques, chords, scales, fingering, rhythm, strumming, and playing simple melodies. They are designed 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 playing and a knowledge of music fundamentals.

**MUL 180-81 CHORALE (2-4E) 2 credits**  
**MUL 280-81 PREREQUISITE: Permission of instructor**  
These courses are selected performing ensembles open to all students. Chorale is required for voice majors and minors. Emphasis is placed on rehearsing and performing literature appropriate to the mission and goals of the group. Performances are assigned.

**MUL 184-85 CONNECTION (2-4E) 2 credits**  
**MUL 284-85 PREREQUISITE: Permission of instructor and audition**  
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 ensemble. Performances are assigned.

**MUL 192-93B GUITAR ENSEMBLE (2-4E) 2 credits**  
**MUL 292-93B PREREQUISITE: Permission of instructor**  
This course provides ensemble experience for guitar students in playing standard literature and arrangements and transcriptions for classical technique. Emphasis is placed on rehearsing and performing lit-

erature appropriate to the mission and goals of the group. Performances are assigned. This course is open to all students and is required for guitar majors.

**MUL 196-97 JAZZ BAND (2-4E) 2 credits**  
**MUL 296-97 PREREQUISITE: Permission of instructor**  
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. Performances are assigned.

**MUP 101 PIANO (2-4E) 1-2 credits**  
**102, 201 PREREQUISITE: MUL 101, 102 or Permission of instructor**  
Individual study, minimum grade of "B" is required to progress to next level. 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. At the conclusion of the last semester of study, a sophomore recital is required.

**MUP 111 VOICE (2-4E) 1-2 credits**  
**112, 211 PREREQUISITE: MUL 111**  
Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to the next level.

**MUP 133 GUITAR (2-4E) 1-2 credits**  
**134, 233 PREREQUISITE: MUL 161, 162**  
Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. Minimum grade of "B" is required to progress to the next level.

**MUP 141 FLUTE (2-4E) 1-2 credits**  
**142, 241**  
Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. Minimum grade of "B" is required to progress to the next level.

## Course Descriptions

<b>MUP 143</b> <b>144, 243</b> <b>244</b>	<b>CLARINET (2-4E)</b> Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to the next level.	<b>1-2 credits</b>	<b>MUS 101</b>	<b>MUSIC APPRECIATION (3T)</b> This course is designed for non-music majors and requires no previous musical experience. It is a survey course that incorporates several modes of instruction including lecture, guided listening, and similar experiences involving music. The course will cover a minimum of three (3) stylistic periods, provide a multi-cultural perspective, and include both vocal and instrumental genres. Upon completion, students should be able to demonstrate a knowledge of music fundamentals, the aesthetic/stylistic characteristics of historical periods, and an aural perception of style and structure in music. This course is offered in lecture, hybrid and on-line formats.	<b>3 credits</b>
<b>MUP 145</b> <b>146, 245</b> <b>246</b>	<b>SAXOPHONE (2-4E)</b> Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to the next level.	<b>1-2 credits</b>	<b>MUS 103</b>	<b>SURVEY OF POPULAR MUSIC (1-2T)</b> This course provides a study of the origins, development and existing styles of popular music. Topics include ragtime, jazz, rhythm and blues, rock, country and western, folk and world music. Upon completion, students should be able to demonstrate a knowledge, understanding and an aural perception of the stylistic characteristics of popular music. This course is offered in a hybrid and lecture format.	<b>1-2 credits</b>
<b>MUP 161</b> <b>162, 261</b> <b>262</b>	<b>TRUMPET (2-4E)</b> Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to the next level.	<b>1-2 credits</b>	<b>MUS 110</b>	<b>BASIC MUSICIANSHIP (3T)</b> 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. Required for music majors or acceptable score on placement test (75%).	<b>3 credits</b>
<b>MUP 171</b> <b>172, 271</b> <b>272</b>	<b>TROMBONE (2-4E)</b> Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to the next level.	<b>1-2 credits</b>	<b>MUS 111</b>	<b>MUSIC THEORY I (3T)</b> <b>PREREQUISITE:</b> Minimum grade of "C" in MUS 110 or acceptable score on placement test (75%) <b>COREQUISITE:</b> MUS 113 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. Open lab required. Spring; Decatur campus.	<b>3 credits</b>
<b>MUP 175</b> <b>176, 275</b> <b>276</b>	<b>TUBA (2-4E)</b> Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to the next level.	<b>1-2 credits</b>	<b>MUS 112</b>	<b>MUSIC THEORY II (3T)</b> <b>PREREQUISITE:</b> Minimum grade of "C" in MUS 111 <b>COREQUISITE:</b> MUS 114 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. Open lab required. Fall; Decatur campus.	<b>3 credits</b>
<b>MUP 181</b> <b>182, 281</b> <b>282</b>	<b>PERCUSSION (2-4E)</b> Individual instruction to include the study of standard literature and technique. 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. At the conclusion of the last semester, a sophomore recital is required. A minimum grade of "B" is required to progress to the next level.	<b>1-2 credits</b>			



- MUS 113 MUSIC THEORY LAB I (1E) 1 credit**  
**PREREQUISITE:** MUS 110 or suitable placement score or permission of instructor  
**COREQUISITE:** MUS 111  
 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. Spring; Decatur campus.
- MUS 114 MUSIC THEORY LAB II (1E) 1 credit**  
**PREREQUISITE:** MUS 113  
**COREQUISITE:** MUS 112  
 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 progressions. Fall; Decatur campus.
- MUS 290 INTRODUCTION TO COMMERCIAL MUSIC (2-3T) 2-3 credits**  
 This course provides an introduction to the commercial music industry and the types of careers in commercial music. Topics include music publishing, recording, contracts, agents and managers, copyrights, unions, music companies and dealers. Upon completion, students should be able to demonstrate a basic knowledge and understanding of the different components of the commercial music industry and the various career options.
- MUS 291 MUSICAL ACOUSTICS (2-3T) 2-3 credits**  
**PREREQUISITE:** Permission of instructor  
 This course is designed to acquaint the student with the nature of musical acoustics and the science of sound. Topics include terminology, symbols, the nature and transmission of sound, vibration, frequency, pitch, intervals, harmonies, resonance, consonance and dissonance. Upon completion, students should be able to demonstrate an understanding of the basic skills and concepts through the successful presentation of an individual project in musical acoustics.
- MUS 292 SONG WRITING (3T) 3 credits**  
**PREREQUISITE:** MUS 110  
 This course provides an introduction to song writing and marketing techniques. Topics include lyric writing, song structures, preparing a lead sheet, notation, rhythmic and melodic dictation, key signatures, basic chord structures, recording, basic copyright laws and publishing. Upon completion, students should be able to compose a song, prepare a lead sheet and demo tape, apply for a copyright and market a song.

## MUSIC INDUSTRY COMMUNICATIONS (MIC)

- MIC 100 INTRODUCTION TO MASS COMMUNICATIONS 3 credits**  
 This course provides the student with general study of mass communications and journalism. This course includes theory, development, regulation, operation, and effects upon society. Upon completion of this class, students should be able to decide the field of mass communications on which to focus.
- MIC 153 INTRODUCTION TO RECORDING TECHNOLOGY (3T) 3 credits**  
 This course is designed to acquaint the student with basic recording fundamentals. Emphasis is placed on microphone techniques, recording principals, musician and recording engineers' code. Upon completion, students should be able to do basic analog recordings.
- MIC 201 PUBLISHING FOR THE RECORDING INDUSTRY (3T) 3 credits**  
 This course is an introduction to the operation and functions of publishing in the recording industry.
- MIC 250 MASS COMMUNICATIONS PRACTICUM (3T) 3 credits**  
**PREREQUISITE:** MIC 153 or instructor approval  
 This course provides practical experience in media through supervised part- or full-time employment with a newspaper, radio or television station, recording studio, or public relations/advertising agency. Upon completion, students should be able to receive employment based on demonstration of their skills in their subject area.
- MIC 251 RECORDING STUDIO PRODUCTION (3T) 3 credits**  
**PREREQUISITE:** MIC 153 or instructor approval  
 This course is designed to acquaint the student with the functional roles of the commercial recording studio. Emphasis will be placed on studio production projects, and include a study of contracts, managers, agents, recording rights, copyright laws, unions, publishers, and music companies. Upon completion, students should be able to produce studio quality recordings and have an understanding of the music industry.
- MIC 253 COMPUTER LITERACY FOR THE MUSICIAN I (3T) 3 credits**  
 This course is designed to teach musicians how to use computers for music writing, ear training, theory, and sequencing. Topics include an introduction to MIDI, sequencing, Master Tracks Pro, Studio 3.1 and 4.0, Cakewalk and Musicator. Upon completion, students should have an understanding of MIDI, Charting and Sequencing on the computer.
- MIC 254 COMPUTER LITERACY FOR THE MUSICIAN II (3T) 3 credits**  
**PREREQUISITE:** MIC 253 or instructor approval  
 This course is designed to teach advanced computer sequencing techniques. Emphasis is placed on projects and the use of computer sequencing software and hardware. Students should be able to sequence and perform advanced editing using MIDI.

## Course Descriptions

### MIC 255 DIGITAL RECORDING (3T) 3 credits

#### PREREQUISITE: MIC 253 or instructor approval

This course is designed to teach Digital Recording using hard disk wave recording techniques. Emphasis is placed on projects and the use of Digital Recording software and hardware. Upon completion, students should be able to do recordings on the "Special Audio Engine" and other software with masters of digital quality.

### MIC 293 MUSIC NOTATION (3T) 3 credits

#### PREREQUISITE: MIC 253 or instructor approval

This course is designed to teach students the music program for charting and writing music. Emphasis will be placed on the use of the software program "FINALE". Upon completion, students should be able to chart and write music using industry standards.

## NURSING ASSISTANT (NAS)

### NAS 100 FUNDAMENTALS OF LONG TERM CARE (3T, 3C) 4 credits

This course fulfills the seventy-five (75) hour Omnibus Budget Reconciliation Act (OBRA) requirements for training of long-term care nursing assistants in preparation for certification through competency evaluation. Emphasis is placed on the development of the knowledge, attitudes, and skills required of the long-term care nursing assistant. Upon completion of this course, the student should demonstrate satisfactory performance on written examinations and clinical skills.

## NURSING (NUR)

### NUR 102 FUNDAMENTALS OF NURSING (3T, 6S/3C) 6 credits

#### COREQUISITE: NUR 103 and NUR 104

This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students learn concepts and theories basic to the art and science of nursing. The role of the nurse as a member of the healthcare team is emphasized. Students are introduced to the concepts of client needs, safety, communication, teaching/learning, critical thinking, ethical-legal, cultural diversity, nursing history, and the program's philosophy of nursing. Additionally, this course introduces psychomotor nursing skills needed to assist individuals in meeting basic human needs. Skills necessary for maintaining microbial, physical, and psychological safety are introduced along with skills needed in therapeutic interventions. At the conclusion of this course, students demonstrate competency in performing basic nursing skills for individuals with common health alterations.

### NUR 103 HEALTH ASSESSMENT (3S) 1 credit

#### COREQUISITE: NUR 102 and NUR 104

This course is designed to provide students the opportunity to learn and practice history taking and physical examination skills with individuals of all ages, with emphasis on the adult. The focus is on symptom analysis along with physical, psychosocial, and growth and development assess-

ments. Students will be able to utilize critical thinking skills in identifying health alterations, formulating nursing diagnoses and documenting findings appropriate to nursing.

### NUR 104 INTRODUCTION TO PHARMACOLOGY (3S) 1 credit

COREQUISITE: NUR 102 and NUR 103  
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. This course introduces students to basic principles of pharmacology and the knowledge necessary to safely administer medication. Course content includes legal implications, pharmacokinetics, pharmacodynamics, calculations of drug dosages, medication administration, and an overview of drug classifications. Students will be able to calculate and administer medications.

### NUR 105 ADULT NURSING (5T, 3S/6C) 8 credits

PREREQUISITE: NUR 102, NUR 103 and NUR 104  
COREQUISITE: NUR 106  
This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Emphasis is placed on providing care to individuals undergoing surgery, fluid and electrolyte imbalance, and common alterations in respiratory, musculoskeletal, gastrointestinal, cardiovascular, and endocrine. Nutrition, pharmacology, communication, cultural, and community concepts are integrated.

### NUR 106 MATERNAL AND CHILD NURSING (4T, 3C) 5 credits

PREREQUISITE: NUR 102, NUR 103 and NUR 105  
COREQUISITE: NUR 105  
This course focuses on the role of the nurse in meeting the physiological, psychosocial, cultural and developmental needs of the maternal and child client. Course content includes antepartal, intrapartal, and postpartal care, complications of pregnancy, newborn care, human growth and development, pediatric care, and selected pediatric alterations. Nutrition, pharmacology, cultural diversity, use of technology, communication, anatomy and physiology review, medical terminology, critical thinking, and application of the nursing process are integrated throughout this course. Upon completion of this course, students will be able to provide and manage care for maternal and pediatric clients in a variety of settings.

### NUR 107 ADULT/CHILD NURSING (5T, 9C) 8 credits

PREREQUISITE: NUR 105 and NUR 106  
COREQUISITE: NUR 108 and NUR 109  
This course provides students with opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process in a variety of settings. Emphasis is placed on providing care to individuals experiencing complex alterations in sensory/perceptual, reproductive, endocrine, genitourinary, neurological, immune, cardiovascular, and lower gastrointestinal systems. Additional instruction is provided for care for clients experiencing burns, cancer, and emergent conditions. Nutrition, pharmacology, therapeutic communication, community, cultural diversity, health promotion, error prevention, critical thinking, impacts on maternal and child clients are inte-

grated throughout the course.

**NUR 108 PSYCHOSOCIAL NURSING (2T, 3C) 3 credits**

**PREREQUISITE:** NUR 105 and NUR 106

**COREQUISITE:** NUR 107 and NUR 109

This course is designed to provide an overview of psychosocial adaptation and coping concepts used when caring for clients with acute and chronic alterations in mental health in a variety of settings. Topics include therapeutic communication skills, normal and abnormal behaviors, treatment modalities, and developmental needs. Upon completion of this course, students will demonstrate the ability to assist clients in maintaining psychosocial integrity through the use of the nursing process.

**NUR 109 ROLE TRANSITION FOR THE PRACTICAL NURSE (2T, 3S) 3 credits**

**PREREQUISITE:** NUR 105 and NUR 106

**COREQUISITE:** NUR 107 and NUR 108

This course provides students with opportunities to gain knowledge and skills necessary to transition from student to practicing nurse. Content includes a discussion of current issues in health care, practical nursing leadership and management, professional practice issues, and transition into the workplace. Emphasis is placed on NCLEX-PN test-taking skills, computer-assisted simulations and practice tests, development of a prescriptive plan for remediation, and review of selective content, specific to the practice of practical nursing.

**NUR 111 PARAMEDIC TO AND MOBILITY (8T, 3S, 9C) 12 Credits**  
**PREREQUISITE:** BIO 201, BIO 202, BIO 220, PSY 200, MTH 100 and ENG 101

This course is designed to assist the experienced licensed EMT-P in transition to the role of the associate degree nurse. Emphasis is placed on basic and advanced nursing skills; the nursing process; communication; selected theories needed to develop competencies necessary to meet the needs of Individuals through the lifespan in a safe, legal, and ethical manner; concepts related to psychosocial needs of individuals, and the role of the registered nurse. Upon completion of the course and the exit exam, students will be able to articulate into the ADN Program. Clinicals required in medical/surgical; obstetrics, and pediatrics. (Lab and Clinical required) Fourteen (14) additional hours of nursing credit are awarded following successful completion of NUR 111 and a score of 75 or higher on the comprehensive standardized examination.

**NUR 200 NURSING CAREER MOBILITY ASSESSMENT (3T, 9S) 6 credits**

This course is designed to provide LPN mobility students self-directed opportunities to prepare for placement into the third semester of the ADN program. Emphasis is on assessment and validation of selected theory, process, and skills covered in NUR 102, 103, 104, 105, and 106. Upon successful completion of assessments, students are eligible for entry into NUR 201. Students who successfully complete this course are awarded 15 non-traditional hours at the completion of the LPN mobility curriculum.

**NUR 201 NURSING THROUGH THE LIFESPAN I (3T, 6C) 5 credits**

**PREREQUISITE:** As required by program

This course provides opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in gastrointestinal, reproductive, sensory, and endocrine systems in a variety of settings. Additional instruction is provided for oncology, mental health, teaching/learning concepts, and advanced dosage calculations, nutrition, pharmacology, communication, cultural, and community concepts are integrated.

**NUR 202 NURSING THROUGH THE LIFESPAN II (3T, 9C) 6 credits**  
**PREREQUISITE:** As required by program

This course builds upon previous instruction and provides additional opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in cardiovascular, hematologic, immune, and genitourinary systems in a variety of settings. Additional instruction is provided for psychiatric disorders and high-risk obstetrics. Teaching/learning concepts, advanced dosage calculations, nutrition, pharmacology, communication, cultural, and community concepts are integrated.

**NUR 203 NURSING THROUGH THE LIFESPAN III (4T, 6C) 6 credits**  
**PREREQUISITE:** As required by program

This course builds upon previous instruction and provides additional opportunities to develop competencies necessary to meet the needs of individuals throughout the lifespan in a safe, legal, and ethical manner using the nursing process. Students manage and provide collaborative care to clients who are experiencing selected alterations in cardiovascular, respiratory, and neurological systems in a variety of settings. Additional instruction is provided in care for selected mental health disorders, selected emergencies, multiple organ dysfunction syndrome and related disorders. Teaching/learning concepts, advanced dosage calculations, nutrition, pharmacology, communication, cultural, and community concepts are integrated.

**NUR 204 ROLE TRANSITION FOR THE REGISTERED NURSE (2T, 6C) 4 credits**

**PREREQUISITE:** As required by program

This course provides students with opportunities to gain knowledge and skills necessary to transition from student to registered nurse. Content includes current issues in health care, nursing leadership and management, professional practice issues for registered nurses, and transition into the workplace. Additional instruction is provided for preparing for the NCLEX-RN.

### ORIENTATION (ORI)

#### ORI 101 ORIENTATION TO COLLEGE

(1)

1 credit

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.

### PHYSICAL EDUCATION (PED)

#### PED 100 FUNDAMENTALS OF FITNESS (3T)

3 credits

This lecture course includes the basic principles of physical education and physical fitness. It explores psychological and physiological effects of exercise and physical fitness, including effects on the human skeleton, muscle development, respiration and coordination. It is reviewed as an introduction to such laboratory courses as slimnastics, weight training, and conditioning. This course may also include fitness evaluation, development of individual fitness programs, and participation in fitness activities.

#### PED 101 SLIMNASTICS (Beginning) (2A)

1 credit

This course provides an individualized approach to physical fitness, wellness, and other health-related factors. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness programs. Upon completion, students should be able to set up and implement an individualized physical fitness program.

#### PED 102 SLIMNASTICS (Intermediate) (2A)

1 credit

This course is an intermediate-level class. Topics include specific exercises contributing to fitness and the role exercise plays in developing body systems, nutrition, and weight control. Upon completion, students should be able to implement and evaluate an individualized physical fitness program.

#### PED 103 WEIGHT TRAINING (Beginning) (2A)

1 credit

This course introduces the basics of weight training. Emphasis is placed on developing muscular strength, muscular endurance, and muscle tone. Upon completion, students should be able to establish and implement a personal weight-training program.

#### PED 104 WEIGHT TRAINING (Intermediate) (2A)

1 credit

This course covers advanced levels of weight training. Emphasis is placed on meeting individual training goals and addressing weight training needs and interests. Upon completion, students should be able to establish and implement an individualized advanced weight-training program.

#### PED 105 PERSONAL FITNESS (2A)

1 credit

This course is designed to provide the student with information allowing him/her to participate in a personally developed fitness program. Topics include cardiovascular, strength, muscular endurance, flexibility and body composition. Fitness Activity.

#### PED 106 AEROBICS (2A)

1 credit

This course introduces a program of cardiovascular fitness involving continuous, rhythmic exercise. Emphasis is placed on developing cardiovascular efficiency, strength,

and flexibility and on safety precautions. Upon completion, students should be able to select and implement a rhythmic aerobic exercise program. Rhythmic Activity.

#### PED 107 AEROBICS DANCE (Beginning) (2A)

1 credit

**PREREQUISITE: PED 106 and/or as required by program.**

This course introduces the fundamentals of step and dance aerobics. Emphasis is placed on basic stepping up, basic choreographed dance patterns, cardiovascular fitness, and upper body, floor, and abdominal exercises. Upon completion, students should be able to participate in basic dance aerobics. Rhythmic activity.

#### PED 108 AEROBICS DANCE (INTERMEDIATE) (2A)

1 credit

**PREREQUISITE: PED 107 and/or as required by program.**

This course provides a continuation of step aerobics. Emphasis is placed on a wide variety of choreographed step and dance patterns; cardiovascular fitness; and upper body, abdominal, and floor exercises. Upon completion, students should be able to participate in and design an aerobics routine. Rhythmic activity.

#### PED 109 JOGGING (2A)

1 credit

This course covers the basic concepts involved in safely and effectively improving cardiovascular fitness. Emphasis is placed on walking, jogging, or running as a means of achieving fitness. Upon completion, students should be able to understand and appreciate the benefits derived from these activities. Fitness Activity.

#### PED 118 GENERAL CONDITIONING (Beginning) (2A)

1 credit

This course provides an individualized approach to general conditioning utilizing the five major components. Emphasis is placed on the scientific basis for setting up and engaging in personalized physical fitness and conditioning programs. Upon completion, students should be able to set up and implement an individualized physical fitness and conditioning program. Fitness Activity.

#### PED 119 GENERAL CONDITIONING (Intermediate) (2A)

1 credit

**PREREQUISITE: PED 118 and/or as required by program.**

This course is an intermediate-level fitness and conditioning program class. Topics include specific exercises contributing to fitness and the role exercise plays in developing body systems. Upon completion, students should be able to implement and evaluate an individualized physical fitness and conditioning program.

#### PED 120 TECHNIQUES OF DUAL AND INDIVIDUAL SPORTS (2T)

2 credits

This course introduces the fundamentals of popular dual and individual sports. Emphasis is placed on rules, equipment, and motor skills used in various sports. Upon completion, students should be able to demonstrate knowledge of the sports covered.

#### PED 121 BOWLING (Beginning) (2A)

1 credit

This course introduces the fundamentals of bowling. Emphasis is placed on ball selection, grips, stance, and delivery along with rules and etiquette. Upon completion, students should be able to participate in recreational bowling.



- PED 122 BOWLING (Intermediate) (2A)** **1 credit**  
**PREREQUISITE:** PED 121 or Permission of instructor  
 This course covers more advanced bowling techniques. Emphasis is placed on refining basic skills and performing advanced shots, spins, pace, and strategy. Upon completion, students should be able to participate in competitive bowling. Individual and dual sport activity.
- PED 123 GOLF (Beginning) (2A)** **1 credit**  
 This course emphasizes the fundamentals of golf. Topics include the proper grips, stance, alignment, swings for the short and long game, putting, and the rules and etiquette of golf. Upon completion students should be able to perform the basic golf shots and demonstrate a knowledge of the rules and etiquette of golf. Individual and dual sport activity.
- PED 124 GOLF (Intermediate) (2A)** **1 credit**  
**PREREQUISITE:** PED 123 and/or as required by program.  
 This course covers the more advanced phases of golf. Emphasis is placed on refining the fundamental skills and learning more advanced phases of the game such as a club selection, trouble shots, and course management. Upon completion, students should be able to demonstrate the knowledge and ability to play a recreational round of golf. This is an individual and dual sport activity.
- PED 126 RECREATIONAL GAMES (2A)** **1 credit**  
 This course is designed to give an overview of a variety of recreational games and activities. Emphasis is placed on the skills and rules necessary to participate in a variety of lifetime recreational games. Upon completion, students should be able to demonstrate an awareness of the importance of participating in lifetime recreational activities. Rhythmic activity.
- PED 131 BADMINTON (Beginning) (2A)** **1 credit**  
 This course covers the fundamentals of badminton. Emphasis is placed on the basics of serving, clears, drops, drives, smashes and the rules and strategies of singles and doubles. Upon completion, students should be able to apply these skills in playing situations.
- PED 133 TENNIS (Beginning) (2A)** **1 credit**  
 This course emphasizes the fundamentals of tennis. Topics include basic strokes, rules, etiquette, and court play. Upon completion, students should be able to play recreational tennis.
- PED 134 TENNIS (Intermediate) (2A)** **1 credit**  
**PREREQUISITE:** PED 133 and/or as required by program.  
 This course emphasizes the refinement of playing skills. Topics include the development of fundamentals, learning advanced serves, strokes and pace and strategies in singles and doubles play. Upon completion, students should be able to play competitive tennis.
- PED 155 SELF-DEFENSE (2A)** **1 credit**  
 This course is designed to aid students in developing rudimentary skills in self-defense. Emphasis is placed on stances, blocks, punches, and kicks as well as non-physical means of self-defense. Upon completion, students should be able to demonstrate basic self-defense techniques of a

physical and non-physical nature. Rhythmic Activity.

- PED 160 SOCIAL DANCE (2A)** **1 credit**  
 This course introduces the fundamentals of popular social dance. Emphasis is placed on basic social dance techniques, dances, and a brief history of social dance. Upon completion, students should be able to demonstrate specific dance skills and perform some dances. Rhythmic activity.
- PED 163 SQUARE DANCING (2A)** **1 credit**  
 This course introduces the terminology and skills necessary to perform square dancing. Topics include working from squared sets-squared circles to squared throughs, right and left throughs, and Dixie Chains. Upon completion, students should be able to perform square dance routines and recognize the calls made for all formations. Rhythmic activity.
- PED 171 BASKETBALL (Beginning) (2A)** **1 credit**  
 This course covers the fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules, and basic game strategy. Upon completion, students should be able to participate in recreational basketball.
- PED 172 BASKETBALL (2A)** **1 credit**  
**PREREQUISITE:** PED 171 and/or as required by program.  
 This course covers more advanced basketball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to play basketball at a competitive level.
- PED 176 VOLLEYBALL (Beginning) (2A)** **1 credit**  
 This course covers the fundamentals of volleyball. Emphasis is placed on the basics of serving, passing, setting, spiking, blocking, and the rules and etiquette of volleyball. Upon completion, students should be able to participate in recreational volleyball.
- PED 177 VOLLEYBALL (Intermediate) (2A)** **1 credit**  
**PREREQUISITE:** PED 176 and/or as required by program.  
 This course covers more advanced volleyball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to participate in competitive volleyball.
- PED 181 BASEBALL (Beginning) (2A)** **1 credit**  
 This course covers the fundamentals of baseball. Emphasis is placed on skill development, knowledge of the rules and basic game strategy. Upon completion, students should be able to participate in recreational baseball.
- PED 182 BASEBALL (Intermediate) (2A)** **1 credit**  
 This course covers more advanced baseball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to play baseball at a competitive level.
- PED 186 SOFTBALL (Beginning) (2A)** **1 credit**  
 This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, students should be able to participate in recreational softball. Team

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sport activity.

**PED 187 SOFTBALL (Intermediate) (2A) 1 credit**  
This course presents advanced skills and competitive practice in softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, students should be able to participate in competitive softball.

**PED 188 YOGA (2A) 1 credit**  
This course introduces basic instruction in yoga for beginners. Emphasis is placed on instruction in gentle stretching, breathing practices, progressive deep relaxation, and posture. Upon completion, students should be able to participate in and appreciate the benefits of the activity. Rhythmic activity.

**PED 191 TEAM SPORTS (2A) 1 credit**  
This course covers the basic concepts involved in team sport competition. Emphasis will be placed on refining basic skills, rules and regulations, officiating, and team play. Upon completion, students should be able to participate and implement an intramural program.

**PED 200 FOUNDATIONS OF PHYSICAL EDUCATION (3T) 3 credits**  
In this course, the history, philosophy, and objectives of health, physical education, and recreation are studied with emphasis on the physiological, sociological, and psychological values of physical education. It is required of all physical education majors.

**PED 216 SPORTS OFFICIATING (3T) 3 credits**  
This course surveys the basic rules and mechanics of officiating a variety of sports, including both team and individual sports. In addition to classwork, students will receive at least 3 hours of practical experience in officiating.

**PED 226 HIKING (2A) 1 credit**  
This course provides instruction on how to equip and care for one's self on the trail. Topics include clothing, hygiene, trail ethics, and necessary equipment. Upon completion, students should be able to successfully participate in nature trail hikes. Fitness Activity.

**PED 227 ANGLING (2A) 1 credit**  
This course introduces the sport of angling. Emphasis is placed on fishing with the use of artificial lures. Upon completion, students should be able to cast and retrieve using baitcaster and spinning reels and identify the various types of artificial lures.

**PED 236 CANOEING (2A) 1 credit**  
This course provides basic instruction for the beginning canoeist. Emphasis is placed on safe and correct handling of the canoe and rescue skills. Upon completion, students should be able to demonstrate basic canoeing, safe-handling, and self-rescue skills.

**PED 245 CYCLING (2A) 1 credit**  
This course is designed to promote physical fitness through cycling. Emphasis is placed on selection and maintenance of the bicycle gear shifting, pedaling tech-

niques, safety procedures, and conditioning exercises necessary for cycling. Upon completion, students should be able to demonstrate safe handling of a bicycle for recreational use. Fitness Activity.

**PED 246 CAMPING (2A) 1 credit**  
This course is designed to acquaint the beginning camper with outdoor skills. Topics include camping techniques such as cooking and preserving food, safety, and setting up camp. Upon completion, students should be able to set up camp sites in field experiences using proper procedures.

**PED 251 VARSITY BASKETBALL (2A) 1 credit**  
**PREREQUISITE: Permission of instructor**  
This course covers advanced fundamentals of basketball. Emphasis is placed on skill development, knowledge of the rules and basic game strategy. Upon completion, students should be able to participate in competitive basketball.

**PED 252 VARSITY BASEBALL (2A) 1 credit**  
**PREREQUISITE: Permission of instructor**  
This course covers advanced baseball techniques. Emphasis is placed on refining skills and developing more advanced strategies and techniques. Upon completion, students should be able to play baseball at a competitive level.

**PED 254 VARSITY SOFTBALL (2A) 1 credit**  
**PREREQUISITE: Permission of instructor**  
This course introduces the fundamental skills and rules of softball. Emphasis is placed on proper techniques and strategies for playing softball. Upon completion, students should be able to play competitive softball.

**PED 257 VARSITY CHEERLEADING (2A) 1 credit**  
**PREREQUISITE: Permission of instructor**  
This course covers advanced co-ed cheerleading techniques. Emphasis is placed on refining skills and improving all areas related to co-ed cheerleading including: knowledge of safety techniques, partner stunts, tumbling, basket tosses, pyramids, motions, physical conditioning, and mental preparation. Upon completion of this program, Students should be able to participate in a competitive program at the university level.

## PHILOSOPHY (PHL)

**PHL 106 INTRODUCTION TO PHILOSOPHY (3T) 3 credits**  
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 ethical decision making. The student should have an understanding of major philosophical ideas in an historical survey from the early Greeks to the modern era.

**PHL 206 ETHICS AND SOCIETY (3T) 3 credits**  
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.

**PHYSICAL SCIENCE (PHS)**

**PHS 111 PHYSICAL SCIENCE (3T, 2E) 4 credits**  
This course provides an introduction to the basic principles of geology, oceanography, meteorology, and astronomy for students who do not intend to major in science or engineering. Laboratory is required.

**PHS 112 PHYSICAL SCIENCE II (3T, 2E) 4 credits**  
**PREREQUISITE: MTH 098 Elementary Algebra**  
This course provides an introduction to the principles of chemistry and physics for students who do not intend to major in science or engineering. Laboratory is required.

**PHS 120 ENVIRONMENTAL SCIENCE (3T, 2E) 4 credits**  
PHS 120 is an interdisciplinary course intended for non-science majors who desire an introduction to environmental science. The environment will be studied with an emphasis on such topics as air, soil, water, wildlife, forestry, and solid waste pollution. Laboratory will include both field studies and experimentation.

**PHS 230 INTRODUCTION TO METEOROLOGY (3T, 2E) 4 credits**  
This course is an introductory survey of meteorology emphasizing the hydrologic cycle, cloud formation, weather maps, forecasting, and wind systems. Local weather systems will be given detailed study. Laboratory is required.

**PHYSICAL THERAPIST ASSISTANT (PTA)**

**PTA 200 PHYSICAL THERAPY ISSUES AND TRENDS (2T) 2 credits**  
**PREREQUISITE: Admission to the PTA Program**  
This is an introductory course to the trends and issues in physical therapy. Emphasis is placed on areas such as history, practice issues, psychosocial aspects of illness and cultural diversity. Upon completion, the student should be able to discuss trends and issues relevant to physical therapy.

**PTA 201 PHYSICAL THERAPY ASSISTANT SEMINAR (2T) 2 credits**  
This course is a continuing study of issues and trends in physical therapy practice. Emphasis is placed on issues such as licensure, job skills, board exam review, practitioner roles, legal and ethical issues. Upon completion, the student should have acquired necessary skills for transition from student to practitioner.

**PTA 202 PTA COMMUNICATION SKILLS (2T) 2 credits**  
This course is the study of verbal and nonverbal communication and documentation in health care. Emphasis will be placed on terminology, format, computer usage, reimbursement, interpersonal communication, and legal issues. Upon completion, student should be able to discuss and demonstrate communication methods for achieving effective interaction with patients, families, the public and other health care providers.

**PTA 220 FUNCTIONAL ANATOMY AND KINESIOLOGY (3T) 3 credits**  
**COREQUISITE: PTA 221**  
This course provides an in-depth, clinically oriented study of functional anatomy. Emphasis is placed on the musculoskeletal system, nervous system, and study of human movement. Upon completion of the course, the student should be able to identify specific anatomical structures and analyze human movements.

**PTA 221 KINESIOLOGY LAB (3S) 1 credit**  
**COREQUISITE: PTA 220**  
This laboratory course allows for a hands on appreciation of functional anatomy and kinesiology. Emphasis may include muscle and joint function, ROM/strength testing, palpation skills and exercise concepts. Upon completion, the student should be able to integrate content areas into an understanding of normal gait posture and movement patterns.

**PTA 230 NEUROSCIENCE (2T) 2 credits**  
This course provides students with an overview of the neuroanatomy of the CNS and PNS, as it relates to treatment necessary for patients with dysfunctions of these systems. Emphasis includes the structure and function of the nervous system, neurophysiological concepts, human growth and development, and neurologic dysfunctions. Upon completion of this course, the student should be able to identify and discuss specific anatomical structures, functions of the nervous system, basic concepts of human growth and development and identify neurologic pathologies.

**PTA 231 REHABILITATION TECHNIQUES (6S) 2 credits**  
**COREQUISITE: PTA 241**  
This course allows for hands on appreciation of advanced rehabilitation techniques. Emphasis is on orthopedic and neurologic treatment techniques, therapeutic exercise procedures and analysis and treatment of pathologic gait. Upon completion, the student should be able to demonstrate an understanding of advanced rehabilitation techniques appropriate to orthopedic and neurologic dysfunctions.

**PTA 232 ORTHOPEDICS FOR THE PTA (2T) 2 credits**  
**COREQUISITE: PTA 290**  
This course provides the student with an overview of orthopedic conditions seen in physical therapy. Emphasis is on the study of orthopedic conditions and appropriate physical therapy intervention and a review of related anatomical structures. Upon completion of the course, the student should be able to discuss PT interventions for common orthopedic conditions.

**PTA 240 PHYSICAL DISABILITIES I (2T) 2 credits**  
This course presents the student with a body systems approach to the etiology, pathology, signs/symptoms and treatment of conditions seen in PT. Emphasis may include conditions most commonly treated in physical therapy. Upon completion, the student should be able to discuss basic pathological processes, treatment options and prognoses of conditions studied.

**PTA 241 PHYSICAL DISABILITIES II (2T) 2 credits**  
**PREREQUISITE: PTA 240**  
**COREQUISITE: PTA 231**  
This course continues a body systems approach to study of common PT pathologies. Emphasis includes various neuro-

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logical pathologies with additional focus on the needs of special populations. Upon completion, the student should be able to discuss PT interventions appropriate to a variety of diagnoses.

**PTA 250 THERAPEUTIC PROCEDURES I (2T, 6S) 4 credits**

This laboratory course provides a hands on introduction to the principles and procedures of therapeutic physical therapy intervention. Emphasis is on basic patient care skills and procedures utilized in physical therapy. Upon completion, the student should be able to demonstrate safe and effective delivery of those procedures with an in-depth understanding of the rationale for each treatment.

**PTA 251 THERAPEUTIC PROCEDURES II (2T, 6S) 4 credits**  
**PREREQUISITE: PTA 250**  
**COREQUISITE: PTA 252**

This laboratory course is a continued study of the principles and procedures of therapeutic PT intervention. Emphasis is on advanced physical therapy interventions and procedures and their rationale. Upon completion, the student should be able to demonstrate safe and effective delivery with an in-depth understanding of each.

**PTA 252 PHYSICAL AGENTS AND THERAPEUTIC MODALITIES (2T) 2 credits**  
**COREQUISITE: PTA 251**

This course provides the student with the theoretical basis for the use of physical agents such as heat, cold, electricity, light, water and therapeutic modalities utilized in physical therapy. Emphasis is placed on modalities such as hydrotherapy, various forms of electrical stimulation, ultrasound, traction and diathermy. Upon completion of the course, the student will understand the physiological effects, indications and contraindication, advantage and disadvantage of utilizing these modalities in physical therapy.

**PTA 260 CLINICAL EDUCATION I (5P5) 1 credit**

This clinical experience is designed to introduce the student to the practice of physical therapy through interaction in the health care environment. The course entails on-going communication between the clinical instructor, student and course coordinator. Upon completion of the course, the student should be able to safely and effectively apply procedures and techniques previously attained in the classroom.

**PTA 261 CLINICAL EDUCATION II (5P5) 1 credit**  
**PREREQUISITE: PTA 260**

This clinical class is a continuation of PTA 260 which is designed to introduce the student to the practice of physical therapy through interaction in the health care environment. The course entails on-going communication between the clinical instructor, student, and course coordinator. The student will safely and effectively apply procedures and techniques previously attained in the classroom.

**PTA 263 CLINICAL AFFILIATION I (15P5) 3 credits**

This clinical class will provide clinical interaction in the health care environment. The course entails on-going communication between the clinical instructor, student, and course coordinator. Upon completion, the student should

be able to safely and effectively apply procedures and techniques previously attained in the classroom.

**PTA 266 CLINICAL FIELD WORK I (10P5) 2 credits**

This clinical class will provide an intensive and extended clinical interaction in the health care environment. The course entails on-going communication between the clinical instructor, student, and course coordinator. The student will safely and effectively apply procedures and techniques previously attained in the classroom.

**PTA 267 CLINICAL FIELD WORK II (10P5) 2 credits**

This clinical class is a continuation of PTA 266 and will provide clinical interaction in the health care environment. The course entails on-going communication between the clinical instructor, student and course coordinator. The student will safely and effectively apply procedures and techniques previously attained in the classroom.

**PTA 290 THERAPEUTIC EXERCISE (3S) 1 credit**  
**COREQUISITE: PTA 232**

This lab course covers exercise techniques commonly used in PTA practice. It may include aquatics, isometric, isotonic, isokinetic, plyometric, Swiss ball, and aerobic exercise. Upon completion of the course, the student should have entry level skills in exercise application.

## PHYSICS (PHY)

**PHY 213 GENERAL PHYSICS WITH CALCULUS I (3T, 2E) 4 credits**  
**PREREQUISITE: MTH 125 or Permission of instructor**  
**CO-REQUISITE: PHY 216**

This course provides a calculus-based treatment of the principal subdivisions of classical physics: mechanics and energy. Laboratory is required.

**PHY 214 GENERAL PHYSICS WITH CALCULUS II (3T, 2E) 4 credits**  
**PREREQUISITE: PHY 213**  
**CO-REQUISITE: PHY 217**

This course provides a calculus-based study in classical physics. Topics included are simple harmonic motion, waves, sound, light, optics, electricity and magnetism. Laboratory is required.

**PHY 218 MODERN PHYSICS (3T, 2E) 4 credits**  
**PREREQUISITE: PHY 214 and MTH 227**

The focus of this course is the development of the theory of relativity, the old quantum theory of Planck, Einstein, Bohr and Sommerfeld, and the new quantum physics of Schroedinger, Heisenberg, Dirac and Pauli. Laboratory experiments illustrate the principles discussed and include, but are not limited to, determination of the speed of light, charge and charge to mass ratio of the electron, the Planck constant and the Rydberg constant. Laboratory is required.



## PROCESS TECHNOLOGY (PCT)

### PCT 100 FUNDAMENTALS OF PROCESS TECHNOLOGY (3T)

**3 credits**

This course will provide an overview and an introduction to process operations within process industries. Topics will include process technician duties and responsibilities, an introduction to plant process flows, process types of equipment and controls, process utilities, and how these systems operate.

### PCT 105 PROCESS TECHNOLOGY I - EQUIPMENT (3T, 2E)

**4 credits**

**PREREQUISITE: PCT 100  
FORMERLY PCT 110**

This course provides an overview or introduction into the field of process technology equipment within the process industry. Students will be introduced to many process industry related equipment concepts including purpose, components, operation, and Process Technicians' role for operating and troubleshooting the equipment.

### PCT 115 INSTRUMENTATION I (2T, 2E)

**3 credits**

This course covers process variables and various instruments used to sense, measure, transmit and control these variables. Introduces the students to control loops and the elements that are found in different types of loops, such as controllers, regulators and final control elements. Concludes with a study of instrumentation drawings and diagrams and a unit on troubleshooting instrumentation.

### PCT 215 INSTRUMENTATION II (3T, 2E)

**4 credits**

**PREREQUISITES: PCT 115**

This course introduces the student to switches, relays and annunciators systems and moves on to discuss signal conversion and transmission. Students move on to learn about digital control, programmable logic control and distributed control systems before ending the course with a discussion of instrumentation power supplies, emergency shutdown systems and instrumentation malfunctions.

### PCT 220 PROCESS TECHNOLOGY II, SYSTEMS (3T, 2E)

**4 credits**

**PREREQUISITES: PCT 105**

This course is a study of the interrelations of process equipment and process systems. Students will be able to arrange process equipment into systems, describe the purpose and function of specific process systems, explain how factors affecting process systems are controlled under normal conditions, and recognize abnormal process conditions. Students are also introduced to the concept of system process control and manufacturing plant process economics.

### PCT 230 PROCESS TECHNOLOGY III, OPERATIONS (3T, 2E)

**4 credits**

**PREREQUISITES: PCT 215 and PCT 220**

This course provides an overview or introduction into the field of operations within the process industry. Students will use existing knowledge of equipment, systems and instrumentation to understand the operation of an entire unit including using a Process Control simulator.

### PCT 240 PROCESS TROUBLESHOOTING (3T, 2E)

**4 credits**

**PREREQUISITES: PCT 215 and PCT 220**

This course involves instruction in different types of troubleshooting techniques, procedures, and methods used to solve process problems. Topics include application of data collection and analysis, cause-effect relationships and reasoning. In addition to troubleshooting static equipment problems as presented within a textbook, dynamic problems will also be presented via a process simulator for problem resolution by the student.

## POLITICAL SCIENCE (POL)

### POL 200 INTRODUCTION TO POLITICAL SCIENCE (3T)

**3 credits**

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.

### POL 211 AMERICAN NATIONAL GOVERNMENT (3T)

**3 credits**

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.

### POL 220 STATE AND LOCAL GOVERNMENT (3T)

**3 credits**

This course is a study of the forms of organization, functions, institutions, and operation of American state and local governments. Emphasis is placed on the variety of forms and functions of state and local governments, with particular attention to those in Alabama and to the interactions between state and local government and the national government. Upon completion, students should be able to identify elements of and explain relationships among the state, local, and national governments of the U.S. and function as more informed participants of state and local political systems.

### POL 299 DIRECTED STUDIES

**1-3 credits\***

**PREREQUISITE: Recommendation of instructor and approval of academic division dean**

This course provides opportunities for non-traditional exploration of selected topics in political science. Emphasis is placed on knowledge and experience students gain through learning activities such as guided reading, internships, and programs combining personal experience with related intensive study. Upon completion, students should

be able to prepare papers, presentations, or other projects on approved topics related to their individual experiences.

\*Credit to be determined from appropriate contact-to-credit ratio formula.

### PARALEGAL (PRL)

#### **PRL 101 INTRODUCTION TO PARALEGAL STUDY (3T) 3 credits**

This course introduces the paralegal profession and the legal system. Topics include an overview of major areas of legal practice, ethics, legal analysis and research, professional development including certification and employment, and related topics.

**\*Note: PRL 101 & PRL 102 must be taken before any other course with the PRL prefix.**

#### **PRL 102 BASIC LEGAL RESEARCH AND WRITING (3T) 3 credits** **PREREQUISITE: Grade of "C" or better in ENG 093 or satisfactory ACT, SAT, or placement score**

This course introduces the techniques of legal research and writing. Emphasis is placed on locating, analyzing, applying, and validating sources of law. Topics include legal research, legal writing, proper citation, and electronic research.

**\*Note: PRL 101 & PRL 102 must be taken before any other course with the PRL prefix.**

#### **PRL 150 COMMERCIAL LAW (3T) 3 credits**

This course covers contracts, selected portions of the Uniform Commercial Code, and forms of business organization.

**\*Note: This course may be substituted by BUS 263**

#### **PRL 160 CRIMINAL LAW AND PROCEDURE (3T) 3 credits**

This course introduces substantive and procedural criminal law including elements of state and federal crimes, defenses, constitutional issues, pre-trial process, and other related topics.

**\*\*Note: This course may be substituted by CRJ 140**

#### **PRL 192 SELECTED TOPICS IN PARALEGAL (3T) 3 credits**

This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline.

#### **PRL 193 SELECTED TOPICS IN PARALEGAL II (3T) 3 credits**

This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on subject matter appropriate to the program or discipline.

#### **PRL 210 REAL PROPERTY LAW (3T) 3 credits**

This course emphasizes the study of real property law. Topics include the distinction between real and personal property, various estates and interests in property, and the mechanics of conveyance, encumbrances, and closing procedure.

#### **PRL 230 DOMESTIC LAW (3T) 3 credits**

This course covers laws governing domestic relations. Topics include marriage, separation, divorce, child custody, support, property division, adoption, and other related topics.

#### **PRL 240 WILLS, TRUSTS, AND ESTATES (3T) 3 credits**

This course covers wills, trusts, and inheritance. Topics include types of wills, the law of intestacy (inheritance), probating estates, and alternatives to probate. The course also covers trusts, medical directives, and associated litigation.

#### **PRL 250 BANKRUPTCY AND COLLECTIONS (3T) 3 credits**

This course provides an overview of the laws of bankruptcy and the rights of creditors and debtors. Topics include bankruptcy procedures and estate management, attachment, claim and delivery, repossession, foreclosure, collection, garnishment, post-judgment collection procedure.

#### **PRL 262 CIVIL LAW AND PROCEDURE (3T) 3 credits**

This course examines the Federal Rules of Civil Procedure, the Alabama Rules of Civil Procedure, and trial procedure.

#### **PRL 282 LAW OFFICE MANAGEMENT AND PROCEDURES (3T) 3 credits**

This course focuses on the organization and policies and procedures of a law office.

#### **PRL 291 PARALEGAL INTERNSHIP (3L) 3 credits** **PREREQUISITE: PRL 101, 102, 262, and permission of the Program Director**

This course provides students opportunities to work in paid or unpaid positions in which they apply paralegal skills and knowledge. This course requires a minimum of 100 hours of practical experience in the legal field.

### PSYCHOLOGY (PSY)

#### **PSY 200 GENERAL PSYCHOLOGY (3T) 3 credits** **COREQUISITE: ENG 093, C or better or satisfactory ACT, SAT, or RDG placement score.**

This course is a survey of behavior with an emphasis on psychological processes. This course includes the biological bases for behavior, thinking, emotion, motivation, and the nature and development of personality.

#### **PSY 208 CONTEMPORARY ISSUES IN PSYCHOLOGY (3T) 3 credits** **PREREQUISITE: PSY 200**

This course is a study of selected topics in general psychology.

#### **PSY 210 HUMAN GROWTH AND DEVELOPMENT (3T) 3 credits** **PREREQUISITE: PSY 200**

This course is a study of the psychological, social and physical factors that affect human behavior from conception to death.

#### **PSY 211 CHILD GROWTH AND DEVELOPMENT (3T) 3 credits** **PREREQUISITE: PSY 200**

This course is a systematic study of the behavior and psychological development of the child from conception to adolescence. Emphasis will be placed on principles underlying physical, mental, emotional and social development, methods of child study, and practical implications.

#### **PSY 220 HUMAN SEXUALITY (3T) 3 credits**

This course is a comprehensive and integrated approach to

human sexuality emphasizing biological, psychological, social and emotional aspects.

**PSY 230 ABNORMAL PSYCHOLOGY (3T) 3 credits**  
**PREREQUISITE: PSY 200**

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.

**PSY 250 SOCIAL PSYCHOLOGY (3T) 3 credits**  
**PREREQUISITE: PSY 200**

This course is a study of social factors as they influence individual behavior.

**PSY 260 STATISTICS FOR THE SOCIAL SCIENCES (3T) 3 credits**

This course is an introduction to the basic statistical concepts, measures, and techniques used in social science research and report writing. It includes both descriptive and inferential statistics.

**PSY 276 HUMAN RELATIONS (3T) 3 credits**  
**PREREQUISITE: Permission of instructor**

This course focuses on readings, inter- and intra- personal experiences, individual testing, employer visits and open discussions. Its goal is to assist the student in making a successful transition from classroom to the world of work.

**READING (RDG)**

**RDG 085 DEVELOPMENTAL READING (3T) 3 credits**

This course is designed to improve reading and critical thinking skills. Topics include vocabulary enhancement; extracting implied meaning; analyzing author's purpose, tone, and style; and drawing conclusions and responding to written material. Upon completion, students should be able to comprehend and analyze college-level material.

NOTE: Students who score at or below 66 on the Compass Reading Test will be required to take RDG 085 during their first or second semester at Calhoun.

**RELIGION (REL)**

**REL 100 HISTORY OF WORLD RELIGIONS (3T) 3 credits**

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 of the world.

**REL 119 INTERPRETING THE BIBLE (3T) 3 credits**

This course is an attempt to understand the method of dealing with scripture as the word of God. Attention is given to different approaches to interpretation and suggestions are provided for legitimate application. The student should develop a greater understanding of the Bible as a result of this course.

**REL 151 SURVEY OF THE OLD TESTAMENT (3T) 3 credits**

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.

**REL 152 SURVEY OF THE NEW TESTAMENT (3T) 3 credits**

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.

**RENEWABLE ENERGY (REN)**

**REN 105 RENEWABLE TECHNOLOGY AWARENESS (1T) 1 credit**

This course provides a comprehensive overview of renewable technology. Subjects covered in this course will include energy analysis and awareness, HVAC ratings and options, electrical production and consumption, plumbing for conservation, hot water, landscaping, fire protection, wastewater reuse, and LEED certification. Students will also learn about local, state and national codes and regulations. A presentation of current government rebates and tax credits will be included.

**REN 115 PHOTOVOLTAIC PRINCIPLES & DESIGN (1T, 4E) 3 credits**  
**PREREQUISITE: ELT 108 and ELT 109**

This course covers principles and design of photovoltaic (PV) systems. Upon completion of the course, students should have demonstrated a basic understanding of PV markets and applications, safety basics, electricity basics, solar energy fundamentals, PV module fundamentals, system components, PV system sizing and electrical and mechanical design, and performance analysis, maintenance and troubleshooting. The course prepares the student to take the National American Board of Certified Energy Practitioners (NABCEP) PV Entry Level Exam. Though highly recommended, taking the exam is not a mandatory requirement of the course.

**REN 205 SOLAR THERMAL PRINCIPLES (1T, 4E) 3 credits**

This course provides a comprehensive overview of solar thermal design, installation and troubleshooting. Topics include solar space heating, solar hot water, solar pool heating and solar cooling for both new and existing construction. Students will learn to assess the viability of solar thermal energy for given factors. Students will also learn about local, state and national codes and regulations. This course will cover all topics required by the National Board of Certified Energy Practitioners (NABCEP).

**REN 215 PHOTOVOLTAIC SYSTEM INSTALLATION & SERV. PROCED. (1T, 4E) 3 credits**  
**PREREQUISITE: ELT 108 and ELT 109**

**CO-REQUISITE: REN 115**  
This course covers installation and servicing procedures related to photovoltaic (PV) systems. Upon completion of the course, students should have demonstrated a basic

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understanding of related safety, site surveys, mechanical and electrical design, installation process, performance analysis, troubleshooting and maintenance. The course prepares the student to take the National American Board of Certified Energy Practitioners (NABCEP) Solar PV Installer Certification Exam. Though highly recommended, taking the exam is not a mandatory requirement of the course.

### SOCIOLOGY (SOC)

**SOC 200 INTRODUCTION TO SOCIOLOGY (3T) 3 credits**  
This course is an introduction to vocabulary, concepts, and theory of sociological perspective of human behavior.

**SOC 208 INTRODUCTION TO CRIMINOLOGY (3T) 3 credits**  
This course delves into the nature and extent of crime in the United States, as well as criminal delinquent behavior and theories of causation. The study includes criminal personalities, principles of prevention, control and treatment.

**SOC 209 JUVENILE DELINQUENCY (3T) 3 credits**  
**PREREQUISITE: SOC 200**  
This course examines the causes of delinquency. It also reviews programs of prevention and control of juvenile delinquency, as well as the role of the courts.

**SOC 247 MARRIAGE AND THE FAMILY (3T) 3 credits**  
The course is a study of family structures and families in a modern society. It covers preparation for marriage, as well as sociological, psychological, biological, and financial factors relevant to success in marriage and family life.

**SOC 296 DIRECTED STUDIES IN SOCIOLOGY (1-3T) 1-3 credits**  
**PREREQUISITE: SOC 200**  
This course provides students with opportunities to have "hands-on" experience with research methods used in the behavioral sciences or to complete directed readings under faculty supervision.

### SPANISH (SPA)

**SPA 101 INTRODUCTORY SPANISH I (4T) 4 credits**  
**PREREQUISITE: Grade of "C" or better in ENG 093 or satisfactory ACT, SAT or placement score**  
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.

**SPA 102 INTRODUCTORY SPANISH II (4T) 4 credits**  
**PREREQUISITE: SPA 101 or Equivalent**  
This continuation course includes the development of basic communication skills and the acquisition of basic knowledge of the cultures of Spanish speaking areas.

**SPA 201 INTERMEDIATE SPANISH I (3T) 3 credits**  
**PREREQUISITE: SPA 102 or Equivalent**  
This course includes a review and further development of communication skills. Topics include readings of literary, historical, and/or cultural texts.

**SPA 202 INTERMEDIATE SPANISH II (3T) 3 credits**  
**PREREQUISITE: SPA 201**  
This continuation course includes a review and further development of communication skills. Topics include readings of literary, historical, and/or cultural texts.

### SPEECH COMMUNICATIONS (SPH)

**SPH 107 FUNDAMENTALS OF PUBLIC SPEAKING (3T) 3 credits**  
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. Students prepare and deliver short speeches, practice analytical listening, and engage in various communication exercises.

**SPH 116 INTRODUCTION TO INTERPERSONAL COMMUNICATION (3T) 3 credits**  
This course is an introduction to the basic principles of interpersonal communication.

**SPH 206 ORAL INTERPRETATION (3T) 3 credits**  
**(Course offered only in the Fall Semester at the Decatur Campus)**  
This course is designed to help students develop specific skills in the analysis and oral interpretation of poetry, prose, and drama. It includes a study of the elements of oral communication such as imagery, structure, and dramatic timing. Opportunity is given for public/classroom performance of literature.

### SOCIAL WORK TECHNOLOGY (SWT)

**SWT 109 TECHNIQUES OF BEHAVIOR MODIFICATION I (3T) 3 credits**  
In this course, the student will demonstrate the ability to decrease inappropriate behaviors and to shape appropriate behavior through the use of behavior modification techniques.

**SWT 130 THE COMMUNITY AND THE SOCIAL WORKER (3T) 3 credits**  
This course is designed to acquaint the student with the demographic, economic and cultural composition of the community. The student will develop technical skills for making practical application of available resources for enhancing the quality of life within the community.

**SWT 131 PROBLEMS OF CHILDREN AND YOUTH (3T) 3 credits**  
This course develops an understanding of the emotional, social, psychological, and physical needs of children and youth. This course presents the influences and responsibilities of natural and surrogate parents. The student becomes familiar with the nature and causes of the more common problems and develops skills for assisting with the prevention and/or improvement of problems common among children and youth.



**SWT 133 GERIATRICS (3T) 3 credits**  
This course includes the study of the needs of making adjustments to retirement, activities and hobbies of the older person, and community agencies available for the aged. This course will include common psychological and physical problems of the aging. Actual experience will be provided in helping the elderly accept the changes in later life and teaching them of the many services available to them.

**SWT 138 COUNSELING FROM A CULTURAL PERSPECTIVE (3T) 3 credits**  
This course will acquaint the students with some of the problems facing minorities. It will stress the importance of the counselor's knowledge of, and sensitivity to, the minority client experiences and how these experiences are greater now than they have been at any time in the past three decades. This course will help counselors and mental health practitioners maximize their effectiveness when working with a culturally diverse population. The student will learn to establish the necessary and sufficient conditions of a counseling relationship with clients who are culturally different. Similarities in race, ethnicity, and culture will be stressed.

## SURGICAL TECHNOLOGY (SUR)

**SUR 100 PRINCIPLES OF SURGICAL TECHNOLOGY (3T, 6S) 5 credits**  
**PREREQUISITES:** Admission to the Surgical Technology Program and EMS 106  
**COREQUISITES:** SUR 102, SUR 107 and SUR 108  
This course is an introduction to the field of surgical technology as a career. Emphasis is on the role of the surgical technologist, principles of asepsis, principles of patient care, operative techniques, blood-borne pathogens, safety, and pharmacology. Additionally, the principles of microbiology, and professional, ethical, and legal responsibilities of the surgical team will be covered. Upon completion, the student should be able to demonstrate practical application of the basic principles and skills of the surgical technologist.

**SUR 102 APPLIED SURGICAL TECHNOLOGIES (2T, 6S) 4 credits**  
**PREREQUISITES:** Admission to the Surgical Technology Program and EMS 106  
**COREQUISITES:** SUR 100, SUR 107 and SUR 108  
This course is the application of principles of asepsis and the role of the surgical technologist. Emphasis is placed on creating and maintaining a sterile environment, identification of surgical instruments, equipment, and supplies, proper patient positioning for surgical procedures, and applying skills of intra-operative procedures. Upon completion of this course, the student should be able to name and select basic surgical instruments, supplies, and equipment, participate in mock surgical procedures.

**SUR 103 SURGICAL PROCEDURES (3T, 6S) 5 credits**  
**PREREQUISITES:** SUR 100, SUR 102, SUR 107 and SUR 108  
**COREQUISITE:** SUR 104  
This course is a study of surgical procedures as they relate to anatomy, pathology, specialty equipment, and team responsibility. Patient safety is emphasized and medications used in surgery are discussed. Upon completion of the course, the student should be able to participate in surgical procedures in the operating room.

**SUR 104 SURGICAL PRACTICUM I (20P5) 4 credits**  
**PREREQUISITES:** SUR 100, SUR 102, SUR 107 and SUR 108  
**COREQUISITE:** SUR 103  
This course is the application of surgical principles in the peri-operative setting. Emphasis is placed on application of surgical technology skills. Upon completion of the course, the student should be able to participate in the surgical technologist role.

**SUR 105 SURGICAL PRACTICUM II (1T, 20P5) 5 credits**  
**PREREQUISITES:** SUR 103 and SUR 104  
**COREQUISITE:** SUR 106  
This clinical experience allows the student to practice in the health care environment using entry level skills attained in previous classroom laboratory and clinical instruction. In addition to clinical skills, emphasis is placed on specialty surgical procedures, the study of trends, professional and interpersonal skills in the health care setting, and case review. Upon completion of this course, the student should be able to apply concepts of surgical technology at the entry level.

**SUR 106 SPECIAL TOPICS IN SURGICAL TECHNOLOGY (1T) 1 credit**  
**PREREQUISITES:** SUR 103 and SUR 104  
**COREQUISITE:** SUR 105  
This course is designed to provide specialized instruction for the student preparing to transition into the field of Surgical Technology. Emphasis is on review of content specific to the practice of surgical technology and preparation for the NBSTSA certification examination. Upon completion of this course, the student will be able to demonstrate readiness to take the certification examination.

**SUR 107 SURGICAL ANATOMY AND PATHOPHYSIOLOGY (3T) 3 credits**  
**PREREQUISITES:** Admission to the program and EMS 106  
**COREQUISITES:** SUR 100, SUR 102 and SUR 108  
This course is an overview of surgical anatomy and pathophysiology. Emphasis is placed on the organization structure of the body, organ systems, relevant surgical pathophysiology, and related medical terminology. Upon completion, the student should be able to apply knowledge of anatomy in the clinical environment.

**SUR 108 PHARMACOLOGY FOR THE SURGICAL TECHNOLOGIST (2T) 2 credits**  
**PREREQUISITES:** Admission to the program and EMS 106  
**COREQUISITES:** SUR 100, SUR 102 and SUR 107  
A study of basic pharmacology as it relates to the practice of the surgical technologist. Topics covered include basic

## Course Descriptions

conversions, calculations, classifications, desired effects and side effects, terminology, care and safe handling of medications, as well as a comprehensive review of surgical medications. Upon completion of the course, students should be able to recognize and properly manage pharmacologic agents commonly used in the surgical environment.

**SUR 204 SURGICAL PRACTICUM III (4C) 4 credits**  
**PREREQUISITE: Admission to the program and/or as required by the Department**

This course is the continuation of the study and application of surgical principles in the perioperative setting. Emphasis is placed on application of the surgical technologist role. Upon completion of the course, the student should be able to function as a surgical technologist in the operating room. Program may use P3 or P5 contact/credit hour ratio for clinical hours.

## THEATRE (THR)

**THR 113, THEATRE WORKSHOP I, II, III  
114, 115 (2T)**

**2 credits each**

These courses provide practical experience in the production and performance of a dramatic presentation with assignments in scenery, lighting, props, choreography, sound, costumes, make-up, publicity, acting, directing, and other aspects of theatre production.

**THR 120 THEATRE APPRECIATION (3T) 3 credits**

This course is designed to increase appreciation of contemporary theatre. Emphasis is given to the theatre as an art form through the study of the history and theory of drama and the contributions of playwright, actor, director, designer, and technician to modern media. Attendance at theatre productions is required.

**THR 126 INTRODUCTION TO THE THEATRE (3T) 3 credits**

This course is designed to teach the history of the theatre and the principles of drama. It also covers the development of theatre production and the study of selected plays as theatrical presentations.

**THR 131 ACTING TECHNIQUES I (3T) 3 credits**

This is the first of a two-course sequence in which the student will focus on the development of the body and voice as the performing instruments in acting. Emphasis is placed on pantomime, improvisation, acting exercises, and building characterizations in short acting scenes. Students will participate in a theatre production.

**THR 132 ACTING TECHNIQUES II (3T) 3 credits**  
**PREREQUISITE: THR 131**

This course is a continuation of THR 131. Students will participate in a theatre production.

**THR 241 VOICE AND SPEECH FOR THE PERFORMER (3T) 3 credits**

This is a beginning course in the effective and healthy use of the vocal instrument for performance. It is designed to approach both the physical and mental processes of vocal

production and includes the following: learning a physical/vocal warm-up, dialect reduction, articulation, class performance and written exams.

## VISUAL COMMUNICATIONS (VCM)

**CAT 283 GRAPHICS AND ANIMATION (1T, 2E, 3M) 3 credits**  
**PREREQUISITE: ART 221**

This course is designed to tap the imagination of the student in a three-dimensional problem solving environment. Topics include a basic introduction to the concepts of 3D design and animation as applied to a design project. Upon completion, students should be able to create and animate objects in a three-dimensional environment.

**VCM 145 INTRODUCTION TO DIGITAL PHOTOGRAPHY (3T) 3 credits**

This course is an introduction to digital photography. Emphasis is placed on aesthetic as well as technical aspects of photography. Upon completion, the student should understand quality in photography and be able to apply the techniques necessary to produce professional photographs. This is a **CORE** course.

**VCM 146 DIGITAL PHOTOGRAPHY (3T) 3 credits**  
**PREREQUISITE: VCM 145 or Permission of instructor**

This course explores various uses of digital photography. Subjects may include studio, portrait, landscape and other areas of photography. Upon completion, the student should be able to apply the techniques necessary to produce professional photographs of a variety of subjects.

**VCM 150 TYPOGRAPHY (2T, 1E) 3 credits**  
**PREREQUISITE: ART 221**

This course is an introduction in using type in graphic design. Emphasis is on typographic techniques used in layout and graphic design. Upon completion, the student should be able to view type as a design element.

**VCM 180 INTRODUCTION TO GRAPHIC DESIGN (2T, 1E) 3 credits**

This course is an introduction to the various elements of graphic design. Emphasis is on aspects of production design including layout, typography, graphic photography, computer graphics and printing techniques. Upon completion, students should have a basic understanding of the graphics process from concept through production.

**VCM 232 ADVANCED COMPUTER GRAPHICS (2T, 1E) 3 credits**

This course is designed to acquaint the student with computer graphics. Topics include illustration and image manipulation. Upon completion, students should be able to apply design principles to computer graphics.

**VCM 250 INTRODUCTION TO TECHNICAL ILLUSTRATION (2T, 2E) 3 credits**  
**PREREQUISITE: ART 221 or Permission of instructor**

This course focuses on technical drawings prepared for industry. Topics include perspective and axonometric drawing. Upon completion, students should be able to apply basic drawing and design principles to technical drawings.

**VCM 251 TECHNICAL ILLUSTRATION (2T, 1E) 3 credits**  
**PREREQUISITE: VCM 250**

This course focuses on renderings prepared for industry. Various techniques are used to illustrate charts, graphs, perspective and axonometric drawings and enhanced assembly views. Upon completion, students should be able to apply design principles to technical drawings and highly creative drawings using technical skills.

**VCM 281 DIGITAL DESIGN (3T) 3 credits**  
**PREREQUISITE: ART 221 and VCM 232 or Permission of instructor**

This course focuses on products for digital media. Emphasis is on creativity and an understanding of software and production. Upon completion, the student should be able to apply creative design and production skills to finished projects.

**VCM 282 ADVANCED DIGITAL DESIGN (3T) 3 credits**  
**PREREQUISITE: ART 221 and VCM 232 or Permission of instructor**

This course focuses on advanced applications in the production of digital design. Emphasis is on computer skills, creativity & design. Upon course completion, students should be able to create a multimedia production.

**VCM 285 MULTIMEDIA PRODUCTION (3T) 3 credits**  
**PREREQUISITE: ART 221 and VCM 232 or Permission of instructor**

This course introduces the student to multimedia production. Emphasis is on production design, creativity, visual design, and technical skills. Upon course completion, students should be able to create a multimedia production.

**VCM 286 ADVANCED MULTIMEDIA PRODUCTION (3T) 3 credits**  
**PREREQUISITE: VCM 285 or Permission of instructor**

This course focuses on advanced multimedia production. Emphasis is on comprehensive interactive multimedia production. Upon course completion, students should be able to apply creative design and production skills to finished interactive projects.





# *Administration, Faculty & Staff*



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# Campus Map

- 1. Aerospace Training Center (ATC)**
- Process Technology
  - Business and Industry Services
  - CNC Lab

- 2. Health Sciences Building (HS)**
- Nursing
  - Emergency Medical Services
  - Dental Assisting
  - Surgical Operating Room Tech.
  - Clinical Lab Technician
  - Physical Therapy

- 3. Center for Applied Technology (CAT)**  
formerly Center for Manufacturing Innovation (CMI)
- Aerospace
  - Automation/Robotics
  - Electricity
  - Industrial Maintenance
  - Alabama Parenthood Initiative

- 4. Barbering and Cosmetology (BAC)**

- 5. Information Technologies Center**

- 6. Campus Police/Security**

- 7. Noble Russell (NR)**
- Accounting
  - Economics
  - Business/CIS Division
  - Computer Classes
  - Design Drafting
  - Photography
  - Television Studio
  - Accounting Lab

- 8. Center for Business and Industry Training (CBIT)**
- Community Education
  - Industrial Maintenance (Business & Industry)
  - Co-op

- 9. Business Center (BC)**
- Adult Education
  - GED Testing
  - Testing Center

- 10. Energy Technology Center (ETC)**
- Air Conditioning and Refrigeration (ACR)
  - Renewable Energy

- 11. Maintenance/Receiving**

- 12. Industrial Technologies**
- Alabama Aviation Center
  - Welding

- 13. Machine Tool Technology (MTT)**

- 14. Math, Science, & Administration (MS)**
- First Floor - Science/Math Classrooms
  - Science/Math Learning Center
  - Decatur Evening Office
  - Second Floor - Science/Math Classrooms
  - Science Labs
  - Third Floor - Administrative Offices (President, Vice-President, Planning, Research, and Grants; Public Relations; Development; Human Resources; Business Operations; Payroll; and Math Science Faculty)

- 15. Chasteen Student Center (SC)**
- Admissions/Registrar
  - Advising & Career Services
  - Cashier/Information
  - Financial Aid
  - Student Affairs
  - Student Activities
  - Student Support Services
  - Upward Bound
  - ADA

- 16. Harris Hall (HH)**
- English/Speech
  - Developmental Math Lab
  - English Lab

- 17. Wallace (WA)**
- Social Sciences
  - Mail Room

- 18. Brewer Library (L)**

- 19. Fine Arts (FA)**
- Music
  - Theatre

- 20. Kelley Gymnasium (GYM)**
- Physical Education/Athletics
  - Bookstore
  - Printing Services

- 21. Softball Field**

- 22. Baseball Field**

PRYOR FIELD AIRPORT

U.S. HIGHWAY 31

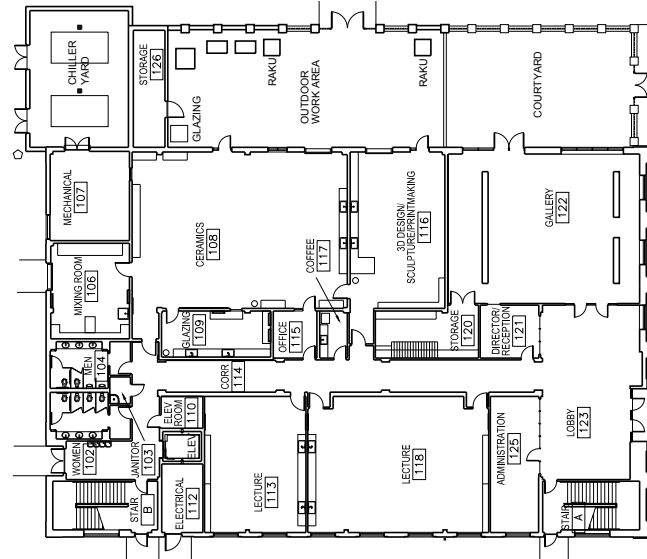
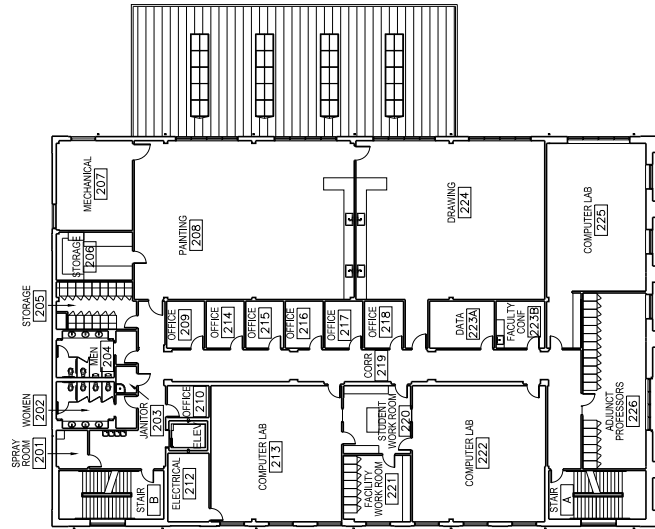
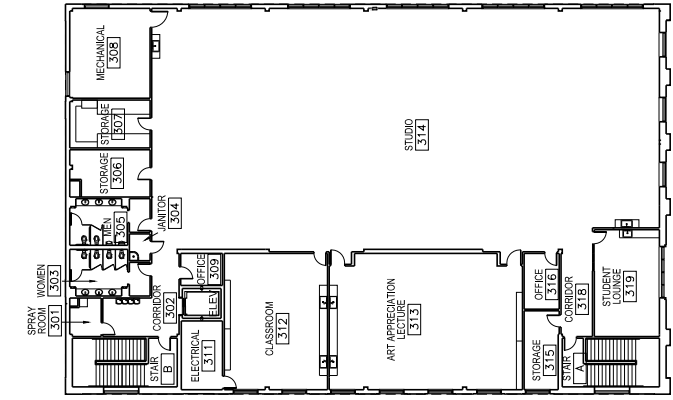




# Huntsville/Research Park Campus



# Alabama Center for the Arts



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## The Alabama Community College System

### System Overview

Governed by the State Board of Education, the Alabama Community College System consists of 22 comprehensive community colleges and four technical colleges; Athens State University; and extensive workforce development initiatives, including the Alabama Industrial Development Training Institute and the Alabama Technology Network.

Approximately 300,000 people are served annually by all of the entities of our system, including AIDT, ATN, workforce development, and adult education. Of those served, approximately 125,000 are enrolled in credit courses.

The Alabama Community College System's commitment to access is characterized by statewide geographical locations, open enrollment, and low-cost tuition, as well as a variety of programs and services that remove barriers to college entrance, education pathways and workforce training opportunities. In addition, thousands of citizens statewide enjoy access to our facilities for community activities and enrichment programs.

The Alabama Community College System is committed to providing a unified system of institutions delivering excellence in academic education, adult education, and workforce development.

The Alabama Community College System provides:

- General education and other collegiate programs at the freshman and sophomore levels prepare students for transfer to four-year institutions to complete baccalaureate degrees, as well as an upper division university that provides selected baccalaureate programs.
- Adult Education focuses on improving individuals' skills, productivity and training with GED preparation and testing, basic skills, and English as a Second Language
- Workforce development initiatives provide customized, flexible, short-term training programs that are responsive to industry needs—from highly specialized training to programs that help prepare entry level employees to meet growing demands.

### Mission

To provide a unified system of institutions dedicated to excellence in delivering academic education, adult education, and workforce development.

### Vision

To develop an educated, prosperous population by providing an affordable pathway to help citizens of any walk or stage of life succeed through quality education and training; a community college system where education works for all.

### Values

- Integrity
- Excellence
- Accessibility
- Accountability
- Diversity