



# Central Carolina Works

Career & College Promise

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COMPLETE COURSE GUIDE

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2018-2019

MASTER EDITION

CENTRAL CAROLINA COMMUNITY COLLEGE

<http://www.cccc.edu/high-school/ccp/>

All information in this guide is subject to change.

Please view our website for the most current information.

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Central Carolina Works (CCW) is a collaboration between the three local education agencies served by Central Carolina Community College; the college administration and faculty, and the business communities of Chatham, Harnett, and Lee counties. The project targets dual enrollment participation in the three county service area, while simultaneously building faculty, administration, and curriculum capacity for guiding students and families through the full range of educational and career pathways-both Career and Technical Education (CTE) and College Transfer (CT). CCW employs an individualized advising model that includes 9 full-time Career and College Advisors, stationed on site at each area high school. In addition to providing outreach and advising services to the area's 11,000+ high school students, these advisors serve as primary coordinators of a sustained professional development program that connects schools and classrooms with local business and industry. CCW is also focused on the development of additional CTE pathways, allowing students more opportunities for pathway completion.

## MISSON

**Central Carolina Works seeks to promote skills and knowledge that will ready students for success in college and careers leading to economic benefits for individuals and communities through increased participation in North Carolina's Career and College Promise program.**

# CCP Overview

The purpose of Career and College Promise is to offer structured opportunities for qualified high school students to dually enroll in community college courses that provide pathways that lead to a certificate, diploma, degree, or State or industry-recognized credential as well as provide entry-level jobs skills. Career and College Promise offers North Carolina high school students a clear path to success in college or in a career. The program is free to all students who maintain a “B” average and meet other eligibility requirements. Through a partnership of the Department of Public Instruction, the N.C. Community College System, the University of North Carolina system and many independent colleges and universities, North Carolina is helping eligible high school students to begin earning college credit at a community college campus at no cost to them or their families. The three pathways include:

1. College Transfer Pathway leading to a minimum of 30 hours of college transfer credit;
2. A Career and Technical Education Pathway leading to a certificate, diploma or degree;
3. A Cooperative Innovative High School Pathway

## College Transfer Pathway

### Eligibility Information

1. The College Transfer Pathway requires the completion of a transfer pathway approved by the State Board of Community Colleges including transfer courses in English and mathematics and ACA 122 College Transfer Success.
2. To be eligible for enrollment, a high school student must meet the following criteria:
  - a. Be a high school junior or senior;
  - b. Have a weighted GPA of 3.0 on high school courses; and
3. Demonstrate college readiness on an assessment or placement test (See
4. College Transfer Test Score Requirements on the following page). A student must demonstrate college readiness in English, reading and mathematics to be eligible for enrollment in a College Transfer Pathway.
5. To maintain eligibility for continued enrollment, a student must
  - a. Continue to make progress toward high school graduation, and
  - b. Maintain a 2.0 GPA in college coursework after completing two courses.
  - c. A student who falls below a 2.0 GPA after completing two college courses will be subject to the college’s policy for satisfactory academic progress.
6. A student may only enroll in one College Transfer Pathway and may not substitute courses in one program for courses in another.
7. A student may change his or her program of study major with approval of the high school principal or his/her designee and the college’s chief academic officer or chief student development administrator. The college’s chief academic officer or chief student development administrator shall approve a change in pathway based on verification provided by the student that the program change allows the student to meet their newly chosen career path.

Verification could include (but is not limited to) a bachelor degree plan published by the university, a career pathway plan, career information published in the Occupational Outlook Handbook and/or information published in the North Carolina Career Cluster Guide, etc.

8. With approval of the high school principal or his/her designee and the college's chief academic officer or chief student development administrator, a student who completes a College Transfer Pathway, while still enrolled in high school, may continue to earn college transfer credits leading to the completion of the Associate in Arts, Science, Engineering, AGE-Nursing, or AFA-Visual Arts. The AA/AS/AE/AGE-Nursing/AFA-Visual Arts may not be awarded prior to high school graduation verification.
9. With approval of the high school principal or his/her designee and the college's chief academic officer or chief student development administrator, a student may concurrently enroll in:
  - a. One College Transfer Pathway and one Career Technical Education Pathway or
  - b. One College Transfer Pathway and one Workforce Continuing Education Pathway
10. CCP students may not enroll in developmental courses.
11. CCP students may not audit courses.
12. CCP Students may not be enrolled in the Associate in General Education or General Occupational Technology programs.
13. Students enrolled in Adult High School, Adult Basic Education, or Adult Secondary Education are not eligible for Career and College Promise.

### College Transfer Test Score Requirements

To be eligible for enrollment in a College Transfer Pathway, students must demonstrate college readiness in English, reading, and mathematics on an approved test or tests. Eligibility may be demonstrated by achieving the required scores on a single test or by combining test scores from any of the approved assessments. For example, a student may combine a 19 on PLAN math with an 86 and an 80 on Accuplacer sentence skills and reading to demonstrate college readiness.

<b>Test</b>	<b>English/Writing Score</b>	<b>Reading Score</b>	<b>Math Score</b>
<b>PLAN (2015)</b>	15	18	19
<b>Pre-ACT (2016)</b>	18	22	22
<b>PSAT (2014 and prior)</b>	45	47	47
<b>PSAT (2015 and later)</b>	26 or 460 composite	26 or 460 composite	24.5 or 510
<b>SAT (Pre-March 2016)</b>	500	500	500
<b>SAT (Mar 2016 &amp; later)</b>	Evidence-Based Reading & Writing: 480		530
<b>ACT</b>	18	22	22
<b>Asset</b>	41	41	41 Num and 41 Alg
<b>Compass</b>	70	81	47 Pre-Alg and 66 Alg
<b>Accuplacer</b>	86	80	55 Arith and 75 Alg
<b>NCDAP</b>	Composite score: 151+		7+ on DMA 010 - 060

Students who have a passing score in each of the three categories above will meet placement test requirements for ALL College Transfer and Career & Technical Education courses in the CCP program.

## Provisional Status

1. A high school junior or senior who does not demonstrate college-readiness on an approved assessment or placement test may be provisionally enrolled in a College Transfer Pathway. To qualify for Provisional Status, a student must meet the following criteria:
  - a. Have a cumulative weighted GPA of 3.5;
  - b. Have completed two years of high school English with a grade of 'C' or higher;
  - c. Have completed high school Algebra II or Math III (or a higher level math class) with a grade of 'C' or higher;
  - d. Obtain the written approval of the high school principal or his/her designee; and,
  - e. Obtain the written approval of the community college president or his/her designee.
2. Students who meet all the requirements listed above may:
  - a. Enroll in English and/or mathematics courses in a college transfer pathway as provisional students without placement or other testing.
  - b. Enroll in ENG 112 if they successfully complete ENG 111 with a 'C' or higher.
  - c. Enroll in MAT 172 if they successfully complete MAT 171 with a 'C' or higher and are in the Associate of Science pathway.
  - d. Register only for college mathematics (MAT) and college English (ENG) courses within the chosen Pathway.
  - e. **Not** enroll in any additional courses in the pathway until they are no longer considered provisional.
3. In order to no longer be considered provisional, the student must successfully complete the first mathematics and English course in the pathway with a grade of 'C' or higher or demonstrate college-readiness on an approved assessment or placement test as listed in Attachment A.
4. Provisional students in the ADN pathway must complete the first math in the AGE - Nursing degree with a "C" or higher and ENG 111 in the pathway with a "C" or higher before being fully admitted to the ADN pathway or demonstrate college-readiness on an approved assessment or placement test as listed on the previous page.
5. Once a student completes the requirements to no longer be considered provisional and with approval of the high school principal or his/her designee and the college's chief academic officer or chief student development administrator, the student may enroll in both a College Transfer Pathway and a Career Technical Education Pathway

# Career & Technical Education Pathway

## Eligibility Information

1. The Career and College Promise Career Technical Education Pathway for juniors and seniors leads to a certificate or diploma aligned with a high school Career Cluster.
2. To be eligible for enrollment, a high school student must meet the following criteria:
  - a. Be a high school junior or senior;
  - b. Have a weighted GPA of 3.0 on high school courses or have the recommendation of the high school principal or his/her designee; and
  - c. Have received career pathway information outlining program requirements for completion of the certificate or diploma.
3. High school counselors should consider students' assessment scores in making pathway recommendations.
4. College Career and Technical Education courses may be used to provide partial or full fulfillment of a four-unit career cluster. Where possible, students should be granted articulated credit based on the local or state North Carolina High School to Community College articulation agreement. See "Course Descriptions" for more information.
5. To maintain eligibility for continued enrollment, a student must
  - a. Continue to make progress toward high school graduation, and
  - b. Maintain a 2.0 in college coursework after completing two courses.
  - c. A student who falls below a 2.0 GPA after completing two college courses will be subject to the college's policy for satisfactory academic progress.
6. A student may be awarded a certificate or diploma prior to high school graduation. The AAS may not be awarded prior to high school graduation verification.
7. A student must enroll in one pathway and may not substitute courses in one pathway for courses in another.
8. The student may change his or her pathway major with approval of the high school principal or his/her designee and the college's chief student development administrator. The college's chief academic officer or chief student development administrator shall approve a change in pathway based on verification provided by the student that the program change allows the student to meet their newly chosen career path. Verification could include (but is not limited to) a bachelor degree plan published by the university, a career pathway plan, career information published in the Occupational Outlook Handbook and/or information published in the North Carolina Career Cluster Guide, etc.
9. With approval of the high school principal or his/her designee and the college's chief academic officer or chief student development administrator, a student may concurrently enroll in:
  - a. One College Transfer Pathway and one Career Technical Education Pathway
  - b. Two Career Technical Education Pathways or
  - c. One Career Technical Education Pathway and one Workforce Continuing Education Pathway
10. A CTE student is not required to demonstrate college readiness on an assessment or placement test to be eligible for the program. However, some required courses within the program may have developmental course pre-requisites requirements which must be met. When this is the

case, the student should demonstrate of college readiness on an approved assessment or placement test (See CTE Test Score Requirements) prior to enrolling in the course. Students are encouraged to complete college readiness assessments prior to entry to the program.

11. A student who completes the CTE certificate or diploma may continue in the same traditional AAS program of study as long as they are still eligible for CCP. In order to continue, the program code should be changed to reflect the traditional AAS program code. The student type will remain CCPP and their student code will remain CTE.
12. Colleges are responsible for adhering to external agency guidelines that may restrict CCP students from enrolling in specific programs.
13. CCP students may not enroll in developmental courses.
14. CCP students may not audit courses.
15. Students enrolled in Adult High School, Adult Basic Education, or Adult Secondary Education are not eligible for Career and College Promise.

### CTE Test Score Requirements

Nearly all students qualify for enrollment in a Career and Technical Education pathway. However, courses within each pathway may have specific testing requirements.

14. If a student has met the testing criteria set forth by the
  1. College Transfer Test Score Requirements, then he/she will also meet all testing criteria for the CTE requirements.
  2. If a student has not met the testing criteria set forth by the College Transfer requirements, they will work with their CCW Advisor to determine testing pre-requisites according to the NCDAP or Accuplacer assessments.
  3. Most CTE courses do not have a testing prerequisite. However, certain course pre-requisites exist and must be adhered to (i.e. ACC-120 is a prerequisite for ACC-121, but neither course requires tests scores).



# Cooperative Innovative High School Pathway

## Eligibility Information

1. Cooperative Innovative High School Programs are located on college campuses, enroll 100 or fewer students per grade level, and provide opportunities for students to complete an associate degree program, diploma, certificate, or earn up to two years of college credit while completing a high school diploma within five years are defined as Cooperative Innovative High School Programs.
2. Eligibility requirements for Cooperative Innovative High School Programs are established jointly by local boards of education and local boards of trustees in accordance with G.S. 115C-238.50.
3. The AA/AS/AE/AFA/AAS may not be awarded prior to high school graduation verification. A student may be awarded a certificate or diploma prior to high school graduation.
4. Students pursuing credits beyond the initial transfer associate degree must provide documentation of justification based upon career pathway needs or transfer program requirements (i.e. bachelor degree plan published by the university). Approval must be granted by the high school principal or his/her designee and the college's chief academic officer or chief student development administrator prior to enrollment in a second transfer program.
5. The State Board of Community Colleges may waive the requirement that a Cooperative Innovative High School Program is located on the community college campus. Exceptions will be based on the local needs as outlined in the location waiver request. The approved waiver shall be maintained locally for documentation. The State Board of Community Colleges shall use the following factors to determine whether to approve location waivers:
  - a. Space availability
  - b. School Capacity
  - c. Proximity to the student population
  - d. Suitable, available space with equipment specific to the curriculum.
6. Cooperative Innovative High School Students may not audit courses.

Central Carolina Community College proudly partners with the Local Education Agencies in our service area. We currently offer three options for Cooperative Innovative High Schools:

**Chatham County:** The Chatham School of Science and Engineering

Principal: Mr. Bobby Dixon • [bdixon@chatham.k12.nc.us](mailto:bdixon@chatham.k12.nc.us) • 919-663-5899

<https://sites.google.com/a/chatham.k12.nc.us/chatham-county-school-of-science-engineering/home>

**Harnett County:** Harnett County Early College

Principal: Mr. Walter McPherson • [wmcpherson@harnett.k12.nc.us](mailto:wmcpherson@harnett.k12.nc.us) • 910-814-3470

<https://www.harnett.k12.nc.us/hcec>

**Lee County:** Lee Early College

Principal: Ms. Kisha Derr • [kderr.lec@lee.k12.nc.us](mailto:kderr.lec@lee.k12.nc.us) • 919-888-4502

<http://www.lee.k12.nc.us/leearly>

Each Early College has its own application process and eligibility criteria. Please reach out to the school directly if you would like more information.

# Grading Policy

Students who elect to participate in the Career & College Promise program will be viewed as college students at Central Carolina Community College, with the same rights, responsibilities, and expectations as any other CCCC student. As such, final grades for all CCCC classes will be reported by the program director to the high school in letter format: A, B, C, D, F, W, and WF. Letter grades only will be issued for all official CCCC documentation (i.e. Aviso, WebAdvisor, transcript, etc.). Each school system (Chatham, Harnett, and Lee County Schools) will determine its own policy for reporting this letter grade on the student's high school transcript and report card.

More information about CCCC's grading and other policies can be found online in our Student Handbook: <http://www.cccc.edu/handbook/>

# Textbook/Fee Policy

Although course tuition is provided at no charge through the Career and College Promise program, textbooks and course fees are not provided by Central Carolina Community College.

However, it has been common practice in Chatham, Harnett, and Lee County Schools that textbooks and course fees are provided by the school system for students during the fall and spring semesters. These textbooks are on loan to the students and should be returned to their high school at the end of each semester. Summer course costs are generally the responsibility of the student, with the exception of students enrolled in one of the Early College programs.

**This practice is subject to change at any time. Students are encouraged to check with their high school for the most up-to-date information regarding textbooks and course fees.**

Private, home school, and students who attend public high schools outside CCCC's three-county service area will be responsible for providing their own textbooks and other course materials.

# Graduation Policy

A College Transfer Pathway (CTP) student may complete the AA/AS/AE/ADN pathway and then continue towards completion of the AA/AS/AE/AGE-Nursing. The AA/AS/AE/AGE-Nursing may not be awarded prior to high school graduation verification.

A Career & Technical Education (CTE) Pathway student may be awarded a certificate or diploma prior to high school graduation. A student may complete the CTE certificate or diploma and then continue towards completion of the AAS. The AAS may not be awarded prior to high school graduation verification.

# Meet Your Advisor/Contact Us

In Fall 2014, the Central Carolina Works program was implemented in each of our service area public high schools. The CCW Advisor at the school assists with career exploration, course selection, and more!

## Chatham County

Chatham Central High School

Advisor: Kelly Dorman

[kdorman@cccc.edu](mailto:kdorman@cccc.edu)

919-837-2251

Northwood High School

Advisor: TBD

919-542-4181

Jordan-Matthews High School

Advisor: Steve Heesacker (Chatham County Lead)

[dheesacker@cccc.edu](mailto:dheesacker@cccc.edu)

919-742-2916

## Harnett County

Harnett Central High School

Advisor: Megan Burgess

[mferguson@cccc.edu](mailto:mferguson@cccc.edu)

919-639-6161

Triton High School

Advisor: Tracy Autry (Harnett County Lead)

[tautry@cccc.edu](mailto:tautry@cccc.edu)

910-897-8123

Overhills High School

Advisor: Katie Surber

[ksurber@cccc.edu](mailto:ksurber@cccc.edu)

910-436-1436

Western Harnett High School

Advisor: Ben Thomas

[bthomas@cccc.edu](mailto:bthomas@cccc.edu)

919-499-5113

## Lee County

Lee County High School

Advisor: Cara Simmons

[csimmons@cccc.edu](mailto:csimmons@cccc.edu)

919-776-7541

Southern Lee High School

Advisor: Lara Abels (Lee County Lead)

[labels@cccc.edu](mailto:labels@cccc.edu)

919-718-2400

## Program Administration

Central Carolina Community College

Director of Secondary Partnerships: Mary Schmid

[mschmid@cccc.edu](mailto:mschmid@cccc.edu)

919-718-7370 (other high schools)

Central Carolina Community College

Director of Admissions: Adam Wade

[awade@cccc.edu](mailto:awade@cccc.edu)

919-718-7526 (home school students)

For additional contact information, please visit our website: <http://www.cccc.edu/high-school/ccp/>  
Disclaimer: Information in this guide is subject to change. Our website has the most current information.

# Pathway Breakdown by County

<b>College Transfer Pathways</b>	<b>Chatham</b>	<b>Harnett</b>	<b>Lee</b>
Pre-Associate in Arts (P1012C)	X	X	X
Pre-Associate in Engineering (P1052C)	X	X	X
Pre-Associate in Science (P1042C)	X	X	X
Pre-Associate Degree Nursing (P1032C)	X	X	X
<b>CTE Certificate Pathways</b>	<b>Chatham</b>	<b>Harnett</b>	<b>Lee</b>
Accounting Foundations (C25100CW)	X	X	X
Audio/Radio Production & Performance (C30120CW)		X	X
Automotive Systems Technology (C60160CW)	X		
Barbering (C55110CP)		X	
Business Foundations (C25120CW)	X	X	X
Cosmetology (C55140CP)		X	X
Criminal Justice Foundations (C55180CW)	X	X	X
Culinary Arts (C55150CP)	X	X	X
Dental Assisting (C45240CW)	X	X	X
Forensic Science (C5518ACW)	X		X
Hardware/Troubleshooting Repair (C25590CH)			X
Health and Fitness Science (C45630CW)			X
Health Information Technology (C45360CW)	X	X	X
Healthcare Administration Foundations (C25200CW)	X	X	X
Industrial Systems Technology (C50240CW)			X
Infant/Toddler Care (C55290CP)	X	X	X
Internet Computing Core (IC3) (C25590CI)			X
Library Basics (C55310CW)	X	X	X
Manicuring/Nail Technology (C55400CW)	X	X	
Veterinary Medical Technology (C45780CW)	X	X	X
Welding Technology (C50420CW)		X	
<b>CTE Diploma Pathways</b>	<b>Chatham</b>	<b>Harnett</b>	<b>Lee</b>
Accounting (D25100CW)	X	X	X
Automotive Restoration Technology (D60140CW)		X	X
Automotive Systems Technology (D60160CW)	X		
Broadcasting & Production Technology (D30120CW)		X	X
Business Administration (D25120CW)	X	X	X
Computer-Aided Drafting Technology (D50150CW)			X
Computer-Integrated Machining (D50210CW)		X	

<b>CTE Diploma Pathways Continued</b>	<b>Chatham</b>	<b>Harnett</b>	<b>Lee</b>
Criminal Justice Technology (C55180CW)	X	X	X
Early Childhood Education (D55220CW)	X	X	X
Electronics Engineering Technology (D40200CW)		X	X
Human Services Technology (D45380CW)	X	X	X
Industrial Systems Technology (D50240CW)	X		X
Information Technology (D25590CW)			X
Laser and Photonics Technology (D40280CP)		X	X
Library and Information Technology (D55310CW)	X	X	X
Medical Assisting (D45400CW)	X	X	X
Medical Office Administration (D25310CW)	X	X	X
Motorcycle Mechanics (D60260CW)		X	X
Nurse Aide (D45970CW)	X	X	X
Sustainability Technologies (D40370CW)	X		
Sustainable Agriculture (D15410CW)	X		
Welding Technology (D50420CW)		X	

## College vs High School Credit

Per agreement between the North Carolina Community College System and the North Carolina Department of Public Instruction, the following credit will be awarded:

<b>Semester Credit Hours:</b>	<b>1-2</b>	<b>3-4</b>	<b>5-8</b>	<b>9+</b>	<b>(on college transcript)</b>
<b>High School Credits:</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>(on high school transcript)</b>

College courses identified in the Comprehensive Articulation Agreement (CAA) will receive the same course weight as AP and IB courses. Select CTE courses receive inherently honors weight.

Example:

ACA-122:	1 college credit	0 high school credits
ART-111:	3 college credits	1 high school credit (part of CAA; same weight as AP/IB)
HUM-110:	3 college credits	1 high school credit (not part of CAA; standard weight)
NAS-101:	6 college credits	2 high school credits (inherently Honors; Honors weight)
BAR-111:	8 college credits	2 high school credits (not part of CAA, standard weight)

Credit awarded subject to change per DPI and NCCCS policy.

# College Transfer Pathways

The courses offered in the Career & College Promise College Transfer Pathways are part of the Comprehensive Articulation Agreement (CAA), which is a statewide agreement governing the transfer of credits between NC community colleges and NC public universities that has as its objective the smooth transfer of credit. All courses, with the exception of the optional foreign language classes, are part of the Universal General Education Transfer Component (UGETC) list. If a student obtains a C or above in a UGETC course, then transferability of that specific course is guaranteed, regardless of whether or not the student completes the transfer degree.

## **Pre-Associate in Arts (32-41\* SHC)**

The CCP College Transfer Pathway Leading to the Associate in Arts is designed for high school juniors and seniors who wish to begin study toward the Associate in Arts degree and a baccalaureate degree in a non-STEM major.

## **Pre-Associate in Engineering (34-50\*<sup>^</sup> SHC)**

The CCP College Transfer Pathway Leading to the Associate in Engineering is designed for high school juniors and seniors who wish to begin study toward the Associate in Engineering degree and a baccalaureate degree in a STEM or technical major.

### **<sup>^</sup> PREREQUISITE GENERAL EDUCATION HOURS (0-8 SHC)**

Students in the Pre-AE pathway who do not place directly into MAT 271 must complete MAT 171 and MAT 172 prior to enrolling in MAT 271 Calculus I.

## **Pre-Associate in Science (35-43\* SHC)**

The CCP College Transfer Pathway Leading to the Associate in Science is designed for high school juniors and seniors who wish to begin study toward the Associate in Science degree and a baccalaureate degree in a STEM or technical major.

### **\*OPTIONAL GENERAL EDUCATION HOURS (0-8 SHC)**

A student may take up to 8 SHC of foreign language courses and accompanying labs, in a single language, designated as General Education in the CAA as a part of this pathway. These courses are not a part of the Universal General Education Transfer Component. Students who complete these courses with a grade of "C" or better will receive transfer credit. The receiving university will determine whether the courses will count as general education, pre-major, or elective credit.

Central Carolina Community College offers the following options for foreign language:

\_\_\_ CHI 111 Elementary Chinese I

\_\_\_ CHI 112 Elementary Chinese II

\_\_\_ SPA 111 Elementary Spanish I

\_\_\_ SPA 112 Elementary Spanish II

## **Associate Degree Nursing (58-60 SHC)**

The CCP ADN Pathway is designed for high school juniors and seniors who wish to begin their educational studies toward the Associate in Nursing degree and a Baccalaureate degree in Nursing. The pathway is based on Blocks 1 through 3 of the Uniform Articulation Agreement (UAA) between the University of North Carolina's Registered Nurse to Bachelor of Science in Nursing programs and the North Carolina Community College Associate Degree Nursing Programs which was approved by the State Board of Community Colleges and the UNC Board of Governors in February 2015.

A student who completed an AAS in Nursing with a GPA of at least 2.0 and a grade of C or better in the RN to BSN AA courses listed below and who holds a current unrestricted license as a Registered Nurse in North Carolina will have fulfilled the UNC institutions lower-division general education requirements as well as nursing program entry requirements. However, because nursing program admissions are competitive, no student is guaranteed admission to the program of his or her choice.

For additional information about Blocks 2 and 3 of the Five Block Degree Plan located within the UAA between the University of North Carolina RN to BSN please visit:

**<http://www.nccommunitycolleges.edu/academic-programs/college-transferarticulation-agreements/uniform-articulation-agreement-rn-bsn>**

# Pre-Associate in Arts (P1012C)

## **English Composition (6 SHC) (two required courses)**

- ENG 111 Writing & Inquiry (3 SHC)
- ENG 112 Writing/Research in the Disciplines (3 SHC)

## **Communication/Humanities/Fine Arts (9 SHC) (select three courses from at least two different disciplines)**

- COM 231 Public Speaking (3 SHC)
- ART 111 Art Appreciation (3 SHC)
- ART 114 Art History Survey I (3 SHC)
- ART 115 Art History Survey II (3 SHC)
- ENG 231 American Literature I (3 SHC)
- ENG 232 American Literature II (3 SHC)
- ENG 241 British Literature I (3 SHC)
- ENG 242 British Literature II (3 SHC)
- MUS 110 Music Appreciation (3 SHC)
- MUS 112 Introduction to Jazz (3 SHC)
- PHI 215 Philosophical Issues (3 SHC)
- PHI 240 Introduction to Ethics (3 SHC)

## **Social/Behavioral Sciences (9 SHC) (select three courses from at least two different disciplines)**

- ECO 251 Principles of Microeconomics (3 SHC)
- ECO 252 Principles of Macroeconomics (3 SHC)
- HIS 111 World Civilizations I (3 SHC)
- HIS 112 World Civilizations II (3 SHC)
- HIS 131 American History I (3 SHC)
- HIS 132 American History II (3 SHC)
- POL 120 American Government (3 SHC)
- PSY 150 General Psychology (3 SHC)
- SOC 210 Introduction to Sociology (3 SHC)

## **Math (3-4 SHC) (select one required course)**

- MAT 143 Quantitative Literacy (3 SHC)
- MAT 152 Statistical Methods I (4 SHC)
- MAT 171 Precalculus Algebra (4 SHC)

## **Natural Sciences (4 SHC) (select one required course)**

- BIO 110 Principles of Biology (4 SHC)
- BIO 111 General Biology I (4 SHC)
- CHM 151 General Chemistry I (4 SHC)
- GEL 111 Introductory Geology (4 SHC)
- PHY 110 Conceptual Physics (3 SHC) and PHY 110A Conceptual Physics Lab (1 SHC)

## **Academic Transition (1 SHC) (one required course)**

- ACA 122 College Transfer Success (1 SHC)

**Minimum Total Semester Hours Credit Required: 32**



# Pre-Associate in Engineering (P1052C)

## **English Composition (6 SHC) (two required courses)**

- ENG 111 Writing & Inquiry (3 SHC)
- ENG 112 Writing/Research in the Disciplines (3 SHC)

## **Communication/Humanities/Fine Arts (3 SHC) (select one required course)**

- COM 231 Public Speaking (3 SHC)
- ART 111 Art Appreciation (3 SHC)
- ART 114 Art History Survey I (3 SHC)
- ART 115 Art History Survey II (3 SHC)
- ENG 231 American Literature I (3 SHC)
- ENG 232 American Literature II (3 SHC)
- ENG 241 British Literature I (3 SHC)
- ENG 242 British Literature II (3 SHC)
- MUS 110 Music Appreciation (3 SHC)
- MUS 112 Introduction to Jazz (3 SHC)
- PHI 215 Philosophical Issues (3 SHC)
- PHI 240 Introduction to Ethics (3 SHC)

## **Social/Behavioral Sciences (3 SHC) (one required course)**

- ECO 251 Principles of Microeconomics (3 SHC)

## **Math (8 SHC) (one required course) (two required courses)**

- MAT 271 Calculus I (4 SHC)
- MAT 272 Calculus II (4 SHC)

## **Natural Science (8 SHC) (select two required courses)**

- CHM 151 General Chemistry I (4 SHC)
- PHY 251 General Physics I (4 SHC)
- PHY 252 General Physics II (4 SHC)

## **Other Required Hours (5 SHC) (two required courses)**

- DFT 170 Engineering Graphics (3 SHC)
- EGR 150 Introduction to Engineering (2 SHC)

## **Academic Transition (1 SHC) (one required course)**

- ACA 122 College Transfer Success (1 SHC)

## **Minimum Total Semester Hours Credit Required: 34\***

\*Students needing to take MAT-171 and 172 prior to enrolling in MAT-271 will have 42 hours required.

# Pre-Associate in Science (P1042C)

## English Composition (6 SHC) (two required courses)

- \_\_\_ ENG 111 Writing & Inquiry (3 SHC)
- \_\_\_ ENG 112 Writing/Research in the Disciplines (3 SHC)

## Communication/Humanities/Fine Arts (6 SHC) (select two courses from at least two different disciplines)

- \_\_\_ COM 231 Public Speaking (3 SHC)
- \_\_\_ ART 111 Art Appreciation (3 SHC)
- \_\_\_ ART 114 Art History Survey I (3 SHC)
- \_\_\_ ART 115 Art History Survey II (3 SHC)
- \_\_\_ ENG 231 American Literature I (3 SHC)
- \_\_\_ ENG 232 American Literature II (3 SHC)
- \_\_\_ ENG 241 British Literature I (3 SHC)
- \_\_\_ ENG 242 British Literature II (3 SHC)
- \_\_\_ MUS 110 Music Appreciation (3 SHC)
- \_\_\_ MUS 112 Introduction to Jazz (3 SHC)
- \_\_\_ PHI 215 Philosophical Issues (3 SHC)
- \_\_\_ PHI 240 Introduction to Ethics (3 SHC)

## Social/Behavioral Sciences (6 SHC) (select two courses from at least two different disciplines)

- \_\_\_ ECO 251 Principles of Microeconomics (3 SHC)
- \_\_\_ ECO 252 Principles of Macroeconomics (3 SHC)
- \_\_\_ HIS 111 World Civilizations I (3 SHC)
- \_\_\_ HIS 112 World Civilizations II (3 SHC)
- \_\_\_ HIS 131 American History I (3 SHC)
- \_\_\_ HIS 132 American History II (3 SHC)
- \_\_\_ POL 120 American Government (3 SHC)
- \_\_\_ PSY 150 General Psychology (3 SHC)
- \_\_\_ SOC 210 Introduction to Sociology (3 SHC)

## Math (8 SHC) (one required course) (select two required courses)

- \_\_\_ MAT 171 Precalculus Algebra (4 SHC)
- \_\_\_ MAT 172 Precalculus Trigonometry (4 SHC)
- \_\_\_ MAT 263 Brief Calculus (4 SHC)
- \_\_\_ MAT 271 Calculus I (4 SHC)
- \_\_\_ MAT 272 Calculus II (4 SHC)

## Natural Sciences (8 SHC) (select two required courses)

- \_\_\_ BIO 110 Principles of Biology (4 SHC)
- \_\_\_ BIO 111 General Biology I (4 SHC)     **and**     BIO 112 General Biology II (4 SHC)
- \_\_\_ CHM 151 General Chemistry I (4 SHC)     **and**     CHM 152 General Chemistry II (4 HSC)
- \_\_\_ GEL 111 Introductory Geology (4 SHC)
- \_\_\_ PHY 110 Conceptual Physics (3 SHC)     **and**     PHY 110A Conceptual Physics Lab (1 SHC)
- \_\_\_ PHY 151 College Physics I (4 SHC)     **and**     PHY 152 College Physics II (4 SHC)
- \_\_\_ PHY 251 General Physics I (4 SHC)     **and**     PHY 252 General Physics II (4 SHC)

## Academic Transition (1 SHC) (one required course)

- \_\_\_ ACA 122 College Transfer Success (1 SHC)

**Minimum Total Semester Hours Credit Required: 35**

# Pre-Associate Degree Nursing (P1032C)

## **English Composition (6 SHC) (select two courses, including ENG-111)**

\_\_\_ ENG 111 Writing & Inquiry (3 SHC)

\_\_\_ ENG 112 Writing/Research in the Disc. (3 SHC)    or    \_\_\_ ENG 114 Prof Research & Reporting (3 SHC)

## **Humanities/Fine Arts (3 SHC) (select one course)**

\_\_\_ ART 111 Art Appreciation (3 SHC)

\_\_\_ ART 114 Art History Survey I (3 SHC)

\_\_\_ ART 115 Art History Survey II (3 SHC)

\_\_\_ HUM 115 Critical Thinking (3 SHC)

\_\_\_ MUS 110 Music Appreciation (3 SHC)

\_\_\_ MUS 112 Introduction to Jazz (3 SHC)

\_\_\_ PHI 215 Philosophical Issues (3 SHC)

\_\_\_ PHI 240 Introduction to Ethics (3 SHC)

## **Social/Behavioral Sciences (6 SHC) (the following courses are required)**

\_\_\_ PSY 150 General Psychology (3 SHC)

\_\_\_ PSY 241 Developmental Psychology (3 SHC)

## **Natural Sciences (8 SHC)**

\_\_\_ BIO 168 Anatomy and Physiology I (4 SHC) and BIO 169 Anatomy & Physiology II (4 SHC)

## **Other Required Hours (1 SHC)**

\_\_\_ ACA 122 College Transfer Success (1 SHC)

**Minimum Total Semester Hours Credit Required: 24**

# Career & Technical Education

## Pathways

### **Information Specific to CTE Pathway Programs of Study**

The college must already have received State Board approval to offer the traditional program in order to file a POS for a Career Technical Education pathway (i.e. the college must be approved for Welding in order to file a POS to offer a Welding CTE pathway.)

The college must utilize the current curriculum standard as the guideline for CTE Pathways. The curriculum standards are located at: <http://www.nccommunitycolleges.edu/academic-programs/curriculum-standards>.

The program of study must consist of specific course requirements and may not include elective options (pick lists) for students.

The CTE certificate program of study must include either a minimum of 12 semester hours credit derived from the core of the curriculum standard or consist of courses in a local traditional certificate as listed in the college's catalog. Local certificates may not include course pick lists.

Local certificates or diplomas submitted as CTE certificate pathways must include the following college comment: Courses included in this CTE program of study are offered in the college's traditional, local certificate as listed in the college catalog.

The college may submit more than one CTE certificate/diploma for a specific program in order to accommodate the needs of various high school districts. The college must file each as a separate certificate/diploma(s).

# Accounting

Available in:  Chatham  Harnett  Lee

## Accounting Foundations Certificate – C25100CW

Course	Title	College Cred	High School Cred
ACC-120*	Principles of Financial Accounting	4	1
ACC-121*	Principles of Managerial Accounting	4	1
ECO-251*	Principles of Microeconomics	3	1
ECO-252*	Principles of Macroeconomics	3	1
<b>4 total courses</b>		<b>14</b>	<b>4</b>

\*Provides one extra quality point when calculating high school GPA.

## Accounting Diploma – D25100CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
ACC-120*	Principles of Financial Accounting	4	1
ACC-121*	Principles of Managerial Accounting	4	1
ACC-122	Principles of Accounting II	3	1
ACC-129	Individual Income Taxes	3	1
ACC-130	Business Income Taxes	3	1
ACC-140	Payroll Accounting	2	0
ACC-150	Accounting Software Applications	2	0
ART-111*	Art Appreciation	3	1
BUS-110*	Introduction to Business	3	1
BUS-115*	Business Law I	3	1
BUS-125	Personal Finance	3	1
CIS-110*	Introduction to Computers	3	1
COM-231*	Public Speaking	3	1
ECO-251*	Principles of Microeconomics	3	1
<b>15 total courses</b>		<b>43</b>	<b>12</b>

\*Provides one extra quality point when calculating high school GPA.

## Suggested Sequencing:

Fall: ACC-120, ECO-251 = 7 credit hours (online in high school schedule)

Spring: ACC-121, ECO-252 = 7 credit hours (online in high school schedule)

# Automotive Restoration Technology

Available in: \_\_\_ Chatham \_X\_ Harnett \_X\_ Lee

## Automotive Restoration Technology Diploma – D60140CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
ARS-112	Auto Restoration Research	3	1
ARS-113	Automobile Upholstery	4	1
ARS-114	Restoration Skills I	4	1
ARS-117	Automotive Engines	2	0
ARS-118	Wood & Metal Restoration	3	1
ARS-131	Chassis and Drive Trains	3	1
AUB-111	Painting & Refinishing I	4	1
AUB-112	Painting & Refinishing II	4	1
COM-231*	Public Speaking	3	1
HUM-110*	Technology and Society	3	1
TRN-110	Intro to Transportation Tech	2	0
TRN-120	Basic Transportation Electricity	5	2
TRN-180	Basic Welding for Transportation	3	1
<b>14 total courses</b>		<b>44</b>	<b>12</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

#### **Harnett/Lee County Option (West Harnett Center)**

Fall: AUB-111 = 4 credit hours (4<sup>th</sup> block in high school schedule)

Spring: AUB-112 = 4 credit hours (4<sup>th</sup> block in high school schedule)

# Automotive Systems Technology

Available in:  Chatham  Harnett  Lee

## Automotive Systems Technology Certificate– C60160CW

Course	Title	College Cred	High School Cred
AUT-151	Brake Systems	3	1
AUT-151A	Brake Systems Lab	1	0
AUT-163	Advanced Auto Electricity	3	1
AUT-163A	Advanced Auto Electricity Lab	1	0
AUT-181	Engine Performance I	3	1
AUT-181A	Engine Performance I Lab	1	0
TRN-120	Basic Transportation Electricity	5	2
<b>7 total courses</b>		<b>17</b>	<b>5</b>

## Automotive Systems Technology Diploma – D60160CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
AUT-114	Safety and Emissions	2	1
AUT-114A	Safety and Emissions Lab	1	0
AUT-141	Suspension & Steering Systems	3	1
AUT-141A	Suspension & Steering Systems Lab	1	0
AUT-151	Brake Systems	3	1
AUT-151A	Brake Systems Lab	1	0
AUT-163	Advanced Auto Electricity	3	1
AUT-163A	Advanced Auto Electricity Lab	1	0
AUT-181	Engine Performance I	3	1
AUT-181A	Engine Performance I Lab	1	0
AUT-183	Engine Performance II	4	1
CIS-111	Basic PC Literacy	2	0
COM-231*	Public Speaking	3	1
HUM-110*	Technology and Society	3	1
TRN-110	Intro to Transportation Tech	2	0
TRN-120	Basic Transportation Electricity	5	2
TRN-140	Transportation Climate Control	2	1
TRN-140A	Transportation Climate Control Lab	2	0
<b>19 total courses</b>		<b>43</b>	<b>11</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

#### **Chatham County Option (Pittsboro)**

Fall Year One: TRN-120 = 5 credit hours (1<sup>st</sup> or 2<sup>nd</sup> block in high school schedule)

Spring Year One: AUT-151/A = 4 credit hours (1<sup>st</sup> or 2<sup>nd</sup> block in high school schedule)

Fall Year Two: AUT-163/A = 4 credit hours (4<sup>th</sup> block in high school schedule)

Spring Year Two: AUT-181/A = 4 credit hours (4<sup>th</sup> block in high school schedule)

# Barbering

Available in: \_\_\_ Chatham X Harnett \_\_\_ Lee

## Barbering Certificate – C55110CP

Course	Title	College Cred	High School Cred
BAR-111	Barbering Concepts I	4	1
BAR-112	Barbering Clinic I	8	2
BAR-113	Barbering Concepts II	4	1
BAR-114	Barbering Clinic II	8	2
<b>4 total courses</b>		<b>24</b>	<b>6</b>

### Suggested Sequencing:

#### **Harnett County Option (Dunn)**

Fall Year One: BAR-111A, BAR-112A = 6 credit hours (4<sup>th</sup> block in high school schedule)

Spring Year One: BAR-111B, BAR-112B = 6 credit hours (4<sup>th</sup> block in high school schedule)



# Broadcasting and Production Technology

Available in: \_\_\_ Chatham \_X\_ Harnett \_X\_ Lee

## Audio/Radio Production Certificate – C30120CW\*\*

Course	Title	College Cred	High School Cred
BPT-121	Broadcast Speech I	3	1
BPT-122	Broadcast Speech II	3	1
BPT-131	Audio/Radio Production I	4	1
BPT-132	Audio/Radio Production II	4	1
<b>4 total courses</b>		<b>14</b>	<b>4</b>

\*\* Certificate pending approval for 2018FA

## Broadcasting and Production Technology Diploma – D30120CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
BPT-110	Intro to Broadcasting	3	1
BPT-111	Broadcast Law & Ethics	3	1
BPT-112	Broadcast Writing	4	1
BPT-113	Broadcast Sales	3	1
BPT-121	Broadcast Speech I	3	1
BPT-131	Audio/Radio Production I	4	1
BPT-135	Radio Performance I	2	0
BPT-215	Broadcast Programming	3	1
BPT-231	Video/TV Production I	4	1
BPT-232	Video/TV Production II	4	1
COM-231*	Public Speaking	3	1
SOC-210*	Introduction to Sociology	3	1
<b>13 total courses</b>		<b>40</b>	<b>11</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

#### **Harnett County Option (Lillington Campus)**

Fall: BPT-131A, BPT-135A = 3 credit hours (4<sup>th</sup> block in high school schedule)

Spring: BPT-131B, BPT-135B = 3 credit hours (4<sup>th</sup> block in high school schedule)

#### **Lee County Option (Sanford Campus)**

Fall: BPT-121, BPT-131 = 7 credit hours (3<sup>rd</sup> and 4<sup>th</sup> block in high school schedule)

Spring: BPT-122, BPT-132 = 7 credit hours (3<sup>rd</sup> and 4<sup>th</sup> block in high school schedule)

# Business Administration

Available in:  Chatham  Harnett  Lee

## Business Foundations Certificate – C25120CW

Course	Title	College Cred	High School Cred
BUS-110*	Introduction to Business	3	1
BUS-115*	Business Law I	3	1
ECO-251*	Principles of Microeconomics	3	1
ECO-252*	Principles of Macroeconomics	3	1
<b>4 total courses</b>		<b>12</b>	<b>4</b>

\*Provides one extra quality point when calculating high school GPA.

## Business Administration Diploma – D25120CW

Course	Title	College Cred	High School Cred
ACC-115	College Accounting	4	1
BUS-110*	Introduction to Business	3	1
BUS-115*	Business Law I	3	1
BUS-137*	Principles of Management	3	1
BUS-151	People Skills	3	1
BUS-153	Human Resources Management	3	1
BUS-280	REAL Small Business	4	1
CIS-110*	Introduction to Computers	3	1
COM-231*	Public Speaking	3	1
ECO-251*	Principles of Microeconomics	3	1
MKT-120	Principles of Marketing	3	1
MKT-220	Advertising & Sales Promotion	3	1
MKT-223	Customer Service	3	1
MKT-232	Social Media Marketing	4	1
WEB-214	Social Media	3	1
<b>15 total courses</b>		<b>48</b>	<b>15</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

Fall: BUS-110, ECO-251= 6 credit hours (online in high school schedule)

Spring: BUS-115, ECO-252 = 6 credit hours (online in high school schedule)

# Computer-Aided Drafting Technology

Available in: \_\_\_ Chatham \_\_\_ Harnett X Lee

This program has courses that require test scores.

## Computer-Aided Drafting Technology Diploma – D50150CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
BPR-111	Print Reading	2	0
BPR-121	Blueprint Reading-Mechanical	2	0
CIS-110*	Introduction to Computers	3	1
DDF-211	Design Process I	4	1
DFT-111	Technical Drafting I	2	0
DFT-151	CAD I	3	1
DFT-152	CAD II	3	1
DFT-153	CAD III	3	1
DFT-154	Intro to Solid Modeling	3	1
DFT-211	Gears, Cams, & Pulleys	2	0
DFT-254	Intermediate Solid Modeling/Rendering	3	1
ENG-111*^	Writing & Inquiry	3	1
MAT-121^	Algebra/Trigonometry I	3	1
MEC-161	Manufacturing Processes I	3	1
MEC-161A	Manufacturing Processes I Lab	1	0
<b>16 total courses</b>		<b>41</b>	<b>10</b>

\*Provides one extra quality point when calculating high school GPA.

^Requires test scores.

### **Suggested Sequencing:**

#### **Lee County Option (Sanford)**

Fall: BPR-111, DFT-111, DFT-151 = 7 credit hours (1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> block in high school schedule)

Spring: BPR-121, CIS-110, DFT-153 = 8 credit hours (1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> block in high school schedule)

# Computer-Integrated Machining

Available in: \_\_\_ Chatham X Harnett \_\_\_ Lee

## Computer-Integrated Machining Diploma – D50120CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
BPR-111	Print Reading	2	0
BPR-121	Blueprint Reading- Mechanical	2	0
CIS-111	Basic PC Literacy	2	0
COM-231*	Public Speaking	3	1
HUM-110*	Technology and Society	3	1
MAC-111	Machining Technology I	6	2
MAC-112	Machining Technology II	6	2
MAC-113	Machining Technology III	6	2
MAC-124	CNC Milling	2	0
MAC-151	Machining Calculations	2	0
MAC-171	Measure/Material & Safety	1	0
MEC-142	Physical Metallurgy	2	0
<b>13 total courses</b>		<b>38</b>	<b>8</b>

\*Provides one extra quality point when calculating high school GPA.

^Requires test scores.

### Suggested Sequencing:

#### **Harnett Apprenticeship:**

Summer: MAC-111A = 3 credit hours

Fall: MAC-111B, BPR-111, MEC-142 = 7 credit hours (2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup> block in high school schedule)

Spring: MAC-171, BPR-121, MAC-124, MAC-151 = 7 credit hours (2<sup>nd</sup>, 3<sup>rd</sup> & 4<sup>th</sup> block in high school schedule)

## Cosmetology

Available in: \_\_\_ Chatham \_X\_ Harnett \_X\_ Lee

### Cosmetology Foundations Certificate – C55140CP

Course	Title	College Cred	High School Cred
COS-111	Cosmetology Concepts I	4	1
COS-112	Salon I	8	2
COS-113	Cosmetology Concepts II	4	1
COS-114	Salon II	8	2
COS-115	Cosmetology Concepts III	4	1
COS-116	Salon III	8	2
COS-223	Contemporary Hair Coloring	2	0
<b>7 total courses</b>		<b>34</b>	<b>9</b>

### Suggested Sequencing:

#### **Lee County Option (Sanford)**

Fall Year One: COS-111A, COS-112A = 6 credit hours (3<sup>rd</sup> and 4<sup>th</sup> blocks in high school schedule)

Spring Year One: COS-111B, COS-112B = 6 credit hours (3<sup>rd</sup> and 4<sup>th</sup> blocks in high school schedule)

#### **Harnett County Option (Lillington)**

Fall Year One: COS-111A, COS-112A = 6 credit hours (4<sup>th</sup> block in high school schedule)

Spring Year One: COS-111B, COS-112B = 6 credit hours (4<sup>th</sup> block in high school schedule)

Fall Year Two: COS-113A, COS-114A = 6 credit hours (4<sup>th</sup> block in high school schedule)

Spring Year Two: COS-113B, COS-114B = 6 credit hours (4<sup>th</sup> block in high school schedule)

# Criminal Justice Technology

Available in:  Chatham  Harnett  Lee

## Criminal Justice Foundations Certificate – C55180CW

Course	Title	College Cred	High School Cred
CJC-111*	Introduction to Criminal Justice	3	1
CJC-112	Criminology	3	1
CJC-113	Juvenile Justice	3	1
CJC-132	Court Procedure & Evidence	3	1
CJC-212	Ethics & Community Relations	3	1
CJC-214	Victimology	3	1
<b>6 total courses</b>		<b>18</b>	<b>6</b>

## Criminal Justice Technology Diploma – D55180CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
CJC-111*	Introduction to Criminal Justice	3	1
CJC-112	Criminology	3	1
CJC-113	Juvenile Justice	3	1
CJC-131	Criminal Law	3	1
CJC-132	Court Procedure & Evidence	3	1
CJC-141	Corrections	3	1
CJC-212	Ethics & Community Relations	3	1
CJC-214	Victimology	3	1
CJC-221	Investigative Principles	3	1
CJC-231	Constitutional Law	3	1
COM-231*	Public Speaking	3	1
PSY-150*	General Psychology	3	1
<b>17 total courses</b>		<b>38</b>	<b>16</b>

\*Provides one extra quality point when calculating high school GPA.

### **Suggested Sequencing:**

Fall: CJC-112, CJC-113 = 6 credit hours (online or seated various blocks in high school schedule)

Spring: CJC-132, CJC-214 = 6 credit hours (online or seated various blocks in high school schedule)

Fall or Spring: CJC-111, CJC-212 = 6 credit hours (online or seated various blocks in high school schedule)

#### **Harnett Central High School will offer:**

Fall: 112/113 4<sup>th</sup> period

Spring: 111/212 3<sup>rd</sup> period, 132/214 4<sup>th</sup> period

#### **Triton High School will offer:**

Fall: 112/113 1<sup>st</sup> period, 111/212 2<sup>nd</sup> period

Spring: 132/214 1<sup>st</sup> period

#### **Lee County Schools will offer on Sanford Main Campus:**

Fall: 112/113 4<sup>th</sup> period

Spring: 132/214 4<sup>th</sup> period

## Culinary Arts

Available in:  Chatham  Harnett  Lee

### Culinary Arts Certificate – C55150CP

Course	Title	College Cred	High School Cred
CUL-110	Sanitation & Safety	2	0
CUL-140	Culinary Skills I	5	2
CUL-140A	Culinary Skills I Lab	1	0
CUL-160	Baking**	3	1
CUL-240	Culinary Skills II	5	2
CUL-240A	Culinary Skills II Lab	1	0
<b>6 total courses</b>		<b>17</b>	<b>5</b>

\*\* Course change pending approval for 2018FA (was previously CUL-170)

### Suggested Sequencing:

**Chatham County (Pittsboro), Harnett County (Dunn), or Lee County (Sanford) Option:**

Fall or Spring: CUL-110, CUL-140/A, CUL-160, CUL-240/A = 17 credit hours (all day in high school schedule)

## Dental Assisting

Available in:  Chatham  Harnett  Lee

### Dental Assisting Certificate – C45240CW

Course	Title	College Cred	High School Cred
ACA-115	Success & Study Skills	1	0
DEN-100	Basic Orofacial Anatomy	2	0
DEN-101	Preclinical Procedures	7	2
DEN-103	Dental Sciences	2	0
DEN-111	Infection/Hazard Control	2	0
PSY-150*	General Psychology	3	1
<b>6 total courses</b>		<b>18</b>	<b>3</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

Fall Year One: ACA-115, DEN-100, PSY-150 = 6 credit hours (online in high school schedule)

Spring Year One: DEN-103, DEN-111 = 4 credit hours (online in high school schedule)

Fall Year Two: DEN-101 = 7 credit hours (TBD)

## Early Childhood Education

Available in:  Chatham  Harnett  Lee

This program has courses that require test scores.

### Infant/Toddler Care Certificate – C55290CP

Course	Title	College Cred	High School Cred
EDU-119	Intro to Early Childhood Education	4	1
EDU-131^	Child, Family & Community	3	1
EDU-144^	Child Development I	3	1
EDU-153^	Health, Safety & Nutrition	3	1
EDU-234^	Infants, Toddlers, & Twos	3	1
<b>5 total courses</b>		<b>16</b>	<b>5</b>

^Requires test scores.

### Early Childhood Education Diploma – D55220CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
CIS-110*	Introduction to Computers	3	1
COM-231*	Public Speaking	3	1
EDU-119	Intro to Early Childhood Education	4	1
EDU-131^	Child, Family & Community	3	1
EDU-144^	Child Development I	3	1
EDU-145^	Child Development II	3	1
EDU-146^	Child Guidance	3	1
EDU-151^	Creative Activities	3	1
EDU-153^	Health, Safety & Nutrition	3	1
EDU-221^	Children with Exceptional Needs	3	1
EDU-234^	Infants, Toddlers, & Twos	3	1
PSY-150*	General Psychology	3	1
<b>13 total courses</b>		<b>38</b>	<b>12</b>

\*Provides one extra quality point when calculating high school GPA.

^Requires test scores.

### Suggested Sequencing:

Fall Year One: EDU-119, EDU-131, EDU-144 = 10 credit hours (online in high school schedule)

Spring Year One: EDU-153, EDU-234, PSY-150 = 9 credit hours (online in high school schedule)



# Electronics Engineering Technology

Available in: \_\_\_ Chatham \_\_\_ Harnett X Lee

This program has courses that require test scores.

## Electronics Engineering Technology Diploma – D40200CP

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
CIS-110*	Introduction to Computers	3	1
EGR-131	Intro to Electronics Tech	2	0
ELC-131	Circuit Analysis I	4	1
ELC-131A	Circuit Analysis I Lab	1	0
ELN-131	Analog Electronics I	4	1
ELN-132	Analog Electronics II	4	1
ELN-133	Digital Electronics	4	1
ENG-111*^	Writing & Inquiry	3	1
MAT-121^	Algebra/Trigonometry I	3	1
MAT-122^	Algebra/Trigonometry II	3	1
PHY-131	Physics- Mechanics	4	1
PHY-133	Physics- Sounds and Light	4	1
<b>13 total courses</b>		<b>40</b>	<b>10</b>

\*Provides one extra quality point when calculating high school GPA.

^Requires test scores.

### **Suggested Sequencing:**

#### **Lee County Option (Sanford):**

Fall Year One: EGR-131, ACA-122 = 3 credit hours (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

Spring Year One: ELN-133, CIS-110 = 7 credit hours (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

Summer Year One: ENG-111 = 3 credit hours (online or seated)

Fall Year Two: MAT-121, ELC-131/A = 8 credit hours

Spring Year Two: ELN-131, PHY-131, MAT-122 = 11 credit hours

Summer Year Two: ELN-132, PHY-133 = 8 credit hours

#### **OR**

Fall Year One: MAT-121, EGR-131, ELC-131/A, ENG-111, ACA-122 = 14 credits

Spring Year One: MAT-122, PHY-131, ELN-131, ELN 133, = 15 credits

Summer Year One: ELN-132, PHY-133, CIS-110 = 11 credits

## Forensic Science

Available in:  Chatham  Harnett  Lee

### Forensic Science Foundations Certificate – C5518ACW\*\*

Course	Title	College Cred	High School Cred
CJC-111*	Introduction to Criminal Justice	3	1
CJC-114	Investigative Photography	2	0
CJC-131	Criminal Law	3	1
CJC-144	Crime Scene Processing	3	1
CJC-221	Investigative Principles	4	1
CJC-231	Constitutional Law	3	1
<b>5 total courses</b>		<b>18</b>	<b>5</b>

\*Provides one extra quality point when calculating high school GPA.

\*\* Certificate pending approval for 2018FA

### Suggested Sequencing:

#### **Northwood High School will offer:**

Fall: CJC-114, CJC-221 (seated, 1<sup>st</sup> block in high school schedule), plus CJC-111 (online)

Spring: CJC-144, CJC-231 (seated, 1<sup>st</sup> block in high school schedule), plus CJC-131 (online)

## Health and Fitness Science

Available in:  Chatham  Harnett  Lee

### Health and Fitness Science Certificate – C45630CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success**	1	0
HEA-112	First Aid & CPR	2	0
HFS-110	Exercise Science	4	1
HFS-111	Fitness & Exercise Testing I	4	1
HFS-116	Prevention & Care of Exercise Injuries	3	1
HFS-210	Personal Training	3	1
PED-117	Weight Training I	1	0
<b>7 total courses</b>		<b>18</b>	<b>4</b>

\*\* Course change pending approval for 2018FA (was previously ACA-115)

### Suggested Sequencing:

#### **Lee County Option (Sanford):**

Fall: HEA-112, HFS-110, HFS-111 = 10 credits (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

Spring: ACA-122, HFS-116, HFS-210, PED-117 = 8 credits (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

## Health Information Technology

Available in:  Chatham  Harnett  Lee

### Health Information Technology Certificate – C45360CW

Course	Title	College Cred	High School Cred
ACA-115	Success & Study Skills	1	0
HIT-110	Fundamentals of Health Information Mgmt	3	1
HIT-112	Health Law & Ethics	3	1
MED-121	Medical Terminology I	3	1
MED-122	Medical Terminology II	3	1
PSY-150*	General Psychology	3	1
<b>6 total courses</b>		<b>16</b>	<b>5</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

Fall: ACA-115, HIT-110, MED-121 = 7 credit hours (online in high school schedule)

Spring: PSY-150, HIS-112, MED-122 = 9 credit hours (online in high school schedule)

## Healthcare Management Technology

Available in:  Chatham  Harnett  Lee

### Healthcare Administration Foundations – C25200CW

Course	Title	College Cred	High School Cred
HMT-110	Intro to Healthcare Management	3	1
OST-141	Medical Terms I- Med Office	3	1
OST-142	Medical Terms II- Med Office	3	1
OST-149	Medical Legal Issues	3	1
<b>4 total courses</b>		<b>12</b>	<b>4</b>

### Suggested Sequencing:

Fall: HMT-110, OST-141 = 6 credit hours (online in high school schedule)

Spring: OST-142, OST-149 = 6 credit hours (online in high school schedule)

# Human Services Technology

Available in:  Chatham  Harnett  Lee

## Human Services Technology Diploma – D45380CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
COM-120	Interpersonal Communication	3	1
CIS-110*	Introduction to Computers	3	1
HSE-110	Introduction to Human Services	3	1
HSE-112	Group Process I	2	0
HSE-123	Interviewing Techniques	3	1
HSE-125	Counseling	3	1
HSE-210	Human Services Issues	2	0
HSE-225	Crisis Intervention	3	1
PSY-115	Stress Management	2	0
PSY-150*	General Psychology	3	1
PSY-241*	Developmental Psychology	3	1
SOC-210*	Introduction to Sociology	3	1
SOC-213*	Sociology of the Family	3	1
SOC-220*	Social Problems	3	1
SOC-232*	Social Context of Aging	3	1
<b>16 total courses</b>		<b>43</b>	<b>12</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

Fall Year One: ACA-122, HSE-110, PSY-150 = 7 credit hours (1<sup>st</sup> block or online in high school schedule)

Spring Year One: CIS-110, HSE-123, PSY-241 = 9 credit hours (1<sup>st</sup> and 2<sup>nd</sup> block or online in high school schedule)

Summer Year One: SOC-210 = 3 credit hours (online or seated)

Fall Year Two: HSE-112, HSE-225, SOC-213 = 8 credit hours (1<sup>st</sup> and 2<sup>nd</sup> block or online in high school schedule)

Spring Year Two: HSE-125, HSE-210, SOC-232 = 8 credit hours (1<sup>st</sup> and 2<sup>nd</sup> block or online in high school schedule)

# Industrial Systems Technology

Available in:   X   Chatham      Harnett   X   Lee

## Industrial Systems Technology CAT Certificate- C50240CW

Course	Title	College Cred	High School Cred
BPR-111	Print Reading	2	0
ISC-110	Workplace Safety	1	0
WLD-112	Basic Welding Processes	2	0
WLD-117	Industrial SMAW	3	1
WLD-121	GMAW (MIG) FCAW/Plate	4	1
<b>17 total courses</b>		<b>12</b>	<b>2</b>

## Industrial Systems Technology Diploma – D50240CW

Course	Title	College Cred	High School Cred
ACA-115	Success & Study Skills	1	0
AHR-120	HVACR Maintenance	2	0
BPR-111	Print Reading	2	0
BPR-115	Electric/Fluid Power Diagrams	2	0
CIS-111	Basic PC Literacy	2	0
COM-231*	Public Speaking	3	1
ELC-112	DC/AC Electricity	5	2
ELC-128	Intro to PLC	3	1
HIS-112*	World Civilizations II	3	1
HYD-110	Hydraulics/Pneumatics I	3	1
ISC-110	Workplace Safety	1	0
MEC-111	Machine Processes I	3	1
MNT-110	Intro to Maintenance Procedures	2	0
MNT-111	Maintenance Practices	2	0
WLD-112	Basic Welding Processes	2	0
WLD-117	Industrial SMAW	3	1
WLD-121	GMAW (MIG) FCAW/Plate	4	1
<b>17 total courses</b>		<b>44</b>	<b>9</b>

\*Provides one extra quality point when calculating high school GPA.

## Suggested Sequencing:

### **Lee County Option (Sanford - CAT Apprenticeship- Rising Juniors Only)**

Fall Year One: WLD-112 = 2 credit hours + CAT Training (1<sup>st</sup> block in high school schedule)

Spring Year One: WLD-121A = 2 credit hours + CAT Training (1<sup>st</sup> block in high school schedule)

Summer Year One : Optional Work Opportunity (Up to 32 hours/week)

Fall Year Two: WLD-121B, BPR-111 = 4 credit hours + CAT (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

Spring Year Two : WLD-117, ISC-110 = 4 credit hours + CAT (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

### **Chatham County Option (Siler City)**

Fall: BPR-111, WLD-117 = 5 credit hours (1<sup>st</sup> block in high school schedule)

Spring: WLD-121 = 4 credit hours (1<sup>st</sup> block in high school schedule)

# Information Technology

Available in: \_\_\_ Chatham \_\_\_ Harnett X Lee

This program has courses that require test scores.

## Hardware/Troubleshooting Repair Certificate- C25590CWH

Course	Title	College Cred	High School Cred
CTI-120	Network & Security Foundation	3	1
CTS-120	Hardware/Software Support	3	1
CTS-220	Advanced Hardware/Software Support	3	1
NOS-130	Windows Single User	3	1
<b>4 total courses</b>		<b>12</b>	<b>4</b>

## Internet Computer Core (IC3) Certificate- C25590CWI

Course	Title	College Cred	High School Cred
CIS-110	Introduction to Computers	3	1
CTI-120	Network & Security Foundation	3	1
CTS-120	Hardware/Software Support	3	1
NOS-130	Windows Single User	3	1
<b>4 total courses</b>		<b>12</b>	<b>4</b>

## Information Technology Diploma – D25590CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
CIS-115*^	Intro to Programming & Logic	3	1
CSC-134*	C++ Programming	3	1
CTI-110	Web, Program, & Database Foundation	3	1
CTI-120	Network & Security Foundation	3	1
CTS-115	Info Sys Business Concepts	3	1
CTS-120	Hardware/Software Support	3	1
CTS-220	Advanced Hardware/Software Support	3	1
CTS-285	Systems Analysis & Logic	3	1
DBA-110	Database Concepts	3	1
ENG-111*^	Writing & Inquiry	3	1
MAT-143*^	Quantitative Literacy	3	1
NOS-130	Windows Single User	3	1
NOS-230	Windows Administration I	3	1
SEC-110	Security Concepts	3	1
WEB-140	Web Development Tools	3	1
<b>16 total courses</b>		<b>46</b>	<b>15</b>

\*Provides one extra quality point when calculating high school GPA.

^Requires test scores.

### Suggested Sequencing:

#### **Lee County Option (Sanford)**

Fall: CTS-120, NOS-130 = 6 credit hours (2<sup>nd</sup> and 3<sup>rd</sup> blocks in high school schedule)

Spring: CIS-110 and/or CTS-120, CTI-120 = 6 or 9 credit hours (4<sup>th</sup> block and online in high school schedule)

# Laser and Photonics Technology

Available in: \_\_\_ Chatham X Harnett \_\_\_ Lee

This program has courses that require test scores.

## Laser and Photonics Technology Diploma – D40280CP

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
CIS-110*	Introduction to Computers	3	1
EGR-131	Intro to Electronics Tech	2	0
ELC-127	Software for Technicians	2	0
ELC-131	Circuit Analysis I	4	2
ELC-131A	Circuit Analysis I Lab	1	0
ELN-131	Analog Electronics I	4	1
ELN-132	Analog Electronics II	4	1
ELN-133	Digital Electronics	4	1
ENG-111*^	Writing & Inquiry	3	1
LEO-111	Lasers and Applications	2	0
MAT-121^	Algebra/Trigonometry I	3	1
MAT-122^	Algebra/Trigonometry II	3	1
PHY-131	Physics- Mechanics	4	1
<b>14 total courses</b>		<b>40</b>	<b>10</b>

\*Provides one extra quality point when calculating high school GPA.

^Requires test scores.

### **Suggested Sequencing:**

#### **Harnett County Option (Lillington)**

Fall: CIS-110, EGR-131, ELC-131/A, MAT-121 = 13 credit hours (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

Spring: ELN-131, ELN-133, MAT-122, ELC-127 = 13 credit hours (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

## Library and Information Technology

Available in:  Chatham  Harnett  Lee

### Library Basics Certificate – C55130CW

Course	Title	College Cred	High School Cred
LIB-110	Introduction to Libraries	3	1
LIB-111	Library Info Resources & Services	3	1
LIB-112	Library Collection Development/Acquisitions	3	1
LIB-114	Library Public Service Operations	3	1
<b>4 total courses</b>		<b>12</b>	<b>4</b>

### Library and Information Technology Diploma – D55130CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
CIS-110*	Introduction to Computers	3	1
COM-231*	Public Speaking	3	1
LIB-110	Introduction to Libraries	3	1
LIB-111	Library Info Resources & Services	3	1
LIB-112	Library Collection Development/Acquisitions	3	1
LIB-113	Library Cataloging & Classification	3	1
LIB-114	Library Public Service Operations	3	1
LIB-210	Electronic Library Databases	3	1
LIB-211	Library Program Development	3	1
LIB-212	Library Services/Special Needs	3	1
LIB-213	Cataloging Nonprint Materials	3	1
LIB-214	Library Program Development	3	1
SOC-210*	Introduction to Sociology	3	1
WEB-110	Internet/Web Fundamentals	3	1
<b>15 total courses</b>		<b>43</b>	<b>14</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

Fall Year One: LIB-110, LIB-111 = 6 credit hours (online in high school schedule)

Spring Year One: LIB-112, LIB-114 = 6 credit hours (online in high school schedule)

Fall Year Two: LIB-113, WEB-110 = 6 credit hours (online in high school schedule)

Spring Year Two: LIB-210, CIS-110 = 6 credit hours (online in high school schedule)



## Manicuring/Nail Technology

Available in:  Chatham  Harnett  Lee

### Manicuring/Nail Technology Certificate – C55400CP

Course	Title	College Cred	High School Cred
COS-121	Manicuring/Nail Technology I	6	2
COS-222	Manicuring/Nail Technology II	6	2
<b>2 total courses</b>		<b>12</b>	<b>4</b>

### **Suggested Sequencing:**

#### **Chatham County Option (Siler City)**

Fall: COS-121 = 6 credit hours (3<sup>rd</sup> and 4<sup>th</sup> block in high school schedule)

Spring: COS-222 = 6 credit hours (3<sup>rd</sup> and 4<sup>th</sup> block in high school schedule)

#### **Harnett County Option (Lillington)**

Fall: COS-121 = 6 credit hours (4<sup>th</sup> block in high school schedule)

Spring: COS-222 = 6 credit hours (4<sup>th</sup> block in high school schedule)

# Medical Assisting

Available in:  Chatham  Harnett  Lee

## Medical Assisting Diploma – D45400CW

Course	Title	College Cred	High School Cred
ACA-115	Success and Study Skills	1	0
BIO-163*	Basic Anatomy & Physiology	5	2
ENG-111*	Writing and Inquiry**	3	1
MED-110	Orientation to Medical Assisting	1	0
MED-118^	Medical Law and Ethics	2	0
MED-121	Medical Terminology I	3	1
MED-122	Medical Terminology II	3	1
MED-130	Admin Office Procedures I	2	0
MED-131	Admin Office Procedures II	2	0
MED-140	Exam Room Procedures I	5	2
MED-150	Laboratory Procedures I	5	2
MED-240	Exam Room Procedures II	5	2
PSY-150*	General Psychology	3	1
<b>13 total courses</b>		<b>40</b>	<b>12</b>

\*Provides one extra quality point when calculating high school GPA.

\*\* Course change pending approval for 2018FA (was previously COM-231)

### Suggested Sequencing:

Fall: ACA-115, ENG-111, MED-121 = 7 credit hours (online in high school schedule)

Spring: MED-118, MED-122, PSY-150 = 8 credit hours (online in high school schedule)

# Medical Office Administration

Available in:  Chatham  Harnett  Lee

## Medical Office Administration Diploma – D25310CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
CIS-110*	Introduction to Computers	3	1
COM-120	Intro to Interpersonal Communication	3	1
OST-131	Keyboarding	2	0
OST-136	Word Processing	3	1
OST-141	Medical Terms I- Med Office	3	1
OST-142	Medical Terms II- Med Office	3	1
OST-148	Med Coding Billing & Insurance	3	1
OST-149	Medical Legal Issues	3	1
OST-164	Text Editing Applications	3	1
OST-243	Medical Office Simulation	3	1
OST-247	Procedural Coding	3	1
OST-248	Diagnostic Coding	3	1
OST-289	Administrative Office Mgmt	3	1
SOC-210*	Introduction to Sociology	3	1
<b>15 total courses</b>		<b>42</b>	<b>13</b>

\*Provides one extra quality point when calculating high school GPA.

### **Suggested Sequencing:**

Fall: OST-141, OST-148, OST-149 = 9 credit hours (online in high school schedule)

Spring: OST-142, OST-247, OST-248 = 9 credit hours (online in high school schedule)

# Motorcycle Mechanics

Available in: \_\_\_ Chatham \_X\_ Harnett \_X\_ Lee

This program has courses that require test scores.

## Motorcycle Mechanics Diploma – D60260CW

Course	Title	College Cred	High School Cred
CIS-110*	Introduction to Computers	3	1
ENG-102	Applied Communications II	3	1
MAT-110^	Math Measurement & Literacy	3	1
MCM-111	Motorcycle Mechanics	7	2
MCM-114	Motorcycle Fuel Systems	5	2
MCM-115	Motorcycle Chassis	3	1
MCM-117	Motorcycle Dyno Tuning I	3	1
MCM-122	Motorcycle Engines	5	2
MCM-217	Motorcycle Dyno Tuning II	3	1
MEC-111	Machine Processes I	3	1
TRN-110	Introduction to Transport Tech	2	0
TRN-120	Basic Transportation Electricity	5	2
TRN-180	Basic Welding for Transportation	3	1
<b>13 total courses</b>		<b>48</b>	<b>16</b>

\*Provides one extra quality point when calculating high school GPA.

^Requires test scores.

### Suggested Sequencing:

#### **Harnett/Lee County Option (West Harnett Center)**

Fall: TRN-110, MCM-122A = 3.5 credit hours (4<sup>th</sup> block in high school schedule)

Spring: MCM-122B = 3.5 credit hours (4<sup>th</sup> block in high school schedule)

## Nurse Aide

Available in:  Chatham  Harnett  Lee

### Nurse Aide Diploma – D45970CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
COM-231*	Public Speaking	3	1
HEA-112	First Aid & CPR	2	0
HSC-110	Orientation to Health Careers	1	0
MED-121	Medical Terminology I	3	1
MED-122	Medical Terminology II	3	1
MUS-110*	Music Appreciation	3	1
NAS-101	Nurse Aide I	6	2
NAS-102	Nurse Aide II	6	2
NUT-110	Nutrition	3	1
PSY-150*	General Psychology	3	1
SOC-240*	Social Psychology	3	1
<b>12 total courses</b>		<b>37</b>	<b>11</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

#### **Chatham County Option (Siler City)**

Fall or Spring: NAS-101, PSY-150 = 9 credits (3<sup>rd</sup> and 4<sup>th</sup> blocks in high school schedule)

#### **Harnett County (Lillington) and Lee County (Sanford) Options**

Fall or Spring: NAS-101, PSY-150 = 9 credits (1<sup>st</sup> and 2<sup>nd</sup> blocks in high school schedule)

#### **Harnett Health Sciences Academy**

Fall or Spring 11<sup>th</sup> Grade: ACA-122, COM-231, HSC-110 = 5 credit hours (4<sup>th</sup> block in high school schedule)

Fall or Spring 12<sup>th</sup> Grade: HHSA students will have the option to choose their pathway:

- Dental Assisting
- Health Information Technology
- Healthcare Management Technology
- Human Services Technology
- Medical Assisting
- Medical Office Administration
- Nurse Aide
- Veterinary Medical Technology

# Sustainability Technologies

Available in:  Chatham  Harnett  Lee

## Sustainability Technology Diploma – D40370CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
ALT-110	Biofuels I	3	1
ALT-120	Renewable Energy Technology	3	1
ALT-250	Thermal Systems	3	1
BIO-140*	Environmental Biology	3	1
BIO-140A	Environmental Biology Lab	1	0
COM-231*	Public Speaking	3	1
ELC-111	Introduction to Electricity	3	1
ELC-220	Photovoltaic Systems Technology	3	1
HIS-132*	American History II	3	1
SST-110	Intro to Sustainability	3	1
SST-120	Energy Use Analysis	3	1
SST-130	Modeling Renewable Energy	3	1
SST-140	Green Building & Design Concepts	3	1
SST-210	Issues in Sustainability	3	1
<b>15 total courses</b>		<b>41</b>	<b>13</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

#### **Chatham County Option (Pittsboro)**

Fall: ALT-120, ELC-111A = 4.5 credit hours (4<sup>th</sup> block in high school schedule)

Spring: ELC-111B, ELC-220 = 4.5 credit hours (4<sup>th</sup> block in high school schedule)

# Sustainable Agriculture

Available in:   X   Chatham     Harnett     Lee

## Sustainable Agriculture Diploma – D15410CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
AGR-111	Basic Farm Maintenance	2	0
AGR-121	Biological Pest Management	3	1
AGR-139	Introduction to Sustainable Agriculture	3	1
AGR-170	Soil Science	3	1
AGR-214	Agricultural Marketing	3	1
AGR-265	Organic Crop Production: Spring	3	1
AGR-266	Organic Crop Production: Fall	3	1
ANS-110	Animal Science	3	1
ANS-111	Sustainable Livestock Management	3	1
CIS-110*	Introduction to Computers	3	1
ENG-102	Applied Communications II	3	1
HIS-111*	World Civilizations I	3	1
SEL-293	Selected Topics in _____	3	1
WBL-111	Work-Based Learning I	1	0
<b>15 total courses</b>		<b>40</b>	<b>12</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

#### **Chatham County Option (Pittsboro)**

Fall Year One: AGR-139, AGR-170 = 6 credit hours (3<sup>rd</sup> and 4<sup>th</sup> blocks in high school schedule)

Spring Year One: AGR-121 = 3 credit hours (1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> blocks in high school schedule)

Fall Year Two: AGR-214, AGR-266 = 3 credit hours (1<sup>st</sup> and 4<sup>th</sup> blocks in high school schedule)

Spring Year Two: AGR-265 = 3 credit hours (3<sup>rd</sup> and 4<sup>th</sup> blocks in high school schedule)

# Veterinary Medical Technology

Available in:  Chatham  Harnett  Lee

**Please Note:** Some courses will require a seated component, and those components will only be at the Lee Main Campus in Sanford.

## Veterinary Medical technology Certificate – C45780CW

Course	Title	College Cred	High School Cred
ACA-115	Success & Study Skills	1	0
PSY-150*	General Psychology	3	1
VET-110**	Animal Breeds and Husbandry	3	1
VET-114	Introduction to Vet Med Tech	1	0
VET-120**	Vet Anatomy & Physiology	4	1
VET-121	Veterinary Medical Terminology	3	1
VET-137	Vet Office Practices	2	0
<b>7 total courses</b>		<b>17</b>	<b>4</b>

\*Provides one extra quality point when calculating high school GPA.

\*\*VET-110 and VET-120 will require 12-16 seated lecture/lab meetings for each course, which will meet at the CCCC Lee main campus in Sanford, NC either in the evenings or on Saturdays, and will require specific uniform and lab equipment purchases.

### **Suggested Sequencing:**

Fall Year One: ACA\_115, PSY-150 = 4 credit hours (online in high school schedule)

Spring Year One: VET-114, VET-121 = 4 credit hours (online in high school schedule)

Fall Year Two: VET-110 (hybrid = online + seated; see notes\*\* above)

Spring Year Two: VET-120 (hybrid= online + seated; see notes\*\* above); VET-137 (online in high school schedule; may require seated midterm and final exams at CCCC Lee Main Campus)



# Welding Technology

Available in: \_\_\_ Chatham X Harnett \_\_\_ Lee

## Welding Technology Certificate – C50420CW

Course	Title	College Cred	High School Cred
BPR-111	Print Reading	2	0
ISC-110	Workplace Safety	1	0
WLD-110	Cutting Processes	2	0
WLD-115	SMAW (Stick) Plate	5	2
WLD-121	GMAW (MIG) FCAW/Plate	4	1
WLD-131	GTAW (TIG) Plate	4	1
<b>6 total courses</b>		<b>18</b>	<b>4</b>

## Welding Technology Diploma – D50420CW

Course	Title	College Cred	High School Cred
ACA-122	College Transfer Success	1	0
BPR-111	Print Reading	2	0
COM-231*	Public Speaking	3	1
HIS-131*	American History I	3	1
ISC-110	Workplace Safety	1	0
WLD-110	Cutting Processes	2	0
WLD-115	SMAW (Stick) Plate	5	2
WLD-116	SMAW (Stick) Plate/Pipe	4	1
WLD-121	GMAW (MIG) FCAW/Plate	4	1
WLD-131	GTAW (TIG) Plate	4	1
WLD-141	Symbols & Specifications	3	1
WLD-151	Fabrication I	4	1
WLD-262	Inspection & Testing	3	1
WLD-265	Automated Welding/Cutting	4	1
<b>14 total courses</b>		<b>43</b>	<b>11</b>

\*Provides one extra quality point when calculating high school GPA.

### Suggested Sequencing:

#### **Harnett County Option (Lillington – Harnett Welding Apprenticeship- Rising Seniors Only)**

Summer Year One: Required 4 day Orientation

Fall Year One: WLD-115, ISC-110 = 6 credit hours (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> blocks in high school schedule)

Spring Year One: WLD-121, BPR-111, WLD-110 = 8 credit hours (2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> blocks in high school)

Summer Year Two: WLD-116 = 6 credit hours

# Course Descriptions

Course descriptions, including testing, prerequisite, and corequisite information, are subject to change. For the most current course description information, please visit our Course Catalog online: <http://www.cccc.edu/registrar/catalog>

Certain high school Career and Technical Education courses can be awarded articulated college credit based on the student's final grade in the course (B or higher) and their score on the standardized CTE postassessment (93 or higher). More information at:

<http://www.ncperkins.org/course/view.php?id=4>

Students wishing to be awarded articulated credit should speak with their advisor about the process for requesting credit on their college transcript.

## **ACA 115 Success and Study Skills**

College credit: 1 semester hour

This course provides an orientation to the campus resources and academic skills necessary to achieve educational objectives. Emphasis is placed on an exploration of facilities and services, study skills, library skills, self-assessment, wellness, goal-setting, and critical thinking. Upon completion, students should be able to manage their learning experiences to successfully meet educational goals.

## **ACA 122 College Transfer Success**

College credit: 1 semester hour

This course provides information and strategies necessary to develop clear academic and professional goals beyond the community college experience. Topics include the CAA, college culture, career exploration, gathering information on senior institutions, strategic planning, critical thinking, and communications skills for a successful academic transition. Upon completion, students should be able to develop an academic plan to transition successfully to senior institutions. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

## **ACC 115 College Accounting**

College Credit: 4 semester hours

This course introduces basic accounting principles for a business. Topics include the complete accounting cycle with end-of-period statements, bank reconciliation, payrolls, and petty cash. Upon completion, students should be able to demonstrate an understanding of accounting principles and apply those skills to a business organization.

## **ACC 120 Principles of Financial Accounting**

College Credit: 4 semester hours

This course introduces business decision-making using accounting information systems. Emphasis is placed on analyzing, summarizing, reporting, and interpreting financial information. Upon completion, students should be able to prepare financial statements, understand the role of financial information in decision-making, and address ethical considerations. This course has been approved for transfer under the CAA and ICAA a premajor and/or elective course requirement.

## **ACC 121 Principles of Managerial Accounting**

College Credit: 4 semester hours

*Prerequisite: ACC 120*

This course includes a greater emphasis on managerial and cost accounting skills. Emphasis is placed on managerial accounting concepts for external and internal analysis, reporting, and decision making. Upon completion, students

should be able to analyze and interpret transactions relating to managerial concepts including product-costing systems. This course has been approved for transfer under the CAA and ICAA a premajor and/or elective course requirement.

**ACC 122 Principles of Financial Accounting II**

College Credit: 3 semester hours

*Prerequisite: ACC 120*

This course provides additional instruction in the financial accounting concepts and procedures introduced in ACC 120. Emphasis is placed on the analysis of specific balance sheet accounts, with in-depth instruction of the accounting principles applied to these accounts. Upon completion, students should be able to analyze data, prepare journal entries, and prepare reports in compliance with generally accepted accounting principles.

**ACC 129 Individual Income Taxes**

College Credit: 3 semester hours

This course introduces the relevant laws governing individual income taxation. Topics include tax law, electronic research and methodologies, and the use of technology for preparation of individual tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various individual tax forms.

**ACC 130 Business Income Taxes**

College Credit: 3 semester hours

This course introduces the relevant laws governing business and fiduciary income taxes. Topics include tax law relating to business organizations, electronic research and methodologies, and the use of technology for the preparation of business tax returns. Upon completion, students should be able to analyze basic tax scenarios, research applicable tax law, and complete various business tax forms.

**ACC 140 Payroll Accounting**

College Credit: 2 semester hours

*Prerequisite: ACC 115 or ACC 120*

This course covers federal and state laws pertaining to wages, payroll taxes, payroll tax forms, and journal and general ledger transactions. Emphasis is placed on computing wages; calculating social security, income, and unemployment taxes; preparing appropriate payroll tax forms; and journalizing/posting transactions. Upon completion, students should be able to analyze data, make appropriate computations, complete forms, and prepare accounting entries using appropriate technology.

**ACC 150 Accounting Software Applications**

College Credit: 2 semester hours

*Prerequisite: ACC 115 or ACC 120*

This course introduces microcomputer applications related to accounting systems. Topics include general ledger, accounts receivable, accounts payable, inventory, payroll, and correcting, adjusting, and closing entries. Upon completion, students should be able to use a computer accounting package to solve accounting problems.

**AGR 111 Basic Farm Maintenance**

College Credit: 2 semester hours

This course covers fundamentals of maintenance and repair of farm facilities and equipment. Topics include safe use of hand tools and farm machinery, carpentry, concrete, painting, wiring, welding, plumbing, and calculating costs and materials needed. Upon completion, students should be able to answer theoretical questions on topics covered and assist with maintenance and repair of farm facilities and equipment.

**AGR 121 Biological Pest Management**

College Credit: 3 semester hours

This course will emphasize the building and maintaining of healthy soil, plant, and insect biological cycles as the key to pest and disease management. Course content includes study of major pests and diseases, including structure, life cycle, and favored hosts; and biological and least toxic methods of chemical control. Upon

completion, students should be able to identify and recommend methods of prevention and control of selected insects and diseases

**AGR 139 Introduction to Sustainable Agriculture** College Credit: 3 semester hours  
This course will provide students with a clear perspective on the principles, history, and practices of sustainable agriculture in our local and global communities. Students will be introduced to the economic, environmental, and social impacts of agriculture. Upon completion, students should be able to identify the principles of sustainable agriculture as they relate to basic production practices.

**AGR 170 Soil Science** College Credit: 3 semester hours  
This course covers the basic principles of soil management and fertilization. Topics include liming, fertilization, soil management, biological properties of soil (including beneficial microorganisms), sustainable land care practices and the impact on soils, and plant nutrients. Upon completion, students should be able to analyze, evaluate, 148 and properly amend soils/media according to sustainable practices.

**AGR 214 Agricultural Marketing** College Credit: 3 semester hours  
This course covers basic marketing principles for agricultural products. Topics include buying, selling, processing, standardizing, grading, storing, and marketing of agricultural commodities. Upon completion, students should be able to construct a marketing plan for an agricultural product

**AGR 265 Organic Crop Production: Fall** College Credit: 3 semester hours  
This course includes a study of spring organic crop production practices, including vegetables, cut flowers, and culinary and medicinal herbs. Topics include variety selection, production methods, and record keeping procedures for certification. Upon completion, students should be able to demonstrate a knowledge of organic crop production appropriate for the spring season.

**AGR 266 Organic Crop Production: Spring** College Credit: 3 semester hours  
The course includes a study of fall organic crop production practices, including vegetables, cut flowers, and culinary and medicinal herbs. Topics include variety selection, production methods, and record keeping procedures for certification. Upon completion, students should be able to demonstrate a knowledge of organic crop production appropriate for the fall season.

**AHR 120 HVACR Maintenance** College Credit: 2 semester hours  
*Local Prerequisite: ELC-112 or Permission of Instructor*  
This course introduces the basic principles of industrial air conditioning and heating systems. Emphasis is placed on preventive maintenance procedures for heating and cooling equipment and related components. Upon completion, students should be able to perform routine preventive maintenance tasks, maintain records, and assist in routine equipment repairs.

**ALT 110 Biofuels I** College Credit: 3 semester hours  
This course is designed to provide an introduction to the fundamentals of bio-based fuels. Emphasis is placed on proper handling and use guidelines, basic chemistry of biofuels, production methods, and the social, environmental, and economic impacts of biofuels. Upon completion, students should be able to demonstrate a general understanding of biofuels.

**ALT 120 Renewable Energy Tech** College credit: 3 semester hours  
This course provides an introduction to multiple technologies that allow for the production and/or conservation of energy from renewable sources. Topics will include hydroelectric, wind power, passive and active solar energy, tidal energy, appropriate building techniques, and energy conservation methods. Upon completion, students should be able to demonstrate an understanding of renewable energy production and its impact of humans and their environment.

**ALT 250 Thermal Systems** College Credit: 3 semester hours  
This course introduces concepts, tools, techniques, and materials used to convert thermal energy into a viable, renewable energy resource. Topics include forced convection, heat flow and exchange, radiation, the various elements of thermal system design, regulations, and system installation and maintenance. Upon completion, students should be able to demonstrate an understanding of geothermal and solar thermal systems and corresponding regulations.

**ANS 110 Animal Science** College Credit: 3 semester hours  
This course introduces the livestock industry. Topics include nutrition, reproduction, production practices, diseases, meat processing, sustainable livestock production, and marketing. Upon completion, students should be able to demonstrate a basic understanding of livestock production practices and the economic impact of livestock locally, regionally, state-wide, and internationally.

**ANS 111 Sustainable Livestock Management** College Credit: 3 semester hours  
This course covers the integration of livestock as part of a sustainable farming system with emphasis on small-scale production for niche markets and pasture. Topics included are appropriate breed selection, nutrition and living requirements for livestock such as goats, hogs, sheep, poultry, and bees. Upon completion, student should recognize appropriate breeds for their farm needs and demonstrate knowledge of small-scale livestock production.

**ARS 112 Auto Restoration Research** College Credit: 3 semester hours  
This course covers identification and collection of information needed to restore classic automobiles. Emphasis is placed on using books, numbers, emblems, titles, bills of sale, and other documents as resources. Upon completion, students should be able to use reference materials in the area of auto restoration to restore classic vehicles.

**ARS 113 Automobile Upholstery** College Credit: 4 semester hours  
This course covers automobile upholstery work used in restoration of classic automobiles. Emphasis is placed on removing, repairing, or reconstructing worn/damaged upholstery material in classic automobiles. Upon completion, students should be able to disassemble, repair/reconstruct, or replace the seats, headliners, door panels, and other components in the interior of vehicles.

**ARS 114 Restoration Skills I** College Credit: 4 semester hours  
*Corequisite: Take All: ARS-113, ARS-117, ARS-131 and TRN-120*  
This course covers mechanical, electrical, and upholstery restoration. Emphasis is placed on engines, transmissions, brakes, starters, generators, distributors, and replacement or fabrication of upholstery. Upon completion, students should be able to restore, rebuild, or replace specific components in a wide range of classic vehicles.

**ARS 117 Automotive Engines** College Credit: 2 semester hours  
This course covers the repair, rebuilding, and troubleshooting of internal combustion engines. Emphasis is placed on use of tools and equipment to measure reconditioning tolerances of the internal combustion engine. Upon

completion, students should be able to disassemble, repair and/or replace, and reassemble an internal combustion engine.

**ARS 118 Wood and Metal Restoration**

College Credit: 3 semester hours

This course introduces various wood materials used in early automobile construction including a general overview of woodworking techniques. Emphasis is placed on wood material, metal behavior, and trim construction. Upon completion, students should be able to perform simple woodworking techniques, attach and remove trim, and be familiar with basic hardware techniques.

**ARS 131 Chassis and Drive Trains**

College Credit: 3 semester hours

This course introduces principles of operation of automotive drive trains, perimeter/ladder/full-framed vehicles, and related restoration processes. Emphasis is placed on the technology related to restoration of manual and automatic transmissions, transaxles, and final drive components used on vehicles. Upon completion, students should be able to describe, diagnose, and determine needed service and repairs in the vehicle restoration industry.

**ART 111 Art Appreciation**

College Credit: 3 semester hours

This course introduces the origins and historical development of art. Emphasis is placed on the relationship of design principles to various art forms including but not limited to sculpture, painting, and architecture. Upon completion, students should be able to identify and analyze a variety of artistic styles, periods, and media. This course has been approved for transfer under the CAA&ICAA as a general education course in Humanities/Fine Arts.

**ART 114 Art History Survey I**

College Credit: 3 semester hours

This course covers the development of art forms from ancient times to the Renaissance. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**ART 115 Art History Survey II**

College Credit: 3 semester hours

This course covers the development of art forms from the Renaissance to the present. Emphasis is placed on content, terminology, design, and style. Upon completion, students should be able to demonstrate an historical understanding of art as a product reflective of human social development. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**AUB 111 Painting and Refinishing I**

College Credit: 4 semester hours

This course introduces the proper procedures for using automotive refinishing equipment and materials in surface preparation and application. Topics include federal, state, and local regulations, personal safety, refinishing equipment and materials, surface preparation, masking, application techniques, and other related topics. Upon completion, students should be able to identify and use proper equipment and materials in refinishing by following accepted industry standards.

**AUB 112 Painting and Refinishing II**

College Credit: 4 semester hours

*Prerequisite: AUB 111*

This course covers advanced painting techniques and technologies with an emphasis on identifying problems encountered by the refinishing technician. Topics include materials application, color matching, correction of refinishing problems, and other related topics. Upon completion, students should be able to perform spot, panel, and overall refinishing repairs and identify and correct refinish problems.

**AUT 114 Safety and Emissions** College Credit: 2 semester hours  
This course covers the laws, procedures, and specifications needed to perform a North Carolina State Safety and Emissions inspection. Topics include brake, steering and suspension, lighting, horn, windshield wiper, tire, mirrors, and emission control devices inspection. Upon completion, students should be able to perform complete and thorough North Carolina State Safety and Emissions inspections.

**AUT 114A Safety and Emissions** College Credit: 1 semester hour  
*Corequisite: AUT 114*  
This course is an optional lab that allows students to enhance their understanding of North Carolina State Emissions Inspection failures. Topics include evaporative, positive crankcase ventilation, exhaust gas recirculation and exhaust emissions systems operation, including catalytic converter failure diagnosis. Upon completion, students should be able to employ diagnostic strategies to repair vehicle emissions failures resulting from North Carolina State Emissions inspection.

**AUT 141 Suspension & Steering Systems** College Credit: 1 semester hour  
This course covers principles of operation, types, and diagnosis/repair of suspension and steering systems to include steering geometry. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.

**AUT 141A Suspension & Steering Lab** College Credit: 1 semester hour  
*Corequisite: AUT 141*  
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include manual and power steering systems and standard and electronically controlled suspension and steering systems. Upon completion, students should be able to service and repair steering and suspension components, check and adjust alignment angles, repair tires, and balance wheels.

**AUT 151 Brake Systems** College Credit: 3 semester hours  
This course covers principles of operation and types, diagnosis, service, and repair of brake systems. Topics include drum and disc brakes involving hydraulic, vacuum boost, hydra-boost, electrically powered boost, and anti-lock and parking brake systems. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

**AUT 151A Brake Systems Lab** College Credit: 1 semester hour  
*Corequisite: AUT 151*  
This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include drum and disc brakes involving hydraulic, vacuum-boost, hydra-boost, electrically powered boost, and anti-lock, parking brake systems, and emerging brake systems technologies. Upon completion, students should be able to diagnose, service, and repair various automotive braking systems.

**AUT 163 Advanced Auto Electricity** College Credit: 3 semester hours  
*Prerequisite: TRN 120*  
This course covers electronic theory, wiring diagrams, test equipment, and diagnosis, repair, and replacement of electronics, lighting, gauges, horn, wiper, accessories, and body modules. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, and troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns.

**AUT 163A      Advanced Automotive Electricity Lab**

College Credit: 1 semester hour

*Corequisite: AUT 163*

This course is an optional lab to be used as an alternative to co-op placement in meeting the NATEF standards for total hours. Topics include networking and module communication, circuit construction, wiring diagrams, circuit testing, troubleshooting, and emerging electrical/electronic systems technologies. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair wiring, lighting, gauges, accessories, modules, and electronic concerns.

**AUT 181      Engine Performance I**

College Credit: 3 semester hours

This course covers the introduction, theory of operation, and basic diagnostic procedures required to restore engine performance to vehicles equipped with complex engine control systems. Topics include an overview of engine operation, ignition components and systems, fuel delivery, injection components and systems, and emission control devices. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel, and emission related drivability problems using appropriate test equipment/service information.

**AUT 181A      Engine Performance I Lab**

College Credit: 1 semester hour

*Corequisite: AUT 181*

This course is an optional lab to be used as an alternative to coop placement in meeting the NATEF standards for total hours. Topics include overviews of engine operation, ignition components and systems, fuel delivery, injection components and systems, and emission control devices and emerging engine performance technologies. Upon completion, students should be able to describe operation and diagnose/repair basic ignition, fuel, and emission-related drive ability problems using appropriate test equipment/service information.

**AUT 183      Engine Performance 2**

College Credit: 4 semester hours

*Prerequisite: AUT 181*

This course covers study of the electronic engine control systems, the diagnostic process used to locate engine performance concerns, and procedures used to restore normal operation. Topics will include currently used fuels and fuel systems, exhaust gas analysis, emission control components and systems, OBD II (on-board diagnostics), and inter-related electrical/electronic systems. Upon completion, students should be able to diagnose and repair complex engine performance concerns using appropriate test equipment and service information.

**BAR 111      Barbering Concepts I**

College Credit: 4 semester hours

*Corequisite: BAR 112*

This course introduces basic barbering concepts and includes careers in barber styling and various hair treatments. Emphasis is placed on sanitizing equipment, professional ethics, skin\ scalp, and hair disorders and treatment, and safe work practices. Upon completion, students should be able to safely and competently apply barbering concepts in the shop setting.

**BAR 112      Barbering Clinic I**

College Credit: 8 semester hours

*Corequisite: BAR 111*

This course introduces basic clinic services. Topics include a study of sanitizing procedures for implements and equipment, determination of hair texture, hair cutting, and hair processing. Upon completion, students should be able to safely and competently demonstrate shop services.

**BAR 113      Barbering Concepts II**

College Credit: 4 semester hours

*Corequisite: BAR 114*

This course covers more comprehensive barbering concepts. Topics include safety and sanitation, product





**BIO 163                      Basic Anatomy and Physiology                      College Credit: 5 semester hours**  
This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships.

**BIO 168                      Anatomy and Physiology I                      College Credit: 4 semester hours**  
*Local Prerequisite: Take one: BIO 090, BIO 094, or BIO 110, BIO 111, or by permission of instructor*  
This course provides a comprehensive study of the anatomy and physiology of the human body. Topics include body organization, homeostasis, cytology, histology, and the integumentary, skeletal, muscular, and nervous systems and special senses. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

**BIO 169                      Anatomy and Physiology II                      College Credits: 4 semester hours**  
*Prerequisite: BIO 168*  
This course provides a continuation of the comprehensive study of the anatomy and physiology of the human body. Topics include the endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems as well as metabolism, nutrition, acid-base balance, and fluid and electrolyte balance. Upon completion, students should be able to demonstrate an in-depth understanding of principles of anatomy and physiology and their interrelationships. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

**BPR 111                      Blueprint Reading                      College Credit: 2 semester hours**  
This course introduces the basic principles of print reading. Topics include line types, orthographic projections, dimensioning methods, and notes. Upon completion, students should be able to interpret basic prints and visualize the features of a part or system.

**BPR 115                      Electric/Fluid Power Diagrams                      College Credit: 2 semester hours**  
This course covers sketching of detail and assembly drawings and reading of hydraulic, pneumatic, electrical, mechanical, and piping schematics. Emphasis is placed on interpretation and communication skills utilizing sketches, symbols, diagrams, and other related topics. Upon completion, students should be able to read, demonstrate an understanding of, and draw sketches and schematics commonly used in industry.

**BPR 121                      Blueprint Reading: Mechanical                      College Credit: 2 semester hours**  
*Prerequisite: BPR 111 or MAC 131*  
This course covers the interpretation of intermediate blueprints. Topics include tolerancing, auxiliary views, sectional views, and assembly drawings. Upon completion, students should be able to read and interpret a mechanical working drawing.

**BPT 110                      Introduction to Broadcasting                      College Credit: 3 semester hours**  
This course introduces the field of broadcasting and other electronic media. Emphasis is placed on the history, development, and current status of radio, television, and related industries. Upon completion, students should be able to demonstrate knowledge of regulations, organizational structure, revenue sources, historical development, and ongoing operation of broadcasting and related industries.

**BPT 111 Broadcast Law & Ethics** College Credit: 3 semester hours  
This course covers judicial, legislative, and administrative policies pertinent to the ethical and legal operation of broadcast and other electronic media organizations. Emphasis is placed on legal and ethical issues including First Amendment protection, FCC regulations, copyright, and libel laws. Upon completion, students should be able to demonstrate an understanding of the historical significance and modern-day application of important broadcast laws and policies.

**BPT 112 Broadcast Writing** College Credit: 4 semester hours  
This course introduces proper copy and script writing techniques and formats for radio, television, and other electronic media. Emphasis is placed on creating effective scripts for programs and promotional materials, including commercial and public radio service announcements for a specific target audience. Upon completion, students should be able to understand and write copy and scripts according to standard industry formats.

**BPT 113 Broadcast Sales** College Credit: 3 semester hours  
This course covers sales principles applicable to radio, television, cable, and other electronic media. Emphasis is placed on prospecting and servicing accounts, developing clients, and preparing sales presentations. Upon completion, students should be able to create a sales presentation based upon standard ratings reports, prospect for new customers, and understand account management.

**BPT 121 Broadcast Speech I** College Credit: 3 semester hours  
This course covers basic preparation and performance of on-air talents' speaking quality. Emphasis is placed on developing a pleasant and efficient voice with techniques applied to taped news, features, commercial copy, and announcing. Upon completion, students should be able to show improvement and aptitude in proper articulation, pronunciation, rate of delivery, pitch, breathing techniques, inflection, projection, and phrasing.

**BPT 122 Broadcast Speech II** College Credit: 3 semester hours  
*Prerequisite: BPT 121*  
This course covers basic and advanced preparation and performance of on-air speech. Emphasis is placed on enhancing a pleasant, effective voice with techniques applied to impromptu speaking, radio plays, and taped presentations. Upon completion, students should be able to employ proper articulation, pronunciation, rate of delivery, phrasing, and other voice techniques in a professional manner.

**BPT 131 Audio/Radio Production I** College Credit: 4 semester hours  
This course covers the creation, development, production, and presentation of audio programming elements for broadcast and/or other electronic media applications. Emphasis is placed on the proper operation of professional audio equipment and the study of basic physical behavior and perceptual effects of sound. Upon completion, students should be able to correctly operate audio recording and playback equipment and demonstrate an understanding of the basic components of sound.

**BPT 132 Audio/Radio Production II** College Credit: 4 semester hours  
*Prerequisite: BPT 131*  
This course covers the use of advanced audio production techniques in broadcast and/or other electronic media applications. Topics include basic audio signal processing equipment and analog and digital professional audio recording and playback equipment. Upon completion, students should be able to optimize the use of professional audio equipment in the production of effective audio programming.

**BPT 135**                      **Radio Performance I**    College Credit: 2 semester hours  
This course provides an opportunity to operate the college radio station as an announcer/board operator. Emphasis is placed on operating control-room equipment, logging transmitter readings, EBS tests, reading news, and broadcasting free of interruptions. Upon completion, students should be able to prepare music, public service announcements, and promos for timely broadcast; introduce songs/programs smoothly; and follow FCC rules.

**BPT 215**                      **Broadcast Programming**    College Credit: 3 semester hours  
This course covers programming methods, research, and resources needed to provide programs for radio, television, cable, and satellite target audiences. Topics include market research and analysis; local, network, and public station programming and program sources; and scheduling procedures for electronic media. Upon completion, students should be able to develop a programming format or schedule.

**BPT 231**                      **Video/TV Production I**    College Credit: 4 semester hours  
This course covers the language of film/video, shot composition, set design, lighting, production planning, scripting, editing, and operation of video and television production equipment. Emphasis is placed on mastering the body of knowledge and techniques followed in producing all forms of video and television production. Upon completion, students should be able to produce basic video and television productions in a team environment.

**BPT 232**                      **Video/TV Production II**    College Credit: 4 semester hours  
*Prerequisite: BPT 231*  
This course covers advanced video and television production. Emphasis is placed on field production, post-production, digital video effects, graphics, and multi-camera productions. Upon completion, students should be able to create productions that optimize the use of studio, field, and post-production equipment.

**BUS 110**                      **Introduction to Business**    College Credit: 3 semester hours  
This course provides a survey of the business world. Topics include the basic principles and practices of contemporary business. Upon completion, students should be able to demonstrate an understanding of business concepts as a foundation for studying other business subjects. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

**BUS 115**                      **Business Law I**    College Credit: 3 semester hours  
This course introduces the ethics and legal framework of business. Emphasis is placed on contracts, negotiable instruments, Uniform Commercial Code, and the working of the court systems. Upon completion, students should be able to apply ethical issues and laws covered to selected business decision-making situations. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.

**BUS 125**                      **Personal Finance**    College Credit: 3 semester hours  
This course provides a study of individual and family financial decisions. Emphasis is placed on building useful skills in buying, managing finances, increasing resources, and coping with current economic conditions. Upon completion, students should be able to develop a personal financial plan.

**BUS 137**                      **Principles of Management**    College Credit: 3 semester hours  
This course is designed to be an overview of the major functions of management. Emphasis is placed on planning, organizing, controlling, directing, and communicating. Upon completion, students should be able to work as contributing members of a team utilizing these functions of management. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement.







identify, explain, and demonstrate the techniques of the investigative process, report preparation, and courtroom presentation.

**CJC 231 Constitutional Law**

College Credit: 3 semester hours

The course covers the impact of the Constitution of the United States and its amendments on the criminal justice system. Topics include the structure of the Constitution and its amendments, court decisions pertinent to contemporary criminal justice issues, and other related topics. Upon completion, students should be able to identify/discuss the basic structure of the United States Constitution and the rights/procedures as interpreted by the courts.

**COM 120 Introduction to Interpersonal Communication**

College Credit: 3 semester hours

This course introduces the practices and principles of interpersonal communication in both dyadic and group settings. Emphasis is placed on the communication process, perception, listening, self-disclosure, speech apprehension, ethics, nonverbal communication, conflict, power, and dysfunctional communication relationships. Upon completion, students should be able to demonstrate interpersonal communication skills, apply basic principles of group discussion, and manage conflict in interpersonal communication situations. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**COM 231 Public Speaking**

College Credit: 3 semester hours

This course provides instruction and experience in preparation and delivery of speeches within a public setting and group discussion. Emphasis is placed on research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Upon completion, students should be able to prepare and deliver well-organized speeches and participate in group discussion with appropriate audiovisual support. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**COS 111 Cosmetology Concepts I**

College Credit: 4 semester hours

*Corequisite: COS 112*

This course introduces basic cosmetology concepts. Topics include safety, first aid, sanitation, bacteriology, anatomy, diseases and disorders, hygiene, product knowledge, chemistry, ethics, manicures, and other related topics. Upon completion, students should be able to safely and competently apply cosmetology concepts in the salon setting.

**COS 112 Salon I**

College Credit: 8 semester hours

*Corequisite: COS 111*

This course introduces basic salon services. Topics include scalp treatments, shampooing, rinsing, hair color, design, haircutting, permanent waving, pressing, relaxing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate salon services.

**COS 113 Cosmetology Concepts II**

College Credit: 4 semester hours

*Prerequisite: COS-111 and 112; Local Corequisite: COS 114*

This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, chemistry, manicuring, chemical restructuring, and hair coloring. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

**COS 114 Salon II**

College Credit: 8 semester hours

*Prerequisite: COS-111 and 112; Local Corequisite: COS 113*

This course provides experience in a simulated salon setting. Topics include basic skin care, manicuring, nail



application, scalp treatments, shampooing, rinsing, hair color, design, haircutting, chemical restructuring, pressing, wigs, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

**COS 115            Cosmetology Concepts III**

College Credit: 4 semester hours

*Prerequisite: COS-111 and 112; Local Corequisite: COS 116*

This course covers more comprehensive cosmetology concepts. Topics include safety, product knowledge, salon management, salesmanship, skin care, electricity/light therapy, wigs, thermal hair styling, lash and brow tinting, superfluous hair removal, and other related topics. Upon completion, students should be able to safely and competently apply these cosmetology concepts in the salon setting.

**COS 116            Salon III**

College Credit: 4 semester hours

*Prerequisite: COS-111 and 112; Local Corequisite: COS 115*

This course provides comprehensive experience in a simulated salon setting. Emphasis is placed on intermediate-level of skin care, manicuring, scalp treatments, shampooing, hair color, design, haircutting, chemical restructuring, pressing, and other related topics. Upon completion, students should be able to safely and competently demonstrate these salon services.

**COS 121            Manicure/Nail Technology I**

College Credit: 6 semester hours

This course covers techniques of nail technology, hand and arm surface manipulation, and recognition of nail diseases and disorders. Topics include OSHA/safety, sanitation, bacteriology, product knowledge, salesmanship, manicures, artificial applications, pedicures, surface manipulation, and other related topics. Upon completion, students should be able to safely and competently perform nail care, including manicures, pedicures, surface manipulations, decorating and artificial applications in a salon setting.

**COS 222            Manicure/Nail Technology II**

College Credit: 6 semester hours

This course covers advanced techniques of nail technology and hand and arm surface manipulation. Topics include OSHA/safety, product knowledge, customer service, salesmanship, artificial applications, nail art, and other related topics. Upon completion, students should be able to demonstrate competence necessary for the licensing examination, including advanced nail care, artificial enhancements, and decorations.

**COS 223            Contemporary Hair Coloring**

College Credit: 2 semester hours

*Prerequisite: COS 111 and COS 112*

This course covers basic color concepts, hair coloring problems, and application techniques. Topics include color theory, terminology, contemporary techniques, product knowledge, and other related topics. Upon completion, students should be able to identify a client's color needs and safely and competently perform color applications and correct problems.

**CSC 134            C++ Programming**

College Credit: 3 semester hours

This course introduces computer programming using the C++ programming language with object-oriented programming principles. Emphasis is placed on event-driven programming methods, including creating and manipulating objects, classes, and using object-oriented tools such as the class debugger. Upon completion, students should be able to design, code, test and debug at a beginning level.

**CTI 110            Web, Program, & DB Foundation**

College Credit: 3 semester hours

This course covers the introduction of the tools and resources available to students in programming, mark-up language and services on the Internet. Topics include standard mark-up language Internet services, creating web

pages, using search engines, file transfer programs; and database design and creation with DBMS products. Upon completion students should be able to demonstrate knowledge of programming tools, deploy a web-site with mark-up tools, and create a simple database table.

**CTI 120                      Network & Security Foundation                      College Credit: 3 semester hours**

This course introduces students to the Network concepts, including networking terminology and protocols, local and wide area networks, and network standards. Emphasis is placed on securing information systems and the various implementation policies. Upon completion, students should be able to perform basic tasks related to networking mathematics, terminology, media and protocols.

**CTS 115                      Information Systems Business Concept                      College Credit: 3 semester hours**

The course introduces the role of IT in managing business processes and the need for business process and IT alignment. Emphasis is placed on industry need for understanding business challenges and developing/managing information systems to contribute to the decision making process based on these challenges. Upon completion, students should be able to demonstrate knowledge of the 'hybrid business manager' and the potential offered by new technology and systems. *This course has been approved to satisfy the Comprehensive Articulation Agreement for transferability as a pre-major and/or elective course requirement.*

**CTS 120                      Hardware/Software Support                      College Credit: 3 semester hours**

This course covers the basic hardware of a personal computer, including installation, operations and interactions with software. Topics include component identification, memory-system, peripheral installation and configuration, preventive maintenance, hardware diagnostics/repair, installation and optimization of system software, commercial programs, system configuration, and device-drivers. Upon completion, students should be able to select appropriate computer equipment and software, upgrade/maintain existing equipment and software, and troubleshoot/repair non-functioning personal computers.

**CTS 220                      Advanced Hardware Software Support                      College Credit: 3 semester hours**

*Prerequisite: CTS 120*

This course provides advanced knowledge and competencies in hardware and operating system technologies for computer technicians to support personal computers. Emphasis is placed on: configuring and upgrading; diagnosis and troubleshooting; as well as preventive maintenance of hardware and system software. Upon completion, students should be able to install, configure, diagnose, perform preventive maintenance, and maintain basic networking on personal computers.

**CTS 285                      System Analysis and Design                      College Credit: 3 semester hours**

*Local Prerequisite: CIS-115*

This course introduces established and evolving methodologies for the analysis, design, and development of an information system. Emphasis is placed on system characteristics, managing projects, prototyping, CASE/OOM tools, and systems development life cycle phases. Upon completion, students should be able to analyze a problem and design an appropriate solution using a combination of tools and techniques.

**CUL 110                      Sanitation & Safety                      College Credit: 2 semester hours**

This course introduces the basic principles of sanitation and safety relative to the hospitality industry. Topics include personal hygiene, sanitation and safety regulations, use and care of equipment, the principles of food-borne illness, and other related topics. Upon completion, students should be able to demonstrate an understanding of the content necessary for successful completion of a nationally recognized food/safety/sanitation exam.

**CUL 140 Culinary Skills I** College Credit: 5 semester hours  
*Corequisite: CUL 110*

This course introduces the fundamental concepts, skills and techniques in basic cookery, and moist, dry and combination heat. Emphasis is placed on recipe conversion, measurements, terminology, classical knife cuts, safe food/equipment handling, flavorings/seasonings, stocks/sauces/soups, and related topics. Upon completion, students should be able to exhibit the basic cooking skills used in the foodservice industry.

**CUL 140A Culinary Skills I Lab** College Credit: 1 semester hour  
*Corequisite: Take CUL 110 and CUL 140*

This course provides laboratory experience for enhancing student skills in the fundamental concepts, skills and techniques in basic cookery, and moist, dry and combination heat. Emphasis is placed on practical experiences including recipe conversion, measurements, terminology, classical knife cuts, safe food/equipment handling, flavorings/seasonings, stocks/sauces/soups, and related topics. Upon completion, students should be able to demonstrate competency in the basic cooking skills used in the foodservice industry.

**CUL 160 Baking I** College Credit: 3 semester hours  
*Corequisite: CUL 110*

This course covers basic ingredients, techniques, weights and measures, baking terminology and formula calculations. Topics include yeast/chemically leavened products, laminated doughs, pastry dough batter, pies/tarts, meringue, custard, cakes and cookies, icings, glazes and basic sauces. Upon completion, students should be able to demonstrate proper scaling and measurement techniques, and prepare and evaluate a variety of bakery products.

**CUL 240 Culinary Skills II** College Credit: 5 semester hours  
*Prerequisites: CUL 110 and CUL 140*

This course is designed to further students' knowledge of the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on meat identification/fabrication, butchery and cooking techniques/methods; appropriate vegetable/starch accompaniments; compound sauces; plate presentation; breakfast cookery; and quantity food preparation. Upon completion, students should be able to plan, execute, and successfully serve entrees with complementary side items.

**CUL 240A Culinary Skills II Lab** College Credit: 1 semester hour  
*Prerequisites: Take All: CUL 110 and CUL-140; Corequisite: Take CUL 240*

This course provides a laboratory experience for furthering students' knowledge of the fundamental concepts, skills, and techniques involved in basic cookery. Emphasis is placed on practical applications of meat identification/fabrication; butchery and cooking techniques/methods; appropriate vegetable/starch accompaniments; compound sauces; plate presentation; breakfast cookery; and food preparation. Upon completion, students should be able to demonstrate a basic proficiency in the preparation of entrees and accompaniments.

**DBA 110 Database Concepts** College Credit: 3 semester hours

This course introduces database design and creation using a DBMS product. Emphasis is placed on data dictionaries, normalization, data integrity, data modeling, and creation of simple tables, queries, reports, and forms. Upon completion, students should be able to design and implement normalized database structures by creating simple database tables, queries, reports, and forms.

**DDF 211 Design Process I** College Credit: 4 semester hours  
*Local Prerequisite: DFT-153 or DFT-154*

This course emphasizes design processes for finished products. Topics include data collection from manuals and handbooks, efficient use of materials, design sketching, specifications, and vendor selection. Upon completion, students should be able to research and plan the design process for a finished product.

**DEN 100            Basic Orofacial Anatomy**

College Credit: 2 semester hours

This course provides a basic introduction to the structures of the head, neck, and oral cavity. Topics include tooth morphology, head and neck anatomy, histology, and embryology. Upon completion, students should be able to demonstrate knowledge of normal structures and development and how they relate to the practice of dental assisting.

**DEN 101            Preclinical Procedures**

College Credit: 7 semester hours

This course provides instruction in procedures for the clinical dental assistant as specified by the North Carolina Dental Practice Act. Emphasis is placed on orientation to the profession, infection control techniques, instruments, related expanded functions, and diagnostic, operative, and specialty procedures. Upon completion, students should be able to demonstrate proficiency in clinical dental assisting procedures.

**DEN 103            Dental Science**

College Credit: 2 semester hours

This course is a study of oral pathology, pharmacology, and dental office emergencies. Topics include oral pathological conditions, dental therapeutics, and management of emergency situations. Upon completion, students should be able to recognize abnormal oral conditions, identify classifications, describe actions and effects of commonly prescribed drugs, and respond to medical emergencies.

**DEN 111            Infection/Hazard Control**

College Credit: 3 semester hours

This course introduces the infection and hazard control procedures necessary for the safe practice of dentistry. Topics include microbiology, practical infection control, sterilization and monitoring, chemical disinfectants, aseptic technique, infectious diseases, OSHA standards, and applicable North Carolina laws. Upon completion, students should be able to understand infectious diseases, disease transmission, infection control procedures, biohazard management, OSHA standards, and applicable North Carolina laws.

**DFT 111            Technical Drafting I**

College Credit: 2 semester hours

This course introduces basic drafting skills, equipment, and applications. Topics include sketching, measurements, lettering, dimensioning, geometric construction, orthographic projections and pictorial drawings, sections, and auxiliary views. Upon completion, students should be able to understand and apply basic drawing principles and practices.

**DFT 151            CAD I**

College Credit: 3 semester hours

*Local Prerequisite: DFT 111 or Instructor Approval*

This course introduces CAD software as a drawing tool. Topics include drawing, editing, file management, and plotting. Upon completion, students should be able to produce and plot a CAD drawing.

**DFT 152            CAD II**

College Credit: 3 semester hours

*Local Prerequisite: DFT 151*

This course introduces extended CAD applications. Emphasis is placed upon intermediate applications of CAD skills. Upon completion, students should be able to use extended CAD applications to generate and manage drawings.

**DFT 153**                      **CAD III**    College Credit: 3 semester hours

*Local Prerequisite: DFT 111*

This course introduces advanced CAD applications. Emphasis is placed upon advanced applications of CAD skills. Upon completion, students should be able to use advanced CAD applications to generate and manage data.

**DFT 154**                      **Introduction to Solid Modeling**    College Credit: 3 semester hours

This course is an introduction to basic three-dimensional solid modeling and design software. Topics include basic design, creation, editing, rendering, and analysis of solid models and creation of multi view drawings. Upon completion, students should be able to use design techniques to create, edit, render, and generate a multi view drawing.

**DFT 170**                      **Engineering Graphics**    College Credit: 3 semester hours

This course introduces basic engineering graphics skills and applications. Topics include sketching, selection and use of current methods and tools, and the use of engineering graphics applications. Upon completion, students should be able to demonstrate an understanding of basic engineering graphics principles and practices. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**DFT 211**                      **Gears, Cams, & Pulleys**    College Credit: 2 semester hours

*Prerequisites: Take one set: (1) DFT 111 and MAT 121; (2) DFT 111 and MAT 171*

This course introduces the principles of motion transfer. Topics include gears, cams, pulleys, and drive components. Upon completion, students should be able to solve problems and produce drawings dealing with ratios.

**DFT 254**                      **Intermediate Solid Model/Render**    College Credit: 3 semester hours

*Prerequisites: DFT 154*

This course presents a continuation of basic three-dimensional solid modeling and design software. Topics include advanced study of parametric design, creation, editing, rendering and analysis of solid model assemblies, and multiview drawing generation. Upon completion, students should be able to use parametric design techniques to create and analyze the engineering design properties of a model assembly.

**ECO 251**                      **Principles of Microeconomics**    College Credit: 3 semester hours

This course introduces economic analysis of individual, business, and industry in the market economy. Topics include the price mechanism, supply and demand, optimizing economic behavior, costs and revenue, market structures, factor markets, income distribution, market failure, and government intervention. Upon completion, students should be able to identify and evaluate consumer and business alternatives in order to efficiently achieve economic objectives. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**ECO 252**                      **Principles of Macroeconomics**    College Credit: 3 semester hours

This course introduces economic analysis of aggregate employment, income, and prices. Topics include major schools of economic thought; aggregate supply and demand; economic measures, fluctuations, and growth; money and banking; stabilization techniques; and international trade. Upon completion, students should be able to evaluate national economic components, conditions, and alternatives for achieving socioeconomic goals. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**EDU 119 Introduction to Early Childhood Education** College Credit: 4 semester hours

This course covers the foundations of the education profession, the diverse educational settings for young children, professionalism and planning developmentally appropriate programs for all children. Topics include historical foundations, program types, career options, professionalism and creating inclusive environments and curriculum responsive to the needs of all children and families. Upon completion, students should be able to design career plans and develop schedules, environments and activity plans appropriate for all children.

**EDU 131 Children, Family, and Community** College Credit: 3 semester hours

*Corequisite: Take DRE 097*

This course covers the development of partnerships between culturally and linguistically diverse families, children, schools and communities. Emphasis is placed on developing skills and identifying benefits for establishing, supporting, and maintaining respectful, collaborative relationships between diverse families, programs/schools, and community agencies/resources. Upon completion, students should be able to explain appropriate relationships between families, educators, and professionals that enhance development and educational experiences of all children.

**EDU 144 Child Development I** College Credit: 3 semester hours

*Corequisite: Take DRE 097*

This course includes the theories of child development, needs, milestones, and factors that influence development, from conception through approximately 36 months. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.

**EDU 145 Child Development II** College Credit: 3 semester hours

*Corequisite: Take DRE 097*

This course includes the theories of child development, needs, milestones, and factors that influence development, from preschool through middle childhood. Emphasis is placed on developmental sequences in physical/motor, emotional/social, cognitive, and language domains and the impact of multiple influences on development and learning. Upon completion, students should be able to compare/contrast typical/atypical developmental characteristics, explain environmental factors that impact development, and identify strategies for enhancing development.

**EDU 146 Child Guidance** College Credit: 3 semester hours

*Corequisite: Take DRE 097*

This course introduces principles and practical techniques including the design of learning environments for providing developmentally appropriate guidance for all children, including those at risk. Emphasis is placed on observation skills, cultural influences, underlying causes of behavior, appropriate expectations, development of self-control and the role of communication and guidance. Upon completion, students should be able to demonstrate direct/indirect strategies for preventing problem behaviors, teaching appropriate/acceptable behaviors, negotiation, setting limits and recognizing at risk behaviors.

**EDU 151 Creative Activities** College Credit: 3 semester hours

*Corequisite: Take DRE 097*

This course covers planning, creation and adaptation of developmentally supportive learning environments with attention to curriculum, interactions, teaching practices and learning materials. Emphasis is placed on creating and adapting integrated, meaningful, challenging and engaging developmentally supportive learning experiences in art,

music, movement and dramatics for all children. Upon completion, students should be able to create, adapt, implement and evaluate developmentally supportive learning materials, experiences and environments.

**EDU 153 Health, Safety, and Nutrition**

College Credit: 3 semester hours

*Corequisite: Take DRE 097*

This course covers promoting and maintaining the health and well-being of all children. Topics include health and nutritional guidelines, common childhood illnesses, maintaining safe and healthy learning environments, recognition and reporting of abuse and neglect and state regulations. Upon completion, students should be able to demonstrate knowledge of health, safety, and nutritional needs, safe learning environments, and adhere to state regulations.

**EDU 221 Students with Exceptionalities**

College Credit: 3 semester hours

*Prerequisites: EDU 144 and EDU 145; or PSY-244 and PSY-245; Corequisite: Take DRE 098*

This course introduces children with exceptionalities, their families, support services, inclusive/diverse settings, and educational/family plans based on the foundations of child development. Emphasis is placed on the characteristics of exceptionalities, observation and assessment of children, strategies for adapting the learning environment, and identification of community resources. Upon completion, students should be able to recognize diverse abilities, describe the referral process, and depict collaboration with families/professionals to plan/implement, and promote best practice.

**EDU 234 Infant, Toddlers, and Twos**

College Credit: 3 semester hours

*Prerequisite: EDU-119; Corequisite: DRE-098*

This course covers the unique needs and rapid changes that occur in the first three years of life and the inter-related factors that influence development. Emphasis is placed on recognizing and supporting developmental milestones through purposeful strategies, responsive care routines and identifying elements of quality, inclusive early care and education. Upon completion, students should be able to demonstrate respectful relationships that provide a foundation for healthy infant/toddler/twos development, plan/select activities/materials, and partner with diverse families.

**EGR 131 Introduction to Electronics Technology**

College Credit: 2 semester hours

This course introduces the basic skills required for electrical/electronics technicians. Topics include soldering/desoldering, safety practices, test equipment, scientific calculators, AWG wire table, the resistor color code, electronic devices, problem solving, and use of hand tools. Upon completion, students should be able to solder/desolder, operate test equipment, apply problem solving techniques, and use a scientific calculator.

**EGR 150 Introduction to Engineering**

College Credit: 2 semester hours

This course is an overview of the engineering profession. Topics include goal setting and career assessment, ethics, public safety, the engineering method and design process, written and oral communication, interpersonal skills and team building, and computer applications. Upon completion, students should be able to understand the engineering process, the engineering profession, and utilize college resources to meet their educational goals. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**ELC 111 Introduction to Electricity**

College Credit: 3 semester hours

This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronics majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment.

**ELC 112 DC/AC Electricity** College Credit: 5 semester hours  
This course introduces the fundamental concepts of and computations related to DC/AC electricity. Emphasis is placed on DC/AC circuits, components, operation of test equipment; and other related topics. Upon completion, students should be able to construct, verify, and analyze simple DC/AC circuits.

**ELC 127 Software for Technicians** College Credit: 2 semester hours  
This course introduces computer software which can be used to solve electrical/electronics problems. Topics include electrical/electronics calculations and applications. Upon completion, students should be able to utilize a personal computer for electrical/electronics-related applications.

**ELC 128 Introduction to PLC** College Credit: 3 semester hours  
*Local Prerequisite: ELC-112 or ELC-131 or Permission of Instructor*  
This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers, and interfacing of controllers with equipment. Upon completion, students should be able to install PLC systems and create simple programs.

**ELC 131 DC/AC Circuit Analysis** College Credit: 5 semester hours  
*Local Corequisite: MAT 121 or MAT 171*  
This course introduces DC and AC electricity with an emphasis on circuit analysis, measurements, and operation of test equipment. Topics include DC and AC principles, circuit analysis laws and theorems, components, test equipment operation, circuit simulation, and other related topics. Upon completion, students should be able to interpret circuit schematics; design, construct, verify, and analyze DC/AC circuits; and properly use test equipment.

**ELC 131A Circuit Analysis I Lab** College Credit: 1 semester hour  
*Corequisite: ELC 131*  
This course provides laboratory assignments as applied to fundamental principles of DC/AC electricity. Emphasis is placed on measurements and evaluation of electrical components, devices and circuits. Upon completion, the students will gain hands-on experience by measuring voltage, current, and opposition to current flow utilizing various meters and test equipment.

**ELC 220 Photovoltaic Systems Technologies** College Credit: 3 semester hours  
This course introduces the concepts, tools, techniques, and materials needed to understand systems that convert solar energy into electricity with photovoltaic (PV) technologies. Topics include site analysis for system integration, building codes, and advances in photovoltaic technology. Upon completion, students should be able to demonstrate an understanding of the principles of photovoltaic technology and current applications.

**ELN 131 Semiconductor Applications** College Credit: 4 semester hours  
*Local Prerequisite: ELC 112 or ELC 131*  
This course introduces the characteristics and applications of semiconductor devices and circuits. Emphasis is placed on analysis, selection, biasing, and applications. Upon completion, students should be able to construct, analyze, verify, and troubleshoot analog circuits using appropriate techniques and test equipment.

**ELN 132 Linear IC Applications** College Credit: 4 semester hours  
*Local Prerequisite: ELN 131 or ELC 140*  
This course introduces the characteristics and applications of linear integrated circuits. Topics include op-amp circuits, waveform generators, active filters, IC voltage regulators, and other related topics. Upon completion,



students should be able to construct, analyze, verify, and troubleshoot linear integrated circuits using appropriate techniques and test equipment.

**ELN 133 Digital Electronics**

College Credit: 4 semester hours

*Local Prerequisite: EGR-131 or ELC-131 or Instructor Approval*

This course covers combinational and sequential logic circuits. Topics include number systems, Boolean algebra, logic families, medium scale integration (MSI) and large scale integration (LSI) circuits, analog to digital (AD) and digital to analog (DA) conversion, and other related topics. Upon completion, students should be able to construct, analyze, verify, and troubleshoot digital circuits using appropriate techniques and test equipment.

**ENG 102 Applied Communications II**

College Credit: 3 semester hours

This course is designed to enhance writing and speaking skills for the workplace. Emphasis is placed on generating short writings such as job application documents, memoranda, and reports and developing interpersonal communication skills with employees and the public. Upon completion, students should be able to prepare effective, short, and job-related written and oral communications. The computer is used as a writing and design tool for this course. This is a diploma-level course.

**ENG 111 Expository Writing**

College Credit: 3 semester hours

*Prerequisite: DRE-098 or appropriate placement test scores*

This course is the required first course in a series of two designed to develop the ability to produce clear expository prose. Emphasis is placed on the writing process including audience analysis, topic selection, thesis support and development, editing, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition.

**ENG 112 Argument-Based Research**

College Credit: 3 semester hours

*Prerequisite: ENG 111*

This course, the second in a series of two, introduces research techniques, documentation styles, and argumentative strategies. Emphasis is placed on historical developments and their impact on the modern world through religion, politics, economics, and social developments. Upon completion, students should be able to compare and contrast western and non-western cultures. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition.

**ENG 114 Professional Research and Reporting**

College credit: 3 semester hours

*Prerequisite: ENG 111*

This course, the second in a series of two, is designed to teach professional communication skills. Emphasis is placed on research, listening, critical reading and thinking, analysis, interpretation, and design used in oral and written presentations. Upon completion, students should be able to work individually and collaboratively to produce well-designed business and professional written and oral presentations. The computer is used as a writing and design tool for this course. This course has been approved for transfer under the CAA and ICAA as a general education course in English Composition.

**ENG 231 American Literature I**

College Credit: 3 semester hours

*Prerequisite: Take one: ENG 112, ENG 113, or ENG 114*

This course covers selected works in American literature from its beginnings to 1865. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and

cultural contexts. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**ENG 232 American Literature II**

College Credit: 3 semester hours

*Prerequisite: Take one: ENG 112, ENG 113, or ENG 114*

This course covers selected works in American literature from 1865 to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in their historical and cultural contexts. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**ENG 241 British Literature I**

College Credit: 3 semester hours

*Prerequisite: Take one: ENG 112, ENG 113, or ENG 114*

This course covers selected works in British literature from its beginnings to the Romantic Period. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in this historical and cultural contexts. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**ENG 242 British Literature II**

College credit: 3 semester hours

*Prerequisite: Take one: ENG 112, ENG 113, or ENG 114*

This course covers selected works in British literature from the Romantic Period to the present. Emphasis is placed on historical background, cultural context, and literary analysis of selected prose, poetry, and drama. Upon completion, students should be able to interpret, analyze, and respond to literary works in this historical and cultural contexts. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**GEL 111 Introductory Geology**

College Credit: 4 semester hours

This course introduces basic landforms and geological processes. Topics include rocks, minerals, volcanoes, fluvial processes, geological history, plate tectonics, glaciers, and coastal dynamics. Upon completion, students should be able to describe basic geological processes that shape the earth. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science.

**HEA 112 CPR & First Aid**

College Credit: 2 semester hours

This course introduces the basics of emergency first aid treatment. Topics include rescue breathing, CPR, first aid for choking and bleeding, and other first aid procedures. Upon completion, students should be able to demonstrate skills in providing emergency care for the sick and injured until medical help can be obtained. *This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective requirement.*

**HFS 110 Exercise Science**

College Credit: 4 semester hours

This course is a survey of scientific principles, methodologies, and research as applied to exercise and physical adaptations to exercise. Topics include the basic elements of kinesiology, biomechanics, and motor learning. Upon completion, students should be able to identify and describe physiological responses and adaptations to exercise.

**HFS 111 Fitness & Exercise Testing I**

College Credit: 4 semester hours

This course introduces the student to graded exercise testing. Topics include various exercise testing protocols with methods for prescribing exercise programs based on exercise tolerance tests and the use of various

equipment and protocols. Upon completion, students should be able to conduct specific exercise tests and the use of various equipment.

**HFS 116                      Prevention & Care of Exercise Related Injuries                      College Credit: 3 semester hours**

This course provides information about the care and prevention of exercise injuries. Topics include proper procedures, prevention techniques, and on-site care of injuries. Upon completion, students should be able to demonstrate the knowledge and skills necessary to prevent and care for exercise related injuries.

**HFS 210                      Personal Training                      College Credit: 3 semester hours**

*Prerequisites: HFS 110 and HFS 111*

This course introduces the student to the aspects of personal (one-on-one) training. Topics include training systems, marketing, and program development. Upon completion, students should be able to demonstrate personal training techniques and competencies of same.

**HIS 111                      World Civilizations I                      College Credit: 3 semester hours**

This course introduces world history from the dawn of civilization to the early modern era. Topics include Eurasian, African, American, and Greco-Roman civilizations and Christian, Islamic, and Byzantine cultures. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in pre-modern world civilizations. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**HIS 112                      World Civilizations II                      College Credit: 3 semester hours**

This course introduces world history from the early modern era to the present. Topics include the cultures of Africa, Europe, India, China, Japan, and the Americas. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in modern world civilizations. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**HIS 131                      American History I                      College Credit: 3 semester hours**

This course is a survey of American history from pre-history through the Civil War era. Topics include the migrations to the Americas, the colonial and revolutionary periods, the development of the Republic, and the Civil War. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in early American history. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**HIS 132                      American History II                      College Credit: 3 semester hours**

This course is a survey of American history from the Civil War era to the present. Topics include industrialization, immigration, the Great Depression, the major American wars, the Cold War, and social conflict. Upon completion, students should be able to analyze significant political, socioeconomic, and cultural developments in American history since the Civil War.

**HIT 110                      Fundamentals of HIM                      College Credit: 3 semester hours**

This course introduces Health Information Management (HIM) and its role in healthcare delivery systems. Topics include standards, regulations and initiatives; payment and reimbursement systems, healthcare providers and disciplines; and electronic health records (EHRs). Upon completion, students should be able to demonstrate an understanding of health information management and healthcare organizations, professions and trends.

**HIT 112 Health Law and Ethics** College Credit: 3 semester hours  
This course covers legislative and regulatory processes, legal terminology, and professional-related and practice-related ethical issues. Topics include confidentiality; privacy and security policies, procedures and monitoring; release of information policies and procedures; and professional-related and practice-related ethical issues. Upon completion, students should be able to apply policies and procedures for access and disclosure of Protected Health Information and apply and promote ethical standards.

**HMT 110 Intro to Healthcare Management** College Credit: 3 semester hours  
This course introduces the functions, practices, organizational structures, and professional issues in healthcare management. Emphasis is placed on planning, controlling, directing, and communicating within health and human services organizations. Upon completion, students should be able to apply the concepts of management within a healthcare service environment.

**HSC 110 Orientation to Health Careers** College Credit: 1 semester hour  
This course is a survey of health care professions. Topics include professional duties and responsibilities, working environments, and career choices. Upon completion, students should be able to demonstrate an understanding of the health care professions and be prepared to make informed career choices. **\*\*This course is recommended for all Health Science pathway students, although it is not in all of the pathways. Advisor should place students in dual pathway with Nurse Aide if HSC 110 is taken.**

**HSE 110 Introduction to Human Services** College Credit: 3 semester hours  
This course introduces the human services field, including the history, agencies, roles, and careers. Topics include personal/professional characteristics, diverse populations, community resources, disciplines in the field, systems, ethical standards, and major theoretical and treatment approaches. Upon completion, students should be able to identify the knowledge, skills, and roles of the human services worker.

**HSE 112 Group Process I** College Credit: 2 semester hours  
*Local Prerequisite: Enrollment in the HSE program*  
This course introduces interpersonal concepts and group dynamics. Emphasis is placed on self-awareness facilitated by experiential learning in small groups with analysis of personal experiences and the behavior of others. Upon completion, students should be able to show competence in identifying and explaining how people are influenced by their interactions in group settings.

**HSE 123 Interviewing Techniques** College Credit: 3 semester hours  
This course covers the purpose, structure, focus, and techniques employed in effective interviewing. Emphasis is placed on observing, attending, listening, responding, recording, and summarizing of personal histories with instructor supervision. Upon completion, students should be able to perform the basic interviewing skills needed to function in the helping relationship.

**HSE 125 Counseling** College Credit: 3 semester hours  
*Prerequisite: PSY 150*  
This course covers the major approaches to psychotherapy and counseling, including theory, characteristics, and techniques. Emphasis is placed on facilitation of self-exploration, problem solving, decision-making, and personal growth. Upon completion, students should be able to understand various theories of counseling and demonstrate counseling techniques.

**HSE 210 Human Services Issues** Credit Hours: 2 semester hours

*Local Prerequisite: Successful completion of 12 SHC in the HSE program*

This course covers current issues and trends in the field of human services. Emphasis is placed on contemporary topics with relevance to special issues in a multi-faceted field. Upon completion, students should be able to integrate the knowledge, skills, and experiences gained in classroom and clinical experiences with emerging trends in the field.

**HSE 225 Crisis Intervention** Credit Hours: 3 semester hours

This course introduces the basic theories and principles of crisis intervention. Emphasis is placed on identifying and demonstrating appropriate and differential techniques for intervening in various crisis situations. Upon completion, students should be able to assess crisis situations and respond appropriately.

**HUM 110 Technology and Society** College Credit: 3 semester hours

This course considers technological change from historical, artistic, and philosophical perspectives and its effect on human needs and concerns. Emphasis is placed on the causes and consequences of technological change. Upon completion, students should be able to critically evaluate the implications of technology.

**HUM 115 Critical Thinking** College Credit: 3 semester hours

*Prerequisites: DRE 098*

This course introduces the use of critical thinking skills in the context of human conflict. Emphasis is placed on evaluating information, problem solving, approaching crosscultural perspectives, and resolving controversies and dilemmas. Upon completion, students should be able to demonstrate orally and in writing the use of critical thinking skills in the analysis of appropriate texts. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**HYD 110 Hydraulics/Pneumatics I** College Credit: 3 semester hours

This course introduces the basic components and functions of hydraulic and pneumatic systems. Topics include standard symbols, pumps, control valves, control assemblies, actuators, FRL, maintenance procedures, and switching and control devices. Upon completion, students should be able to understand the operation of a fluid power system, including design, application, and troubleshooting.

**ISC 110 Workplace Safety** College Credit: 1 semester hour

This course introduces the basic concepts of workplace safety. Topics include fire, ladders, lifting, lock-out/tag-out, personal protective devices, and other workplace safety issues related to OSHA compliance. Upon completion, students should be able to demonstrate an understanding of the components of a safe workplace.

**LEO 111 Lasers and Applications** College Credit: 2 semester hours

*Corequisite: MAT 122*

This course covers the basic principles of laser operations and applications with a particular emphasis on laser safety. Topics include the properties of laser light, laser components, laser beam characteristics, and laser safety. Upon completion, students should be able to make measurements of laser beam characteristics and conduct a safety audit and hazards analysis of a laser facility.

**LIB 110 Introduction to Libraries** College Credit: 3 semester hours

This course includes the history and future of libraries, a survey of library types, and an overview of library organization, services, and community relationships. Emphasis is placed on societal roles of the library, literary and intellectual freedom, comparisons and contrasts of library types, and the roles of professional organizations. Upon

completion, students should be able to discuss literacy and intellectual freedom, describe library organization and compare types of libraries, their materials, and services.

**LIB 111                      Library Information Resources and Services                      College Credit: 3 semester hours**  
This course provides introductory skills for selecting and using general and specialized information resources in print and electronic formats and related copyright issues. Emphasis is placed on selection tools, print and electronic censorship, core collection materials in various disciplines, compiling bibliographies and interpreting and referring reference questions. Upon completion, students should be able to use numerous resources to answer directional and factual questions and to decide when to refer difficult reference questions.

**LIB 112                      Library Collection Development and Acquisition                      College Credit: 3 semester hours**  
This course covers library collection development and acquisitions policies and procedures. Emphasis is placed on evaluating mission statements, needs assessment studies, purchasing materials using selection criteria and tools, and related collection development and acquisitions activities. Upon completion, students should be able to evaluate mission statements, conduct needs assessments using selected criteria, and complete related collection development and acquisitions activities.

**LIB 113                      Library Cataloging and Classification                      College Credit: 3 semester hours**  
This course covers standards and procedures for copy cataloging and types of classification systems. Emphasis is placed on selecting bibliographic records, maintaining and using authority records and the importance of the catalog to the library mission. Upon completion, students should be able to select the appropriate MARC record, search OCLC, and demonstrate an understanding of authority files.

**LIB 114                      Library Public Service Operation                      College Credit: 3 semester hours**  
This course covers effective library orientations, effective patron service, automated circulation systems, statistics and reports, reserves, and security. Emphasis is placed on public relations, problem solving, communication skills, circulation systems and policies, interlibrary loan procedures, shelving and display options. Upon completion, students should be able to deal with diverse patrons, conduct library orientations, compile reports from statistical data, initiate interlibrary loans, and prepare displays.

**LIB 210                      Electronic Library Databases                      College Credit: 3 semester hours**  
*Prerequisite: LIB 111 and WEB 110*  
This course covers developing search strategies for using electronic resources in the humanities, social and behavioral sciences, physical and life sciences, and health-related fields. Emphasis is placed on the reference interview, teaching Boolean logic and other search strategies, retrieving and evaluating information, and citing it in APA/MLA style. Upon completion, students should be able to describe methods of information retrieval, use search strategies to teach basic research using databases, and cite sources appropriately.

**LIB 211                      Library Program Development                      College Credit: 3 semester hours**  
This course covers the purpose of library programs and various methods used for program design, promotion, delivery, and evaluation. Topics include serving library communities through appropriate program activities such as storytelling, puppet shows, book clubs, lectures, reading aloud, workshops, special collections, and outreach. Upon completion, students should be able to prepare, promote, deliver, and evaluate appropriate library programs.

**LIB 212                      Library Services/Special Needs                      College Credit: 3 semester hours**  
This course covers basic information for serving library users with special needs. Emphasis is placed on ADA guidelines, the location and use of appropriate resources, and accessibility options. Upon completion, students

should be able to access appropriate information about ADA guidelines, locate and use appropriate resources, and be aware of accessibility options.

**LIB 213            Cataloging Non-Print Materials**

College Credit: 3 semester hours

*Prerequisite: LIB 113*

This course continues the study and application of information cataloging practices. Emphasis is placed on cataloging information resources, updating bibliographic materials in databases, an overview of Dublin Core, and nonprint materials cataloging practices. Upon completion, students should be able to catalog nonprint and electronic resources.

**LIB 214            Library Services for Children**

College Credit: 3 semester hours

This course covers the location, evaluation, acquisition, and presentation of children's materials in libraries. Emphasis is placed on locating, evaluating, acquiring, and presenting children's literature, video and audio materials, and web sites through programs, displays, talks, and instruction. Upon completion, students should be able to locate, evaluate, acquire, and present a wide range of children's materials to library users.

**MAC 111            Machining Technology I**

College Credit: 6 semester hours

This course introduces machining operations as they relate to the metalworking industry. Topics include machine shop safety, measuring tools, lathes, drilling machines, saws, milling machines, bench grinders, and layout instruments. Upon completion, students should be able to safely perform the basic operations of measuring, layout, drilling, sawing, turning, and milling.

**MAC 112            Machining Technology II**

College Credit: 6 semester hours

*Local Prerequisite: MAC 111*

This course provides additional instruction and practice in the use of precision measuring tools, lathes, milling machines, and grinders. Emphasis is placed on setup and operation of machine tools including the selection and use of work holding devices, speeds, feeds, cutting tools, and coolants. Upon completion, students should be able to perform basic procedures on precision grinders and advanced operations of measuring, layout, drilling, sawing, turning, and milling.

**MAC 113            Machining Technology III**

College Credit: 6 semester hours

*Local Prerequisite: MAC 112*

This course provides an introduction to advanced and special machining operations. Emphasis is placed on working to specified tolerances with special and advanced setups. Upon completion, students should be able to produce a part to specifications.

**MAC 124            CNC Milling**

College Credit: 2 semester hours

This course introduces the manual programming, setup, and operation of CNC machining centers. Topics include programming formats, control functions, program editing, part production, and inspection. Upon completion, students should be able to manufacture simple parts using CNC machining centers.

**MAC 151            Machining Calculations**

College Credit: 2 semester hours

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.

**MAC 171**            **Measure/Material & Safety**            College Credit: 1 semester hour  
This course introduces precision measuring instruments, process control and adjustment, inspection, material handling and workplace safety. Topics include properly identifying and handling various measurement instruments and materials, process control, adjustment and improvement, personal protective equipment (PPE) and OSHA safety regulations. Upon completion, students should be able to safely demonstrate effective measurement techniques, identify and handle various materials, and explain safe industry practices.

**MAT 110**            **Mathematical Measurement**            College Credit: 3 semester hours  
*Prerequisite: DMA 010 through 030 or appropriate placement test scores*  
This course provides an activity-based approach to utilizing, interpreting, and communicating data in a variety of measurement systems. Topics include accuracy, precision, conversion, and estimation within metric, apothecary, and avoirdupois systems; ratio and proportion; measures of central tendency and dispersion; and charting of data. Upon completion, students should be able to apply proper techniques to gathering, recording, manipulating, analyzing, and communicating data.

**MAT 121**            **Algebra/Trigonometry I**            College Credit: 3 semester hours  
*Prerequisite: DMA 010 through 060*  
This course provides an integrated approach to technology and the skills required to manipulate, display, and interpret mathematical functions and formulas used in problem solving. Topics include the properties of plane and solid geometry, area and volume, and basic proportion applications; simplification, evaluation, and solving of algebraic equations and inequalities and radical functions; complex numbers; right triangle trigonometry; and systems of equations. Upon completion, students will be able to demonstrate the ability to use mathematics and technology for problem-solving, analyzing and communicating results.

**MAT 122**            **Algebra/Trigonometry II**            College Credit: 3 semester hours  
*Prerequisite: MAT 121*  
This course extends the concepts covered in MAT 121 to include additional topics in algebra, function analysis, and trigonometry. Topics include exponential and logarithmic functions, translation and scaling of functions, Sine Law, Cosine Law, vectors and statistics. Upon completion, students should be able to demonstrate an understanding of the use of technology to solve problems and to analyze and communicate results.

**MAT 143**            **Quantitative Literacy**            College Credit: 3 semester hours  
*Prerequisite: DMA 010 through 050 and DRE 098 or appropriate placement test scores*  
This course is designed to engage students in complex and realistic situations involving the mathematical phenomena of quantity, change and relationship, and uncertainty through project- and activity-based assessment. Emphasis is placed on authentic contexts which will introduce the concepts of numeracy, proportional reasoning, dimensional analysis, rates of growth, personal finance, consumer statistics, practical probabilities, and mathematics for citizenship. Upon completion, students should be able to utilize quantitative information as consumers and to make personal, professional, and civic decisions by decoding, interpreting, using, and communicating quantitative information found in modern media and encountered in everyday life.

**MAT 152**            **Statistical Methods I**            College Credit: 4 semester hours  
*Prerequisite: DMA 010 through 050 and DRE 098 or appropriate placement test scores*  
This course provides a project-based approach to introductory statistics with an emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results.



**MAT 171          Precalculus Algebra**

College Credit: 4 semester hours

*Prerequisite: DMA 010 through 080 or appropriate placement test scores*

This is the first of two courses designed to emphasize topics, which are fundamental to the study of calculus. Emphasis is placed on equations and inequalities, functions (linear, polynomial, rational), systems of equations and inequalities, and parametric equations. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and predictions. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics.

**MAT 172          Precalculus Trigonometry**

College Credit: 4 semester hours

*Prerequisite: MAT-171*

This is the second of two courses designed to emphasize topics which are fundamental to the study of calculus. Emphasis is placed on properties and applications of transcendental functions and their graphs, right and oblique triangle trigonometry, conic sections, vectors, and polar coordinates. Upon completion, students should be able to solve practical problems and use appropriate models for analysis and prediction. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics.

**MAT 263          Brief Calculus**

College Credit: 4 semester hours

*Prerequisite: MAT-171*

This course is designed for students needing one semester of calculus. Topics include functions, graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics.

**MAT 271          Calculus I**

College Credit: 4 semester hours

*Prerequisite: MAT-172 or other. See your Advisor for more information.*

This course covers in-depth the differential calculus portion of a three-course calculus sequence. Topics include limits, continuity, derivatives, and integrals of algebraic and transcendental functions of one variable with applications. Upon completion, students should be able to apply differentiation and integration techniques to algebraic and transcendental functions. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics.

**MAT 272          Calculus II**

College Credit: 4 semester hours

*Prerequisite: MAT-271*

This course is designed to develop advanced topics of differential and integral calculus. Emphasis is placed on the applications of definite integrals, techniques of integration, indeterminate forms, improper integrals, infinite series, conic sections, parametric equations, polar coordinates, and differential equations. Upon completion, students should be able to select and use appropriate models and techniques for finding solutions to integral-related problems with and without technology. This course has been approved for transfer under the CAA and ICAA as a general education course in Mathematics.

**MCM 111          Motorcycle Mechanics**

College Credit: 7 semester hours

This course covers the proper nomenclature of parts and components of motorcycles, ATVs, and personal watercraft. Topics include theory of operation, differences of operation, preventive maintenance, and operating principles involved in servicing and repairing motorcycles, ATVs, and personal watercraft. Upon completion, students should be able to perform basic inspection, diagnosis, repair, and/or adjustment of motorcycles, ATVs, and personal watercraft.



completion, students should be able to specify appropriate manufacturing processing for common engineering materials.

**MEC 161A      Manufacturing Processes I**

College Credit: 1 semester hour

This course is a laboratory for MEC 161. Emphasis is placed on experiences that enhance the materials presented in MEC 161. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in MEC 161.

**MED 110      Orientation to Medical Assisting**

College Credit: 1 semester hour

This course covers the history of medicine and the role of the medical assistant in the healthcare setting. Emphasis is placed on professionalism, communication, attitude, behaviors, and duties in the medical environment. Upon completion, students should be able to project a positive attitude and promote the profession of medical assisting.

**MED 118      Medical Law and Ethics**

College Credit: 2 semester hours

*Local Prerequisites: DRE 098 or appropriate placement test scores*

This course covers legal relationships of physicians and patients, contractual agreements, professional liability, malpractice, medical practice acts, informed consent, and bioethical issues. Emphasis is placed on legal terms, professional attitudes, and the principles and basic concepts of ethics and laws involved in providing medical services. Upon completion, students should be able to meet the legal and ethical responsibilities of a multi-skilled health professional.

**MED 121      Medical Terminology I**

College Credit: 3 semester hours

This course introduces prefixes, suffixes, and word roots used in the language of medicine. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

**MED 122      Medical Terminology II**

College Credit: 3 semester hours

*Prerequisite: MED 121*

This course is the second in a series of medical terminology courses. Topics include medical vocabulary and the terms that relate to the anatomy, physiology, pathological conditions, and treatment of selected systems. Upon completion, students should be able to pronounce, spell, and define medical terms as related to selected body systems and their pathological disorders.

**MED 130      Administrative Office Procedures I**

College Credit: 2 semester hours

This course introduces medical office administrative procedures. Topics include appointment processing, written and oral communications, medical records, patient orientation, and safety. Upon completion, students should be able to perform basic administrative skills within the medical environment.

**MED 131      Administrative Office Procedures II**

College Credit: 2 semester hours

*Local Prerequisite: MED 130*

This course provides medical office procedures in both economic and management skills. Topics include physical plant maintenance, equipment and supplies, liability coverage, medical economics, and introductory insurance procedures. Upon completion, students should be able to manage the economics of the medical office and supervise personnel.









world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science.

**PHY 110A      Conceptual Physics Laboratory**

College Credit: 4 semester hours

*Corequisite: PHY 110*

This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science.

**PHY 131      Physics-Mechanics**

College Credit: 4 semester hours

*Prerequisite (take one): MAT 121 or MAT 171*

This algebra/trigonometry-based course introduces fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem solving methods, graphical analysis, vectors, motion, forces, Newton's laws of motion, work, energy, power, momentum, and properties of matter. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

**PHY 133      Physics-Sound and Light**

College Credit: 4 semester hours

*Prerequisite: PHY 131*

This algebra/trigonometry-based course is a study of fundamental physical concepts as applied to engineering technology fields. Topics include systems of units, problem solving methods, graphical analysis, wave motion, sound, light, and modern physics. Upon completion, students should be able to apply the principles studied to applications in engineering technology fields.

**PHY 151      College Physics I**

College Credit: 4 semester hours

*Prerequisite: MAT 171*

This course uses algebra/trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vectors, linear kinematics and dynamics, energy, power, momentum, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem solving ability for the topics covered. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science.

**PHY 152      College Physics II**

College Credit: 4 semester hours

*Prerequisite: PHY 151*

This course uses algebra/trigonometry-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem solving ability for the topics covered. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science.

**PHY 251      General Physics I**

College Credit: 4 semester hours

*Prerequisite: MAT 271      Corequisite: MAT 272*

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include units and measurement, vector operations, linear kinematics and dynamics, energy,



power, momentum, rotational mechanics, periodic motion, fluid mechanics, and heat. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem solving ability for the topics covered. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science.

**PHY 252            General Physics II**

College Credit: 4 semester hours

*Prerequisites: MAT 272 and PHY 251*

This course uses calculus-based mathematical models to introduce the fundamental concepts that describe the physical world. Topics include electrostatic forces, electric fields, electric potentials, direct-current circuits, magnetostatic forces, magnetic fields, electromagnetic induction, alternating-current circuits, and light. Upon completion, students should be able to demonstrate an understanding of the principles involved and display analytical problem solving ability for the topics covered. This course has been approved for transfer under the CAA and ICAA as a general education course in Natural Science.

**POL 120            American Government**

College Credit: 3 semester hours

This course is a study of the origins, development, structure, and functions of American national government. Topics include the constitutional framework, federalism, the three branches of government including the bureaucracy, civil rights and liberties, political participation and behavior, and policy formation. Upon completion, students should be able to demonstrate an understanding of the basic concepts and participatory processes of the American political system. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**PSY 115            Stress Management**

Credit Hours: 2 semester hours

This course covers stressors and techniques for stress management. Topics include anger, assertiveness, adaptation to change, conflict, coping skills, identification of stressors, time management, and the physiology of stress and burnout. Upon completion, students should be able to demonstrate an understanding of the effective management of stress.

**PSY 150            General Psychology**

College Credit: 3 semester hours

This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**PSY 241            Developmental Psychology**

College Credit: 3 semester hours

*Prerequisite: PSY 150*

This course is a study of human growth and development. Emphasis is placed on major theories and perspectives as they relate to the physical, cognitive, and psychosocial aspects of development from conception to death. Upon completion, students should be able to demonstrate knowledge of development across the life span. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**SEC 110            Security Concepts**

College Credit: 3 semester hours

This course introduces the concepts and issues related to securing information systems and the development of policies to implement information security controls. Topics include the historical view of networking and security, security issues, trends, security resources, and the role of policy, people, and processes in information security.

Upon completion, students should be able to identify information security risks, create an information security policy, and identify processes to implement and enforce policy.

**SEL 293                      Selected Topics in \_\_\_\_\_**                      College Credit: 3 semester hours

This course provides an opportunity to explore areas of current interest in specific program or discipline areas. Emphasis is placed on the subject matter appropriate to the program or discipline. Upon completion, students should be able to demonstrate an understanding of the specific area of study.

**SOC 210                      Introduction to Sociology**                      College Credit: 3 semester hours

This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**SOC 213                      Sociology of the Family**                      College Credit: 3 semester hours

This course covers the institution of the family and other intimate relationships. Emphasis is placed on mate selection, gender roles, sexuality, communication, power and conflict, parenthood, diverse lifestyles, divorce and remarriage, and economic issues. Upon completion, students should be able to analyze the family as a social institution and the social forces which influence its development and change. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**SOC 220                      Sociology Problems**                      College Credit: 3 semester hours

This course provides an in-depth study of current social problems. Emphasis is placed on causes, consequences, and 214 possible solutions to problems associated with families, schools, workplaces, communities, and the environment. Upon completion, students should be able to recognize, define, analyze, and propose solutions to these problems. This course has been approved for transfer under the CAA and ICAA as a general education course in Social/Behavioral Sciences.

**SOC 232                      Social Context of Aging**                      College Credit: 3 semester hours

This course provides an overview of the social implications of the aging process. Emphasis is placed on the roles of older adults within families, work and economics, politics, religion, education, and health care. Upon completion, students should be able to identify and analyze changing perceptions, diverse lifestyles, and social and cultural realities of older adults. This course has been approved for transfer under the CAA and ICAA as a premajor and/or elective course requirement

**SOC 240                      Social Psychology**                      College Credit: 3 semester hours

This course examines the influence of culture and social groups on individual behavior and personality. Emphasis is placed on the process of socialization, communication, conformity, deviance, interpersonal attraction, intimacy, race and ethnicity, small group experiences, and social movements. Upon completion, students should be able to identify and analyze cultural and social forces that influence the individual in a society.

**SPA 111                      Elementary Spanish I**                      College Credit: 3 semester hours

This course introduces the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the development of basic listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with grammatical accuracy to spoken and written Spanish and

demonstrate cultural awareness. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**SPA 112 Elementary Spanish II**

College Credit: 3 semester hours

*Prerequisite: SPA 111*

This course is a continuation of SPA 111 focusing on the fundamental elements of the Spanish language within a cultural context. Emphasis is placed on the progressive development of listening, speaking, reading, and writing skills. Upon completion, students should be able to comprehend and respond with increasing proficiency to spoken and written Spanish and demonstrate further cultural awareness. This course has been approved for transfer under the CAA and ICAA as a general education course in Humanities/Fine Arts.

**SST 110 Intro to Sustainability**

College Credit: 3 semester hours

This course introduces sustainability issues and individual contributions toward environmental sustainability. Topics include management processes needed to maximize renewable/nonrenewable energy resources, economics of sustainability, and reduction of environmental impacts. Upon completion, students should be able to discuss sustainability practices and demonstrate an understanding of their effectiveness and impacts.

**SST 120 Energy Use Analysis**

College Credit: 3 semester hours

This course introduces the principles of analyzing energy use, energy auditing tools and techniques, conservation techniques, and calculating energy savings. Topics include building system control theory, calibrating digital controls, energy loss calculations, and applicable conservation techniques. Upon completion, students should be able to demonstrate an understanding of energy use, audits, and controls in the analysis of energy consumption.

**SST 130 Modeling Renewable Energy**

College Credit: 3 semester hours

This course introduces software and other technologies used for modeling renewable energy systems. Topics include renewable energy modeling software applications, data analysis, renewable energy sources, and cost of renewable energy systems. Upon completion, students should be able to use appropriate technology to model the effectiveness of renewable energy systems.

**SST 140 Green Building & Design Concepts**

College Credit: 3 semester hours

This course is designed to introduce the student to sustainable building design and construction principles and practices. Topics include sustainable building rating systems and certifications, energy efficiency, indoor environmental quality, sustainable building materials and water use. Upon completion, students should be able to identify the principles and practices of sustainable building design and construction.

**SST 210 Issues in Sustainability**

College Credit: 3 semester hours

*Prerequisites: SST 110*

This course introduces the long-term impacts and difficulties of applying sustainability concepts in an organization, business, or society. Topics include the application of sustainable technologies and the analysis of affordability, efficiencies, recycling, and small and large-scale design. Upon completion, students should be able to recognize the possible limitations of sustainable technologies and be prepared to reconcile such conflicts.

**TRN 110 Intro to Transport Technology**

College Credit: 2 semester hours

This course covers workplace safety, hazardous materials, environmental regulations, hand tools, service information, basic concepts, vehicle systems, and common transportation industry terminology. Topics include familiarization with major vehicle systems, proper use of various hand and power tools, material safety data sheets, and personal protective equipment. Upon completion, students should be able to demonstrate appropriate

safety procedures, identify and use basic shop tools, and describe government regulations regarding transportation repair facilities.

**TRN 120                      Basic Transportation Electricity**                      College Credit: 5 semester hours  
This course covers basic electrical theory, wiring diagrams, test equipment, and diagnosis, repair and replacement of batteries, starters, and alternators. Topics include Ohm's Law, circuit construction, wiring diagrams, circuit testing, and basic troubleshooting. Upon completion, students should be able to properly use wiring diagrams, diagnose, test, and repair basic wiring, battery, starting, charging, and electrical concerns.

**TRN 140                      Transportation Climate Control**                      College Credit: 2 semester hours  
This course covers the theory of refrigeration and heating, electrical/electronic/pneumatic controls, and diagnosis and repair of climate control systems. Topics include diagnosis and repair of climate control components and systems, recovery/recycling of refrigerants, and safety and environmental regulations. Upon completion, students should be able to diagnose and repair vehicle climate control systems.

**TRN 140A                      Transportation Climate Control Lab**                      College Credit: 2 semester hours  
*Corequisite: TRN 140*  
This course provides experiences for enhancing student skills in the diagnosis and repair of transportation climate control systems. Emphasis is placed on reclaiming, recovery, recharging, leak detection, climate control components, diagnosis, air conditioning equipment, tools and safety. Upon completion, students should be able to describe the operation, diagnose, and safely service climate control systems using appropriate tools, equipment, and service information.

**TRN 180                      Basic Welding for Transportation**                      College Credit: 3 semester hours  
This course covers the terms and procedures for welding various metals used in the transportation industry with an emphasis on personal safety and environmental health. Topics include safety and precautionary measures, setup/operation of MIG equipment, metal identification methods, types of welds/joints, techniques, inspection methods, cutting processes and other related issues. Upon completion, students should be able to demonstrate a basic knowledge of welding operations and safety procedures according to industry standard.

**VET 110                      Animal Breeds and Husbandry**                      College Credit: 3 semester hours  
This course provides a study of the individual breed characteristics and management techniques of the canine, feline, equine, bovine, porcine, ovine, caprine, and laboratory animals. Topics include physiological data, animal health management, and basic care and handling of animals. Upon completion, students should be able to identify breeds of domestic and laboratory animals, list physiological data, and outline basic care, handling, and management techniques.

**VET 114                      Intro to Veterinary Medical Technology**                      College Credit: 1 semester hour  
This course introduces the standard operating procedures and responsibilities of veterinary medical technology departments, common zoonotic diseases, safety and ethical issues, and USDA/DEA/OSHA regulations/compliance. Emphasis is placed on standard operating procedures, zoonotic diseases, safety and ethical issues, and the importance of USDA/DEA/OSHA regulations and compliance. Upon completion, students should be able to perform duties assigned in veterinary medical technology, recognize potential zoonotic diseases, and establish safety protocols/regulatory compliance.

**VET 120                      Veterinary Anatomy and Physiology**                      College Credit: 4 semester hours  
*Local Prerequisite: Completion of one of the following: high school biology course, BIO 090, BIO 094, BIO 110, BIO*

111, or by permission of the instructor

This course covers the structure and function of the animal body with emphasis on the similarities and differences among domestic animals. Emphasis is placed on the structure and function of the major physiological systems of domestic, laboratory, and zoo animals. Upon completion, students should be able to identify relevant anatomical structure and describe basic physiological processes for the major body systems.

**VET 121                      Veterinary Medical Terminology                      College Credit: 3 semester hours**

This course covers the basic medical terminology required for veterinary technicians. Topics include the pronunciation, spelling and definition of word parts and vocabulary terms unique to the anatomy, clinical pathology, and treatment of animals. Upon completion, students should be able to demonstrate knowledge and understanding of basic medical terms as they relate to veterinary medicine.

**VET 137                      Veterinary Office Practices                      College Credit: 2 semester hours**

This course is designed to teach basic administrative techniques, client communication skills, and regulations pertaining to veterinary medicine. Topics include record keeping, telephone techniques, professional liability, office procedures, state and national regulatory laws, human relations, and animal welfare. Upon completion, students should be able to demonstrate effective communication techniques, office procedures, and knowledge of regulatory laws and issues relating to animal welfare

**WBL 111                      Work-Based Learning I                      College Credit: 1 semester hour**

*Local Prerequisite: Approval of Instructor or Department Chairperson*

This course provides a work-based learning 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.

**WEB 110                      Internet/Web Fundamentals                      College Credit: 3 semester hours**

This course introduces World Wide Web Consortium (W3C) standard markup language and services of the Internet. Topics include creating web pages, search engines, FTP, and other related topics. Upon completion, students should be able to deploy a hand-coded website created with mark-up language, and effectively use and understand the function of search engines.

**WEB 140                      Web Development Tools                      College Credit: 3 semester hours**

This course provides an introduction to web development software suites. Topics include the creation of web sites and applets using web development software. Upon completion, students should be able to create entire web sites and supporting applets.

**WEB 214                      Social Media                      College Credit: 3 semester hours**

This course introduces students to social media for organizations. Topics include social media, marketing strategy, brand presence, blogging, social media analytics and technical writing. Upon completion, students should be able to utilize popular social media platforms as part of a marketing strategy, and work with social media analytics tools.

**WLD 110                      Cutting Processes                      College Credit: 2 semester hours**

This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness.



**WLD 262            Inspection and Testing**

College Credit: 3 semester hours

This course introduces destructive and non-destructive testing methods. Emphasis is placed on safety, types and methods of testing, and the use of testing equipment and materials. Upon completion, students should be able to understand and/or perform a variety of destructive and nondestructive testing processes.

**WLD 265            Automated Welding/Cutting**

College Credit: 4 semester hours

*Prerequisites: Take All: WLD 110 and WLD 121*

This course introduces automated welding equipment and processes. Topics include setup, programming, and operation of automated welding and cutting equipment. Upon completion, students should be able to set up, program, and operate automated welding and cutting equipment.