

# Caroline County Public Schools High School Course Offerings 2015-2016



Colonel Richardson High School    North Caroline High School  
Caroline Career and Technology Center  
Revised January 2015



# THE BOARD OF EDUCATION OF CAROLINE COUNTY

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## Caroline County Public Schools

204 Franklin Street  
Denton, Maryland 21629



MILTON E. NAGEL, CPA  
INTERIM SUPERINTENDENT OF SCHOOLS

January 2015

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Dear Students,

The Caroline County Board of Education, Interim Superintendent and Assistant Superintendent of Instruction are committed to you and your education. Our goal is that concluding four years of high school, you will be prepared to enter college and/or be career ready. In order for you to accomplish this goal, we ask that you be committed to Caroline County's academic program. This program is one that is rigorous and diverse.

This curriculum guide is for you to use as a reference when planning short and long term goals and deciding your course of study. We advise you to challenge yourself and take advantage of all the many opportunities available in Caroline County Public Schools.

Please involve your parents, teachers and school counselor in these important decisions. It is our wish that your high school experience be fulfilling, challenging and rewarding.

Sincerely,

Caroline County Board of Education  
Milton E. Nagel, Interim Superintendent of Schools  
Dr. Patricia Saelens, Assistant Superintendent of Instruction

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## ACADEMIC WAIVERS

Students who have junior or senior status may request an alternative to a four-year enrollment by presenting a completed application package that adheres to particular timelines outlined for each academic waiver. The following program options are available:

- Career Internship allows a student to gain work experience related to his or her career major.
- Dual Enrollment allows a student to enroll in an approved college and earn credits that count as both college and high school credit. (Articulated agreement with Chesapeake College & Washington College).
- Early College Admission allows a student to attend an approved college or postsecondary school full-time during his or her senior year and to use those credits for high school graduation.
- Early Completion allows a student to complete after three and one-half years of attendance to attend college, vocational, technical or other post secondary school program full time, provided all other graduation requirements have been met.

Students on Academic Waivers who drop college courses must re-enter high school and are denied any future dual enrollment opportunities. Students who drop a dual enrollment course after the college drop and add period will be ineligible for graduation honors such as valedictorian and salutatorian.

## ADMISSION REQUIREMENTS FOR STATE UNIVERSITIES & COLLEGES

**Bowie State University**  
**Frostburg State University**  
**Towson University**  
**University of MD, Baltimore**  
**University of MD, Eastern Shore**

**Coppin State University**  
**Salisbury University**  
**University of Baltimore**  
**University of MD, College Park**

As prescribed by the Board of Regents, the Maryland University System Universities listed above expect all applicants, at a minimum, to have completed by graduation the following coursework: 4 years of English, 3 years of Mathematics (a 4<sup>th</sup> year of Mathematics taken in the final year of high school that is at or above the level of Algebra II is strongly recommended. Computer Sciences Principles course does not satisfy this recommendation.), 3 years of History or Social Science, 3 years of Science in at least two different areas, with at least two lab experiences, and at least 2 years of the same World Language.

The above criteria represents the minimum requirements for admission. Successful applications typically present academic credentials that exceed the minimum, including: Advanced Placement (AP) courses, Dual Enrollment, and additional electives.

## ARTICULATION AGREEMENTS

An **articulation agreement** is a written, formal document that specifies the process by which a high school student may earn college credit through successful completion of certain high school courses where students achieve learning outcomes, skills and abilities comparable to those covered in college courses. Generally, the college credit is not awarded until the student is enrolled at the college issuing the articulation agreement and until the student has satisfactorily completed a designated number of credit hours or terms. Because the courses involved are at the high school level, the student pays no tuition.

The opportunity for high school students to enroll in courses approved by a postsecondary institution for college credit comes through **transcripted credit** courses. The student is able to receive credit toward a high school diploma for such courses and upon graduating from high school may receive college credit from the postsecondary institution involved and other colleges and universities, which accept transfer credit from that postsecondary institution.

<b>Program Name</b>	<b>Name of Institution offering credit bearing agreement</b>
Automotive Technician	Community College of Baltimore County Montgomery College Pennsylvania College of Technology
Business Management	Chesapeake College
CASE	Institute of Applied Agriculture (UMCP)
Computer Science	Chesapeake College
Digital Media & Web Design	Bridgemount Community & Technical College Chesapeake College Montgomery College
Early Childhood Development	Chesapeake College
Food & Beverage Management	The Culinary Institute of America Stratford University
Teacher Academy of Maryland	Chesapeake College Coppin State Stevenson University St. Mary's College of Maryland Towson University



## ASSESSMENTS

### Accuplacer Test

The Accuplacer Test is a placement test used by community colleges, four-year colleges, and technical schools around the world including our local institution Chesapeake Community College. This nationally-normed test provides fast, accurate assessment of an incoming college students' ability to access college freshman coursework. It also identifies students who need remedial coursework.

### Advanced Placement Exams

The Advanced Placement Exams (AP) are given in May at both North Caroline High and Colonel Richardson High Schools. **Students who take AP courses are expected to take AP exams.** Over 400 college institutions may grant college credit to students who earn a qualifying score of 3, 4, or 5.

### ACT

The American College Test (ACT) is a widely accepted college entrance exam. It assesses high school students' general educational development and their ability to complete college level work. The multiple-choice tests cover four skill areas: English, Mathematics, Reading, and Science. The Writing Test, which is optional, measures skills in planning and writing a short essay. Students should check with the college of their choice to determine which entrance exam is required by the institution. If a student qualifies for the free and reduced lunch program he/she qualifies for two free tests beginning in 11<sup>th</sup> grade.

### ASVAB

The Armed Services Vocational Aptitude Battery (ASVAB) test is given to all juniors every year. The ASVAB is a comprehensive aptitude test and it is given, free of charge, to all juniors in our school system. An aptitude is the capability a student has developed through experience or education that indicates his/her current readiness to become proficient in a certain type of activity, given the opportunity to do so. The instrument provides comparative scores for verbal, math, science, and technical areas which are comparable to SAT results. A Department of Defense employee administers the test but the scores are not given to military recruiters unless the student gives permission. This is an excellent tool to use as students finalize his/her career choices.

### High School Assessments

The Maryland High School Assessment program includes tests that all students must take as they complete Algebra 1, Biology, English 10, and Government high school level courses. Although these are considered high school tests, middle school students also take the tests if they are enrolled in high school level courses. *Beginning with the 2014-2015 school year, PARCC (Partnership for Assessment of Readiness for College and Careers) state assessments in reading and mathematics replace the High School Assessments in Algebra I and English 10.*

### PSAT

The Preliminary Scholastic Assessment Test (PSAT) gives students the opportunity to practice for the SAT I. The PSAT allows the student to find information about various colleges and enter scholarship competitions. Caroline County administers the PSAT to all 10<sup>th</sup> graders at no cost to the students. The results are shared with students and parents as a way to help plan for coursework in grades 11 & 12. Students receive their results, along with the test questions, so they may review their strengths and

weaknesses. These results can help students select appropriate courses to prepare them for college. Eleventh grade students may elect and are encouraged to take the PSAT by paying the required testing fee. Eleventh grade students, who take the PSAT and score well, may be eligible for the National Merit Scholarship. Students who take the PSAT are provided access to the College Board's Big Future program that indicates AP testing potential and allows them to search for colleges and prepare for the SAT.

### **SAT**

The Scholastic Assessment Test (SAT) consists of two different tests, the SAT I and the SAT II. The SAT I measures a student's critical reading, mathematics and writing skills. It is used to assess the student's readiness for college level work. The SAT II is designed to measure a student's knowledge in a specific subject and his/her ability to apply that knowledge. SAT II tests are available in areas such as literature, sciences, languages, math and history. Students should check with the college of their choice to determine which entrance exam is required by that institution. If a student qualifies for the free and reduced lunch program his/her qualifies for two free SAT tests beginning in 11<sup>th</sup> grade and four (4) free college applications. The PSAT and SAT I will undergo changes in the 2015-2016 school year.

### **BALANCED CURRICULUM**

- Every student is **required** to take a course in English and Mathematics every year.
- Every student is **advised** to take a course in Science and Social Studies every year.
- Students may take only one Physical Education course per semester.

**Caroline County Public Schools  
Career Pathways and  
Majors/Programs of Study**

**2015-2016 School Year**

<b>Career Pathways</b>	<b>Majors/Programs of Study</b>
<b>Career &amp; Technology Education (CTE)</b>	
Arts, Media and Communication	Digital Media and Web Design
Business Management & Finance	Accounting Marketing
Construction & Development	Computer Aided Drafting & Design Construction Technology Industrial Technology
Consumer Services, Hospitality & Tourism	Careers in Cosmetology Food & Beverage Management (Prostart)
Environmental, Agricultural & Natural Resources	CASE (Curriculum for Agricultural Science)
Health & Biosciences	PLTW Biomedical Sciences Academy of Health Professions
Human Resources Services	Teacher Academy of Maryland (TAM) Fire Science Maryland Fire and Rescue Institute Early Childhood Education
Manufacturing, Engineering & Technology	PLTW Pre-Engineering
Transportation Technologies	Automotive Technician (NAETEF)
<b>Non-CTE</b>	Liberal Arts Military Service

**\*\* Career Majors are identified as part of the Plan of Study completed in Grade 8.**

## **CAROLINE COUNTY CAREER & TECHNOLOGY COMPLETER PROGRAM SEQUENCES**

**Note: Students may enroll in CTE courses prior to the concentrator course. Only students intending to complete a program of study may enroll in the concentrator and completer courses (see asterisks).**

**Arts, Media, and Communication:** CCPS offers great opportunities for careers in the Arts, Media and Communication Career Cluster. Students interested in this cluster combine creative abilities with technical skills and knowledge which prepares them for careers in: Broadcast Production, Graphic Communications, Web Design, Interactive Media and Game Design. Working with people from the industry helps ensure that our programs keep pace with the industry. These programs include options for students to earn industry certifications and college credit toward advanced study in the career field.

### **Digital Media and Web Design Development**

Graphics and Media Publications (845)

Programming I (846)

Web Design I (847)

Web Design II (848)\* - Concentrator course

Operating Systems (849)\* - Completer course

\*Must complete industry assessment (Adobe)

**Business Management and Finance:** CTE programs include a focus on financial services, accounting, marketing, business management, and business administrative support services. These programs include options for students to earn industry certifications and college credit toward advanced study in the career field. Successful completion of these exams, may allow students to earn college credit for knowledge gained in their high school program.

### **Accounting**

Principles of Business Administration & Management (801)

Accounting I (807)

Accounting II (808)

Accounting III (809)\* - Concentrator and Completer course

\*Must complete CLEP (Financial Accounting) assessment

### **Marketing**

Principles of Business Administration and Management (801)

Accounting I (807)

Marketing I (812)

Marketing II (813)\* - Concentrator and Completer course

\*Must complete CLEP (Marketing) assessment

**Construction and Development:** Advances in science and technology will continue to drive innovation in the design, construction, and maintenance of buildings and infrastructure, including new design concepts, construction materials and methods, and the application of information technology. Construction-related programs allow students to advance their knowledge in specific construction trades, design or construction management.

**Computer Aided Drafting and Design (CADD)**

Foundations of Building and Construction Technology - CORE (80840)

Fundamentals of Construction and Drafting (870)

Computer Aided Drafting and Design – CADD I (871)

Computer Aided Drafting and Design II – CADD II (872)\* - Concentrator course

Residential and Light Commercial Construction Technology I (873)\* - Completer course

\*Must complete NCCER or CADD assessments.

**Construction Technology**

Foundations of Building and Construction Technology – CORE (80840)

Fundamentals of Construction and Drafting (870)

Computer Aided Drafting and Design – CADD I (871)

Residential and Light Commercial Construction Technology I (873)

Residential and Light Commercial Construction Technology II (874)\* - Concentrator and Completer course

\*Must complete NCCER assessments.

**Industrial Technology**

Foundations of Building & Construction Technology – CORE (80840)

Fundamentals of Industrial Technology (860)

Drafting and Print Reading (861)

Mechanical Systems (862)\* - Concentrator course

Electrical Systems (863)\* - Completer course

\*Must complete NCCER assessments.

**Consumer Services, Hospitality, and Tourism:** Programs in consumer services, hospitality and tourism prepare students for a variety of career options. Each program includes options for students to earn industry certifications and college credit in the career field. Students, who are interested in culinary arts, restaurant management, lodging management, or cosmetology, engage in real-world experiences through internships and mentoring opportunities. These options allow students to apply their classroom instruction in meaningful ways and give them (through licensure or certification) a head start into the profession.

**Cosmetology**

Principles & Practices of Cosmetology (835)

Advanced Cosmetology (836)

Mastery of Cosmetology (837)\* - Concentrator course

Cosmetology Practicum (838)\* - Completer course

\*Must complete State Board Examination in both theory and practice.

**Food and Beverage Management (Prostart)**

Food Service Professional I (901)

Food Service Practicum I (903)

Food Service Professional II (902)\* - Concentrator course

Food Service Practicum II (903)\* - Completer course

\*Must complete Serve Safe and Prostart assessments

**Environmental, Agriculture and Natural Resources:** The agricultural sector is a highly competitive global industry creating new challenges in identifying global and domestic markets, improving business planning, financing, risk management, and productivity; and reducing costs. Advances in science and technology, in particular biotechnology, will continue to drive innovation and growth in this career cluster. Growing public concerns over natural resources, environmental quality, and public health will continue to expand the role and scope of the natural resource management and environmental services sectors.

**Curriculum for Agricultural Science Education (CASE)**

Agriculture, Food and Natural Resources (8160)

Principles of Agriculture – Animal Science (8190) or

Principles of Agriculture – Plant Science (8540)

Animal and Plant Biotechnology (8550)\* - Concentrator course

Agriculture Business, Research & Development – Capstone (8555)\* - Completer course

\*Must complete CASE assessment

**Health and Biosciences:** Career and Technology Education programs in the Health and Biosciences cluster focus on preparing dedicated professionals with the knowledge and skills necessary to pursue challenging and rewarding careers and further education. These programs require students to apply knowledge learned in science and mathematics to professions in the health and biosciences field. These careers are among the fastest growing and highest in demand in the country as the population ages and health care needs continue to increase. These CTE programs prepare students for positions in direct patient care settings, research and laboratory facilities, as well as for opportunities in business and management related to health care. These programs also provide career development experiences for students in a wide variety of exciting careers.

**Academy of Health Professions**

Foundations of Medicine & Health Science (80801)

Medical Specialty /CNA (80802)

Allied Health Internship (80803)

Structures and Functions of the Human Body (80804)\* - Concentrator course

Clinical Internship (80805)\* - Completer course

\*Must complete CNA assessment

**PLTW – Biomedical Sciences**

Principles of Biomedical Science (80880)

Human Body Systems (80881)

Medical Interventions (80883) \* - Concentrator course

Biomedical Innovation (80882)\* - Completer course

\*Must complete end of course assessment if available

**Human Resource Services:** Advances in scientific knowledge, and increased public awareness of social problems and issues are contributing to a demand for high-quality social services. Public concerns over crime, security, and emergency response and the increased demand for legal intervention in business and communities will continue to drive the growth of law enforcement, emergency and legal services. The continuous need for education professionals, especially in the critical shortage areas, offers creative ways to engage young people early on in the teaching profession.

**Early Childhood Education**

Human Growth and Development (80821)

Child Development Laboratory (80822)

Advanced Laboratory – Child Development (80824)\* - Concentrator course

Early Childhood Education Seminar & Internship (80825)\* - Completer course

\*Must complete ParaPro assessment

**Firefighter**

Emergency Medical Care Technician (80831)\* - Concentrator

National Incident Management System (NIMS), Incident Command System (ICS) for Fire Service (80833)\* - Concentrator course

Rescue Technician-Site Operations (80834)\* - Concentrator course

Rescue Technician-Vehicle and Machinery Extraction (80835)\* - Completer course

\*Must complete industry assessment

**Teacher Academy of Maryland (TAM)**

Human Growth and Development (80821)

Teaching as a Profession (80826)

Foundations of Curriculum and Instruction (80827)\* - Concentrator course

Education Academy Internship (80828)\* - Completer course

\*Must complete ParaPro assessment

**Manufacturing, Engineering and Technology (MET):** Programs in the Manufacturing, Engineering, and Technology Cluster prepare students for a variety of career options through Maryland’s Career and Technology Education Programs of Study that lead to postsecondary education and employment. Students engage in real world projects that strengthen their understanding of science, technology, engineering, and mathematics (STEM). They work in teams to complete challenging projects related to design, manufacturing process applications, and quality improvements. Graduates are being educated for the high-performance workplace using advanced technologies. Employers in the manufacturing and engineering sectors need a pipeline of highly qualified employees to remain internationally competitive, to develop and use new technologies, and to continuously improve the quality of life for Marylanders.

**Project Lead the Way (PLTW) – Pre-Engineering**

Principles of Engineering (80871)

Introduction to Engineering Design (80872)

Digital Electronics (80874)\* - Concentrator course

Civil Engineering (80873) or Aerospace Engineering (80876)\* - Completer course

Engineering Design and Development (80875)\* - Completer course

\*Must complete end of course assessment if available

**Transportation Technologies:** Advances in science and engineering are producing major innovations in transportation technology, resulting in faster movement of people and goods at lower costs and with less environmental and safety risks. These innovations require higher skills to manage and maintain transportation equipment. High school programs provide opportunities for students to prepare for careers in the transportation industry.

**Automotive Technology**

Automotive – Suspension and Steering (880)

Automotive Engine Performance A (881)

Automotive – Brakes (883)

Automotive – Electrical/Electronic Suspension (882)\* - Concentrator course

Automotive Heating and Air Conditioning Systems (884)\* - Concentrator course

Automotive Engine Performance B (885)\* - Concentrator course

\*Must complete NATEF/ASE industry assessments



## **CAROLINE COUNTY NON-CTE COMPLETER PROGRAM SEQUENCES**

**Liberal Arts:** This career major is for students who are non-CTE majors. Students who opt to be Liberal Arts majors must complete two years of world language or two advanced technology courses and a minimum of three (3) of the following elective courses in order to meet graduation requirements.

- Speech and Presentation Technology (123)
- Creating Writing (125)
- Contemporary Issues (207)
- Physical & Cultural Geography (209)
- Psychology (216)
- Sociology (217)
- Business Law (214)
- Economics (213)
- Algebra II (308)
- Statistics (311)
- AP Statistics (311)
- Discrete Math (314)
- Calculus (315)
- Pre-Calculus (322)
- AP Calculus (307)
- Chemistry (405)
- Physics (407)
- Anatomy & Physiology (410)
- Environmental Science (411)
- AP Biology (413)
- AP Chemistry (418)
- AP Physics C (471)
- French III (503) – offered at NCHS only
- French IV (504) – offered at NCHS only
- AP French (506) – offered at NCHS only
- Spanish III (510)
- Spanish IV (511)
- AP Spanish (513)
- Human Growth & Development (80821)

**Military Service:** Students who opt to participate in this program will complete two years of world language or two advanced technology courses and four credits in the Naval Junior Officer Training Corps program of study offered at Easton High School. Transportation to this program will be provided by Caroline County Public Schools.

- Naval Science I (85001)
- Naval Science II (85002)
- Naval Science III (85003)
- Naval Science IV (85004)

**CAROLINE COUNTY GRADUATION REQUIREMENTS**  
**(For students entering Grade 9 in 2013-2014 school year and beyond)**

Core Subject	Credits Required
<b>English</b>	<b>4 credits</b>
<b>Mathematics</b> <i>(Beginning with students entering the 9<sup>th</sup> grade class of 2014-2015 school year, each student shall enroll in a mathematics course in each year of high school that the student attends up to a maximum of 4 years of attendance.)</i>	<b>4 credits – at the high school level</b> - 1 credit in Algebra I - 1 credit in Geometry - 2 credits beyond Algebra I
<b>Science</b>	<b>3 credits</b> - 1 credit in Biology - 2 credits that must include laboratory experience in any or all of the following areas: earth science, life sciences, physical sciences
<b>Social Studies</b>	<b>3 credits</b> - 1 credit in U.S. History - 1 credit in World History - 1 credit in local, state, national government
<b>Financial Literacy</b>	<b>1 credit</b>

**Other Graduation Requirements**

Subject Area	Credits Required
<b>Fine Arts</b>	<b>1 credit</b>
<b>Physical Education</b>	<b>1 credit</b>
<b>Health</b>	<b>1 credit</b>
<b>Technology Education</b>	<b>1 credit</b>
<b>Electives</b>	<b>3 credits</b>
<i>AND</i>	
<b>World Language</b>	<b>2 credits</b>
<i>OR</i>	
<b>Electives</b>	<b>3 credits</b>
<i>AND</i>	
<b>Advanced Technology</b>	<b>2 credits</b>
<i>OR</i>	
<b>CTE Completer Program Sequence</b>	<i>(Credits may vary by CTE major)</i>

Students must meet all local school system requirements including attendance and service learning.

## ENGLISH SEQUENCE

The required English courses, grades 9-12, must be completed in the intended sequence. Students may not take two required English courses in the same semester except in the senior year with permission of the principal.

## ENROLLMENT NUMBERS

- In keeping with Board of Education practice, a course may not be offered if fewer than ten students are enrolled.
- Some courses taught at CCTC have limited enrollments and a specific number of seats available to each school. When requests exceed capacity, a selection process is used to identify students for enrollment in these programs.
- Some courses are taught only at one campus and students are strongly encouraged to participate in cross-campus opportunities.

## GRADUATION RECOGNITION

A tiered recognition program based on the standards below will be used to recognize academic achievement at graduation. Students in all programs and concentrations will have the opportunity to earn these recognitions.

<u>Recognition</u>	<u>GPA minimum</u>
Distinguished Honors	3.80
High Honors	3.50
Honors	3.20

## MARYLAND HIGH SCHOOL CERTIFICATE

In accordance with COMAR, “The decision to award a student with a disability a Maryland High School Certificate of Program Completion will not be made until after the beginning of the student’s last year in high school unless the student is participating in the Alt-MSA. An Exit Document that describes the student’s skills shall accompany the Maryland High School Certificate of Program Completion.”

“A Maryland High School Certificate shall only be awarded to students with disabilities who cannot meet the requirements for a diploma, but who meet one of the following standards:

- 1) enrolled in an educational program for at least 4 years beyond eighth grade, or its age equivalent, and is determined by an IEP team with the agreement of the parents of the student, to have developed appropriate skills for the individual student to enter the world of work, act responsibly as a citizen, and enjoy a fulfilling life, with the world of work including but not limited to:

- a. gainful employment
  - b. work activity centers
  - c. sheltered workshops
  - d. supported employment or
- 2) has been enrolled in an education program for 4 years beyond grade 8 or its age equivalent and will have reached age 21 by the end of the student's current school year."

## **MARYLAND SCHOLARS**

Maryland Scholars is a course of study that prepares high school students to be college and career-ready.

### **Maryland Scholars Course of Study** (*freshmen entering in 2012*)

4 credits of English

4 credits of Math (Including Algebra 1, Geometry, Algebra 2)

3 credits of Lab Science (Biology, Chemistry, Physics (preferred))

3 credits of Social Science (U.S. History, World History, Government)

2 credits of the same World Language

(Students must attain a 3.0 GPA to qualify.)

(Courses underlined exceed state graduation requirements.)

### **Financial Rewards for Maryland Scholars**

Academic Competitiveness Grants (ACG) - The U.S. Department of Education has allocated an additional \$4.5 billion in college tuition grants over five years for State Scholars who qualify for federal financial aid. Students who are Pell-eligible and completed the Maryland Scholars Course of Study could qualify for an Academic Competitiveness Grant - \$750 (for college freshmen) and \$1,300 (for college sophomores).

## **NATIONAL COLLEGIATE ATHLETIC ASSOCIATION**

College-bound student-athletes who want to compete for Divisions I and II programs must be certified academically (and also as an amateur) by the NCAA Eligibility Center. Students must register with the eligibility center. Students must make sure he/she is on course to meet core-course requirements (verify he/she has the correct number of core courses and that the core courses are on the high school's 48-H with the eligibility center).

## PROMOTION & GRADUATION REQUIREMENTS

1. Promotion from one grade to the next will require the accumulation of credits based on the following schedule. The accumulation of earned credits (core and elective credits) will determine promotion to the next grade. The following minimum number of credits are required:

Grades 9 to 10 -	Earn six (6) credits, three (3) of which must be in the “CORE” Subject areas of English, Mathematics, Science, or Social Studies.
Grades 10 to 11 -	Twelve (12) credits, including at least five (5) credits in the areas of English, Mathematics, Science, or Social Studies
Grades 11 to 12 -	Sixteen (16) credits, including at least eight (8) credits in the areas of English, Mathematics, Science, or Social Studies.
  
2. In order to qualify for a Maryland high school diploma from a public high school in Caroline County, students must meet the requirements established by the Maryland State Board of Education in Bylaw 13A.03.02.03 and the Caroline County Board of Education.
  - A. Requirements for graduation are summarized on the chart on page 12.
  - B. Students shall satisfactorily complete four years of approved study beyond the eighth grade unless a waiver is granted by the Superintendent of Schools in accordance with Board of Education Regulation III.C 33.40.01, Alternatives to a Four-Year High School Enrollment.
  - C. **At least four credits must be earned after the completion of 11<sup>th</sup> grade.**
  - D. Credits toward graduation may also be earned in the following ways with advanced approval:
    1. Summer Semester (credit recovery/make-up credit only)
    2. Evening Program
    3. Career Internship
    4. College Courses (Dual Enrollment)
  - E. Credits earned in a state accredited non-public school will count toward graduation. Credits earned at an unaccredited non-public school must be validated according to procedures listed in Board Policy III.C.16, Transfer of Students from Unaccredited Non-Public Schools. No transfer of credit for courses in religious education will be accepted per the provisions of State Board of Education regulations, COMAR 13.A.04.05.01D.
  - F. **Before a student will be permitted to participate in graduation exercises, he/she must have completed all graduation requirements and must have met all obligations to the school.**

- G. Any approved college course (three or four credits) that is part of the Dual Enrollment program will receive one (1) high school credit if a grade of C or better is earned. In addition, if the college course is substituted in place of a high school course, the grade (A-E) will count toward the student's grade point average. If more than one (1) college course is taken as a substitute for a high school course, then the student will designate in writing prior to the start of the semester the primary course for which the grade will count as part of the student's grade point average.

## **SERVICE LEARNING**

As a graduation requirement, students must complete 75 hours. Students will start working on their hours in grades 3-5, five (5) hours in each grade (15 hours). Students must complete a service-learning project in grades 6-8, ten (10) hours in each grade (30 hours) and ten (10) hours in 9<sup>th</sup> grade. Students must complete twenty (20) hours of independent service learning. Students not completing the middle school component in middle school must do so in high school in addition to the high school requirement. Each student is also required to complete the service-learning requirement for high school in order to be eligible to graduate.

**Transfer Policy:** Transfer policies differ in each Maryland public school system. If a student transfers to another county in Maryland, it will be indicated on the student's record how many hours have been completed in that system. If transferring into Caroline County Public Schools from out-of-state, non-public school, out of country, or home school, based on their official record, students will need to complete their service-learning requirement according to the following:

### **Time of Transfer & Hours Students Must Earn**

6<sup>th</sup> Grade – 60 hours

7<sup>th</sup> Grade – 50 hours

8<sup>th</sup> Grade – 40 hours

9<sup>th</sup> Grade – 30 hours

10<sup>th</sup> Grade – 20 hours

11<sup>th</sup> Grade – 15 hours

12<sup>th</sup> Grade/1<sup>st</sup> Semester – 10 hours

12<sup>th</sup> Grade/2<sup>nd</sup> Semester – 5 hours

## **SPECIAL SCHEDULING CONSIDERATIONS**

Every effort is made to develop a master schedule that best meets student course requests. However, some course conflicts are inevitable. The schools cannot guarantee students will be able to take every course they would like in a given year, even if that course is in the student's four year plan.

## **STUDENTS WITH DISABILITIES**

All students, including students with disabilities, are expected to receive instruction consistent with the Maryland's College and Career-Ready Standards based on the Maryland Content Standards, Core Learning Goals, and must be assessed on their attainment of grade level reading (English II) and math (Algebra/Data Analysis) content for the high school band of Maryland School Assessment (MSA) and course content of Biology and Government for the HSA. Students with disabilities are expected to have access to the general education curriculum, instruction in the contents, and meet the same enrollment, attendance, credit course, and service learning requirements as their non-disabled peers, as well as participate in State assessment programs (MSA and HSA). If the student has been determined by his or her Individualized Educational Program (IEP) team to have a significant cognitive disability, that student would be required to participate in the Alt-MSA.

# COURSES OF STUDY

## ART

### FOUNDATIONS OF ART

Course 920      5 periods/week/sem  
                         1 credit (Fine Arts/Elective credit)

This course meets the fine arts requirements for graduation and is a prerequisite for all other art courses. Students will relate units of study to art history and media involvement. Areas of focus include drawing, basic design, sculpture, clay, and graphics.

**Prerequisites and other notes:** This course satisfies the state Fine Arts requirement.

### DRAWING

Course 921      5 periods/week/sem  
                         1 credit (Elective credit)

This course is designed to give students an opportunity to explore a wide variety of drawing activities while improving drawing skills and techniques. Students will examine both contemporary and traditional masters' art work. Areas of focus may include still life, type or lettering, cartooning, perspective, portraiture, and figure drawing. Additionally, students will gain an insight to both realistic and abstract work. Students will be encouraged to explore experimental methods and employ various media. Matting will be an important skill learned in presenting artwork. Students will experience new avenues through the use of experimental approaches and themes.

**Prerequisites and other notes:** Successful completion of Foundations of Art (920).

### DRAWING II

Course 922      5 periods/week/sem  
                         1 credit (Elective credit)

This course is designed to extend and improve personal growth through drawing skills developed in course 921. Students will research, develop, and/or modify individual personal series and themes in the area of drawing. Students will examine both contemporary and traditional masters' art work. Areas of focus may include still life, type or lettering, cartooning, perspective, portraiture, and figure drawing. Additionally, students will gain an insight to both realistic and abstract work. Students will be encouraged to employ mixed media. As a culminating activity students will build a personal portfolio that is reflective of their acquired skills.

**Prerequisites and other notes:** Successful completion of Drawing (921).

### COLOR

Course 923      5 periods/week/sem  
                         1 credit (Elective credit)

This course is designed to focus on color theory and its applications. Students will examine how color has been used to enhance works of historical and cultural importance. This course will also provide a variety of problem solving activities. Students will apply color theory and skills to achieve specific goals. Students will be encouraged to use traditional and non-traditional materials for special effects. Types of media may include pastels, colored pencils, tempera, acrylic, watercolor, printmaking, dyes, and mixed media.

**Prerequisites and other notes:** Successful completion of Foundations of Art (920).

### COLOR II

Course 924      5 periods/week/sem  
                         1 credit (Elective credit)

This course is designed to extend and improve personal growth through color skills developed in course 923. Students will research, develop, and/or modify individual personal skills to achieve specific goals. Students will be encouraged to use traditional and non-traditional materials for special effects. Types of media may include but are not limited to pastels, colored pencils, tempera, acrylic, watercolor, printmaking, dyes, oils, and mixed media. As a culminating activity students will build a personal portfolio that is reflective of their acquired skills.

**Prerequisites and other notes:** Successful completion of Color (923).

### 3-D I

Course 925      5 periods/week/sem  
                         1 credit (Elective credit)

This course is designed to provide a variety of opportunities for students to work with functional and non-functional three-dimensional artwork. Students will solve problems of weight and balance, and high and low relief. Basic design principles will be applied to all work. Students will plan projects before working directly with the materials. This course will also provide students the opportunity to explore areas of personal interest using various media. Areas of focus may include clay, paper, paper mache, plaster, wood, textiles, and found or recycled



items. Additional focus may be given to mold construction, moving sculpture, and plastics.

**Prerequisites and other notes:** Successful completion of Foundations of Art (920).

### **3-D II**

Course 926            5 periods/week/sem  
                                 1 credit (Elective credit)

This course is designed to extend and improve personal growth through three-dimensional skills developed in course 925. Students will explore problems of weight and balance issues. Students will research, develop, and/or modify individual personal series and themes in the areas involving two and three-dimensional media. Types of media focus may include but not limited to, clay, paper, paper mache, plaster, wood, textiles, and found or recycled items. As a culminating activity students will build a personal portfolio that is reflective of their acquired skills.

### **ART STUDIO**

Course 927            5 periods/week/sem  
                                 1 credit (Elective credit)

This course is for the student who would like to work intensively in visual art. It is an advanced class designed for students who wish to develop a portfolio to use for admission in college, or for scholarship applications.

**Prerequisites and other notes:** Two credits in art courses beyond Foundations of Art (920).

### **ART STUDIO II**

Course 9927          5 periods/week/sem  
                                 1 credit (Elective credit)

This course extends personal growth for the student who would like to work intensively in the visual arts. It is an advanced class designed for senior students who have already completed Art Studio I, to continue to develop a portfolio to use for admission in college, or for scholarship applications. Students enrolled in the AP course in the spring must take this class in order to begin preparation for the AP portfolio.

**Prerequisites and other notes:** Seniors only. Successful completion of Art Studio (927)

### **AP STUDIO ART: DRAWING**

Course 937            5 periods/week/sem  
                                 1 credit (Fine Arts/Elective credit)

This is an advanced, highly individualized course for the student who plans to pursue art in college or post-secondary studies. The course requires the development of an in-depth portfolio

demonstrating quality, depth of concentration and breadth of application. This course focuses on making and drawing concepts.

**Prerequisites and other notes:** Satisfactory completion of Art Studio I and/or II. This course is specifically for those students who will take the AP Exam. Students who plan to take the exam will need to provide slide film and processing for the AP exam portfolio. One course may be selected in junior year and a different course in senior year (938 or 939). Weighted credit will be awarded for completion.

### **AP STUDIO ART: 2-D DESIGN**

Course 938            5 periods/week/sem  
                                 1 credit (Elective credit)

This is an advanced, highly individualized course for the student who plans to pursue art in college or post-secondary studies. The course requires the development of an in-depth portfolio demonstrating quality, depth of concentration and breadth of application. This course focuses on principles of design and concepts in composition.

**Prerequisites and other notes:** Satisfactory completion of Art Studio I and/or II. This course is specifically for those students who will take the AP Exam. Students who plan to take the exam will need to provide a slide film and processing for the AP exam portfolio. One course may be selected in junior year and a different course in senior year (938 or 939). Weighted credit will be awarded for completion.

### **AP STUDIO ART: 3-D DESIGN**

Course 939            5 periods/week/sem  
                                 1 credit (Elective credit)

This is an advanced, highly individualized course for the student who plans to pursue art in college or post-secondary studies. The course requires the development of an in-depth portfolio demonstrating quality, depth of concentration, and breadth of application.

**Prerequisites and other notes:** Satisfactory completion of Art Studio I and/or II. This course is specifically for those students who will take the AP Exam. Students who plan to take the exam will need to provide slide film and processing for the AP exam portfolio. Weighted credit will be awarded for completion.

**Dual Enrollment (register with college):**

**INTRODUCTION TO ART**

Course 9514 2 periods/week/sem  
1 credit – (3 college credits/Fine Arts credit/elective credit)

**Prerequisites and other notes:** Weighted credit will be awarded for completion.

**ENGLISH**

**ENGLISH 9**

Course 102 5 periods/week/sem  
1 credit (English credit)

In this course, students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information. Likewise, students are able independently to discern a speaker's key points, request clarification, and ask relevant questions. By the end of grade 9, students should be able to read and comprehend literature, including stories, dramas, and poems, and literary nonfiction in the grades 9-10 text complexity band proficiently, with scaffolding as needed at the high end of the range.

**ENGLISH 10**

Course 105 5 periods/week/sem  
1 credit (English credit)

In this course, students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multi faceted information. Likewise, students are able independently to discern a speaker's key points, request clarification, and ask relevant questions. By the end of grade 10, students should be able to read and comprehend literature, including stories, dramas, and poems, and literary nonfiction at the high end of the grades 9-10 text complexity band independently and proficiently.

**Prerequisites and other notes:** English 9 (102)

**AP ENGLISH LANGUAGE & COMPOSITION**

Course 107 5 periods/week/sem  
1 credit (English credit)

This course extends previously studied literary concepts and applies them to the chronological development of American literature. Grammatical, stylistic and structural requirements of various formal and creative written and oral assignments are addressed. Two to three literary analyses with a focus on rhetorical devices and authors' purpose and style will be completed during the semester.

**Prerequisites and other notes:** English 9 (102), English 10 (105). This course is specifically for those students taking the AP Exam. Weighted credit will be awarded for completion.

**ENGLISH 11**

Course 108 5 periods/week/sem  
1 credit (English credit)

In this course, students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information. Likewise, students are able independently to discern a speaker's key points, request clarification, and ask relevant questions. By the end of grade 11, students should be able to read and comprehend literature, including stories, dramas, and poems, in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 11, students should also be able to read and comprehend literary nonfiction in the grades 11-CCR text complexity band proficiently, with scaffolding as needed at the high end of the range.

**Prerequisites and other notes:** English 9 (102) and English 10 (105).

**ENGLISH 12**

Course 111 5 periods/week/sem  
1 credit (English credit)

In this course, students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information. Likewise, students are able independently to discern a speaker's key points, request clarification, and ask relevant questions. By the end of grade 12, students should be able to read and comprehend literature, including stories, dramas, and poems, at the high end of the

grades 11-CCR text complexity band independently and proficiently. By the end of grade 12, students should also be able to read and comprehend literary nonfiction at the high end of the grades 11-CCR text complexity band independently and proficiently.

**Prerequisites and other notes:** English 9 (102), English 10 (105), and English 11 (108).

### **AP ENGLISH LITERATURE & COMPOSITION**

Course 110      5 periods/week/sem  
1 credit (English credit)

This course emphasizes the refinement of literary analysis techniques and applies them to the study of English and world literature. Grammar and style requirements are intensified in a variety of more complex compositions and oral presentations.

**Prerequisites and other notes:** English 9 (102), English 10 (105), and English 11 (108). This course is specifically for those students taking the AP Exam. Weighted credit will be awarded for completion.

### **SPEECH AND PRESENTATION TECHNOLOGIES**

Course 123      5 periods/week/sem  
1 credit (Elective credit)

This elective course is an introductory course in basic speaking techniques. Speech activities include oral interpretation, debating, demonstrating a process and extemporaneous speaking. Students will learn basic computer presentation skills using multimedia technology.

**Prerequisites and other notes:** This course may not be used to meet the state requirements of four (4) Carnegie units in English. This course may be taken only once.

### **CONTENT AREA READING STRATEGIES**

Course 132      5 periods/week/sem  
1 credit (Elective credit)

This elective course is a reading intervention for identified students who are still in need of reading support. Using a variety of materials, students receive instruction in reading strategies for use in all content area classes.

**Prerequisites and other notes:** Students must be recommended for this course by the principal or his/her designee.

### **CREATIVE WRITING**

Course 125      5 periods/week/sem  
1 credit (Elective credit)

Creative Writing is an elective course for students who wish to explore such literary forms as the short story, the poem, the essay, or the one-act play. Literary works will serve as models through analysis, application, and imitation. Composition exercises will reflect an understanding of studied forms and application of creative techniques.

**Prerequisites and other notes:** This course may not be used to meet the state requirements of four (4) Carnegie units in English. This course may be taken only once.

### **READ 180/SYSTEM 44**

Course 1390      5 periods/week/sem  
1 credit (Elective credit)

*Read180/System 44* is a foundational reading program designed to meet students where they are and accelerate them to grade level text. *Read180/System 44* provides a personalized learning progression driven by technology and explicit instruction in reading, writing, language, speaking and listening.

**Prerequisites and other notes:** Students must be recommended for this course by the principal or his/her designee.

### **READ 180**

Course 139      5 periods/week/sem  
1 credit (Elective credit)

*READ 180 Next Generation* is a multimedia program that exposes students to a wide range of complex texts, while providing them the scaffolding they need to access, comprehend, and respond to grade-level content. *READ 180 Next Generation* provides students with personalized instruction in reading, writing, speaking, and thinking.

**Prerequisites and other notes:** Students must be recommended for this course by the principal or his/her designee.

**Dual Enrollment (register with college):**

**ENGLISH COMPOSITION 101**

Course 960      2 periods/week/sem  
                         1 credit – (3 college  
                         credits/elective credit)

**Prerequisites and other notes:** Completion of both English 101 (960) and English 102 (961) satisfy the graduation requirement for English 12 (111). Weighted credit will be awarded for completion.

**INTRODUCTION TO LITERATURE 102**

Course 961      2 periods/week/sem  
                         1 credit – (3 college  
                         credits/English credit/elective)

Prerequisites Completion of both English 101 (960) and English 102 (961) satisfy the graduation requirement for English 12. Weighted credit will be awarded for completion.

**MATHEMATICS**

**Note: State graduation requirements include two credits in algebraic and geometric concepts. Algebra I and Geometry meet this requirement.**

**PRE-ALGEBRA**

Course 313      5 periods/week/sem  
                         1 credit (Math credit)

Pre-Algebra is designed to prepare students for the Algebra I course. This course will focus on three critical areas: (1) formulating and reasoning about expressions and equations, including modeling an association in bivariate data with a linear equation, and solving linear equations and systems of linear equations; (2) grasping the concept of a function and using functions to describe quantitative relationships; (3) analyzing two- and three-dimensional space and figures using distance, angle, similarity, and congruence, and understanding and applying the Pythagorean Theorem. The Units included in this course are: The Number System, Expression & Equations, Functions, Geometry and Statistics & Probability. **This course is an elective credit, not a mathematics credit.**

**Prerequisites and other notes:** This course is only for students who have failed Math 8.

**ALGEBRA I**

Course 303      5 periods/week/sem  
                         1 credit (Math credit)

Aligned to the Maryland College and Career Readiness Standards for Mathematics, this foundational math course extends students' prior work in middle school. Students will depend and extend understanding of linear and exponential relationships by contrasting them with each other. They will also apply linear models to data that exhibit a linear trend. Likewise, students engage in methods for analyzing, solving, and using quadratic functions. Completion of this course will prepare students for the PARCC Algebra I Assessment.

**Prerequisites and other notes:** Successful completion of Algebra I (303) is a graduation requirement.

**ADVANCED ALGEBRA I**

Course 318      5 periods/week/sem  
                         1 credit (Math credit)

This course is designed to reinforce the skills and concepts necessary for students to be successful in Common Core Geometry and Common Core Algebra II. In this course, students will expand on their work in Algebra I to interpret and write expressions. This work will include arithmetic operations on polynomials and rational expressions. Students will solve, construct, interpret, analyze, and model with linear, quadratic and exponential functions using different representations. Students will also summarize, represent, and interpret one and two variable categorical and quantitative statistical data.

**Prerequisites and other notes:** Students must successfully complete Algebra I (303) before taking this course. It is recommended that students who earn less than a C in Algebra I (303) take Advanced Algebra I (318) prior to taking Geometry (305).

## GEOMETRY

Course 305      5 periods/week/sem  
1 credit (Math credit)

This course is aligned to the Maryland Common Core State Curriculum Framework for Geometry. Content in this course includes the study of Congruence, Similarity, Right Triangles, Trigonometry, Circles, and Two and Three Dimensional Measurement. Students will explore these topics through transformations in the plane, constructions, proof and modeling. Completion of this course will prepare students for the PARCC Geometry Assessments.

**Prerequisites and other notes:** Students must successfully complete Algebra I (303) before taking this course. It is recommended that students who earn less than a C in Algebra I (303) take Advanced Algebra I (318) prior to taking Geometry (305). Successful completion of Geometry (305) is a graduation requirement.

## ALGEBRA II

Course 308      5 periods/week/sem  
1 credit (Math credit)

Building on their work in Algebra I with linear, quadratic, and exponential functions, students extend their study of functions to include polynomial, rational, and radical functions in Algebra II. Students continue to expand and hone their abilities to model situations and to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Completion of this course will prepare students for the PARCC Algebra II Assessment.

**Prerequisites and other notes:** Students must successfully complete Algebra I (303) and Geometry (305) before taking this course. The University of Maryland System requires Algebra II (308) for admission.

## DISCRETE MATHEMATICS

Course 314      5 periods/week/sem  
1 credit (Math credit)

Throughout this course, students will develop skills in the processes of problem-solving, communication, reasoning, and representing (connections). The main topics of Social Decision Making, Graph Theory, Matrices, Counting and Probability, and Recursion are developed through the six underlying themes of the course; mathematical modeling, use of technology, algorithmic thinking, recursive thinking and decision making. This course provides a review of important concepts in

algebra, statistics, probability, and geometry typically assessed on college entrance and placement tests. It is intended for students who wish to strengthen their math background before continuing their study of math and/or science. Students who have had more than one semester gap in taking a math course prior to taking their college entrance/placement test should take this course.

**Prerequisites and other notes:** Students must successfully complete Advanced Algebra I (318) and Geometry (305) before taking this course.

## STATISTICS

Course 311      5 periods/week/sem  
1 credit (Math credit)

This course is provided for those students who may pursue a science, mathematics, social science, or business course of study. Topics include graphing, averages, dispersion statistics, probability, normal distributions, estimates and sample sizes, hypotheses testing, and sample and parameter comparisons. Computerized statistical analysis is used extensively.

**Prerequisites and other notes:** Students must successfully complete Advanced Algebra I (318) and Geometry (305) before taking this course.

## AP STATISTICS

Course 324      5 periods/week/sem  
1 credit (Math credit)

This course is for the college-bound students who desire in-depth study in statistics before entering college. This course is designed specifically for those that wish to take the AP Test to earn college credit. It will include the advanced study of descriptive and inferential statistics, probability, distribution, samples, and statistical surveys. Use of graphing calculator is required.

**Prerequisites and other notes:** Successful completion of Algebra II (308) and Statistics (311). This course is specifically for those students taking the AP Exam. Weighted credit will be awarded for completion.

## PRE-CALCULUS

Course 322      5 periods/week/sem  
1 credit (Math credit)

This course builds a base of study for calculus concepts through work related applications. Topics covered include the analysis of families of functions; graphical, algebraic and numerical representations of equations and inequalities; exponential, logarithmic and logistic functions; real and complex numbers, polynomial and

rational functions; trigonometric functions and analytical trigonometry; vectors and parametric equations; the derivative and integral in calculus. Use of a graphing calculator is required.

**Prerequisites and other notes:** Successful completion of Algebra II (308) and Geometry (305).

## **CALCULUS**

Course 315      5 periods/week/sem  
1 credit (Math credit)

This course provides an introduction to the study of calculus beginning with the study of limits. It also includes the study of derivatives and their application to problem solving. It is intended for students who plan to study mathematics and/or sciences in college.

**Prerequisites and other notes:** Must have successfully completed Pre-Calculus (322).

## **AP CALCULUS AB**

Course 307      5 periods/week/sem  
1 credit (Math credit)

This course is for college-bound students who desire in-depth study in calculus and analytic geometry before entering a math or science major. It includes the study of derivatives and integrals and their application to problem solving. This course is specifically for those students who will take the AP Exam.

**Prerequisites and other notes:** Must have successfully completed Calculus (315). This course is specifically for those students who will take the AP Exam. Weighted credit will be awarded for completion

## **COMPUTER SCIENCE PRINCIPLES**

Course 80851    5 periods/week/sem  
1 credit (CTE/Math credit)

This course advances students' understanding of the technical aspects of computing including: programming and algorithm design, computer system organization and operation, and data representation and information organization. This course includes the use of several programming languages, based on the specific project or problem students must solve.

**Prerequisites and other notes:** See page 1, under the section titled, "Admission Requirements for State Universities and Colleges" for implications for qualifying for University System of Maryland admission for Computer Science Principles Course.

## **Dual Enrollment (register with college):**

### **STATISTICS**

Course 9512      2 periods/week/sem  
1 credit – (3 college  
credits/elective credit)

**Prerequisites and other notes:** Weighted credit will be awarded for completion.

## **MUSIC**

### **MARCHING BAND**

Course 930      5 periods/week/sem  
1 credit (Fine Arts/Elective  
credit)

This course includes the performance of a variety of marching band literature and instruction in various styles of marching techniques. Participation in a variety of performances is required.

**Prerequisites and other notes:** Prior instrumental instruction recommended. This course meets the fine arts credit for graduation.

### **CONCERT BAND**

Course 935      5 periods/week/sem  
1 credit (Fine Arts/Elective  
credit)

This course includes the performances of concert and symphonic bands, each of which studies and performs different styles of instrumental literature. Participation in a variety of performances is required.

**Prerequisites and other notes:** Prior instrumental instruction recommended. This course meets the fine arts credit for graduation.

### **JAZZ BAND**

Course 931      5 periods/week/sem  
1 credit (Fine Arts/Elective  
credit)

This course is designed to study and perform music of the jazz idiom. Activities include class discussion and listening to jazz styles.

**Prerequisites and other notes:** Prior instrumental instruction recommended. Participation in performances is encouraged. This course meets the fine arts credit for graduation.

### **INSTRUMENTAL SECTIONALS**

Course 932            5 periods/week/sem  
                          1 credit (Fine Arts /Elective credit)

This course provides individual instruction in all band instruments. It concentrates on developing those instrumental skills needed for solo and small group performance.

**Prerequisites and other notes:** Prior instrumental instruction recommended.

### **INSTRUMENTAL ADVANCED THEORY**

Course 933            5 periods/week/sem  
                          1 credit (Fine Arts/Elective credit)

This course expands the study of individual performance on a specific instrument. Study includes in-depth theory instruction in elementary harmony.

**Prerequisites and other notes:** Completion of a prior instrumental music course.

### **VISUAL ENSEMBLE**

Course 934            5 periods/week/sem  
                          1 credit (Fine Arts/Elective credit)

The purpose of this course is to instruct the band's color guard in marching and equipment execution. Students learn marching style, counting techniques and participate in field and parade routines. Participation in performances is required.

**Prerequisites and other notes:** This course meets the fine arts credit for graduation.

### **CHORUS**

Course 940            5 periods/week/sem  
                          1 credit (Fine Arts/Elective credit)

This course is designed for the study and performance of popular and classical music literature. Included in this course are counting, note reading, elementary sight-reading, pitch recognition and performance techniques. Participation in performances is required.

**Prerequisites and other notes:** This course meets the fine arts credit for graduation.

### **GENERAL MUSIC**

Course 941            5 periods/week/sem  
                          1 credit (Fine Arts/Elective credit)

This course includes the study of American music, properties of sound, fundamentals of music, voice, conducting, ethnomusicology,

careers in music, electronic music, and music in the media.

**Prerequisites and other notes:** This course meets the fine arts credit for graduation.

### **STRING ORCHESTRA**

Course 9322          5 periods/week/sem  
                          1 credit (Fine Arts/Elective credit)

This course is designed to focus on the orchestral string ensemble and the instruments of the string family – the violin, viola, cello and bass. Other instruments may be included from time to time at the discretion of the conductor. A variety of music will be performed utilizing many different styles of instrumental literature from Baroque period music to present-day Pops literature. Skill requirements for this class include counting, note reading, sight-reading, pitch recognition and performance technique specific to the instrument. Participation in a variety of performances is required.

**Prerequisites and other notes:** Prior instrumental instruction recommended, preferably in the middle school string orchestra program. This course meets the fine arts credit for graduation. **(CRHS campus only)**

## **PHYSICAL EDUCATION/ HEALTH**

### **PHYSICAL EDUCATION I**

Course 600            5 periods/week/sem  
                          1 credit (PE credit)

This course emphasizes skills and techniques that lead to improved physical fitness and personal conditioning as well as teaching high school basic sports, team and individual games and activities. The course contains age-appropriate health lessons, which inform students of health-related concerns, and the community agencies that offer related services.

**Prerequisites and other notes:** This is the only course that satisfies the state physical education requirement and is recommended for students entering 9<sup>th</sup> grade.

### **LIFETIME SPORTS AND FITNESS II/III/IV**

Courses 603,604,605    5 periods/week/sem  
                          1 credit (Elective credit)

This course emphasizes personal physical fitness components, advanced skill and game strategies. This course includes high school team games

and lifetime activities such as tennis, golf, badminton and table tennis.

**Prerequisites and other notes:** Successful completion of Physical Education I (600) is required for enrollment. These courses are offered sequentially.

### **STRENGTH & CONDITIONING I**

Course 609      5 periods/week/sem  
1 credit (/Elective credit)

Elective physical education course designed to introduce students to the benefits of strength training and cardio-vascular conditioning. Students will design a personal fitness plan to improve their overall fitness levels. Students will research and develop an individualized training program to enhance muscular strength as well as participate in aerobic and cross-training activities to improve cardio-vascular endurance. Research-based topics also include diet, nutrition and performance-based supplements.

**Prerequisites and other notes:** Successful completion of Physical Education I (600) is required for enrollment.

### **STRENGTH & CONDITIONING II**

Course 610      5 periods/week/sem  
1 credit (Elective credit)

Elective physical education course designed to extend and improve personal fitness plans developed in course 609. Students will research, develop and/or modify individualized training programs in the areas of muscular strength and cardio-vascular endurance. Aerobic and cross-training activities as well as Internet research on topics of diet, nutrition and performance-based supplements is included.

**Prerequisites and other notes:** Successful completion of Strength & Conditioning I (609) is required for enrollment.

### **STRENGTH & CONDITIONING III**

Course 611      5 periods/week/sem  
1 credit (Elective credit)

Elective physical education course designed to extend and improve their overall fitness. Aerobic, cross-training and muscular strengthening activities are emphasized. Student research into different types of fitness programs as well as Internet research on topics of diet, nutrition and performance-based supplements is included. Student will produce a comprehensive fitness program for others as a culminating activity.

**Prerequisites and other notes:** Successful completion of Strength & Conditioning II (610) is required for enrollment.

### **HEALTH**

Course 620      5 periods/week/sem  
1 credit (Health credit)

Required course of study for all secondary students. Units of study include physical fitness; alcohol, tobacco and other drugs; personal safety, first aid and injury prevention; disease prevention and control; nutrition; mental health; consumer health; family life and human sexuality, including units on AIDS prevention, sexually-transmitted infections and contraception.

**Prerequisites and other notes:** This is the only course that satisfies the state Health Education requirement and is recommended for students in 10<sup>th</sup> grade.

## **SCIENCE**

### **ECOLOGICAL SYSTEMS**

Course 421      5 periods/week/sem  
1 credit (Science credit)

In this course, students will study the major components of Earth's ecological systems: chemical cycles of life, energy and matter processes, interdependence of organisms, and the development of the biosphere. Awareness of ecological issues will be developed through scientific readings, research projects, hands-on laboratory activities, and simulations. This course is designed to provide students with the content and scientific skills and processes necessary to take biology (403).

**Prerequisites and other notes:** Ecological Systems must be taken prior to Biology (403) unless student qualifies for exemption.

### **BIOLOGY**

Course 403      5 periods/week/sem  
1 credit (Biology credit)

In this course, the characteristics and cycles of living organisms are studied. It also includes the structure and function of biologically important molecules, processes and the functions of related structures in unicellular and multicellular organisms, how traits are inherited and passed on from one generation to another, and the mechanism of evolutionary change. Emphasis is placed on the analysis of scientific processes and oral and written descriptions of these processes. Projects, reports, and readings of current



scientific literature are required. This course is designed to prepare students to take the biology HSA.

**Prerequisites and other notes:** Satisfactory completion of Ecological Systems (421) required.

### **AP BIOLOGY S1**

Course 413      5 periods/week/sem  
1 credit (Elective credit)

AP Biology uses a college level textbook to develop an in-depth, conceptual understanding of life science rather than an accumulation of isolated facts. Students will experience the process of scientific inquiry, recognize the unifying themes that integrate the major topics of biology, and apply their biological knowledge and critical thinking skills to environmental and social concerns. The number of topics included in an AP Biology course, as well as the time students need to spend on coursework, further distinguish this class from the typical first year biology class.

**Prerequisites and other notes:** Satisfactory completion of Algebra II (308), Biology (403), and Chemistry (405). Students must complete AP Biology (414) to be prepared to take the AP Biology exam. Weighted credit will be awarded for completion.

### **AP BIOLOGY**

Course 414      5 periods/week/sem  
1 credit (Science credit)

This is a continuation of course 413. Students taking this second half of the sequence will be eligible for the AP Biology exam.

**Prerequisites and other notes:** AP Biology S1 (413). Weighted credit will be awarded for completion.

### **ANATOMY AND PHYSIOLOGY**

Course 410      5 periods/week/sem  
1 credit (Science credit)

This course is for the student who has shown a special aptitude and interest in biology. It will expand fundamental biological concepts presented in biology (403), specifically comparative vertebrate anatomy, human anatomy and physiology. Animal and organ dissection, as well as skeleton, anatomical model and histological slide study are an integral part of the program of study.

**Prerequisites and other notes:** Satisfactory completion of Biology (403).

### **PHYSICAL SCIENCE**

Course 422      5 periods/week/sem  
1 credit (Science credit)

Physical Science uses a conceptual approach to study the practical applications of chemistry and physics and how they apply to everyday experiences. Students will study the structure and composition of matter, changes in matter, forces of motion, work, electricity, magnetism, and energy. Physical Science topics of study are presented through research based projects, hands-on classroom activities, simulations, and scientific readings.

**Prerequisites and other notes:** Recommended for 11<sup>th</sup> and 12<sup>th</sup> grade students after successful completion of Biology (403).

### **CHEMISTRY**

Course 405      5 periods/week/sem  
1 credit (Science credit)

This course is intended for the college-bound student. The focus is on the mathematical/theoretical understanding of the structure and composition of matter, the changes in matter, and their causes. Topics include chemical shorthand and nomenclature, atomic structures and bonding; periodic groups and trends; solids, liquids, and gases; solutions, chemical equilibrium; acid and base chemistry, and qualitative analysis.

**Prerequisites and other notes:** Satisfactory completion of Common Core Algebra I (303) or Advanced Algebra I (318).

### **AP CHEMISTRY S1**

Course 417      5 periods/week/semester  
1 credit (Elective credit)

AP Chemistry emphasizes the in-depth development and understanding of fundamentals and a reasonable competence in dealing with chemical problems. Students will work individually, as well as collaboratively, to express ideas orally and in writing in a clear and logical manner. AP Chemistry uses a college level textbook, involves students in laboratory experiences typical of college courses, covers topics not typically taught during a first year chemistry class, emphasizes calculations, and the mathematical formulation of principles. The number of topics included in an AP Chemistry course, as well as the time students need to spend on coursework, further distinguish this class from the typical first year chemistry class.

**Prerequisites and other notes:** Satisfactory completion of Algebra II (308) and Chemistry (405). Students must complete AP Chemistry

(418) to be prepared to take the AP Chemistry exam. Weighted credit will be awarded for completion.

### **AP CHEMISTRY**

Course 418      5 periods/week/semester  
1 credit (Science credit)

This is a continuation of AP Chemistry S1 (417). Students taking the second half of the AP Chemistry sequence will be eligible for the AP Chemistry exam.

**Prerequisites and other notes:** AP Chemistry S1 (417). Weighted credit will be awarded for completion.

### **PHYSICS**

Course 407      5 periods/week/sem  
1 credit (Science credit)

Recommended for students with an interest in science, engineering, and/or mathematics. It includes kinematics, and conservation laws of momentum and energy, electric charge, Coulomb's Law, the motion of charged particles in an electromagnetic field, induction, electric circuits, and light. Also studied are wave mechanics, particle dynamics and modern physics.

**Prerequisites and other notes:** Satisfactory completion of Common Core Algebra I (303) or Advanced Algebra I (318).

### **AP PHYSICS C (MECHANICS) S1**

Course 470      5 periods/week/sem  
1 credit (Elective credit)

AP Physics C (Mechanics) emphasizes an in-depth understanding of the fundamentals of mechanics. Areas of study will include: kinematics, Newton's Laws of Motion, work, power, energy, circular motion, rotation, oscillation, gravitation, system particles and momentum. AP Physics uses a college level textbook and involves student laboratory investigation expected at the college level. Additionally, this course will emphasize the application of calculus to solve problems.

**Prerequisites and other notes:** Satisfactory completion or concurrent enrollment in Calculus (315). Weighted credit will be awarded for completion.

### **AP PHYSICS C (MECHANICS)**

Course 471      5 periods/week/sem  
1 credit (Science credit)

This is a continuation of course 470. Students taking the second half of AP Physics C (Mechanics) sequences will be eligible for the AP Physics C (Mechanics) exam.

**Prerequisites and other notes:** Satisfactory completion of AP Physics C S1 (470). Weighted credit will be awarded for completion.

### **ENVIRONMENTAL SCIENCE**

Course 411      5 periods/week/sem  
1 credit (Science credit)

This course is recommended for students with an interest in the life sciences, ecology as well as the impact of humans on the environment. The course focuses on how Earth's land (geosphere), air (atmosphere), water (hydrosphere), and living things (biosphere) interact. It also focuses on the ways humans have an effect on the environment. Various methods for reducing damage to the environment will be presented and evaluated through laboratory investigations, research, projects, and simulations.

**Prerequisites and other notes:** Recommended for 11<sup>th</sup> and 12<sup>th</sup> graders after the satisfactory completion of Biology (403) and Physical Science (422) or Chemistry (405).

### **Dual Enrollment (register with college):**

### **ENVIRONMENTAL SCIENCE**

Course 9511      2 periods/week/sem  
1 credit – (3 College credits/Science/Elective credit)

**Prerequisites and other notes:** Weighted credit will be awarded for completion.

## **SOCIAL STUDIES**

### **UNITED STATES HISTORY**

Course 205      5 periods/week/sem  
1 credit (Social Studies credit)

This course provides an understanding of the principles that helped shape modern America. The inter-relatedness of political, economic, and socio-cultural influences in the chronological study of history from Reconstruction to the present is emphasized. Students apply knowledge of the past within the context of the present and the future. Constructive assessments, book reports, critiques, and selected topical research are requirements for this course.

## **AP UNITED STATES HISTORY – COURSE SEQUENCE**

This course sequence is designed for students wishing to pursue AP credit. Students who do not complete AP United States History S1 (220) and AP United States History S2 (221) must complete course 205 in order to meet the state graduation requirement. These courses are specifically for students who will take the Advanced Placement Exam.

### **AP UNITED STATES HISTORY S1 – (Colonization to Reconstruction)**

Course 220      5 periods/week/sem  
1 credit (Elective credit)

An in-depth study of selected topics in United States history is the theme of this course. Note-taking from printed materials, lectures, and discussions are used in the development of essays. From this foundation, critical reading and writing, analysis of historical interpretation, and research development are used to assist students in preparation for college level study.

**Prerequisites and other notes:** Students taking this course must also sign-up for AP United States History S2 (221). This course is specifically for those students who will take the AP Exam. Weighted credit will be awarded for completion.

### **AP UNITED STATES HISTORY S2 (Reconstruction to Present)**

Course 221      5 periods/week/sem  
1 credit (Social Studies credit)

This course is a continuation of course 220. A research paper is the culminating activity. Students taking this sequence will be eligible for the AP US History Exam.

**Prerequisites and other notes:** AP United States History S1 (220). Weighted credit will be awarded for completion.

## **AMERICAN GOVERNMENT**

Course 201      5 periods/week/sem  
1 credit (Social Studies credit)

This course is designed to develop an awareness of the governmental, political, and economic factors that influence the American way of life on national, state, and local levels. Included is the study of basic American political documents, the functioning of the three branches of government, and the influence of mass media and special interest groups. The individual's role as worker, consumer, and citizen in a democratic, capitalistic society is emphasized.

## **AP UNITED STATES GOVERNMENT AND POLITICS**

Course 222      5 periods/week/sem  
1 credit (Social Studies credit)

This course is designed to give students an analytical perspective on government and politics in the United States. It includes the study of general concepts used to interpret U.S. politics and the analysis of specific examples. This course requires familiarity with the various institutions. Constructive assessments, analysis of current events from newspapers and magazines, oral reports, and group projects are required for this course.

**Prerequisites and other notes:** This course may be taken in place of American Government (201). Weighted credit will be awarded for completion.

## **WORLD HISTORY**

Course 203      5 periods/week/sem  
1 credit (Social Studies credit)

This course is designed to develop an understanding of early Modern World History through present day. It includes the transition from ancient civilizations to early modern societies, the growth of Eurasia and Africa in between 1300-1550, revolutionary Europe, 18<sup>th</sup> and 19<sup>th</sup> Century nationalism, industrialism, and imperialism, the World Wars, and the modern, post-1950 era. Emphasis is given to not only content, but also social studies skills and processes.

## **AP WORLD HISTORY**

Course 224      5 period/week/sem  
1 credit (Social Studies credit)

This course will develop greater understanding of the evolution of global processes and contacts in different types of human societies. Through a combination of factual knowledge and appropriate analytical skills, the nature of change in global frameworks, causes and consequences as well as comparisons among major societies are analyzed. The course emphasizes relevant factual knowledge, leading interpretive issues, historiography, and skills in analyzing various types of historical evidence.

**Prerequisites and other notes:** This course may be taken in place of World History (203). Weighted credit will be awarded for completion.

## CONTEMPORARY ISSUES

Course 207      5 periods/week/sem  
1 credit (Elective credit)

An examination of current issues and events as they relate to federal, state and local government is the focus of this course. International affairs and national social concerns are emphasized. Investigation is aimed at providing an awareness and concern for the complex problems facing all individuals so students may function intelligently and effectively in the modern world.

**Prerequisites and other notes:** An elective course available for grades 10-12.

## PHYSICAL AND CULTURAL GEOGRAPHY

Course 209      5 periods/week/sem  
1 credit (Elective credit)

This course furnishes an understanding of the diverse cultures throughout the world as they relate to physical and political geography. Included are activities on map-reading, political and economic relationships between nations, and both cultural similarities and differences within and among nations.

**Prerequisites and other notes:** An elective course available for grades 10-12.

## PSYCHOLOGY

Course 216      5 periods/week/sem  
1 credit (Elective credit)

The focus of this course is the individual and his/her interactions with others. Particular emphasis is placed on self-understanding. Students will become acquainted with a variety of theoretical perspectives and explanations for various behaviors and outcomes. Topics covered include personality, motivation, learning and mental illness.

**Prerequisites and other notes:** An elective course available for grades 10-12. (NCHS campus only)

## AP PSYCHOLOGY

Course 218      5 periods/week/sem  
1 credit (Elective credit)

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also will learn about the ethics and methods psychologists use in their science and practice.

**Prerequisites and other notes:** An elective course available for grades 11 and 12. Weighted credit will be awarded for completion.

## SOCIOLOGY

Course 217      5 periods/week/sem  
1 credit (Elective credit)

This course examines cultural and societal values, norms and mores including the structure of society, human needs, their roles and relationships. The study of agents of socialization such as the family unit, schools, religion, peers, the workplace, mass media, and technomedia familiarize students with the various dynamics of society. Students are exposed to both pure and applied sociological concepts in order to connect the classroom lessons with the world beyond the classroom for a better understanding of society as a whole.

**Prerequisites and other notes:** An elective course available for grades 10-12.

## BUSINESS LAW

Course 214      5 periods/week/sem  
1 credit (Elective credit)

This course provides students with a basic foundation and concepts of the legal system in the United States with primary focus on the role of law in the business environment. Emphasis is placed on the application of the principles of the laws to areas of business such as contracts, property, consumer relations, and business organization.

**Prerequisites and other notes:** An elective course recommended for grades 10-12.

## ECONOMICS

Course 213      5 periods/week/sem  
1 credit (Elective credit)

This introductory course focuses on the functioning of the American economic system. Topics included are essential economic principles, concepts, and themes dealing with how individuals function as workers, consumers, and citizens.

**Prerequisites and other notes:** An elective course recommended for grades 10-12. (NCHS campus only)

**Dual Enrollment (register with college):**

**WORLD CIVILIZATION**

Course 9513 2 periods/week/sem  
1 credit – (3 college credits/World History credit/elective credit)

**Prerequisites and other notes:** Weighted credit will be awarded for completion.

**TECHNOLOGY**

**TECHNOLOGY EDUCATION**

Course 916 5 periods/week/sem  
1 credit (Technology credit)

This course challenges students to effectively use technology, knowledge, techniques, skills, processes, tools, machines, and instruments to solve problems. Students will receive instruction in the areas of communication, manufacturing, construction, and power-energy-transportation.

**Prerequisites and other notes:**

A statewide assessment will be administered at the end of the course. Graduation requirement

**COMMUNICATION TECHNOLOGY**

Course 917 5 periods/week/sem  
1 credit (Fine Arts/Advanced Tech credit)

This course provides students with an opportunity for in-depth educational experiences in technical graphics, photo-technology, graphic reproduction, audio-visual systems, and telecommunication.

**Prerequisites and other notes:** Technology Education (916). This course can count as a Fine Arts credit.

**ADVANCED TECHNOLOGY APPLICATIONS**

Course 918 5 periods/week/sem  
1 credit (Advanced Tech credit)

This advanced technology education course provides students the opportunity to examine the core systems used in all technology systems. The core technologies to be studied through this course include: mechanical, structural, thermal, propulsion, electrical, electronic, fluid and optical systems.

**Prerequisites and other notes:** Technology Education (916). Recommended for students in grades 10-12. This course can be used as an Advanced Technology credit.

**TECHNOLOGICAL DESIGN**

Course 914 5 periods/week/sem  
1 credit (Advanced Tech credit)

This course requires students to do more than design new products. Additionally, students are expected to learn systemic practical reasoning, and develop an understanding of technology assessment. Impacts of Technology is a class that allows students to apply their imagination toward the designing, problem solving, and building of projects that are most interesting and timely. Impacts of Technology provide students with opportunities to apply their imaginations while using engineering skills. Think about your dream of a space station that floats on a cushion of air can come true.

**Prerequisites and other notes:** Technology Education (916). Students in grades 10-12. This course can be used as an Advanced Technology Credit.

**TECHNOLOGY & SOCIETY**

Course 915 5 periods/week/sem  
1 credit (Advanced Tech credit)

This course is designed to provide opportunities for students to assess the positive and negative effects, and how these have shaped today's global society. Students become knowledgeable about technology, and use hands-on-lessons to apply and transfer this knowledge to common problems. Students will learn to:

- Recognize various types of social and technological issues that arise from the implementation of technology.
- Evaluate the issues related to technology transfer within and between cultures.
- Identify constraints and limitations to the design and demand of technology.
- Recognize various points of view of ethics, trade-offs, economics, and the environment when examining technological issues.
- Examine various practices, policies, and protections that affect technological issues.
- Research, collect, and synthesize data, and draw conclusions on the effects of technology on individuals, groups and society.
- Use a variety of assessment and futurology tools to extrapolate future impacts from technological issues.

**Prerequisites and other notes:** Technology Education (916). Recommended for students in grades 10-12. This course can be used as an Advanced Technology credit.

## WORLD LANGUAGES

### ENGLISH AS A FOREIGN LANGUAGE (EFL)

Course 120      5 periods/week/sem  
1 credit (Foreign Language/  
Elective credit)

This course focuses on improving LEP (limited English proficient) students' skills in reading, writing, listening, and speaking. Instruction begins with survival English and progresses through a continuum of basic English with increasing difficulty.

**Prerequisites and other notes:** This course may not be used to meet the state requirements of four (4) Carnegie units in English. Placement in this course will be contingent upon ELL placement and assessment scores.

### ENGLISH AS A FOREIGN LANGUAGE (EFL)

Course 1202      5 periods/week/sem  
1 credit (Foreign  
Language/Elective credit)

This course focuses on improving LEP (limited English proficient) students' skills in reading, writing, listening, and speaking. Instruction focuses on the emergent language learner and develops their reading, writing, listening and speaking skills.

**Prerequisites and other notes:** This course may not be used to meet the state requirements of four (4) Carnegie units in English. Placement in this course will be contingent upon ELL placement and assessment scores.

### LANGUAGE FOR LEARNING

Course 140      5 periods/week/sem  
1 credit (Elective credit)

Language for Learning is a foundational program designed to provide novice learners with the knowledge and understanding of language needed to achieve proficiency and boost reading comprehension. This program teaches students the words, concepts, and statement important to both oral and written language, and helps enable them to extend this knowledge to other areas of development.

### FRENCH I

Course 501      5 periods/week/sem  
1 credit (Foreign  
Language/Elective credit)

French I is designed to give students practice in developing the four basic communication skills: listening, speaking, reading and writing. Emphasis is on speaking. Students practice the sounds of the everyday language, learn expressions and vocabulary that are useful in everyday conversation, and read from supplementary materials. Students will also learn about the culture and geography of French-speaking countries. **(NCHS campus only)**

### FRENCH II

Course 502      5 periods/week/sem  
1 credit (Foreign  
Language/Elective credit)

French II is designed to give students continued practice in the development of the four communication skills: listening, speaking, reading, and writing. Skill in oral communication is stressed while more emphasis is given to reading and writing. The study of culture and geography continues.

**Prerequisites and other notes:** French I (501). **(NCHS campus only)**

### FRENCH III

Course 503      5 periods/week/sem  
1 credit (Foreign  
Language/Elective credit)

French III continues to emphasize the four basic communication skills of listening, speaking, reading, and writing. Reading and writing requirements are increased as students read poems, short stories, and literary excerpts. French grammar, extemporaneous speaking, the study of culture (art, literature, science, music, history) and geography continues.

**Prerequisites and other notes:** French I (501), French II (502). **(NCHS campus only)**

### FRENCH IV

Course 504      5 periods/week/sem  
1 credit (Foreign  
Language/Elective credit)

French IV continues to develop proficiency in the four communication skills: listening, speaking, reading, and writing. Grammar and extemporaneous speaking continue to be emphasized. Students read poems, short stories, full-length novels, and plays. Culture (art, literature, history, music, and science) and geography study continues. This course may be

taken as an independent study course with administrative approval.

**Prerequisites and other notes:** French I (501), French II (502), & French III (503). (NCHS campus only)

### AP FRENCH LANGUAGE

Course 506      5 periods/week/sem  
1      credit      (Foreign Language/Elective credit)

Students who enroll in AP French Language should already have a good command of French grammar and vocabulary and have competence in listening, reading, speaking, and writing. Most students will be in the final stages of their secondary school training and will have had substantial course work in the language.

**Prerequisites and other notes:** French I (501), French II (502), French III (503), & French IV (504). This course is specifically for those students who will take the AP Exam. Weighted credit will be awarded for completion. (NCHS campus only)

### SPANISH I

Course 508      5 periods/week/sem  
1      credit      (Foreign Language/Elective credit)

Spanish I is an introductory course designed to develop listening, speaking, reading, and writing skills. Basic dialogues and pattern practices present vocabulary and grammar to permit students to function in some daily life situations. Students read and discuss simple conversations and reports, and they write short compositions in Spanish. Through extra reading and reports, students acquire some background in the history, geography, and culture of Spanish speaking countries.

### SPANISH II

Course 509      5 periods/week/sem  
1      credit      (Foreign Language/Elective credit)

Spanish II is designed to continue the study of the language through the activities of listening, speaking, reading, and writing. Basic grammar and vocabulary introduced in Level I are reviewed, and new structures and vocabulary are presented. Longer selections are read, and longer compositions are written. The content continues to focus on daily life situations but also includes historical and cultural information. By the end of this level, students are able to read and comprehend easy versions of literary selections in Spanish.

**Prerequisites and other notes:** Spanish I (508)

### SPANISH III

Course 510      5 periods/week/sem  
1      credit      (Foreign Language/Elective credit)

Spanish III is designed to maintain previously learned vocabulary and grammar. Students refine their existing listening, speaking, reading, and writing skills. Students gain further knowledge of the language and culture of Spanish speaking people. Literary selections include excerpts from some of the Spanish and Latin American masterpieces. Students read articles and short stories independently and present their findings to their classmates in oral Spanish.

**Prerequisites and other notes:** Spanish I (508) & Spanish II (509).

### SPANISH IV

Course 511      5 periods/week/sem  
1      credit      (Foreign Language/Elective credit)

Spanish IV emphasizes the review of previously presented vocabulary and grammar, and students continue to develop their skills of listening, speaking, reading, and writing. Longer and more difficult reading selections including selections of drama and poetry are presented. Students write longer compositions, some of which deal with the style of literature. An individual project on some phase of Spanish culture is required as the year progresses discussions of increasing length are held in Spanish on topics selected by the group. This course may be taken as an independent study course with administrative approval.

**Prerequisites and other notes:** Spanish I (508), Spanish II (509), & Spanish III (510).

### AP SPANISH LANGUAGE

Course 513      5 periods/week/sem  
1      credit      (Foreign Language/Elective credit)

AP Spanish Language is intended for students who wish to develop their proficiency in all four language skills: listening, speaking, reading and writing. Students who enroll should already have a basic knowledge of the language and culture of Spanish-speaking peoples and should have attained a reasonable proficiency in listening comprehension, speaking, reading, and writing. Most students will be in the final stages of their secondary school training and will have had substantial course work in the language.

**Prerequisites and other notes:** Spanish I (508), Spanish II (509), Spanish III (510), and Spanish IV (511). This course is specifically for those students who will take the AP Exam. Weighted credit will be awarded for completion.

## **CAREER AND TECHNOLOGY EDUCATION COURSES**

**All CTE Completers will be required to take an industry or program assessment in order to pass the course. All required industry assessments are given at no cost to the students.**

### **ARTS, MEDIA & COMMUNICATION**

Students need to pass four (4) required courses of the five (5) offered in order to be a program completer.

#### **GRAPHICS & MEDIA PUBLICATIONS**

Course 845      5 periods/week/sem  
1 credit (CTE credit)

This course involves the creating of media objects, which are then used in developing presentations and publications. Emphasis will be placed on development of professional level projects for inclusion in the student's portfolio.

**Prerequisites and other notes:** Fall Semester. Completion of Technology Education (916) and Computer Applications II (803) recommended. Recommended for grades 10-12.

#### **PROGRAMMING I**

Course 846      5 periods/week/sem  
1 credit (CTE credit)

This course introduces the student to basic computer programming concepts. In addition, students will be introduced to the Visual Basic 6.0 programming environment. The students will learn to write code for events and general procedures and develop Windows applications. Course topics include event-driven object-oriented concepts, Active X controls, user interface forms, menus and dialog boxes, debugging, databases and data control, and multiple document interfaces (MDI).

**Prerequisites and other notes:** Recommended for grades 10-12.

#### **WEB DESIGN I**

Course 847      5 periods/week/sem  
1 credit (CTE credit)

This course introduces students to the fundamentals of web site planning, design, implementation and administration. The students will learn how TCP/IP and HTML are used on the Internet and World Wide Web. Course topics will include Internet and World Wide Web history, design fundamentals, HTML, and image composition. An overview of careers related to web design will be presented.

**Prerequisites and other notes:** Recommended for grades 10-12.

#### **WEB DESIGN II**

Course 848      5 periods/week/sem  
1 credit (CTE credit)

This course introduces students to advanced topics in web site planning, design, implementation and administration. During this course students will create and manage complex web sites using Microsoft FrontPage, Macromedia Dream Weaver, and Adobe PhotoShop. The students will learn to integrate active components and database information into their web sites.

**Prerequisites and other notes:** Web Design I (847). Recommended for grades 11-12. Students must take Industry Assessment to receive credit for course. (World Organization of Webmasters and Adobe Creative Suite). Concentrator course only for this major.

#### **OPERATING SYSTEMS**

Course 849      5 periods/week/sem  
1 credit (CTE credit)

The course is intended to provide students with a basic knowledge of the function, configuration and maintenance of PC Operating Systems. Topics of study will include OS upgrading, maintenance, security, and network connectivity. Students will install and use a variety of PC operating systems and perform day-to-day maintenance. Students will work with DOS, Windows and Mac Operating Systems. An overview of careers related to the support of operating systems and application software will be presented.

**Prerequisites and other notes:** Completer course, only for this major.



## **BUSINESS MANAGEMENT & FINANCE**

### **PRINCIPLES OF BUSINESS ADMINISTRATION AND MANAGEMENT**

Course 801      5 periods/week/sem  
1 credit (CTE credit)

This course provides students with knowledge of the types of businesses, as well as various applications, laws, and theories of business. A brief historical perspective, business terminology and principles will be emphasized. Students will be expected to think analytically, improve written and oral communication skills, enhance listening and questioning skills, learn and practice the art of conversation, improve public speaking skills, broaden their awareness of career options, practice using teamwork to make decisions, solve problems, and learn how people, communication and networking skills will help them succeed in their careers. Students will develop human resource skills including: diversity training, attitude, attendance, accountability, employer/employee rights, discrimination, availability of information as well as time management and setting priorities. Students will write grammatically correct correspondence and communicate orally. Students will understand the business world and be more prepared to meet their career goals. **Prerequisites and other notes:** Required course to be a completer in the Accounting and Marketing Pathway.

### **COMPUTER APPLICATIONS II**

Course 803      5 periods/week/sem  
1 credit (CTE credit)

This course builds on the knowledge learned and skills developed in Computer Applications I. The course is designed to prepare the student to effectively and efficiently use Microsoft. Additionally, this course is designed to prepare the student for the Microsoft Office Specialist (MOS) certification exam for Microsoft Word. The Microsoft Office Specialist certification is a globally recognized standard for demonstrating desktop skills in the Microsoft Office Suite. The features and concepts of Microsoft Excel and PowerPoint will also be presented during this course. Additionally, this course will foster the development of the soft skills and workplace readiness skills necessary to work effectively in the technology dependent environment. Students will demonstrate understanding through projects and presentations.

## **COMPUTER APPLICATIONS III**

Course 804      5 periods/week/sem  
1 credit (CTE credit)

This course will build on the concepts and skills presented and developed in Computer Applications II. The course is designed to prepare the student to use Microsoft Excel and Microsoft PowerPoint. Additionally, this course is designed to prepare the student to take the Microsoft Office Specialist (MOS) Excel certification exam. The Microsoft Office Specialist certification is a globally recognized standard for demonstrating desktop skills in the Microsoft Office Suite. During this course the student will also be introduced to the concepts and applications of Microsoft Access. This course will foster the development of the soft skills and workplace readiness skills necessary to work effectively in the technology dependent environment.

**Prerequisites and other notes:** Computer Applications II (803). Students must take the MOS Excel Certification Exam to receive credit for the course.

## **ACCOUNTING I**

Course 807      5 periods/week/sem  
1 credit (CTE credit)

This course is designed to give students a background in the basic accounting procedures used to operate a business. Additionally students will learn about career opportunities in the area of accounting. Emphasis will be placed on double-entry accounting principles. The course includes the study of business organization and management, accounting cycle, books of original entry, and closing accounts at the end of fiscal periods. The students will use a variety of industry standard accounting software. This curriculum complies with the standards of the American Institute of Certified Public Accountants.

## **ACCOUNTING II**

Course 808      5 periods/week/sem  
1 credit (CTE credit)

Mastery of technology skills needed to operate and understand computerized accounting systems are an integral part of this advanced accounting course. Advanced accounting develops understanding of special journals, corporations and applications of computerized accounting systems to business administration. Critical thinking, decision-making, problem solving, team building, ethics, work quality communications, and technology are skills that

are integrated and reinforced throughout the accounting curriculum. This course uses industry standard software applications that meet the accepted workforce standard for automated accounting. The course helps prepare students to operate their own businesses and to study accounting in post-secondary institutions.

**Prerequisites and other notes:** Accounting I (807).

### **ACCOUNTING III**

Course 809      5 periods/week/sem  
1 credit (CTE credit)

Students learn and apply advanced topics in accounting including accounting for inventories, current assets, assets, current and long term liabilities and time value of money concepts. Critical thinking, decision-making, problem solving, team building, ethics, work quality, communications, and technology are skills that are integrated and reinforced throughout the accounting curriculum. Students will work on specialized accounting projects. This course uses industry standard software applications that meet the accepted workforce standard for automated accounting. (Recommended for students planning to pursue post-secondary studies in accounting or business administration)

**Prerequisites and other notes:** Accounting II (808). Students must take CLEP (College Level Examination Program) assessment to receive credit for the course. Concentrator and completer course only for this major.

### **MARKETING I**

Course 812      5 periods/week/sem  
1 credit (CTE credit)

This course introduces students to the processes and functions involved in transferring business products or services to a consumer. The study of marketing helps students gain a clearer picture of how key business functions. This course is designed to enable the student to understand and apply marketing, management, and entrepreneurial principles and to make rational economic decisions while exhibiting social responsibility in a global economy. Marketing skills are essential for any student planning to major in business in college, seek entry-level work in retailing or marketing, or planning to start his or her own business.

**Prerequisites and notes:** Recommended for students in grades 10-12.

### **MARKETING II**

Course 813      5 periods/week/sem  
1 credit (CTE credit)

This course builds on the concepts presented in Marketing I. Students are provided with learning experiences in marketing, management, sales and merchandising. The subject matter is approached from the point of view of the employee in relation to management activities and merchandising sales promotion, marketing research, organizing, and managing a business. This course allows students the opportunity to pursue in greater depth the development of marketing/management competence necessary for full-time employment and job advancement in marketing and distribution. Topics include advertising principles, channels of distribution, methods of product distribution, purchasing, and stock handling and control. Standard business and non-traditional aspects of marketing are explored. All students complete a culminating project, which will include a demonstration of knowledge related to marketing principles.

**Prerequisites and other notes:** Marketing I (812). Students must take CLEP (College Level Examination Program) to receive credit for the course. Concentrator and completer course only for this major.

### **FINANCIAL LITERACY**

Course 8111      5 periods/week/sem  
1 credit (Elective credit)

This course will focus on the role of the student as a citizen, family member, consumer, and active participant in the business world. Students will explore many important areas of economic interest that will enhance their financial security. They will discover ways to maximize their earnings potential, develop strategies for managing their resources, explore skills for the wise use of credit, and gain knowledge of the different ways of investing and managing money. In addition, students will learn about risk management and laws that protect them as a consumer.

**Prerequisite and other notes:** This course is recommended for juniors and seniors only.

## **CONSTRUCTION & DEVELOPMENT**

### **FUNDAMENTALS OF CONSTRUCTION AND DRAFTING**

Course 870      5 periods/week/sem  
                         1 credit (CTE credit)

This course provides an introduction and overview of the areas of construction and drafting technologies. The student will develop basic skills in both manual and computer aided drafting and design. The student will gain hands-on experience in the use of the hand and power tools used in the construction industry. Projects, which incorporate basic construction techniques, will be completed. The student will become aware of career opportunities in the areas of construction and development. Practical applications of mathematics and other academic skills will be integrated into all course activities. The development of safe work habits and effective workplace readiness will be an important element of this course.

**Prerequisites and other notes:** Recommended for grades 9-12.

### **COMPUTER AIDED DRAFTING AND DESIGN – CADD I**

Course 871      5 periods/week/sem  
                         1 credit (CTE credit)

This course introduces the student with the tools and techniques used to create technical drawings in the engineering, manufacturing, and construction industries. During this course required drawings will be completed using both hand drafting tools and computer aided drafting and design software. The student will complete basic and intermediate level orthographic and isometric drawing assignments. Emphasis will be placed on the practical application of geometric concepts during the drawing process. The student will learn about career opportunities in the area of drafting and design. The student will develop effective workplace readiness and customer relation skills as they relate to computer aided drafting and design careers. A portfolio of completed assignments will be developed.

**Prerequisites and other notes:** Recommended for grades 10-12.

### **COMPUTER AIDED DRAFTING AND DESIGN – CADD II**

Course 872      5 periods/week/sem  
                         1 credit (CTE credit)

This course introduces students to the intermediate concepts and applications of residential and light commercial planning techniques as they are used in the building and construction industries. The student will study topics such as designing and drawing elevations, sectionals, details and site plans. The students will develop a basic understanding of building materials, construction practices and architectural drawing standards. Complete working drawings of a home or small commercial building will be prepared. The student will continue to develop effective workplace readiness and customer relation skills as they relate to computer aided drafting and design careers. The portfolio of completed assignments will be refined.

**Prerequisites and other notes:** CADD I (871). Recommended for grades 10-12. Students must take Industry Assessment to receive credit for course. (NCCER). Concentrator course only for this major.

### **RESIDENTIAL AND LIGHT COMMERCIAL CONSTRUCTION TECHNOLOGY I**

Course 873      5 periods/week/sem  
                         1 credit (CTE credit)

This course introduces the basic processes of residential and light commercial building construction, from digging and pouring the masonry foundation to installing roofing. Topics will include interpreting plans and blueprints, layout and site preparation, wall, window, stairwell, and roof framing, installing windows and layout and application of roofing materials. The students will have the opportunity to apply their skills and knowledge during the construction of a residential or light commercial structure. The continued development of safe work habits and effective workplace readiness skills will be emphasized throughout the course.

**Prerequisites and other notes:** Recommended for grades 10-12. Students must take Industry Assessment to receive credit for course. (NCCER). Completer course only for this major.

**RESIDENTIAL AND LIGHT  
COMMERCIAL CONSTRUCTION  
TECHNOLOGY II**

Course 874      5 periods/week/sem  
1 credit (CTE credit)

Building on the knowledge and skills learned in Residential Construction Technology I, the student will learn methods and processes used in residential and light commercial structure exterior and interior finish work. Topics include installation of exterior wall sheathing, siding and trim and interior finishing processes, door installation, floor coverings, tiling, trim work and cabinetry. The students will learn to prepare for job interviews and become aware of opportunities for further education in construction technology. The continued development of safe work habits and effective workplace readiness skills will be emphasized throughout the course.

**Prerequisites and other notes:** Residential and Light Commercial Construction Technology I (873). Recommended for grades 11-12. Students must take Industry Assessment to receive credit for course. (NCEER). Concentrator and completer course only for this major.

***FOUNDATIONS OF BUILDING AND  
CONSTRUCTION TECHNOLOGY (Core)***

**FOUNDATIONS OF BUILDING &  
CONSTRUCTION**

Course 80840      5 periods/week/sem  
1 credit (CTE credit)

The Foundations of Building and Construction course is the Core Curriculum of the Construction and Development Cluster. The NCCER Core Curriculum is taught within this course and is the basis for all construction skills. NCCER requires that all trainees successfully complete the Core Curriculum before advancing to Level One of their chosen field. The course of study descriptions correlates to the modules of the NCCER national standards and related work-based learning opportunities. **The following modules are designed to be completed in approximately 72.5 hours of instruction and allows for an estimated 27.5 hours of related “hands-on” applications/work-based learning opportunities to reinforce and extend the learning.**

**INDUSTRIAL TECHNOLOGY PATHWAY**

**FUNDAMENTALS OF INDUSTRIAL  
TECHNOLOGY**

Course 860      5 periods/week/sem  
1 credit (CTE credit)

This is the introductory course of the Industrial Technologies program and is required for all students. Students will be introduced to planning and scheduling production processing and material usage. Topics will include industry process, broad troubleshooting, quality control, product development and communication. Forklift driving and certification will be taught in this course. Welding techniques emphasized in this course are: shield metal arc welding and oxy-fuel cutting welding.

**Prerequisites and other notes:** Recommended for grades 10 – 12.

**DRAFTING AND PRINT READING**

Course 861      5 periods/week/sem  
1 credit (CTE credit)

Students will develop the ability to read, interpret and prepare technical plans, blue print drawings, schematics and technical manuals. Communication and teamwork will be emphasized as well as safe practices in the workplace. Techniques for achieving client and customer satisfaction will be included. Hands on projects are included working from drawings to the finished project. Welding techniques emphasized in this course will be: shield metal arc welding and symbology welding.

**Prerequisites and other notes:** Recommended for grades 10 – 12. Students must take Industry Assessment to receive credit for course.

**MECHANICAL SYSTEMS**

Course 862      5 periods/week/sem  
1 credit (CTE credit)

This course covers the installation and maintenance of mechanical drives with an emphasis on developing the ability to install, align, adjust and troubleshoot various drives. Students will learn the principles of mechanics, basic measurement, proper tools and safety in the workplace. Projects are related to residential and industry. Welding techniques emphasized in this course are: shield metal arc welding and gas metal arc welding.

**Prerequisites and other notes:** Recommended for grades 10 – 12. Concentrator course only for this major.

## **ELECTRICAL SYSTEMS**

Course 863      5 periods/week/sem  
1 credit (CTE credit)

This course covers the fundamentals of electricity and electronics. Students will understand the basic elements of electrical systems and develop the ability to use specific equipment necessary to complete electrical and electronics projects. The ability to read electrical schematics and diagrams is included with an emphasis on working safely with electricity. Electrical components and electrical troubleshooting are included. Hands on projects are emphasized in the course. Welding techniques emphasized in this course are: electrical applications in welding, shielded metal arc welding and oxy-fuel welding.

**Prerequisites and other notes:** Recommended for students in grades 10 – 12. Completer course only for this major.

## **CONSUMER SERVICES, HOSPITALITY & TOURISM**

### ***COSMETOLOGY PATHWAY***

#### **PRINCIPLES AND PRACTICE OF COSMETOLOGY (#1)**

Course 835      15 periods/week/sem  
3 credits (CTE credit)

This course provides an introduction to the field of cosmetology. Students develop and practice basic skills in cosmetology, develop a broad understanding of the variety of career options available to a licensed cosmetologist, and learn how science and math are fundamental aspects in the practice of cosmetology. Students will learn histology of the hair and scalp, properties of hair, skin, and nails, perform basic manicure and pedicure, shampooing, rinsing, and conditioning hair, haircutting tools, techniques, and principles of hair design, apply foundation knowledge of anatomy, physiology, and chemistry.

**Prerequisites and other notes:** Students earn 405 hours toward the 1,500 hours required for licensure. Recommended for grade 10.

#### **ADVANCED COSMETOLOGY: THEORY AND APPLICATION (#2)**

Course 836      15 periods/week/sem  
3 credits (CTE credit)

This course allows students to develop and practice more advanced techniques in the field of

cosmetology. Students will learn various facial treatments, massage and manipulation techniques, make-up application, hair press and thermal styling, coloring and lightening techniques, hair braiding technique, human body systems as they relate to cosmetology, hair removal techniques, skin care treatments, artificial nail techniques.

**Prerequisites and other notes:** Principles and Practice of Cosmetology (835). Students earn 405 hours toward the 1500 hours required for licensure. Recommended for grade 11.

#### **MASTERY OF COSMETOLOGY (#3)**

Course 837      15 periods/week/sem  
3 credits (CTE credit)

This course provides students the opportunity to further refine and apply skills that support all aspects of the cosmetology industry. It will assist in preparing students to obtain employment and advance in the field of cosmetology upon passing the State Board of Cosmetologists licensing examination. Students will learn the fundamentals of small business management and complete a senior capstone project/portfolio. Upon completion of this course students may be eligible to apply for the 1,000-hour letter to participate in a work-based learning experience. Upon successful completion of the first 1,000 hours of the program and the instructor's recommendation, students will be eligible to participate in up to 300 hours of a supervised work-based learning experience in an off-site salon setting. These experiences are organized around a training plan that is cooperatively developed by the school and the employer to add value to and extend a student's career preparation.

**Prerequisites and other notes:** Advanced Cosmetology: Theory and Application (836). Students earn 405 hours toward the 1,500 hours required for licensure. Recommended for grade 11. Students must take and pass State Boards at the end of this class in lieu of taking Course 838. Concentrator course only for this major.

#### **COSMETOLOGY PRACTICUM (#4)**

Course 838      15 periods/week/sem  
3 credits (CTE credit)

This is the culminating course to prepare students for the Maryland State Board of Cosmetologist Licensing Exam administered by Experior Assessments. Students will refine skills necessary to pass the Maryland State Board of Cosmetologists exam. Some students may elect to participate in a 13-week internship

experience to earn 300 hours in lieu of attending class at CCTC. All students are required to attend class the last five weeks for an in-depth focus on theory and practical skill review for the State Board Cosmetologists exam. Internships will be approved by the cosmetology instructor and arranged by the CCTC guidance counselor.

**Prerequisites and other notes:** Mastery of Cosmetology. Recommended for grade 12. Students earn 405 hours toward the 1,500 hours required for licensure. License will not be issued until age 17. Students who complete 1500 hours and pass the State Board Cosmetology exam, are **exempted** from this course. Students who pass the State Boards during this course will have an option to convert to Career Internship. Students must take Industry Assessment to receive credit for course. Completer course only for this major.

### **COSMETOLOGY PRACTICUM (#5)**

Course 839      10 periods/week/sem  
                         2 credits (CTE credit)

This two period course is designed to provide students the opportunity to further refine and apply skills that support all aspects of the cosmetology industry. It will assist in preparing students to obtain employment and advance in the field of cosmetology upon passing the State Board of Cosmetologists licensing examination. Prior to selecting this course students must have completed a minimum of 1,000 hours in the classroom and commits to obtaining 300 hours in a salon supervised by a senior cosmetologist.

**Prerequisites and other notes:** Mastery of Cosmetology (837). Recommended for grade 12. Students earn 405 hours toward the 1,500 hours required for licensure. License will not be issued until age 17. Students who complete 1500 hours and pass the State Board Cosmetology exam, are **exempted** from this course. Students who pass the State Boards during this course will have an option to convert to Career Internship. Students must take Industry Assessment to receive credit for course.

## **CULINARY ARTS PATHWAY**

### **FOOD SERVICE PROFESSIONAL I**

Course 901      10 periods/week/sem  
                         2 credits (CTE credit)

This course provides an introduction to the food service and hospitality industry. Students develop and demonstrate skills in safe and sanitary food handling and preparation techniques. Students learn to prepare a variety of foods. They develop a broad understanding of

the variety of career options available in the food service and hospitality industry, and have the opportunity to earn the ServSafe Credential. Students successfully completing this course will be able to:

- Describe the variety of careers within the food service and hospitality industry and the education required to be successful.
- Demonstrate proper handling of different types of foods.
- Demonstrate work-place safety.
- Demonstrate a variety of food preparation techniques.
- Demonstrate an understanding of nutrition, evaluate and apply the principles of the food pyramid and its importance for healthy living.
- Prepare and work with a variety of foods to include dairy, salads and garnishes, fruits and vegetables.
- Demonstrate effective teamwork, communication, problem-solving, an decision-making skills.
- Apply mathematical concepts relevant to the restaurant, food service and hospitality industry.

**Prerequisites and other notes:** Recommended for students in grades 10-12. Students taking this course must also enroll in 3<sup>rd</sup> period Culinary Practicum (903). Students must take Industry Assessment ProStart I, and ServSafe to receive credit for course.

### **FOOD SERVICE PROFESSIONAL II**

Course 902      10 periods/week/sem  
                         2 credits (CTE credit)

Students enrolled this course will continue to prepare a variety of foods. They will create menus and demonstrate various types of restaurant service. They will apply purchasing techniques and demonstrate an understanding of inventory monitoring and control. Students will have the opportunity for an authentic, mentored work-based learning experience. Students successfully completing this course will be able to:

- Describe the history of food service and hospitality.
- Describe various types of lodging establishments and career opportunities associated with each type.
- Identify global cultures and traditions related to food preparation and service.

- Prepare a variety of foods including desserts, based goods, meat, poultry and seafood, stocks, soups and sauces.
- Define and develop a variety of menus and food service styles effective of the industry.
- Apply concepts of purchasing and inventory control.
- Apply mathematical concepts relevant to the restaurant and food service industry.
- Demonstrate effective teamwork, communication, problem-solving, and decision-making skills.

**Prerequisites and other notes:** Food Service Professional I (901). Students taking this course must also enroll in a 3<sup>rd</sup> period Culinary Practicum (904). Students must take Industry Assessment ProStart II to receive credit for course. Concentrator course only for this major.

### **FOOD SERVICE PROFESSIONAL PRACTICUM**

Course 903, 904 10 periods/week/sem  
1 credit (CTE credit)

This course provides students the opportunity to further refine and apply skills that support all aspects of the industry. It will assist in preparing students for employment and advancement in the field of hospitality and food and beverage management. Students successfully completing this course will be able to:

- Explore job market and employment opportunities.
- Apply the fundamentals of managing a food service establishment.
- Explain and demonstrate the skills necessary for transition from school to a professional setting.
- Apply the foundation knowledge of safe and sanitary food preparation and food handling techniques.
- Apply the foundation knowledge in order to prepare a wide variety of foods.

**Prerequisites and other notes:** Concurrently enrolled and/or completed Food Service Professional I (901) & Food Service Professional II (902). Food Service Practicum (903) is taken in conjunction with Food Service Professional I (901) and Food Service Practicum (904) is taken in conjunction with Food Service Professional II (902). Completer course only for this major.

## **ENVIRONMENTAL, AGRICULTURE & NATURAL RESOURCES**

### **AGRICULTURAL SCIENCE - ANIMAL**

#### **PRINCIPLES OF AGRICULTURE ANIMAL SCIENCE (ASA)**

Course 8190 5 periods/week/sem  
1 credit (CTE credit)

The Principles of Agricultural Science – Animal course serves as one of two principle courses within the CASE program sequence. The course is structured to enable all students to have a variety of experiences that will provide an overview of the field of agricultural science with a foundation in animal science so that students may continue through the sequence of courses in the CASE program. Students will explore hands-on projects and activities to learn the characteristics of animal science and work on major projects and problems similar to those that animal science specialists, such as veterinarians, zoologists, livestock producers, or industry personnel face in their respective careers. The knowledge and skills students develop will be used in future courses within the CASE program. In addition, students will understand specific connections between the Animal Science lessons SAE, FFA, and LifeKnowledge (a curriculum for leadership and career development) components that are important for the development of an informed agricultural education student. Students will build on the skills developed in the AFNR to investigate, conduct experiments, and document projects that solve real life problems. Students will communicate their solutions through reports and presentations to their peers and members of the professional community.

#### **SOIL AND CROP SCIENCE**

Course 815 5 periods/week/sem  
1 credit (CTE credit)

Students will develop an understanding of soil, plant nutrition and fertilization, soil and water management, and soil evaluation. Students will also explore various career options related to soil and crop management in a small and large-scale environment.

**Prerequisites and other notes:** Biology (403), Chemistry (405).

## **AGRICULTURE, FOOD AND NATURAL RESOURCES (AFNR)**

Course 8160 5 periods/week/sem  
1 credit (CTE credit)

The course is structured to enable all students to have a variety of experiences that will provide an overview of the fields of agricultural science and natural resources so that students may continue through the sequence of courses. Woven throughout the course are activities to develop and improve employability skills of students through practical applications. Students participating in the AFNR course will experience inquiry-based activities, projects, and problems. Students' experiences will involve the study of communication, sciences of agriculture, plants, animals, natural resources, and agricultural mechanics. While surveying the opportunities available in agriculture and natural resources, students will learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions, and learning. For example, students will work in groups to determine the efficiency and environmental impacts of fuel sources in practical learning exercise. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community. Students will explore career and post-secondary opportunities in each area of the course.

## **AGRICULTURE TECHNOLOGY**

Course 817 5 periods/week/sem  
1 credit (CTE credit)

Students will learn the basic principles involved in all types of agriculture and horticultural mechanics and technology. Students will be involved in basic carpentry, farm construction, electrical systems, arc welding, masonry, safe equipment operations and computer technology.

## **AGRIBUSINESS, RESEARCH, AND DEVELOPMENT (CAPSTONE)**

Course 8555 5 periods/week/sem  
1 credit (CTE credit)

**Capstone:** The Agriculture Business, Research, and Development course will serve as the capstone course available to students through the CASE™ curriculum. Instruction and continued inquiry-based projects are designed to integrate key learning from previous CASE™ courses and have students apply them to real-world career

situations through SAE projects or other internship/ work-based learning opportunities.

**Prerequisites and other notes:** Completer course for this major.

## **AGRICULTURE SCIENCE – PLANT PATHWAY**

### **FLORICULTURE**

Course 852 5 periods/week/sem  
1 credit (CTE credit)

Introduces students to the basic principles of floral design/ arrangements. Students will identify plant anatomy and physiology. Students will also explore the elements of floral design, demonstrate design techniques, and evaluate marketing trends. Students will also create many types of floral designs, which will be “ready to sell”.

### **PRINCIPLES OF AGRICULTURAL PLANT SCIENCE (ASP)**

Course 8540 5 periods/week/sem  
1 credit (CTE credit)

The course is structured to enable all students to have a variety of experiences that will provide an overview of the field of agricultural science with a foundation in plant science. Students will work in teams, exploring hands-on projects and activities, to learn the characteristics of plant science and work on major projects and problems similar to those that plant science specialists, such as horticulturalists, agronomists, greenhouse and nursery managers and producers, and plant research specialists face in their respective careers. Students will develop skills to investigate, conduct experiments, and document projects that solve real life problems. Students will communicate their solutions through reports and presentations to their peers and members of the professional community.

### **ANIMAL AND PLANT BIOTECHNOLOGY**

Course 8550 5 periods/week/sem  
1 credit (CTE credit)

The Animal and Plant Biotechnology course is one of two specialized courses available to students through the CASE curriculum. Throughout the course students will explore the science of biotechnology and its agricultural and societal implications. Students will work in teams through inquire-based projects exploring biotechnology research methodology, DNA/gene transfer, biofuels, micro propagation, embryo



transfer, transgenic materials, and microbial biotechnology. As a foundation, biochemistry and the regulations, laws, and ethics governing biotechnology will be addressed. In addition, students will understand specific connections between the Animal and Plant Biotechnology lessons SAE, FFA, and LifeKnowledge components that are important for the development of an informed agricultural education student. Expanding on their knowledge and skills from previous courses, students will continue to investigate, conduct experiments, and document projects to solve problems that pose greater conceptual and technical challenges. Student's presentations will communicate their solutions to their peers and members of the professional community.

**Prerequisites and other notes:** Concentrator course only for this major.

### **LANDSCAPE MANAGEMENT**

Course 851            5 periods/week/sem  
                                 1 credit (CTE credit)

This course will prepare students for careers and further studies in the related landscaping occupations. Students will learn theories and principles of landscape and turf grass management. Drawing, estimating, planting plants, differential leveling, grading, propagation and combining plants will be practiced to maximize landscaping objectives.

**Prerequisites and other notes:** Biology (403) recommended.

### **AGRIBUSINESS, RESEARCH, AND DEVELOPMENT (CAPSTONE)**

Course 8555        5 periods/week/sem  
                                 1 credit (CTE credit)

**Capstone:** The Agriculture Business, Research, and Development course will serve as the capstone course available to students through the CASE™ curriculum. Instruction and continued inquiry-based projects are designed to integrate key learning from previous CASE™ courses and have students apply them to real-world career situations through SAE projects or other internship/ work-based learning opportunities.

## **HEALTH & BIOSCIENCES**

### **ACADEMY OF HEALTH PROFESSIONS PATHWAY**

#### **FOUNDATIONS OF MEDICINE AND HEALTH SCIENCE**

Course 80801    15 periods/week/sem  
                                 1 credit (CTE credit)

This course is designed to provide students with an overview of the therapeutic, diagnostic, environmental and information systems of the healthcare industry. Students will begin to prepare for a medical or health science career by developing a broad understanding of the cluster and pathways in the Health and Biosciences Cluster. Students will learn about ethical and legal responsibilities, as well as the history and economics of healthcare. Students will engage in processes procedures that are used in the delivery of essential healthcare services. As students learn to use medical terminology within a variety of medical and healthcare environments, they will develop the Skills for Success, academic, and technical skills necessary to function as a health professional. It is recommended that students complete or be concurrently enrolled in Biology to understand the concepts of Anatomy and Physiology and Pathophysiology introduced in this course.

**Prerequisites and other notes:** Weighted credit will be awarded for completion.

#### **MEDICAL SPECIALTY**

Course 80802    5 periods/week/sem  
                                 1 credit (CTE credit)

Students are prepared for actual experience in the clinical setting with a focus on the specific knowledge, skills and abilities that relate to the specialized course. Clinical internships will align with requirements set forth by the governing boards. Students in a specialized course will take the appropriate credentialing and/or end-of-course exam at the completion of the course. At the completion of this course students will be able to accurately use medical terminology; effectively apply written, verbal and non-verbal communication skills; practice ethical and professional behavior and respect confidentiality; perform healthcare provider CPR and obtain certification from the American Heart Association, where appropriate; earn industry recognized credentials or certifications (as appropriate); incorporate various diagnostic and

therapeutic technologies as they relate to patient care; demonstrate proficiency in clinical and medical settings; demonstrate knowledge of human growth and development in relation to patient care; and demonstrate proficiency in one or more specialty area(s).

**Prerequisites and other notes:** Clinical rotations require a physical, a TB test and proof of current immunizations. Recommended for Grade 11. Must take Foundations of Medicine & Health Science (80801) and Allied Health Internship (80803) concurrently.

#### **ALLIED HEALTH INTERNSHIP**

Course 80803 5 periods/week/sem  
1 credit (CTE credit)

This course is designed to give students supervised practical experiences in a variety of health care settings such as hospital, physician offices, and other health care facilities. This internship assists students to identify career areas of interest within health care and make informed decisions about career options, educational requirements and career preparation.

**Prerequisites and other notes:** Weighted credit will be awarded for completion.

#### **STRUCTURE AND FUNCTIONS OF THE HUMAN BODY**

Course 80804 5 periods/week/sem  
1 credit (CTE credit)

Students in this course study the structure and functions of the human body, including cellular biology and histology. Systemic study involves homeostatic mechanisms of the integumentary, skeletal, muscular, circulatory, nervous systems and special senses. Students will investigate and body's responses to the external environment, maintenance of homeostasis, electrical interactions, transport systems, and energy processes. Students will conduct laboratory investigations and fieldwork, use scientific methods during investigations to solve problems and make informed decisions. Students will learn the medical terminology related to body systems. It is recommended that students have completed biology and be concurrently enrolled in chemistry.

**Prerequisites and other notes:** Medical Specialty (80802), Foundations of Medicine & Health Science (80801) and Allied Health Internship (80803). Recommended for Grade 12. Students must take Industry Assessments to receive credit for course. (Certified Nursing Assistant assessment and Geriatric Nursing Assistant assessment) Weighted credit will be

awarded for completion. Concentrator course for this major.

#### **CLINICAL INTERNSHIP**

Course 80805 10 periods/week/sem  
2 credits (CTE credit)

AHP students will participate in a work-based learning opportunity. Clinical Internship is designed to give students supervised practical application of previously studied theory. It is required to earn the industry credential as a Certified Nursing Assistant and Geriatric Nursing Assistant. A clinical internship is approved by a third party, such as the Maryland Board of Nursing. Students participating in the clinical internship will work in a professional healthcare setting providing geriatric health care and participate in a school-based seminar class at least once per week to share experiences; prepare a professional portfolio that aligns to the SkillsUSA portfolio requirements containing, but not limited to, an updated resume, school transcript, letters of reference, achievements and awards, community project participation and projects; complete a research project and present it to a panel of industry representatives.

**Prerequisites and other notes:** Must take Structure & Functions of the Human Body (80804) and Clinical Internship (8-805) concurrently. Completer course for this major

#### ***BIO-MEDICAL – PROJECT LEAD THE WAY***

The Biomedical Sciences Program is based on the National Standards for Science, Mathematics, and English Language Arts, and the Accountability Criteria for National Health Care Cluster Foundation Standards. The program consists of a sequence of four courses: Principles of the Biomedical Sciences, Human Body Systems, Medical Interventions, and Science Research. The goal of the program is to increase the number of students pursuing careers in the biomedical sciences, including healthcare. Students who complete the program are prepared for employment and further education at two- and four-year college levels. **Successful completion of the four course sequence with a B average or better and receive a score of 8 or higher can apply and receive 4 transcribed Biology credits from Stevenson University.**

## **PRINCIPLES OF THE BIOMEDICAL SCIENCES**

Course 80880 5 periods/week/sem  
1 credit (CTE credit)

Student work involves the study of human medicine, research processes and an introduction to bioinformatics. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. A theme through the course is to determine the factors that led to the death of a fictional person. After determining the factors responsible for the death, the students investigate lifestyle choices and medical treatments that might have prolonged the person's life. Key biological concepts including: homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease are embedded in the curriculum. Engineering principles including: the design process, feedback loops, fluid dynamics, and the relationship of structure to function are incorporated in the curriculum where appropriate. Students will have a clear understanding of all the courses in the Biomedical Sciences program and the scientific foundation necessary for student success in the subsequent courses.

## **HUMAN BODY SYSTEMS**

Course 80881 5 periods/week/sem  
1 credit (CTE credit)

Students examine the interactions of body systems as they explore identity, communication, power, movement, protection, and homeostasis. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary actions, and respiration. Exploring science in action, students build organs and tissues on a skeletal manikin, work through interesting real world cases and often play the role of biomedical professionals to solve medical mysteries.

**Prerequisites and other notes:** Must have completed Principles of the Biomedical Sciences (80880). Weighted credit will be awarded for completion.

## **BIOMEDICAL INNOVATION**

Course 80882 5 periods/week/sem  
1 credit (CTE credit)

In this capstone course, students apply their knowledge and skills to answer questions to solve problems related to biomedical sciences. Students design innovative solutions for the health challenges of the 21<sup>st</sup> century as they work through progressively challenging open-ended problems. Addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. They have the opportunity to work on an independent project and may work with a mentor or advisor from a university, hospital, physician's office, or industry. Throughout the course students are expected to present their work to an adult audience that may include representatives from the local business and health care community.

**Prerequisites and other notes:** Must have completed Human Body Systems (80881). Completer course for this major.

## **MEDICAL INTERVENTIONS**

Course 80883 5 periods/week/sem  
1 credit (CTE credit)

Students investigate the variety of interventions involved in the prevention, diagnosis and treatment of disease as they follow the lives of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body as students explore how to prevent and fight infection; how to screen and evaluate the code in human DNA; how to prevent, diagnose and treat cancer; and how to prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to the wide range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Lifestyle choices and preventative measures are emphasized throughout the course as well as the important roles scientific thinking and engineering design play in the development of interventions of the future.

**Prerequisites and other notes:** Must have completed Biomedical Innovation (80882). Weighted credit will be awarded for completion. Concentrator course for this major.

## **HUMAN RESOURCE SERVICES**

### **TEACHER EDUCATION ACADEMY PATHWAY**

The Maryland Academy for Teacher Education is a Career and Technology Education (CTE) instructional program that aligns with the Interstate New Teacher Assessment and Support Consortium (INTASC) and the Maryland Essential Dimensions of Teaching (EdoTs). The program prepares students for further education and careers in the education profession. The program consists of four high school credits that focus on teaching as a profession, human growth and development, learning theory, and curriculum and instruction. These credits are designed to articulate to a Maryland post secondary teacher education program. Upon completion of the program and passing the ParaPro test, high school graduates are ready for employment in the teaching profession. This program is based on the outcomes of the Maryland Associates of Arts in Teaching (A.A.T.) degree, which aligns with the National Council for the Accreditation for Teacher Education (NCATE) standards.

### **EARLY CHILDHOOD EDUCATION OPTION I**

The Early Childhood Education completer is a Career and Technology Education (CTE) instructional program that aligns with the National Association for the Education of Young Children (NAEYC), Interstate New Teacher Assessment and Support Consortium (INTASC) and Head Start Performance. The program prepares students for further education of young children, birth through age eight. The program consists of five high school credits that focus on human growth and development, early childhood learning theory eight. The program consists of four high school credits that focus on human growth and development, early childhood learning theory and curriculum materials and instructional methods for young children. These credits are designed to articulate to post-secondary education in early childhood education. Upon completion of the program and passing the ParaPro test and/or receiving the 90-hour certificate, high school graduates are ready for employment in early childhood education. This program is based on the outcomes of the

Maryland Association of Arts in Teaching (ATT) degree, which aligns with the National Council of Accreditation for Teacher Education standards.

**Prerequisites and other notes:** Recommended for grades 10-12. Must take Human Growth & Development (80821) and Child Development Laboratory (80822) concurrently in the 10<sup>th</sup> grade.

### **HUMAN GROWTH AND DEVELOPMENT**

Course 80821 5 periods/week/sem  
1 credit (CTE credit)

This course is the foundation course in the Child Care Development completer program and is required for all students. Students will focus on human development from birth through adolescence. Emphasis is placed on theories of physical, cognitive and psychosocial development, the effect of heredity and the environment, the role of caregivers and the family, health and safety concerns, and contemporary issues. Students explore special challenges to growth and development. Students will have opportunities for guided observation of children from birth through adolescence in a variety of settings to help students further understand theories of human development. Students will begin to develop the components of a working portfolio to be assembled upon completion of the internship.

### **CHILD DEVELOPMENT LABORATORY**

Course 80822 5 periods/week/sem  
1 credit (CTE credit)

In this course, students will study children's ages three to five, with the primary emphasis being placed on actual experience and observation of three and four year-old children in the preschool laboratory. Classroom and individualized study will increase knowledge of the development of children. Students will study childcare services, safety and health in the preschool, child guidance and discipline, operation of preschool, and methods and materials of instruction.

**Prerequisites and other notes:** Recommended to take Human Growth and Development (80821) concurrently. Recommended for grades 10-12. (NCHS campus only)

### **ADVANCED LABORATORY-CHILD DEVELOPMENT**

Course 80824 5 periods/week/sem  
1 credit (CTE credit)

Advanced work is offered in areas such as childhood personality theories and behavior

patterns. Emphasis is placed on expanding the students' knowledge of careers in child development. Topics of study include implementation of curriculum and instructional techniques in a preschool operation, nurturing the components of intelligence, school readiness and the exceptional child. The laboratory preschool will provide students with an opportunity to develop and integrate preschool learning experiences.

**Prerequisites and other notes:** Human Growth and Development (80821) and Child Development Laboratory (80822). Recommended for grade 11. Students must take Industry Assessment (ParaPro) to receive credit for course. Weighted credit will be awarded for completion. Concentrator course for this major.

### **EARLY CHILDHOOD EDUCATION SEMINAR AND INTERNSHIP**

Course 80825 5 periods/week/sem  
1 credit (CTE credit)

This is the culminating course of the Early Childhood Education program. Students will have an opportunity to integrate content and pedagogical knowledge in an early childhood educational setting. They will extend and apply their knowledge about the young child and teaching in a classroom setting under the supervision of a mentor teacher. Students will complete their working portfolio. Upon completion of this course students will take the ParaPro and/or SAT, Praxis I.

**Prerequisites and other notes:** Advanced Laboratory – Child Development (80824) Recommended for grade 12. Completer course for this major.

## **SECONDARY EDUCATION – OPTION 2**

### **HUMAN GROWTH AND DEVELOPMENT**

Course 80821 5 periods/week/sem  
1 credit (CTE credit)

This course is the foundation course in the Child Care Development completer program and is required for all students. Students will focus on human development from birth through adolescence. Emphasis is placed on theories of physical, cognitive and psychosocial development, the effect of heredity and the environment, the role of caregivers and the family, health and safety concerns, and contemporary issues. Students explore special challenges to growth and development. Students will have opportunities for guided observation of children from birth through adolescence in a

variety of settings to help students further understand theories of human development. Students will begin to develop the components of a working portfolio to be assembled upon completion of the internship.

**Prerequisites and Notes:** Foundations of Curriculum and Instruction

### **TEACHING AS A PROFESSION**

Course 80826 5 periods/week/sem  
1 credit (CTE credit)

This course focuses on the profession of teaching-its history, purposes, issues, ethics, laws and regulations, roles, and qualifications. Emphasis is placed on identifying the current, historical, philosophical and social perspectives of American education, including trends and issues. Students will explore major approaches to human learning. Students will participate in guided observations and field experiences in multiple settings to help them assess their personal interest in pursuing careers in this field and to identify effective learning environments. Students will continue to develop the components of a working portfolio to be assembled.

**Prerequisites and other notes:** Recommended to take Human Growth and Development (80821) prior or concurrently. Recommended for grades 10-12. Weighted credit will be awarded for completion.

### **FOUNDATIONS OF CURRICULUM AND INSTRUCTION**

Course 80827 5 periods/week/sem  
1 credit (CTE credit)

This course explores curriculum delivery models in response to the developmental needs of all children. Emphasis is placed on the development of varied instructional materials and activities to promote learning, classroom management strategies, and a supportive classroom environment. Students will explore basic theories of motivation that increase learning. Students will participate in guided observations and field experiences to critique classroom lessons in preparation for developing and implementing their own. Students will continue to develop the components of a working portfolio.

**Prerequisites and other notes:** Teaching As A Profession (80826). Recommended for grades 10-12. Students must take an Industry Assessment (ParaPro) to receive credit for the course. Concentrator course for this major.

## **EDUCATION ACADEMY INTERNSHIP**

Course 80828 5 periods/week/sem  
1 credit (CTE credit)

The internship is the culminating course of the Education Academy Program. Students will have an opportunity to integrate content and pedagogical knowledge in an educational area of interest. They will have an opportunity to extend and apply their knowledge about teaching in a classroom setting under the supervision of a mentor teacher. The students will complete their working portfolio and present it for critique. At the conclusion of this program students will be required to take the Para Pro or SAT, Praxis I exam.

**Prerequisites and other notes:** Recommended for grades 11-12. Foundations of Curriculum and Instruction (80827). Completer course for this major.

## ***FIREFIGHTER CADET PROGRAM***

This is a senior level program taught off-campus in Queen Anne's County. Students are enrolled in two classes during the fall semester and two classes during the spring semester.

**Prerequisites and other notes:** Must be a member of a local fire department and provide own transportation to the Eastern Shore Regional Training Center of the Maryland Fire and Rescue Institute (Limited slots available). Students must pass all tests. Failure to pass tests will result in immediate removal from the Firefighter Cadet program. **Only seniors are eligible to enroll in this program. Students must complete another career major prior to this program.**

## **EMT FIRE AND RESCUE**

Certified instructors will teach the EMT Fire and Rescue program from the Maryland Fire and Rescue Institute of the University of Maryland. **Both classroom and practical sessions will be conducted off school property at the Upper Eastern Shore Regional Training Center of the Maryland Fire and Rescue Institute.** Operating as members of the Fire and Rescue service requires good health and physical condition. Individuals with physical and medical conditions which may limit their full and active participation may not be eligible for this program. You must be a member of a Caroline County Volunteer Department and **16 years of age.**

## **EMERGENCY MEDICAL CARE TECHNICIAN**

Course 80831 1<sup>st</sup> semester  
1 credit (CTE credit)

This course provides students with the necessary knowledge and skills to perform emergency medical care in a pre-hospital environment at the basic life support level. Students will know and be able to: recognize, assess, and manage medical and trauma signs and symptoms in patients of emergency situations by understanding and applying knowledge and skills.

Students in this course must pass all eight modular exams with a minimum of 70%, meet the attendance requirements for the course and receive a satisfactory evaluation by the instructor. A written and practical examination for certification is administered by the Maryland Institute for Emergency Medical Services Systems as part of this course.

**Prerequisites and other notes:** Seniors Only. Concentrator course for this major.

## **NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS), INCIDENT COMMAND SYSTEM (ICS) FOR THE FIRE SERVICE**

Course 80833 2<sup>nd</sup> semester  
1 credit (CTE credit)

The objective of this course is to enable the student to develop an understanding of the Incident Command System (ICS) and its application to both emergency and non-emergency situations. Major topics covered in the course are the history of elements and components of the incident command system, command responsibilities, expanding the system, command staff positions, incident scene accountability, rapid intervention crews, resource determination, ICS organizations chart format, and ICS system functions and components.

**Prerequisites and other notes:** Seniors only. Concentrator course for this major.

## **RESCUE TECHNICIAN – SITE OPERATIONS**

Course 80834 2<sup>nd</sup> semester  
1 credit (CTE credit)

This course is designed to provide students with the knowledge and skills to perform site operations, victim management, maintenance of equipment, and the selection and use of specific ropes and rigging rescue skills. Site operations include identification of support resources required for specific rescue incidents, size up of a rescue incident, management of rescue incident

hazards, management of resources in a rescue incident, conducting searches, performance of ground support for helicopter activities, and termination of a technical rescue operation.

**Prerequisites and other notes:** Seniors only. Concentrator course for this major.

### **RESCUE TECHNICIAN – VEHICLE AND MACHINERY EXTRICATION**

Course 80835 2<sup>nd</sup> semester  
1 credit (CTE credit)

This course is designed to provide students with the knowledge and skills to perform specific rescue skills applicable to common passenger vehicles and simple machines (Level I) as well as rescue skills applicable to commercial or heavy vehicles, incidents involving complex extrication processes or multiple uncommon concurrent hazards, and incidents involving heavy machinery or more than digital entrapment (Level II).

**Prerequisites and other notes:** Seniors only. Completer course for this major.

## **MANUFACTURING, ENGINEERING & TECHNOLOGY**

### **PRE-ENGINEERING PROJECT LEAD THE WAY PATHWAY**

This is a five course completer program where students may earn transcribed college credit from the Rochester Institute of Technology in New York. To earn college credit students must maintain an 85% average in the high school course and successfully pass the RIT Exam.

Project Lead the Way (PLTW) is a CTE instructional program that incorporates the national standards of The National Council of Teachers of Mathematics, and the International Technology Education Association. The program prepares students for further education and careers in engineering and engineering technology. The program consists of five courses that are divided into three groups: Foundation (POE, IED, DE); Specialization (CEA), and Capstone (EDD). Students are expected to:

- 1) Develop thinking skills by solving real-world engineering problems (POE);
- 2) Use computer software to produce, analyze, and evaluate models of project solutions (IED) and use prototyping equipment to produce 3-D models (CEA).
- 3) Use industry-standard computer software in testing and analyzing digital circuitry (DE).
- 4) Use three-dimensional computer software to solve design problems. They assess their solutions and modify their designs.
- 5) Work in teams to complete challenging, self-directed projects.
- 6) Students design and build solutions to authentic engineering problems (EED).

It is highly recommended that students complete or be currently enrolled in Algebra I before selecting this Pathway.

### **PLTW: PRINCIPLES OF ENGINEERING (POE)**

Course 80871 5 periods/week/sem  
1 credit (CTE credit)

This course provides an overview of engineering and engineering technology. Students develop problem-solving skills by tackling real-world engineering problems. Through theory and practical hands-on experiences, students address the engineering social and political consequences of technological change.

### **PLTW: INTRODUCTION TO ENGINEERING DESIGN (IED)**

Course 80872 5 periods/week/sem  
1 credit (CTE credit)

This course emphasizes the development of a design. Students use 3-D computer software to produce, analyze, and evaluate models of project solutions. They study the design concepts of form and function, then use state-of-the-art technology to translate conceptual designs into reproducible products.

**Prerequisites and other notes:** Successful completion of Algebra I (303). Recommended for Grades 9 or 10. Can be used as Technology Education if student is a PLTW completer. May

be used to satisfy the technology education requirement.

### **CIVIL ENGINEERING AND ARCHITECTURE (CEA)**

Course 80873 5 periods/week/sem  
1 credit (CTE credit)

The major focus of the Civil Engineering and Architecture (CEA) is a long-term project that involves the development of a local property site. Teachers and students develop property as a simulation to model the real-world experiences that civil engineers and architects experience when developing property.

Students work in teams, exploring hands-on projects and activities to learn the characteristics of Civil Engineering Architecture.

In addition, students use Rivet, which is a state of the art 3D design software package from AutoDesk, to help them design solutions to solve their major course project. Students learn about documenting their projects, solving problems, and communicating their solutions to their peers and members of the professional community of Civil Engineering and Architecture.

The course of study includes:

- The Rules of Engineering & Architects
- Project Planning
- Site Planning
- Building Design
- Project Demonstration & Presentation

**Prerequisites and other notes:** IED (80872), POE (80871), DE (80874). Recommended for Grades 11 and 12. Weighted credit will be awarded for completion. Completer course for this major.

### **DIGITAL ELECTRONICS (DE)**

Course 80874 5 periods/week/sem  
1 credit (CTE credit)

This course introduces students to applied digital logic, a key element of careers in engineering and engineering technology. This course explores the smart circuits found in watches, calculators, video games and computers. Students use industry-standard computer software in testing and analyzing digital circuitry. They design circuits to solve problems, export their designs to a printed circuit auto-routing program that generates printed circuit boards, and use appropriate components to build their designs. Students use mathematics and science in solving real-world engineering

problems. This course covers several topics, including:

- analog and digital fundamentals
- number systems and binary addition
- logic gates and functions
- Boolean algebra and circuit design
- decoders, multiplexers and demultiplexers

**Prerequisites and other notes:** IED (80872), POE (80871). Grade 10 and 11. Weighted credit will be awarded for completion. Concentrator course for this major.

### **ENGINEERING DESIGN & DEVELOPMENT (EDD)**

Course 80875 5 periods/week/sem  
1 credit (CTE credit)

The EDD course is the capstone course for Project Lead the Way. This course should be taken in the 12<sup>th</sup> grade, because it applies the knowledge and skills from the PLTW Foundation courses in solving and identifying technical problems.

The course of study includes:

- Problem Identification and Justification
- Research
- Design Process
- Innovation vs. Invention
- Building and Testing a Prototype
- Engineering Drawing Standards
- CAD Solid Modeling
- Tool Safety
- Jury Presentation

**Prerequisites and other notes:** Completion of all PLTW Foundation courses. IED (80872), POE (80871), DE (80874), and CEA (80873). Completer course for this major.

### **AEROSPACE ENGINEERING (AE)**

Course 80876 5 periods/week/sem  
1 credit (CTE credit)

This course introduces students to the world of aeronautics, flight, and engineering. Students in this course will apply scientific and engineering concepts to design materials and processes that directly measure, repair, improve, and extend systems in different environments. Students are expected to:

- Research and apply the history of flight and identify the major components of airplanes.



- Demonstrate the principals of aerodynamics.
- Explain fundamental theories of flight systems.
- Apply Newton’s Three Laws of Motion, the ideas associated with the design of rocket engines and how the creation of an action results in thrust that enables rockets to move.
- Investigate space life sciences. Design and videotape experiments that create a positive g-force.
- Design composite (layered) plastic test samples using engineering composite materials. Design and implement laboratory testing to measure the stiffness of composite materials and designs.
- Research types of intelligent vehicles and learn basic aspects of designing, building, and programming an intelligent vehicle.

**Prerequisites and other notes:** IED (80872), POE (80871), DE (80874). Recommended for Grades 11 and 12. Weighted credit will be awarded for completion. Completer course for this major.

## **TRANSPORTATION TECHNOLOGIES**

### ***AUTOMOTIVE TECHNOLOGY PATHWAY***

#### **AUTO-SUSPENSION AND STEERING**

Course 880      5 periods/week/sem  
1 credit (CTE credit)

This course provides the student with the knowledge and skills necessary to pass the ASE end-of-course assessment for automobile suspension and steering and immediately enter a career in this area and/or attend post-secondary education and/or training. Students develop diagnostic, technical and academic skills through classroom instruction and hands-on maintenance applications. Through theory and real-world experiences, students master the concepts and the ability to identify and perform necessary automobile suspension and steering repair tasks. Students will learn: steering system diagnosis and repair, front and rear suspension diagnosis and repair, miscellaneous service, wheel alignment diagnosis, adjust and repair, and wheel and tire diagnosis and repair. Upon successful completion of this course, students will be

eligible to take the NATEF Core area exam and earn a Student ASE Achievement decal and certificate.

**Prerequisites and other notes:** Engine performance skills are included. Recommended for grades 10-12. Students must take Industry Assessment to receive credit for the course. Recommended to take concurrently with Auto-Engine Performance Part A (881) and Auto-Engine Brakes (883).

#### **AUTO-ENGINE PERFORMANCE-PART A**

Course 881      5 periods/week/sem  
1 credit (CTE credit)

This course provides the student with the knowledge and skills necessary to pass the ASE end-of-course assessment for automobile engine performance and immediately enter a career in this area and/or attend post- secondary education and/or training. Students develop diagnostic, technical and academic skills through classroom instruction and hands-on maintenance applications.

#### **AUTO-ENGINE PERFORMANCE –PART B**

Course 885      5 periods/week/sem  
1 credit (CTE credit)

Through theory and hands-on experiences, students master the concepts and the ability to identify and perform necessary engine performance troubleshooting and repair tasks. Students will learn: engine related service, general engine diagnosis, computerized engine controls diagnosis and repair, ignition system diagnosis and repair, fuel systems diagnosis and repair, air induction system diagnosis and repair, emission control system diagnosis and repair to include positive crankcase ventilation system, exhaust gas recirculation system, intake air temperature controls, early fuel evaporation controls, and evaporative emission controls. Upon successful completion of this course students will be eligible to take the ASE Core area exam and earn a Student ASE Achievement decal and certificate.

**Prerequisites and other notes:** Auto- Engine Performance Part A (881), Auto-Suspension and Steering (880) and Auto-Brakes (883). Recommended for grades 10-12. Students must take industry assessment to receive credit for the course. Concentrator course for this major.

## **AUTO-ELECTRICAL/ELECTRONIC SYSTEMS**

Course 882      5 periods/week/sem  
                         1 credit (CTE credit)

This course provides the student with the knowledge and skills necessary to pass the ASE end-of-course assessment for automobile electrical/electronic systems and immediately enter a career in this area and/or attend postsecondary education and/or training. Students develop diagnostic, technical and academic skills through classroom instruction and hands-on maintenance applications. Through theory and real-world experiences, students master the concepts and the ability to identify and perform necessary electrical/electronic systems repair tasks. Students will learn: general electrical diagnosis, battery diagnosis and service, starting system diagnosis and repair, charging system diagnosis and repair, lighting system diagnosis and repair, gauge, warning devices and driver information systems diagnosis and repair, horn diagnosis and repair, wiper/washer diagnosis and repair, accessories diagnosis and repair. Upon successful completion of this course students will be eligible take the NATEF Core area exam and earn a Student ASE Achievement decal and certificate.

**Prerequisites and other notes:** Recommended to take concurrently with Auto – Heating & Air Conditioning Systems (884) and Auto-Engine Performance Part B (885). Recommended for grades 10-11. Students must take Industry Assessment to receive credit for course. Concentrator course for this major.

## **AUTO - BRAKES**

Course 883      5 periods/week/sem  
                         1 credit (CTE credit)

This course provides the student with the knowledge and skills necessary to pass the ASE end-of-course assessment for automobile brakes and immediately enter a career in this area and/or attend postsecondary education and/or training. Students develop diagnostic, technical and academic skills through classroom instruction and hands-on maintenance applications. Through theory and real-world experiences, students master concepts and the ability to identify and perform necessary brake repair tasks. Students will learn: hydraulic system diagnosis and repair, drum brake diagnosis and repair, disk brake diagnosis and repair, power assist units diagnosis and repair, miscellaneous diagnosis and repair to include wheel bearings,

parking brakes, electrical diagnosis and repair of brake light system, and antilock system diagnosis and repair. Upon successful completion of this course students will be eligible to take the NATEF Core area exam and earn a Student ASE Achievement decal and certificate.

**Prerequisites and other notes:** Automotive-Electrical skills included. Recommended to take Auto-Electrical/Electronic Systems (882) and Auto-Heating & Air Conditioning (884) concurrently. Recommended for grades 10-12. Students must take Industry Assessment to receive credit for course.

## **AUTO – HEATING & AIR COND. SYSTEMS**

Course 884      5 periods/week/sem  
                         1 credit (CTE credit)

This course provides the student with the knowledge and skills necessary to pass the ASE end-of-course assessment for automobile heating and air-conditioning systems and immediately enter a career in this area and/or attend postsecondary education and/or training. Students develop diagnostic, technical and academic skills through classroom instruction and hands-on maintenance applications. Through theory and hands-on experiences, students master the concepts and ability to identify and perform necessary air-conditioning troubleshooting and repair tasks.

**Prerequisites and other notes:** Program elective. Engine performance skills included. Recommended to take Auto-Electrical/Electronic Systems (882) and Auto-Engine Performance Part B (885) concurrently. Recommended for grades 10-12. Students must take Industry Assessment to receive credit for course. Concentrator course for this major.

## OTHER COURSES

### CAREER INTERNSHIP

Course 991      5 periods/week/sem  
1 credit (Elective)

A high school junior or senior works for an employer for an agreed upon period of time to gain experience in a career area. Student activities may include work on special projects as well as tasks related to different jobs.

**Prerequisite and other notes:** Available for all career majors. Juniors and Seniors only.

### NAVAL JUNIOR OFFICER TRAINING CORPS

Students entering this program should be aware that this course practices codes of behavior consistent with military discipline, dress, and apparel. Students choosing this pathway must complete two years of world language or two advanced technology courses. **Transportation to this program will be provided by Caroline County Public Schools.**

### NAVAL SCIENCE I

Course 85001      5 periods/week/sem  
1 credit (Elective credit)

The Naval Junior Officer Training Corps (NJROTC) program is designed to teach the student self-discipline, self-confidence, and leadership while introducing the basics of Naval Science, Naval History and Tradition, and Citizenship. The curriculum includes leadership, naval organization and tradition, U.S. Government, maritime geography, Naval History, navigation, seamanship, and health. Successful completion of three years of NJROTC allows entry into the armed forces at a pay grade two levels above other enlistees. There is no obligation to join the armed forces for NJROTC participants.

**Prerequisite and other notes:** Course is offered as a regional program in Talbot County Public Schools at Easton High School.

### NAVAL SCIENCE II

Course 85002      5 periods/week/sem  
1 credit (Elective credit)

Naval Science II builds on the leadership, management, and technical training received in Naval Science I by delving deeper into the academic and technical curriculum of the initial course. The curriculum includes leadership, citizenship, Naval History, ship construction,

naval weapons, oceanography, navigation and small boat seamanship. Basic survival and orienteering training is also included. There is no obligation to join the armed forces for NJROTC participants.

**Prerequisite and other notes:** Naval Science I (85001). Course is offered as a regional program in Talbot County Public Schools at Easton High School.

### NAVAL SCIENCE III

Course 85003      5 periods/week/sem  
1 credit (Elective credit)

Leadership becomes the paramount topic in the Naval Science III course. Fundamentals of democracy and Naval history are also stressed, and technical subjects such as meteorology and weather, astronomy, seamanship, and survival training are introduced. Leadership and management are the key areas of concern and effort. Leadership will be studied through readings and lectures, and practiced in classroom exercises and actual unit operations. There is no obligation to join the armed forces for NJROTC participants.

**Prerequisite and other notes:** Naval Science II (85002). Course is offered as a regional program in Talbot County Public Schools at Easton High School.

### NAVAL SCIENCE IV

Course 85004      5 periods/week/sem  
1 credit (Elective credit)

The purpose of this course is to build on the basic qualities of a good follower and an effective leader provided in the Naval Science I, II and III curriculums and takes an in-depth look at what leadership is, and how to maximize your abilities in the leadership area. In addition to extensive reading and critical thinking, leadership skills are practiced and improved upon through staff leadership positions within the NJROTC unit.

**Prerequisite and other notes:** Naval Science III (85003). Course is offered as a regional program in Talbot County Public Schools at Easton High School.

## Caroline County Public Schools High School Plan of Study

Student Name \_\_\_\_\_ Graduation Year \_\_\_\_\_ ID# \_\_\_\_\_

**CAROLINE COUNTY PUBLIC SCHOOLS CAREER MAJOR:**

- |   |  |
|---|--|
| <input type="checkbox"/> Academy of Health Professions<br><input type="checkbox"/> Accounting<br><input type="checkbox"/> Automotive Technology<br><input type="checkbox"/> Computer Aided Drafting and Design (CADD)<br><input type="checkbox"/> Construction Technology<br><input type="checkbox"/> Cosmetology<br><input type="checkbox"/> Curriculum for Agricultural Science Education (CASE)<br><input type="checkbox"/> Digital Media and Web Design Development<br><input type="checkbox"/> Early Childhood Education | <input type="checkbox"/> Firefighter<br><input type="checkbox"/> Food and Beverage Management (Prostart)<br><input type="checkbox"/> Industrial Technology<br><input type="checkbox"/> Liberal Arts<br><input type="checkbox"/> Marketing<br><input type="checkbox"/> Military Service<br><input type="checkbox"/> Project Lead the Way (PLTW) – Biomedical Sciences<br><input type="checkbox"/> Project Lead the Way (PLTW) – Pre-Engineering<br><input type="checkbox"/> Teacher Academy of Maryland (TAM) |
|---|--|

**POST-SECONDARY PLAN:**

- |   |   |
|---|---|
| <input type="checkbox"/> 2-year college<br><input type="checkbox"/> 4-year college<br><input type="checkbox"/> Military | <input type="checkbox"/> Technical school<br><input type="checkbox"/> World of work |
|---|---|

REQUIRED COURSES	# of CREDITS	GRADE 9	GRADE 10	GRADE 11	GRADE 12	CREDITS EARNED
ENGLISH	4					
MATH	4					
SCIENCE	3					
SOCIAL STUDIES	3					
TECHNOLOGY ED	1					
FINE ARTS	1					
PHYS. ED	1					
HEALTH	1					
FINANCIAL LITERACY	1					
<b>OTHER REQUIREMENTS</b>						
<b>2 credits</b> of World Language <b>and 3 credits</b> in electives (Non-CTE majors only)	5					
<b>OR</b>						
<b>2 credits</b> of Advanced Technology <b>and 3 credits</b> in electives (Non-CTE majors only)	5					
<b>OR</b>						
<b>4 credits</b> by successfully completing a State-approved Career & Technology Program <b>and 1 credit</b> in an elective	5 <i>(Credits may vary by CTE major)</i>					
<b>Students must also meet attendance, service-learning, and Maryland assessment requirements.</b>						54

