

HIGH SCHOOL PROGRAMS OF STUDY

2025-2026



Introduction

University Completer Program

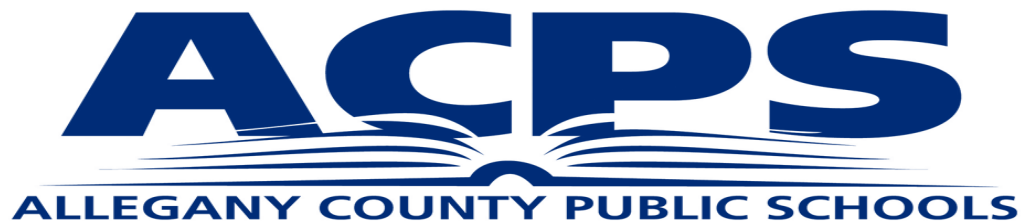
Career and Technical Educations (CTE)

Completer Programs

Course Descriptions

Post-Secondary Connections

Board of Education of Allegany County
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Although great care has been taken to ensure the accuracy, completeness, and timeliness of information in this publication, please note that ACPS makes no guarantees that such information will be error free. Information is subject to change at any time in order to add, update, or correct information provided in this publication. The information is intended to serve as an educational resource for students, parents, and educators. The most up-to-date information will be provided in the online Program of Study guide on the ACPS website. The professional staff in each school shares responsibility for providing access to course selection forms and information. Parents and students should check with the specific college or university regarding admission requirements and/or with the NCAA regarding Divisions I and II Initial-Eligibility requirements. If questions arise, students and parents should contact school administrators, guidance counselors, or teachers for clarification and assistance. Any errors or omissions should be reported for investigation.

Welcome to the Allegany County Public Schools *Programs of Study* guide! Planning the high school program is an important process that requires careful thought and attention. The information inside outlines the approved curriculum for secondary schools in Allegany County and is intended to serve as an educational resource for students, parents, and educators.

Our secondary schools in Allegany County offer an appropriately challenging curriculum in language arts, science, social studies, mathematics, world language, fine arts, physical education, and career and technology education. We also offer a wide variety of elective courses and extra-curricular activities.

To begin planning a program of study, students should become familiar with the graduation requirements established by the State of Maryland. Courses which fulfill career goals, college goals, and/or personal goals must also be considered when examining the curriculum and planning a sequential high school program.

I want to personally encourage each student to consider the many options available in the course selection process and to select courses which are consistent with individual student goals, interests, and abilities. Career cluster booklets explain and serve as a reference for developing high school and post-secondary educational plans. We offer many dual enrollment and Advanced Placement courses that can provide excellent opportunities for advanced study.

Every program of study listed in this booklet may not be available in every school. Each school makes a determination of the course offerings and programs available to students based on course demand. Student interest in a particular course and the availability of qualified and certified staff to teach the course are two factors which determine course offerings.

The professional staff in each school shares responsibility for providing access to course selection forms and information. If questions arise, students and parents are encouraged to contact school administrators, guidance counselors, or teachers for clarification and assistance. This guide is intended provide valuable guidance as students plan their course of study that will help them maximize their learning potential.

Best regards,

Dr. Kim Green Kalbaugh
Chief Academic Officer

WHAT IS A PROGRAM OF STUDY?

A Program of Study is “an instructional program that includes a combination of courses and experiences designed to accomplish a predetermined objective or set of allied objectives such as preparation for advanced study, qualification for an occupation or range of occupations, or simply the increase of knowledge and understanding.” (Chrimore and Hill, *A Classification of Educational Subject Matter*, NCES, 1978, p.165.)

The Maryland State Department of Education’s goal is for every high school student to be a completer in one or more of the following completer programs. Dual completers are strongly encouraged.

University of Maryland System Completer Program (page 8)

To be a University of Maryland System Completer, a student must complete a sequence of courses that satisfies the requirement for entrance in various colleges or universities in the University of Maryland System.

The university requires, at a minimum, to have completed the following course work by high school graduation: four (4) years of English, four (4) years of math, including Algebra I, Geometry, and Algebra II. (Students who complete Algebra II prior to their final year must complete the four-year mathematics requirement by taking a course or courses that utilize non-trivial algebra. Examples of courses meeting this requirement include Algebra II, Trigonometry, Pre-calculus, Calculus and successor courses, Statistics, and College Algebra.); three (3) years of history or social science; three (3) years of science in at least two different areas, with at least two lab experiences; and two (2) years of foreign language.

Career and Technical Education (CTE) Completer Programs (page 9-30)

To be a CTE Completer, a student must complete a State approved Career and Technology program sequence of courses which develop skill and knowledge in career areas leading to employment, college, or both.

An approved CTE Completer Program must have a minimum sequence of four (4) credits. Some CTE Completer Programs offer students the opportunity to participate in internship/work-based learning experiences and earn articulated college credits or apprenticeship credit.

CTE Completer Programs will be offered based on enrollment demand.

Dual Enrollment/Early College Program

At the end of the junior year (exception P-TECH students), a student with satisfactory credits, assessment requirements and the College and Career Ready (CCR) Memorandum of Understanding (MOU) multiple measures of assessment met, may enroll in the Dual Enrollment Program. Successful completion of Dual Enrollment courses outlined in the Program of Study awards a student ACPS credit and local college credit, and it will be part of the high school GPA. Students enrolled in Dual Enrollment courses may participate in extra curricular activities.

Information on Dual Enrollment courses is found in Section V in the Program of Study starting on page 80:

- Students must register with the college/university each semester for dual enrollment courses.
- ACM via the annual CCR MOU accepts a variety of assessment measures for college– level courses. Students may qualify to take a college-level course if they meet at least one of the following set criteria for PARCC/MCAP, SAT, ACT, AP, IB, Accuplacer, and GPA. For specific criteria please talk to your high school counselor or the ACM/ACPS Career and College Coach.
- Senior English credit may be satisfied by taking College English in the Comprehensive High School.
- Senior math credit may be satisfied by taking College Algebra or College Probability and Statistics in the Comprehensive High School.
- All Dual Enrollment Courses will be offered based on enrollment demand.
- Only ACPS approved courses at ACM or FSU during the fall or spring semester will be awarded dual enrollment credit.
- Credits from a college or university other than ACM or FSU will not be recognized for dual enrollment credit without prior written approval of the superintendent.

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Section I

Introduction



MARYLAND HIGH SCHOOL DIPLOMA

The Maryland High School Diploma is awarded in recognition of the fulfillment of the minimum enrollment, competency prerequisite, credit, and student service requirements. Students who meet the following requirements shall be awarded a Maryland High School Diploma.

Specified Core Credit Requirements

Credits	Subject Area
4	English
4*	Mathematics one in Algebra one with geometric concepts *additional math credits (see below)
3**	Science **science credits (see below)
3	Social Studies U.S. History, World History Local, State, Federal Government
1	Fine Arts
1	Physical Education
1	Technology Education
1*	Health Education (See explanation below)
.5	Personal Financial Literacy

Choose one of the following:

Completer** and Electives

**Completer refers to a specified sequence of courses required for completing graduation requirements.

2 credits of World Language in sequence and any remaining credits in electives

OR

Complete a MSDE CTE Program and any remaining credit in electives needed

- Agricultural Sciences & Operations (3 credits)
- Biomedical Sciences - PLTW (4 credits)
- Engineering Design & Processes (3 credits)
- Any CTE Program at the Career Center (4-10 credits which vary depending on program)

ACPS Certificates

In addition to earning the Maryland High School Diploma, students who earn at least 12 credits in honors courses as indicated in the course descriptions, Section IV during their high school program and meet the following GPA requirements shall be eligible for a:

Honors Certificate

Cumulative Weighted Grade Point Average—3.5 GPA

Students shall obtain at least a 3.5 total cumulative weighted grade point average for the high school years.

Auditing a Course

A student is enrolled in a course identified in the Program of Study, but is not to be assigned a grade. It will be noted on their transcript that the course was audited, no grade will be provided, no credit will be earned and the GPA will not be affected in any way. This applies to eighth period classes offered before or after regular school hours, teachers' aides, and office aides.

23

Minimum Total Credits Required for Graduation

*For the Grade 9 Class of 2021-22 and beyond, 1 credit of health will be required.

Additional Requirements

In addition to the specified core credit requirements for a Maryland High School Diploma:

- Students must complete 75 hours of Student Service Learning.
- Students must satisfactorily complete four years of approved study beyond grade eight.
- Students earning high school math credits prior to entering high school are required to take four years of high school mathematics in Grades 9-12.
- MSDE and ACPS require 4 years of mathematics.
- Exploring Computer Science, AP Computer Science Principles, or Foundations of Technology fulfills the Technology Education graduation requirement.
- Students earning World Language credit in Grade 8 are required to take a minimum of 2 additional World Language classes in the same language while in Grades 9-12.
- Environmental Literacy Standards and experiences are infused throughout the Pre K-12 curriculum.
- Per COMAR, students are required to earn three credits, designed to develop scientific literacy with all courses integrating the application of the science and engineering practices, crosscutting concepts, and each containing a laboratory component, including one credit in life science aligned to the Maryland Comprehensive Assessment for Life Science (ACPS—Biology/Honors Biology); one credit in physical science (ACPS—Chemistry/Matter and Energy); and one credit in Earth/space science or a course with the topics of Earth/space science integrated (ACPS—Honors Earth Space/Earth Space Science or AP Environmental Science).

MARYLAND HIGH SCHOOL DIPLOMA

Maryland High School Assessments Required for Graduation

Maryland Comprehensive Assessment Program (MCAP)

MCAP assesses the Maryland College and Career Ready Standards in English language arts, mathematics, science, and government.

Beginning with students in Grade 9 2023-2024, the assessments in Life Science MISA and Government will be 20% of the course final grade. Students must pass the course as part of graduation requirements. The Life Science MISA assessment scores will be associated with the Honors Biology/Biology classes.

Students must be assessed no later than Grade 10 in English and Algebra I. These assessments will be used as a measure to determine the student's College and Career Readiness (CCR). Students that achieve CCR in both English and math will choose a post CCR pathway. Students that do not meet CCR will continue in coursework that prepares students for CCR and will re-assess.

Maryland High School Assessments are a series of end-of-course exams that test student knowledge of Core Learning Goals (CLGs) established by the Maryland State Department of Education. See COMAR 12A.03.02.02.

Maryland College and Career Readiness

The Maryland State Department of Education is committed to implementing the Blueprint for Maryland's Future so that each student enrolled in public school, regardless of the student's race, ethnicity, gender, zip code, socioeconomic status, or the language spoken at home, meets the College and Career Readiness standard by the end of the 10th grade. The Blueprint calls for a clear definition of a college and career readiness standard and a system of assessments that ensure students are reaching their goals and receiving the support needed.

GRADUATION REQUIREMENTS

MARYLAND HIGH SCHOOL DIPLOMA

Coursework Options for High School Content

Weights for GPA Calculation by Course Title			
Grade	Academic	Honors	Dual Enrollment Advanced Placement
A	4	4.5	5
B	3	3.5	4
C	2	2.5	3
D	1	1	1

Allegany County Public Schools Offers Four Levels of Courses

Academic 4.0 GPA scale	includes Essential Learner Outcomes or core content identified in the Maryland College and Career Ready Standards or Maryland Core Learning Goals.
Honors 4.5 GPA scale	includes content in the Maryland College and Career Ready Standards or the Maryland Core Learning Goals that includes an increased emphasis on the synthesis of content knowledge demonstrated by an integration of reading and writing processes.
Dual Enrollment or Early College on-site 5.0 GPA scale	includes syllabi content that represents the highest common standards between ACPS and the cooperating college. Successful completion (a grade of C or better) awards local college credit hours. A grade of D may not be awarded college credit or be transferable to other institutions.
Advanced Placement 5.0 GPA scale	includes content in the Advanced Placement Course Outline approved by the College Board. College credit is awarded based on the AP test score and the standards set by the receiving college/university. Prerequisites for AP course work are intended to serve as a guideline not a stringent rule. AP Courses are weighted on a 5.0 GPA scale. The course requires a final classroom exam that will count 10% of the final grade. Students are strongly encouraged to take the Advanced Placement examination.

Academic Certification Decisions: An academic certification will be conducted to determine if you meet the **Division I or Division II** academic standards. Academic certifications are required for all college-bound student-athletes planning to compete at a **Division I or Division II** school. (An amateurism certification is also required. The following items are required in order to complete your academic certification: official transcripts from all high schools attended, test scores, final official transcript with proof of graduation, no open academic tasks in your Eligibility Center Certification account, and be on a **Division I or Division II** school's institutional request list. Being placed on a institutional request list means you are being recruited and notifies Eligibility Center to complete an academic evaluation for you after all of your required documents have been submitted.

In January 2023, NCAA Divisions I and II adopted legislation to remove standardized test scores from initial - eligibility requirements for all student-athletes who initially enroll full time on or after August 1, 2023. Check with the NCAA school you plan to attend regarding whether standardized test scores are necessary for admission or scholarship requirements.

If you want to compete in Division I NCAA sports, you need to register with the NCAA Eligibility Center at eligibilitycenter.org to make sure you stay on track to meet initial-eligibility standards. If you have questions about your eligibility or the registration process, call us toll free at **877-262-1492, Monday-Friday, 9 a.m. to 5 p.m. Eastern time.**

To be eligible to compete in NCAA sports during your first year at a **Division I or Division II** school, you must meet **ALL** the following requirements:

- Earn 16 NCAA-approved core-credit courses (four years of English, three years of math (Algebra 1 or higher), two years of science (including one year of lab, if offered), one additional year of English, math or science, two years of social science, and four additional years of English, math, science, social science, world language or non-doctrinal religion/philosophy.
- Complete your 16 NCAA-approved core-course credits in eight academic semesters or four consecutive academic years from the start of ninth grade. If you graduate from high school early, you still must meet core-course requirements .
- Complete 10 of your 16 NCAA-approved core-course credits, including seven in English, math or science, before the start of your seventh semester. Once you begin your seventh semester, any course needed to meet the 10/7 requirement cannot be replaced or repeated.
- Earn a minimum 2.3 core-course GPA (Division I); Earn a minimum 2.2 core-course GPS (Division II).
- Ask your high school counselor to upload your final official transcript with proof of graduation to your Eligibility Center account.

What if I Don't Graduate on Time? In **Division I**, if you do not graduate on time (in four years/eight semesters), the NCAA Eligibility Center will still use your grades and coursework for the first four years/eight semesters for your certification. You will still need to provide proof of graduation (once you graduate) and you may not use any coursework taken after your high school graduation toward your certification.

What if I Don't Meet the Division I Standards? If you have not met all of the Division I academic standards, you may not compete in your first year at a Division I school. However, if you qualify as an academic redshirt, you may practice during your first term in college and receive an athletics scholarship for the entire year. To qualify as an academic redshirt, you must: earn 16 NCAA-approved core-course credits, earn a minimum 2.0 core-course GPA, and submit your final transcript with proof of graduation to the Eligibility Center.

What if I Don't Meet the Division II Standards? If you have not met all of the Division II academic standards, you may not compete in your first year at a Division II school. However, you will be deemed a partial qualifier. All Division II partial qualifiers may practice and receive an athletics scholarship, but may NOT compete, during their first year of full-time enrollment at a Division II school.

Core-Course Timeline: For **Division I**, only courses completed in your first eight semesters will qualify as core courses. If you graduate from high school on time (in eight semesters) with your incoming ninth-grade class, you may use one core course completed in the year after graduation (summer or academic year) before full-time collegiate enrollment. You may complete the core course at a location other than the high school from which you graduated as long as the course is taken prior to full-time enrollment at any college or university. A college course taken after high school graduation may be used toward your initial eligibility and awarded 0.5 units from your college transcript (unless awarded one full unit on your home high school transcript). An additional core-course unit taken after on-time high school graduation cannot replace a course used to meet the core course progression (10/7) requirement, but an additional core course after on-time graduation may replace one of the remaining six core-course units necessary to meet core course requirements. If you plan to compete at a **Division II** school, you must complete 16 NCAA core courses after starting grade nine and before your first full-time college enrollment. For **Division II**, you may use an unlimited number of core courses completed after graduation (summer or academic year) before full-time collegiate enrollment. You may complete the core course(s) at a location other than the high school from which you graduated. A college course taken after high school graduation can be used toward your initial eligibility and will be awarded 0.5 units (unless awarded one full unit by your home high school). It must appear on your home high school transcript with grade and credit.

Initial-Eligibility Standards

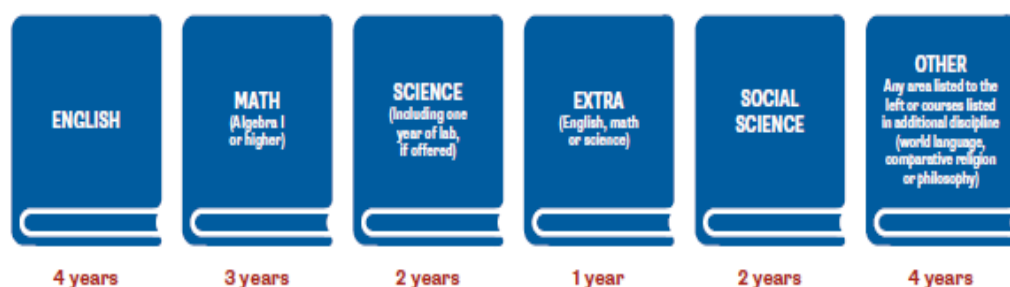
If you want to compete in NCAA sports, you need to register with the NCAA Eligibility Center at eligibilitycenter.org. Plan to register before your freshman year of high school. For more information on registration, visit on.ncaa.com/RegChecklist.

Academic Requirements

Division I and II schools require you to meet academic standards. To be eligible to practice, compete and receive an athletics scholarship in your first year of full-time enrollment, you must meet the following requirements:

Division I

1. Earn 16 NCAA-approved core-course credits in the following areas:



2. Complete your 16 NCAA-approved core-course credits in eight academic semesters or four consecutive academic years from the start of ninth grade. If you graduate from high school early, you still must meet core-course requirements.
3. Complete 10 of your 16 NCAA-approved core-course credits, including seven in English, math or science, before the start of your seventh semester. Once you begin your seventh semester, any course needed to meet the 10/7 requirement cannot be replaced or repeated.
4. Earn a minimum 2.3 **core-course GPA**.
5. Ask your high school counselor to upload your **final official transcript** with proof of graduation to your Eligibility Center account.

Division II

1. Earn 16 NCAA-approved core-course credits in the following areas:



2. Earn a minimum 2.2 **core-course GPA**.
3. Ask your high school counselor to upload your **final official transcript** with proof of graduation to your Eligibility Center account.

Division III

While **Division III schools** set their own admissions and academic requirements, **international student-athletes** (first-year enrollees and transfers) who are enrolling at a Division III school after Aug. 1, 2023, must be certified as an amateur by the Eligibility Center. Contact the Division III school you plan to attend for more information about its academic requirements.

HIGH SCHOOL CERTIFICATE

COMAR 13A.03.02.09E

There shall be a State certificate for completion of a special education program named the Maryland High School Certificate of Program Completion.

1. This certificate shall be awarded only to students with disabilities who cannot meet the requirements for a diploma but who meet the following standards:
 - A. The student is enrolled in an education program for at least four (4) years beyond grade eight or its age equivalent, and is determined by an Individual Education Plan (IEP) Committee, with the agreement of the parents of the student with disabilities, to have developed appropriate skills for the individual 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:
 - (i) Gainful employment;
 - (ii) Work activity centers;
 - (iii) Sheltered workshops; and
 - (iv) Supported employment; or
 - B. The student has been enrolled in an educational program for four (4) years beyond grade eight or its age equivalent and has reached age 21 by the end of the student's current school year.

ADDITIONAL STANDARDS

- Instruction in computer use shall be included in the curriculum or each appropriate subject area.
- Students shall receive appropriate instruction in study skills and such thinking skills as gathering, analyzing, synthesizing, and evaluating information.
- Program offerings shall be open to enrollment for all students in:

Community Service	Technology Education
Family & Consumer Science	Health
Computer Studies	Career & Technology Education
- Opportunities for students to participate in structured learning experiences in the community as part of the regular high school program.

OTHER PROVISIONS FOR EARNING CREDIT

Options for earning credits may be offered by the local school system. These options should be explored at the local school level and may include such alternatives as original credit summer school for health and physical education and approved MVLO courses that are not part of the regular ACPS course offerings. Online courses must be approved by the superintendent or his designee prior to enrollment. Costs associated with online courses are the responsibility of the parent/guardian. The high school counselor can provide assistance for the above alternatives.

STUDENT SERVICE LEARNING

048 Student Service Learning 0 Credit

All students in the state of Maryland must complete 75 service-learning hours in order to graduate. Students in Allegany County will start earning hours in Grade 6 in a variety of courses. Students will have the opportunity to receive hours in Creative Arts, Health, PE, English, Math, Science and/or Social Studies.

Students will receive hours in the following ways:

- 6th grade—15 hours
- 7th grade—30 hours
- 8th grade—15 hours
- High School—15 hours

Pass will appear on the report card in high school when all hours are met. The credit will be a Pass (P) grade only and will not be averaged with the GPA.

051 Elective Service Learning 1 Credit

Active Service Learning is a program available to all students in grades 6-12. Students wishing to work toward this elective credit must complete a total of 132 hours beyond the initial 75 required service-learning hours. To earn a Service-Learning Elective Credit, students must complete at least one community based individual project in addition to curriculum based projects. To receive the additional credit, students must: 1) participate in or organize approved independent projects or activities which meet school or community needs, 2) receive approval for the project or activity, and 3) complete and return the verification/reflection form to the service learning coordinator at that grade level or at the high school level. Students may earn only one Active Service Learning credit. The credit will be a Pass (P) grade only and will not be averaged with the GPA. Students will receive the elective service learning credit once 132 hours have been completed and recorded in the Service Learning Tracker.

COMPLETER PROGRAM INTERNSHIPS

060 Job Shadowing 0 Credit

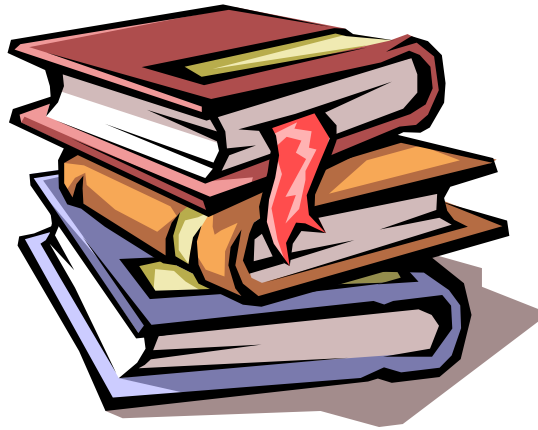
Job Shadowing is a work-based learning opportunity designed to provide hands-on work experience for students for career development exploration.

063 Non-credit Internship 0 Credit

Non-credit Internship is a work-based learning opportunity designed to provide a work related experience for the student as part of an Occupational Completer Program. The credit will be a Pass (P) grade only and will not be averaged with the GPA. Non-credit Internship is related to the student's Occupational Completer Program and requires the approval of the Occupational Completer teacher. This course is separate from the credit internships required for some Occupational Completer Programs.

Section II

University Completer Program



UNIVERSITY OF MARYLAND SYSTEM COMPLETER

Regular freshman admission to a four-year college in the University of Maryland System is determined on the following criteria. Each institution shall publish its own decision criteria which may be more rigorous than the system-wide minima stated below.

1. High School Diploma or its equivalent

2. Grade Point Average

A high school grade point average of C or better is required to admission of full-time and part-time entering freshmen who have graduated from high school within three years of intended enrollment.

3. Test Score

A score on a nationally standardized admission examination such as the SAT or the ACT is required of all applicants who have graduated from high school within three years of intended enrollment.

**The most competitive applicants exceed these minimum requirements, earning a strong A-/B+ or better average in their high school coursework while taking several honors and/or Advanced Placement or International Baccalaureate courses and additional academic electives. Be sure to review University of Maryland application checklist for a list of all required materials for a complete application.

4. Minimum Core Content Proficiency

To indicate their readiness for college-level work, high school seniors or graduates must demonstrate achievement of the appropriate level of competencies and core content associated with the array of courses that follows:

<u>Subject</u>	<u>Credits</u>
English	4
Mathematics	4
Social Science/History	3
Science (at least 2 different areas with at least 2 lab experiences)	3
World Language	2
Academic Electives	6
TOTAL	22

5. Other Criteria

Each institution shall publish other criteria for admission that may include (a) strength of the high school curriculum, (b) trends in performance, (c) citizenship and leadership, (d) special talents, and (e) personal circumstances.

A University of Maryland System Completer must complete the following course work:

- Four years of English,
- Four years of math, including Algebra I, Geometry and Algebra II.
If you complete Algebra II prior to your final year, you must complete the four-year mathematics requirement by taking a course that utilizes non-trivial algebra. Examples of courses meeting this requirement include Algebra II, Trigonometry, Precalculus, Calculus (and successor courses), Statistics and College Algebra.
- Three years of history or social science,
- Three years of science in at least two different areas (with at least two lab experiences), and
- A minimum of two years of high school study in the same world language.

Section III

Career and Technical (CTE) Completer Programs



Career and Technical (CTE) Completer Programs By Career Clusters

Arts, Media and Communication

Graphic Communications (PrintED CCTE)
Interactive Media Production (IMP CCTE)

Construction and Development

Construction Maintenance—HVAC (NCCER CCTE)
Construction Maintenance—Welding (NCCER CCTE)
Construction Trades—Carpentry (NCCER CCTE)
Construction Trades—Electrical (NCCER CCTE)

Consumer Services, Hospitality and Tourism

Culinary Arts (ACF- CCTE)
Careers in Cosmetology (CCTE)

Environmental, Agricultural, and Natural Resources

Agricultural Sciences and Operations (AL, FO, MR)

Health and Biosciences

Academy of Health Professions (CCTE)
Biomedical Science—Project Lead the Way (PLTW - AL, FO, MR)

Human Resource Services

Criminal Justice/Law Enforcement/Public Safety (CCTE)

Information Technology

IT Networking Academy (CISCO - CCTE)

Manufacturing, Engineering, and Technology

Manufacturing Engineering—CNC Programming and Operations (CCTE)
Engineering Design and Processes (AL, FO, MR)

Transportation Technologies

Auto Collision Repair (CCTE)
Automotive Technology MLR (CCTE)

Work-Based Learning

Apprenticeship Maryland Program (AMP)- AL, CCTE, FO, MR

CENTER for CAREER and TECHNICAL EDUCATION (CCTE)

The Center for Career and Technical Education (CCTE) serves the skill training needs of students from the comprehensive high schools in Allegany County by offering 14 different career and technical programs. CTE Completer Programs are also offered at the Comprehensive High Schools as indicated in the list below.

At the Center for Career and Technical Education, the academic curriculum is comparable to courses offered at the comprehensive high schools and students are eligible to participate in extracurricular activities at their comprehensive high schools.

Students who complete CTE programs are prepared for entry-level employment or further study at various post-secondary institutions. Most programs at the Center for Career & Technical Education are eligible for articulated (free) college credit when complete.

SKILL TRAINING PROGRAMS

Academy of Health Professions
Auto Collision Repair
Automotive Technology MLR
Careers in Cosmetology
Construction Maintenance—HVAC (NCCER)
Construction Maintenance—Welding (NCCER)
Construction Trades—Carpentry (NCCER)
Construction Trades—Electrical (NCCER)
Criminal Justice/Law Enforcement
Culinary Arts (ACF)
Graphic Communications (PrintED)
Interactive Media Production (IMP)
Manufacturing Engineering Technology—
CNC Programming and Operations
P-TECH/IT Networking Academy (CISCO)

Senior Option—Center for Career and Technical Education (CCTE)

At the end of the junior year, a student with satisfactory credits and a cumulative GPA of 2.5 may enroll at the Center for Career and Technical Education to complete a Senior Option in a skill area of interest. Students must take English 4 and are required to take a math course in addition to completing two levels in a selected skill area. In addition, Senior Option is contingent upon the approval of the Center for Career and Technical Education principal. Senior options may not be available in every skill area. A student requesting the Senior Option must complete an application with the Center for Career and Technical Education counselor and there must be available space in the skill area.

WHO IS ELIGIBLE TO ATTEND CCTE?

1. Any student enrolled in an Allegany County high school who has successfully completed ninth and tenth grade and has earned a minimum of twelve (12) credits prior to grade 11 is eligible to attend CCTE under the following conditions:

*The following courses **MUST BE** successfully completed prior to admission to CCTE:*

*Algebra I and another math
Biology and another science
English 1
English 2
Fine Arts*

*Foundations of Technology
Government
Health
Personal Financial Literacy
Physical Education
US History*

A minimum of 12 credits must be completed to be enrolled as an 11th grade student at CCTE. Senior Option Students can only be admitted if they have all requirements for graduation met with the exception of: English 4, 4th Year Math, and the Periods required for Skill Area Completion. (Students applying for Senior Option cannot have any Bridge Project Requirements)

2. Some skill training areas have specific program entry requirements. (Example: Students entering the Academy of Health Professions Program must understand that the Internship Experience is conducted in local healthcare facilities and these facilities require students to have the seasonal influenza vaccine seasonal influenza vaccine, the 2-step PPD testing, and COVID vaccine or agreement to weekly/daily COVID test in order to be admitted to the program entrance.
3. In the event requests to enroll in a particular skill area exceed the capacity of the program, attendance, grade point average (GPA) and courses completed will be considered. Furthermore, instructors reserve the right to conduct interviews of students to determine selections when enrollment exceeds capacity. All students are provided the same opportunity to engage in these activities.

DID YOU KNOW?

1. Many CCTE programs offer internships during the senior year.
2. Future Business Leaders of America (FBLA) and Skills USA participate in local, district, state, and national occupational skill competitions and are just two of the many organizations that you can belong to at CCTE.
3. CCTE has articulation agreements with Allegany College of Maryland and other 2 and 4 year colleges which award college credit.
4. CCTE students can apply and be accepted at two- and four-year colleges and universities.
5. CCTE students may participate in comprehensive high school sports and/or extracurricular activities.
6. CCTE assists students and graduates with job placement.
7. CCTE provides students with tools and materials in their chosen skill area.
8. CCTE provides opportunities for students who wish to participate in the Honors Certificate Program.
9. CCTE has a chapter of the National Technical Honor Society.
10. CCTE offers advanced placement and college courses.

Program Overview:

The Academy of Health Professions (AHP) uses project and problem-based learning, clinical and internship experiences, and classroom and lab instruction to prepare the next generation of health professionals for the workforce and for further study at the postsecondary level. Students are introduced to healthcare knowledge and skills through two foundation courses: Foundations of Medicine and Health Science and Structure and Functions of the Human Body. Within the AHP there are opportunities for students to apply what they are learning to real-life healthcare situations in the Medical Specialty course. Students pursuing this option will also participate in a supervised Clinical Experience course and will earn state and/or nationally recognized certifications. AHP students will also have the opportunity to design and participate in an Allied Health Internship Course. Students enrolled in this program are able to acquire (2) separate program certifications as a result of program completion: CNA & GNA, with an optional elective course preparing students for certification as a CCMA, and Pharm Tech.

Occupational Careers and Postsecondary Options:

Secondary: Certified nursing assistant, geriatric nurse assistant

Postsecondary (2 year): Dental Hygienist, Dental Assistant, Massage Therapist, Medical Assistant, Medical Lab Technician, Nurse, Occupational Therapist, Phlebotomy Technician, Pharmacy Technician, Physical Therapy Technician, Respiratory Therapist, Radiology Technician, Sonographers

Postsecondary (4 year): Allied Health Manager, Audiologist, Biological Technician, Clinical Lab Technician, Dietitian, EMT/Paramedic, Forensic Science Technician, Geneticist, Health Educator, Registered Nurse, Occupational Health Specialist, Orthotists, Prosthetist, Pediatric Nurse, Physician Assistant, Substance Abuse Counselor, Social Worker, Speech Pathologist, Toxicologist, Veterinarian Technician

Program Certification:

- Maryland Board of Nursing (MBoN) - Certified Nursing Assistant

Articulated Credit:

- Allegany College of Maryland (ACM) - Up to 12 Credits dependent on degree
 - ◊ Additional Opportunity: Students who are Academy of Health Professions Completers may earn guaranteed admission under articulated conditions to ACM program: , Nursing (RN/PN).
- Medical Assistant/Administrative Assistant Program - 9 to 12 Credits at ACM
- Community College of Baltimore County (CCBC) - 3 Credits
- Stevenson University (Baltimore, MD) - 6 Credits or 3 Credits Dependent on Degree Chosen

Total Dollars Saved through Articulated Credits dependent on College
\$1800.00 to \$8000.00

Program Overview:

The Agricultural Sciences and Operations program falls within the Environmental, Agricultural and Natural Resources Career Cluster. This program focuses on the scientific principles and practice of agricultural research and production; the applications to real-life agricultural problems; and the management of technical and business operations connected with agricultural services. The program comprises of a three course sequence: Introduction to Agriculture and Natural Resources, Animal Veterinary Science, and Plant Science and Greenhouse Operations. All courses will focus on a hands-on approach to learning and will include educational experiences to explore the local agricultural industry.

Occupational Careers and Postsecondary Options:

Secondary: Agricultural Equipment Operators, Animal Trainers, First Line Logging Workers, Floral Designers, Landscaping and Grounds keeping Workers, Log Graders and Scalers, Nursery and Greenhouse Managers, Pest Control Workers, Tree Trimmers and Pruners.

Postsecondary (2 year): Postsecondary (4 year): Animal Systems, Environmental Service Systems, Natural Resource Systems, Forestry, and Agribusiness System.

Program Certification:

- Bayer Plant Science Certification

Articulated Credit:

- Allegany College of Maryland (ACM) - 2 Credits in Forest Technology (Pending Approval)

**Total Dollars Saved through Articulated Credits dependent on College
\$271.00 to \$540.00**

AUTO COLLISION REPAIR

Program Overview:

The Collision Repair and Refinishing program is a CTE pathway program. It combines technical, academic and workplace skills in an integrated curriculum in accordance with The Inter-Industry Conference on Auto Collision Repair (I-CAR) curriculum programs, and Automotive Service Excellence (ASE) guidance and directives. The major technical skills and abilities for each course offering are outlined below. The Collision Repair and Refinishing Program incorporates the applied academic and workplace skills for each of the required collision repair, refinish and painting areas utilizing the I-CAR Live Curriculum. The I-CAR curriculum prepares students for careers and/or further education in collision repair and refinishing within the Transportation Technology Cluster.

Occupational Careers and Postsecondary Options:

Secondary: Collision Repair Technician, Automobile Insurance Estimator

Postsecondary (2 year): Collision Repair Lead Technician, Collision Repair Team Leader, Collision Repair Estimator, Collision Repair Insurance Adjuster, Collision Repair Quality Technician, Collision Repair Quality Engineer, Automotive Refinishing Technician

Program Certification:

- Automotive Service Excellence (ASE) Education Foundation- Non-Structural Analysis & Damage Repair
- Automotive Service Excellence (ASE) Education Foundation- Painting and Refinishing

Articulated Credit:

- Community College of Baltimore County (CCBC) - 10 Credits
- Universal Technical Institute (UTI) - Up to 4 courses - Test Out
- Pennsylvania College of Technology (Williamsport, PA) - 16 Credits

**Total Dollars Saved through Articulated Credit dependent on College
\$933.00 to \$3250.00**

Program Overview:

The Automotive Technology MLR Plus CTE Program of Study (POS) is an instructional program that incorporates the Automotive Service Excellence (ASE) Education Foundation program accreditation standards and task lists. The program prepares students for further education and careers in the Transportation Equipment Pathway and Automotive Technology. Students work in teams to analyze and solve challenging simulated and real-world repair problems utilizing late model vehicles and state-of-the-art diagnostic tools and equipment. Under the supervision of ASE certified automotive instructors, students troubleshoot, solve and repair complex problems as members of teams and individually.

Occupational Careers and Postsecondary Options:

Secondary: Automobile Service Tech, Automobile Master Mechanic, Automobile Specialty Technician, Electronic Equipment Installer & Repairer

Postsecondary (2 year): Automobile Lead Technicians, Automobile Team Leaders, Automobile Service Advisors, Diagnosticians

Postsecondary (4 year): Field Representative, Technical Hotline Assistant, Aftermarket Sales Manager, Fleet Equipment Manager, Test Engineering Technician, Service Training Instructor, Insurance Claims Repre-

Program Certification:

- Automotive Service Excellence (ASE) Education Foundation - Suspension & Steering
- ASE Education Foundation - Brakes
- ASE Education Foundation - Electrical/Electronics Components
- National Automotive Technicians Education Foundation (NATEF) - Engine Performance

Articulated Credit:

- University NW Ohio (UOH) - 12 Credits
- Allegany College of Maryland (ACM) - 12 Credits
- Pennsylvania College of Technology (Williamsport, PA) - 16 Credits
- Community College of Baltimore County (CCBC) - 18 Credits

Total Dollars Saved through Articulated Credits dependent on College

\$1230.00 to \$3250.00

BIOMEDICAL SCIENCES (PLTW)

Program Overview:

The Project Lead The Way Biomedical Sciences Program is a CTE Completer Program that 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 Biomedical Sciences, Human Body Systems, Medical Interventions, and Biomedical Innovation. 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. This completer program is available at all three comprehensive high schools.

Occupational Careers and Postsecondary Options:

Secondary: Medical Technician, Nursing Assistant.

Postsecondary (2 year): Nurse Dental Hygienist, Dental Assistant, Medical Lab Technician, Phlebotomy Technician, Pharmacy Technician, Physical Therapy Technician, Respiratory Therapist, Radiology Technician, Sonographers, Veterinarian Assistant

Postsecondary (4 year): Doctor, Dentist, Veterinarian, Pharmacist, Research Scientist, Biomedical Engineer, Dietician, Paramedic, Health Information Manager, Radiologist, Medic, Physician Assistant, Medical Assistant, Biotechnology/Biomanufacturing Lab Technician

Program Certification:

- PLTW National Recognized Exams

Articulated Credit:

- Stevenson University (Baltimore, MD) - 4 Credits or 3 Credits Dependent on Degree
- Allegany College of Maryland - 3-6 Credits (Depending on Program of Study at Allegany College of Maryland)

Total Dollars Saved through Articulated Credits dependent on College
\$1800.00 to \$2400.00

Program Overview:

The Careers in Cosmetology Program prepares individuals to care for and beautify hair, skin and nails. Students are instructed in the art and science of cosmetology as well as all aspects of the industry. Hair services taught include giving shampoos, rinses, scalp treatments, styling, setting, cutting, hair coloring and lightening, permanent waving and chemical relaxing. Skin procedures include facials, make-up and hair removal. Nail techniques include manicures, pedicures, artificial nail enhancements, advanced nail techniques, and foot/leg and hand/arm massage. Emphasis is placed on hygiene, safety and sanitation as well as State Board of Cosmetologists' rules and regulations. Related areas of instruction include human anatomy and physiology; mathematics and measurement; analysis, diagnosis and histology of hair, skin and nails; chemistry; fundamentals of electricity; product knowledge; customer relations; and employability skills. Salon management is an integral part of the classroom and clinical experience. The 1,500 hour program includes classroom instruction, clinical experience, related mentored work-based learning experience and a senior capstone project. Upon successful completion and the instructor's recommendation the student will be required to take the Maryland State Board of Cosmetologists' Examination.

Occupational Careers and Postsecondary Options:

Secondary: Cosmetologist, Barbering, Make-up Artist, Nail Technician,

Postsecondary (2 year): Massage Therapy, Cosmetology Instructor

Program Certification:

- Practical MD State Board of Cosmetologist License

Program Credit:

No articulations available. Students are required to take the Maryland State Board of Cosmetologists' Examination. Successful passage of this exam results in cost saving equivalent to enrollment in Post-secondary Cosmetology Program.

Cost savings dependent on Post-secondary Cosmetology Program of Choice.

CONSTRUCTION MAINTENANCE - HVAC (NCCER)

Program Overview:

Construction Maintenance—HVAC (NCCER) is a CTE complete program designed to provide students with entry level skills and instruction in the basic principles of refrigeration, air conditioning, heating, and plumbing. HVAC provides students with an opportunity to learn about the industry as it relates to residential and commercial building. Participants master a variety of HVAC skills. Students apply their knowledge and skills by participating in the “student-built” house project. The course of study descriptions correlate to the modules of the NCCER national standards.

Occupational Careers and Postsecondary Options:

Secondary: Plumber, Industrial Maintenance Technician, Building Management, Construction Management, Sheet Metal Worker

Postsecondary (2 year): Commercial HVAC, Residential HVAC

Program Certification:

- OSHA 10 Certification
- NCCER Certifications

Apprenticeship Credit:

- Opportunity to earn first-year apprenticeship credit in the Local #489 Plumbers and Steamfitters Union

Program Overview:

Construction Maintenance—Welding (NCCER) is a CTE completer program which provides students with an opportunity to learn about the industry as it relates to welding. Participants master a variety of welding skills including oxyfuel cutting and welding including SMAW. The course of study descriptions correlate to the modules of the NCCER national standards. NCCER meets the American Welding Society (AWS) Entry Level Welder—Phase One and Phase Two requirements of the AWS QC-10 and AWS EG2.0-95 guidelines.

Occupational Careers and Postsecondary Options:

Secondary: Welder, Agriculture, Automotive Manufacture and Repair, HVAC, Sheet Metal Worker, and Pipefitter

Postsecondary (2 year): Postsecondary options further provide students the opportunity to advance skills in Automotive Manufacturing and Repair, and Shipbuilding

Program Certification:

- OSHA 10 Certification & First Aid/CPR
- NCCER Certifications

Apprenticeship Credit:

- Opportunity to earn first-year Apprenticeship credit in Local #489 of the Plumbers and Steamfitters Union
- Opportunity to earn first-year Apprenticeship credit in Local #568 of the Ironworkers Union

CONSTRUCTION TRADES — CARPENTRY (NCCER)

Program Overview:

Construction Trades—Carpentry (NCCER) is a CTE completer program which provides students with classroom, shop and on-the-job experience working with tools and materials. Instructional units include layout, fabrication, assembly, installation, and the repair of structural units, as well as Introduction to basic Masonry skills. Instruction will also include exposure to operating equipment of the trade. Students learn blueprint reading, layout techniques, construction techniques, use of building materials, hand and power tool safety, and trim/finish work. Advanced students are encouraged to develop independent skills in form construction and work with commercial specifications. Students are taken to a job site where they receive the ultimate "hands-on" experience as they construct an entire house. The second year of the program qualifies for honors credit. Seniors who have successfully completed all academic requirements except English 4 may earn a certificate in one year by attending CCTE under the senior option. Successful students are guaranteed an interview with Local #423 United Brotherhood of Carpenters and Joiners of America. If successful, credit towards an apprenticeship program is given. The course of study descriptions correlate to the modules of the NCCER national standards.

Occupational Careers and Postsecondary Options:

Secondary: Carpenter, Building Management, Construction Management

Postsecondary (2 year): Residential Remodeling and Design, Sustainable Construction

Program Certification:

- OSHA 10 Certification
- Scaffold User/Erector Certification, Fall Protection Certification
- First Aid/CPR
- NCCER Certifications

Apprenticeship Credit:

- Opportunity to earn first-year apprenticeship credit in the United Brotherhood of Carpenters and Joiners of America Union #423

CONSTRUCTION TRADES - ELECTRICAL (NCCER)

Program Overview:

Electrical (NCCER) - Construction Trades is a CTE completer program which prepares the student to install, operate, maintain, and repair electrically energized systems in residential, commercial and industrial settings. Students learn methods of wiring, how to read diagrams, schematics, and blue prints, electrical safety, electric motor control wiring, and residential wiring. Students are taken to a job site where they receive the ultimate "hands-on" experience as they construct an entire house. Advanced students learn how to produce schematics and complete a course in Industrial Motor Control. Each advanced student is required to complete a project in motor control. An articulation agreement with Local #307, International Brotherhood of Electrical Workers has been established for second year students. If successful in the program, the participant is eligible for an interview for apprenticeship. The second year of the program qualifies for honors credit. Seniors who have successfully completed all academic requirements except English 4 may earn a certificate in one year by attending CCTE under the senior option.

Occupational Careers and Postsecondary Options:

Secondary: Electrician, Industrial Maintenance Technician, Building Management, Construction Management

Postsecondary (2 year): Industrial maintenance, Field Service Technician, Electronic Apparatus Troubleshooter, Electrical Laboratory Technician, Electrical Engineering Technologist, Design Assistant, Electrical Layout Facilitator, Technical Writer

Program Certification:

- OSHA 10 Certification
- NCCER Certifications

Apprenticeship Credit:

- Opportunity to earn first-year apprenticeship credit in the International Brotherhood of Union Electrical Workers (IBEW) Local #307

CRIMINAL JUSTICE/LAW ENFORCEMENT

Program Overview:

CCTE offers the Criminal Justice/Law Enforcement career strand from the Homeland Security and Emergency Preparation (HS/EP). The (HS/EP) Program is a Career and Technology Education instructional program which integrates government, academia, and private sector training/educational initiatives to help students understand how the United States and its interests worldwide are protected against threats to public safety, both natural and manmade, through effective communication, preparedness, detection, prevention, response and recovery.

Occupational Careers and Postsecondary Options:

Secondary: Forensic Science Technician, Explosive Ordinance/Bomb Squad Member, Physical Scientist, Research Chemist, Epidemiologist

Postsecondary (2 year): Local, State and Federal Law Enforcement Officers, Probation and Parole Officers, Customs and Immigration Inspectors, Fish and Game Wardens, Park Rangers, and Correctional Officers

Postsecondary (4 year): Police Officers, Intelligence Analysts, FBI Investigative Assistance, Fire Fighters, Paramedics, Intelligence Officers, Security Officers, Port Security personnel, Transportation Security Administration Officers, Correctional Officers, Private Detectives and Investigators

Program Certification:

- CPR/First Aid & Hunter's Safety

Articulated Credit:

- Frederick Community College – 3 Credits
- Allegany College of Maryland (ACM) - 3 Credits
(Additional Credit Opportunity, Early College Students - 9 credits)
- Potomac State College (Keyser, WV) - 3 Credits
- Anne Arundel Community College (AACC) - 3 Credits
- Harford Community College (HCC) - 3 Credits
- University of Maryland University College (UMUC) - 3 Credits

Total Dollars Saved through Articulated Credits dependent on College

\$321.00 to \$1450.00

Program Overview:

The Culinary Arts Program partners with the American Culinary Federation (ACF) program to prepare students for successful careers in the food service and hospitality industry. This is a two-year CTE program that educates high school students in professional cooking. Students will progress through a program that includes hands-on education in food production, while developing professionalism and proficiency in cooking, baking, cost control, nutrition, sanitation, and food marketing. Students in this program gain practical experience through school-based enterprises and/or work-based learning in the culinary industry. When the clinical experience is combined with classroom learning, this program will provide the necessary skills for further education and career success. Students have the opportunity at the end of the program to earn their ServSafe Manager and/or Food Handler Certification from the National Restaurant Association, and also a Certified Fundamental Cook (CFC) Certification from the American Culinary Federation (ACF).

Occupational Careers and Postsecondary Options:

Secondary: First Cook, Professional Chef, Sous Chef, Banquet Chef, and Culinary Manager

Postsecondary (2 year): Service Managers, First-Line Supervisors/Managers of Food Preparation and Serving Workers, Institution and Cafeteria Cooks and Private Household Cooks

Postsecondary (4 year): General Manager, Executive Chef, Menu Planner, Nutritionist and Registered Dietician Chefs and Head Cooks, Food Preparation Workers, Food Service Managers, First-Line Supervisors/Managers of Food Preparation and Serving Workers, Institution and Cafeteria Cooks and Private Household Cooks

Program Certification:

- ServSafe and ACF Certified Fundamentals Cook Certification

Articulated Credit:

- Allegany College of Maryland (ACM) - Up to 10 Credits Dependent on Degree
- Potomac State College - 2 Credits
- Stratford University
 - ◊ AAS Degree in Culinary Arts (18 credits)
 - ◊ BA Degree in Culinary Management (18 credits)

Total Dollars Saved through Articulated Credits dependent on College
\$1800.00 to \$8000.00

Program Overview:

The Engineering Design and Processes CTE Program follows the MSDE Advanced Technology Education Program of Study. It is intended for high school students to take a close look into manufacturing, engineering, and technology through a variety of topics including basic layout and computer-aided drafting, 3-D architectural design, robotics, and numerous design challenges focusing on core technological concepts. The purpose of this program is to prepare students to succeed in passing the desired industry-based credential examination - AutoCAD. As students work through the program, they will master key the design concepts and technical skills for success. Upon completion of this program, students are ready for entry into the workplace as an Engineering Technician or Skilled Generalist. Students can also continue their studies in two-year programs at local community colleges.

Occupational Careers and Postsecondary Options:

Secondary: Engineering Technician or Skilled Generalist

Postsecondary (2 year): Engineering Technicians, Project Estimators, Maintenance Support and Computer-aided Design Operators, Industrial maintenance Technicians, Field Service or Sales Technicians, Laboratory Instrument Technicians and Engineering Assistants

Postsecondary (4 year): Computer Systems Engineering, Electrical Engineering, Industrial Engineering, Mechanical Engineering, Architecture Engineering, Civil Engineering, Biomedical Engineering

Program Certification:

- AutoCAD Certification

Articulated Credit:

- University of Maryland Eastern Shore - 3 Credits

Total Dollars Saved through Articulated Credits dependent on College

\$1240.00 to \$1550.00

Program Overview:

The Graphic Communication (PrintED) Program is designed to give students an overall understanding of the graphics communication industry and its major operations while teaching competencies that lead to national PrintED certification. PrintED, administered by the Graphic Arts Education and Research Foundation (GAERF), is a national accreditation program based on industry standards for graphic communications courses of study at the secondary and postsecondary levels. In Maryland, PrintED is supported by the Printing and Graphics Association MidAtlantic (PGAMA), an industry organization that assists with professional development, curriculum, work based learning and the Skills USA contest.

Occupational Careers and Postsecondary Options:

Secondary: Graphic Designer, Print and Digital Production Supervisor, Press Operator, Customer Service Representative, Estimator, Salesperson, Electronic Prepress Manager, Desktop Publishing Specialist, Digital Photo Technician

Postsecondary (2 year): Graphic Designer, Computer Publisher

Postsecondary (4 year): Printing Manager

Program Certification:

- PrintED - Introduction to Graphic Communications
- PrintED - Digital File Preparation
- PrintED - Offset Press Operation
- PrintED - Binding and Finishing
- PrintED - Digital Production Printing
- PrintED - Advanced Graphic Communications

Articulated Credit:

- Allegany College of Maryland (ACM) - 6 Credits
- Bridgemont Community and Technical College School (Montgomery, WV) - 16 Credits

Total Dollars Saved through Articulated Credits dependent on College
\$321.00 to \$2972.00

INTERACTIVE MEDIA PRODUCTION

Program Overview:

The Interactive Media Production program is a program within the Arts, Media, and Communication Career Cluster. As such, it includes a strong foundation in arts and communication with particular emphasis on design, graphic and media communications, interactive technologies, and project development. Students complete two foundation courses: *Principles of Arts, Media and Communication and Interactive Media Production*. The *Advanced Interactive Media Production* course is a two-credit completion course. Interactive Media Production is aligned to National Workforce Center for Emerging Technologies (NWCET) standards and college-level media programs. Students will work in teams to plan and design projects. Student will gain experience in Internet technology and website development, computer graphics, digital media production and project management. Students produce three-dimensional models, two-dimensional animations, layered images, streaming media and web pages for portfolios.

Occupational Careers and Postsecondary Options:

Secondary: Graphic Designer, Illustrator, Animator, Layout Artist, Packaging Designer, Web Designer, Webmaster, Interactive Media Designer
Game Designer, Program Analyst, Technical Writer

Postsecondary (2 year): Graphic Designer, Illustrator, Layout Artist, Packaging Designer, Web Designer

Postsecondary (4 year): Webmaster, Interactive Media Designer, Game designer, Program Analyst

Program Certification:

- Adobe - Adobe Creative Suites Certification
- World of Web (WOW) - Web Design Certification

Articulated Credit:

- Allegany College of Maryland (ACM) - 6 Credits
- Community College of Baltimore County (CCBC) - 3 Credits
- University of Baltimore - 6 Credits

**Total Dollars Saved through Articulated Credits dependent on College
\$321.00 to \$3752.00**

Program Overview (P-TECH STUDENTS ONLY*):

The IT Networking Academy (Cisco Academy) is a nationally recognized program that prepares students for successful careers in information technology fields such as computer network design and administration, hardware, software and network installation, local and wide-area network (LAN/WAN) management and systems engineering. This program is open only to students who are currently enrolled in the P-TECH Program. The IT Networking Academy (Cisco Academy) prepares high school students with the professional skills they require to pursue quality academic and professional opportunities. Particular emphasis is given to using decision-making and problem-solving techniques in the application of science, mathematics, communication and social studies concepts to solve networking problems.

*Application for the P-TECH program occurs in the 8th grade. Consult www.acpsmd.org/Page/2186.

Occupational Careers and Postsecondary Options:

Secondary: Computer Support Specialist, Customer Service Representative, Information Clerk/Specialist

Postsecondary (2 year): Computer Programmers, Information Security Specialist, Web Developers, Technical Writers, Cyber Security

Postsecondary (4 year): Computer System Administrator, Computer Information, Computer Systems Analyst, Database Administrators, Computer Network Architect

Program Certification:

- Cisco Certified Network Administrator (CCNA) - CCENT, CCNA, PCT Certification, Comptia A+ Certification

Articulated Credit:

- Allegany College of Maryland (ACM) - Up to 16 Credits Available
- Anne Arundel Community College (AACC) - 6 Credits
- Harford Community College (HCC) - 3 Credits

Total Dollars Saved through Articulated Credits dependent on College
\$972.00 to \$1650.00

MANUFACTURING ENGINEERING TECHNOLOGY CNC PROGRAMMING AND OPERATIONS

Program Overview:

Manufacturing Engineering Technology—CNC Operations and Programming is a CTE Completer Program that prepares students for a beginning career in manufacturing and machine technologies and aligns to the National Institute of Metalworking Skills (NIMS) Machining Level I Credentials. Students will progress through a program that includes hands-on education in precision machining while developing competency in process control, manual operations, process adjustment, part inspection as well as demonstrate usage of machine safety. The majority of instruction will take place at the ACM Western Maryland Works Facility with students have the opportunity to take 39 credits of college and dual enrollment courses.

Occupational Careers and Postsecondary Options:

Secondary: Machinist, Production Operator, Quality Control Technician, or Manufacturing Engineering Technologist

Postsecondary (4 year): Manufacturing Engineering Technologist, Manufacturing Management, Manufacturing Process Engineering Technologist, Line Supervisor, Research and Development Technologist, Industrial/Technical Representative, Industrial/Technical Sales, Production Technologist.

Program Certification:

- National Institute of Metalworking Skills (NIMS) in up to 13 areas.

Apprenticeship Credit:

- Up to 12 credits at Community College of Baltimore County
- Up to 9 Credits at the College of Southern Maryland

*****All students will be enrolled in college and dual enrollment coursed beginning in their junior year and complete 39 credits from ACM upon high school graduation. Per ACM admission policy, all students must have a 3.0 GPA to be enrolled in dual enrollment courses and accepted into this CTE program.**

CTE COMPLETER PROGRAMS SUMMARY

Completer	Courses Required for Completion & Suggested Electives	Articulation	Major	Crs. College
Academy of Health Professions (CCTE)	<p>Foundations of Medicine & Health Structure & Function of the Human Body Honors Medical Specialty-Certified Nursing Assistant Honors Clinical Internship</p> <p>Medical Terminology Honors Medical Terminology Honors Occupational Skills Pharmacy Technician & CCMA</p>	<p>ACM</p> <p>CCBC</p> <p>Stevenson University</p>	<p>Medical Administrative Assistant (AAS and Certificate) Medical Assistant (AAS)</p> <p>Students earn guaranteed admission under specified conditions to Nursing (RN/LPN) School of Health Professions</p> <p>Nursing (B.A.) Med Tech (B.S.)</p>	<p>3 Medical Admin Asst 100 3 Medical Admin Asst 132 3 Medical Assistant 101 3 Medical Admin Asst 111</p> <p>3 Credits</p> <p>6 Credits 3 Credits</p>
Agricultural Sciences and Operations	<p>Introduction to Agriculture and Natural Resources Animal Veterinary Science Plant Science and Greenhouse Operations</p>	ACM	Forest Technology	<p>101 Introduction to Forestry — 2 Credits (Pending Approval)</p> <p>Students must complete the entire Ag Science Program with a “B” average or better in all courses.</p>
Auto Collision Repair (CCTE)	<p>Non-Structural Analysis & Damage Repair Honors Painting & Refinishing</p> <p>Auto Collision Repair I</p>	<p>CCBC</p> <p>UTI</p> <p>Penn Tech</p>	<p>Auto Body/Collision & Repair</p> <p>Auto Body/Collision & Repair</p> <p>Collision Repair Technology</p>	<p>5 AUCR 101 5 AUCR 103</p> <p>Up to 4 courses, test out option to earn credit</p> <p>16 Credits</p>
Automotive Technology MLR (CCTE)	<p>Electrical/Electronic Systems & HVAC Honors Suspension & Steering & Brakes Honors MLR Powertrain & Engine Repair/Performance</p> <p>Intro to Automobiles</p>	<p>ACM</p> <p>CCBC</p> <p>Penn Tech</p> <p>UTI</p> <p>University of NW Ohio</p>	<p>Automotive Technology (AAS and Certificate)</p> <p>Auto Technology</p> <p>Auto Technology</p> <p>Auto Body/Collision & Repair</p> <p>Auto Technology</p>	<p>4 Automotive Tech 103 2 Automotive Tech 105 2 Automotive Tech 114 4 Automotive Tech 215</p> <p>4 Auto 126 Brake System 5 Auto 131 Electronic System 5 Auto 141 Engine System 4 Auto 171 Susp. System</p> <p>3 Brake Systems 112 3 Steering & Suspension 113 2 Fuel & Emission Control 121 4 Eng. Electrical System 126 3 Electrical Fundamentals 109</p> <p>Up to 4 courses, test out option to earn credit</p> <p>12 Credits</p>
Biomedical Sciences (PLTW) (Comprehensive High Schools)	<p>Honors Principles of Biomedical Sciences Honors Human Body Systems Honors Medical Interventions Honors Biomedical Innovation</p>	<p>Stevenson University</p> <p>ACM</p>	<p>Biology Biotechnology Nursing (BA) Medical Technology (BS)</p>	<p>(4)Bio 113 (4) General Biology I: Cell Biology and Genetics (Based on score on End of Course Assessments)</p> <p>3-6 Credits (Depending on Program of Study at Allegany College of Maryland)</p>
Careers in Cosmetology (CCTE)	<p>Principles and Practices of Cosmetology Advanced Cosmetology: Theory and Application Mastery of Cosmetology</p>	None	Students must take the State Board Examination to earn the completer certificate.	

CTE COMPLETER PROGRAMS SUMMARY

Completer	Courses Required for Completion & Suggested Electives	Articulation	Major	Crs. College
Construction Maintenance - HVAC (CCTE)	Core HVAC NCCER HVAC 1 Honors HVAC 2 Introduction to HVAC Honors Occupational Skills in HVAC	Plumbers & Steamfitters Union #489		
Construction Maintenance - Welding NCCER (CCTE)	Core Welding NCCER Intro to Welding 1 NCCER Honors Welding 2 NCCER Particular Topics in Welding Honors Advanced Topics in Welding	Plumbers & Steamfitters Union #489 Ironworkers Union Local #568		
Construction Trades—Carpentry (NCCER CCTE)	Intro to Construction-Carpentry Foundations in Carpentry Honors Advanced Topics in Carpentry Honors Carpentry Capstone	United Brotherhood of Carpenters & Joiners Union #423		1 st Year Apprenticeship Credit
Construction Trades - Electrical (CCTE)	Intro to Construction-Electrical Foundations in Electrical Honors Advanced Topics in Electricity Honors Electrical Capstone Honors Industrial Electricity Union Curricula	Electrical Workers IBEW Local Union #307		1 st Year Apprenticeship Credit
Criminal Justice/ Law Enforcement (CCTE)	Foundations of Homeland Security & Emergency Preparedness Administration of Justice Honors Public Safety Honors Administration of Justice II Honors Internship, OR Honors Capstone Experience Occupational Skills-Law Enforcement	ACM Potomac State College University of MD University College (UMUC) Frederick Comm. College	Criminal Justice Criminal Justice 1 yr. Criminal Justice Certificate Emergency Management	3 Criminal Justice 101 3 Criminal Justice 102 DE* 3 Criminal Justice 103 DE 3 Criminal Justice 104 DE 3 Criminal Justice 101 3 Criminal Justice 101 3 Disaster, Crisis, and Emergency Management. 225
Culinary Arts (ACF) (CCTE)	Culinary Basics—Foundations of Professional Cooking Honors Professional Cooking Food Service Honors Professional Internship in Cooking Honors Principles of Restaurant	ACM Stratford University	Culinary Arts Hospitality Management AAS Culinary Arts or BA Degree in Culinary Management	3 Culinary Arts 150 3 Culinary Arts 212 3 Hospitality Management 101 1 Hospitality Management 110 3 Hospitality Management 101 1 Hospitality Management 110 3 Hospitality Management 160 18 Credits (Pending Acquisition of Program Certification)
Graphic Communications (PrintED) (CCTE)	Introduction to Graphic Communications Honors Advanced Graphic Communications Honors Advanced Occupational Skills	ACM Bridgemont Community & Technical College	Multimedia Technology (AAS, Certificate) Digital Design & Print Communications	3 Multimedia Tech 207 3 Multimedia Tech 217 14 Credits

CTE COMPLETER PROGRAMS SUMMARY

Completer	Courses Required for Completion & Suggested Electives	Articulation	Major	Crs. College
Interactive Media Production (CCTE)	Principles of Arts, Media & Communication Interactive Media & Design Level 1 Honors Interactive Media & Design Level 2 Honors Interactive Media Portfolio Capstone Broadcast Technology Honors Broadcasting Technology	ACM	Multimedia Technology (AA)	3 Multimedia Tech 102 3 Multimedia Tech 106
IT and Networking Academy (CCTE)	IT Essentials (A+ Certification)-P-TECH Cybersecurity Essentials-P-TECH Honors CCNA 1 Intro to Networks Honors CCNA 2 Routing & Switching Honors Advanced IT	ACM	Computer Technology	3 Computer Technology 180 3 Computer Technology 219 3 Computer Technology 225 3 Computer Technology 239 *Successful completion of A+ Hardware and A+ Operating System Exam will earn one additional credit for Comp 188.
Manufacturing Engineering Technology—CNC Programming and Operations (CCTE)	Measurement, Materials and Safety Job Planning, Benchwork, and Layout CNC Programming and Operations (2 credits) (All CTE course are Dual Enrollment courses with ACM)	ACM CCBC College of Southern Maryland	Automated Manufacturing—Engineering	36 Credits of College and Dual Enrollment completed at the ACM Western Maryland Works Facility Up to 12 Credits Up to 9 Credits
<p style="text-align: center;">***All articulations are accurate as of the date of print and to the best knowledge of ACPS Administrative Staff.</p> <p style="text-align: center;">Post-Secondary Education Institutions frequently change programs and/or program requirements. All articulated agreements are subject to modification and/or change at any time.</p> <p style="text-align: center;">For the most current agreements always check with your school guidance counselor or the articulating institution.</p> <p style="text-align: center;">Articulated credits will appear on the college transcript as “Credit by Articulation” and will not, therefore, figure into the college GPA***</p>				

Section IV

Course Descriptions



Agricultural Sciences and Operations CTE Completer (AL, FO, MR)

Agricultural Sciences and Operations

Agricultural Sciences and Operations (9-12) program falls within the Environmental, Agricultural and Natural Resources Career Cluster. This program focuses on the scientific principles and practice of agricultural research and production, the applications to real-life agricultural problems, and the management of technical and business operations connected with agricultural services. The Agricultural Sciences and Operations program is a Career and Technical Education (CTE) approved program and satisfies the CTE graduation requirement. Students must take the following three required courses in order to receive CTE certification:

1. Introduction to Agriculture and Natural Resources
2. Animal Veterinary Science
3. Plant Science and Greenhouse Operations.

811 Introduction to Agriculture and Natural Resources

1 Credit

Introduction to Agriculture and Natural Resources (IANR) (9-12) is a required course for the Agricultural Sciences and Operations CTE Program. IANR introduces students to the science of agriculture, plants, animals, and natural resources. Students will apply the understanding of ecosystems and systems thinking to the management of natural resources to maximize the health and productivity of the environment, agriculture, and communities. Students will analyze energy usage, renewable energy options, and renewable materials options to promote sustainable practices, learning to use "green" technologies and promoting their use. Practical hands-on experience and student collaboration will be emphasized in this course.

812 Animal Veterinary Science

1 Credit

Animal Veterinary Science (10-12) is a required course for the Agricultural Sciences and Operations CTE Program that will investigate scientific concepts relating to the care of animals. Students will study the nutrition, safety, training, health, and general care of large and small animals. Small animals to be studied include dogs, cats, rabbits, birds, reptiles and fish. Large animals to be studied include sheep, goats, cows, and horses. Laboratory activities will provide opportunities for problem-solving through practical applications to learn scientific concepts. Leadership, entrepreneurial skills, and application to current issues will also be explored in the course. Prerequisite: 811 Introduction to Agriculture and Natural Resources.

Agricultural Sciences and Operations Electives (AL, FO, MR)

813 Plant Science and Greenhouse Operations

1 Credit

Plant Science and Greenhouse Operations (PSGO) (10-12) is the third required course for the Agricultural Sciences Operations CTE Program. PSGO will focus on the biology and science of growing plants. Students will gain understanding and practical application in propagation, plant identification and use, soils and plant nutrition, plant diseases, weed identification, and insects to obtain a well-rounded background on plant management. This course provides principles and practices of commercial greenhouse construction, operation, and management, and provides students with a school-based enterprise experience. Methods and equipment for planting, lighting, irrigation, fertilization, plant growth regulators, and insect and disease management of greenhouse crops will be presented and incorporated in hands-on lessons, activities, and projects. Prerequisite: 811 Introduction to Agriculture and Natural Resources.

814 Agricultural Sciences and Operations Capstone

1 Credit

Agricultural Science and Operations Capstone (11-12) course provides students with an opportunity to synthesize their knowledge and skills in Agricultural Sciences through a hands-on, work-based learning experience or an independent project. This course bridges classroom learning with practical experience, preparing students for future roles in agriculture, agribusiness, or related fields. Students will have the option to design and implement a Supervised Agricultural Experience (SAE) that focuses on a real-world challenge or opportunity in the agricultural industry or serves as preparation for FFA and Envirothon competitions requiring individualized study and specialized content knowledge, such as proficiency awards, research presentations, and agriscience fair projects. Students can tailor their SAE and capstone experience to align with competition categories, allowing for in-depth exploration of topics relevant to their competitive goals. Faculty and mentors will provide guidance in research, presentation skills, and competition readiness to ensure students achieve success in their FFA endeavors.

Art

511 Art I

1 Credit

Art I (9-12) is an elective course designed to provide an initial high school art experience. Students will become aware of natural and man-made art forms in their environment as well as explore cultural and historical artistic heritage. Students will learn to use the elements and principles of design by incorporating various tools and techniques in the production of works. Skills developed in Art I can enrich leisure time or lead to advanced study.

512 Art II

1 Credit

Prerequisite: *Art I (511)*

Art II (10-12) is an elective course which continues to develop students' awareness of art heritage as it reflects, records and plays a role in every culture. Activities will cover a wide range of media in an effort to develop individual artistic technique, self-image and appreciation of other expressions of art.

Art

513 Honors Art III

1 Credit

Prerequisites: *Art I and II (511, 512)*

Honors Art III (11-12) is an elective course in which emphasis is placed on identifying the elements and principles of design in the environment and in student artistic efforts. Students will identify cultural and historical influences of art heritage and its relationship to personal creativity. Students will be presented with an in depth study of numerous media and techniques to enable them to effectively translate their ideas, feelings and emotions to create their own personal artistic style.

514 Honors Art IV

1 Credit

Prerequisites: *Art I, II, III (511, 512, 513)*

Honors Art IV (12) is an elective course which encourages students to explore individual interests and ideas in a studio atmosphere. Through a variety of media, students will develop the potential to interpret and utilize aesthetic aspects in works of art. Emphasis will be placed upon analysis of the elements and principles of design. This course will synthesize artistic knowledge, production skills, and criticism to develop a high level of artistic understanding.

Biomedical Sciences (PLTW)

Biomedical Sciences

Biomedical Sciences (PLTW) (9-12) is a CTE Completer Program that has a sequence of four Project Lead the Way (PLTW) courses, all aligned with natural learning standards which follows a proven hands-on, real-world, problem-solving approach to learning. Students explore the concepts of human medicine and are introduced to topics such as physiology, genetics, microbiology and public health. Through activities like dissecting a heart, students examine the processes, structures, and interactions of the human body—often playing the role of biomedical professionals. Students also explore the prevention, diagnosis, and treatment of disease, working collaboratively to investigate and design innovative solutions to the health challenges of the 21st century such as fighting cancer with nanotechnology. All four years of the program are taught in the comprehensive high schools (Allegany, Fort Hill, and Mountain Ridge).

805 Honors* Principles of Biomedical Sciences 1 Credit

Honors Principles of Biomedical Sciences (9-10) is a required course for students in the Biomedical Sciences CTE program. Students will study several health situations such as analyzing the evidence found at a crime scene and helping the medical examiner uncover clues left on a body to solve a mystery; questioning, diagnosing, and proposing treatment and care for patients in a family medical practice; tracking down the source of a mysterious outbreak at a local hospital; accessing and stabilizing a patient during an emergency and preparing for medical surge and mobile medical care; and collaborating with professionals in other fields to innovate and design solutions to local and global medical problems. Whether seeking a career in medicine or healthcare or simply looking to for the challenge of real-world problems, students in Principles of Biomedical Science will practice how to think creatively and critically to innovate in science and will gain practical experience with experimental design and the design process. This course provides an overview of all the courses in the Biomedical Sciences program and lays the scientific foundation for subsequent courses.

806 Honors* Human Body Systems 1 Credit ***Prerequisite: Honors Principles of Biomedical Sciences (805)***

Honors Human Body Systems (10-11) is a required course for students in the Biomedical Sciences CTE program. Students examine the interactions of human body systems as they explore the skeletal, muscular, nervous, endocrine, cardiovascular, respiratory, immune, urinary, and digestive systems. 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/voluntary action, and respiration. Exploring science in action, students build organs and tissues on a skeletal Maniken, work through real-world cases, and play the roles of biomedical professionals to solve medical mysteries.

Biomedical Sciences (PLTW)

807 Honors Medical Interventions 1 Credit

Prerequisite: Honors Principles of Biomedical Sciences (805) and Honors Human Body Systems (806)

Medical Interventions (11-12) is a required course for students in the Biomedical Sciences CTE program. Students investigate a variety of interventions involved in the prevention, diagnosis, and treatment of disease as they follow the life of a fictitious family. The course is a "How-To" manual for maintaining overall health and homeostasis in the body. Students explore how to prevent and fight infection; screen and evaluate the code in human DNA; prevent, diagnose and treat cancer; and prevail when the organs of the body begin to fail. Through these scenarios, students are exposed to a range of interventions related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics.

808 Honors Biomedical Innovation 1 Credit

Prerequisite: Honors Principles of Biomedical Sciences (805), Honors Human Body Systems (806), and Honors Medical Interventions (807)

Biomedical Innovations (12) is a required course for students in the Biomedical Sciences CTE program. Students design innovative solutions for the health challenges of the 21st century, working through progressively challenging, open-ended problems, addressing topics such as clinical medicine, physiology, biomedical engineering, and public health. Students also have the opportunity to work on an independent project with a mentor or advisor from a university, hospital, research institution, or the biomedical industry. Throughout the course, students are expected to present their work to an audience of STEM professionals.

Business and Entrepreneurship

821 Document Processing I 1/2 Credit

Document Processing I (10-12) is an elective semester course designed to develop competencies in touch keyboard techniques essential for the efficient use of micro-computers and other keyboard devices. Students will apply their touch keyboarding skill to basic word processing documents using Microsoft Word software. This course focuses on formatting and editing basic correspondence and reports and serves as a foundation for more advanced word processing and other software applications.

822 Document Processing II 1/2 Credit ***Prerequisite: Document Processing I (821)***

Document Processing II (10-12) is an elective semester course designed to develop competencies in advanced word processing and other computer software applications. Students have the opportunity to apply knowledge and skills through projects and simulation sets.

833 Business Communications 1 Credit (CCTE)

Business Communications (11-12) is an elective course of written and oral communication which provides students with reading, listening, speaking, and writing practice they will need to succeed in any business situation. Students will learn how to apply communication skills and talent toward seeking employment and will participate in school leadership experiences that enhance their ability to interact with others.

840 Leadership 1/2 Credit

The word "leadership" can bring to mind a variety of images. It can bring to mind a political leader, pursuing a passionate human rights issue; a developer creating a new technological device; or an executive who creates a winning vision and strategies to move her company ahead of the competition. Leaders set direction, build an inspiring vision, and create something new. Leadership is dynamic, exciting, and inspiring. The Leadership (9-12) course is designed to teach students how to develop leadership skills that will be important to their future regardless of their career goals. This class teaches several of the basic skills identified as crucial for success into the next century. These skills include problem solving and creative thinking; self-esteem, goal setting, and motivation; interpersonal skills and teamwork; situational leadership and communication. The class emphasizes small group work and hands-on learning experiences.

Business and Entrepreneurship

841 Business & Marketing Essentials 1/2 Credit

How do you know what consumers really want? How do you know which consumers to go after and how to get them interested in your products and services? You need to develop an effective marketing strategy! Business and Marketing Essentials (9-12) offers an intro to the fundamentals of marketing. This course looks at marketing as a key business process and examines how online businesses and social media are changing the face of marketing by bringing companies and customers closer together through new technologies. Throughout the course, students are presented problem-solving situations for which they must apply academic and critical-thinking skills.

842 Principles of Entrepreneurship 1/2 Credit

Do you want to own your own business? Does being your own boss sound appealing to you? Principles of Entrepreneurship (10-12) will provide you with the basics of planning and launching your own successful business. Whether you want to start your own for profit business or create a non-profit to help others, this course will help you develop the core skills you will need to be successful. Students will learn how to come up with new business ideas, attract investors, market their business, and manage expenses.

870 Personal Financial Literacy 1/2 Credit

Personal Financial Literacy (9-12) is a required semester course. This course is designed to place the student in the role of citizen, family member, consumer, and active participant in managing personal finances. Students will learn ways to maximize their earnings potential, develop ways for managing financial resources, understand, and develop skills for using credit, and explore ways to invest money for future security. Themes of study will include career decisions, money management, financial security, credit management and consumer rights and responsibilities. Personal Financial Literacy is a required semester course for students in grade (9-11). Students with intention of enrolling at CCTE MUST enroll in this course prior to grade 11.

Career and Technology Education (CCTE) - Academy of Health Professions

Academy of Health Professions

The Academy of Health Professions (AHP) Program uses project and problem-based learning, clinical and internship experiences, and classroom and lab instruction to prepare the next generation of health professionals for the workforce and for further study at the post-secondary level. There are opportunities for students to apply what they are learning to real-life healthcare situations in the *Medical Specialty* course. Students pursuing this option will also participate in a supervised *Clinical Experience* course and will earn state and/or nationally recognized certifications. NOTE: Students entering the Academy of Health Professions Program must understand that, due to the patient interaction required of our students in this program at local healthcare facilities, it is mandatory for students to have the seasonal influenza vaccine, the 2-step PPD testing, and COVID vaccine or agreement to weekly/daily COVID test in order to be admitted to the program entrance.

Level I

926A Foundations of Medicine & Health Science

1 Credit

Foundations of Medicine & Health Science (11) is a required course for the Academy of Health Professions Completer Program. 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 activities, projects, and problems that highlight various health careers, introduce basic health care system, and begin to explore human body systems.

926B Structure & Function of the Human Body

1 Credit

Structure & Function of the Human Body (11) is a required course for the Academy of Health Professions Completer Program. Students in this course study the structure and functions of the human body, including cellular biology and histology. Systematic study involves homeostatic mechanisms of the integumentary, skeletal, muscular, circulatory, nervous systems and special senses. Students will conduct laboratory investigations and fieldwork, use scientific methods during investigations to solve problems, and make informed decisions.

926C Medical Terminology

1 Credit

Medical Terminology (11) is an elective course that teaches students how to identify medical terms by analyzing their components. This course emphasizes defining medical prefixes, root words, suffixes, and abbreviations. The primary focus is on developing both oral and written skills in the language used to communicate within healthcare professions.

Level II

927A Honors Medical Specialty - Certified Nursing Assistant

1 Credit

Honors Medical Specialty—Certified Nursing Assistant (12) is a required course for the Academy of Health Professions Completer Program. 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, if required in the specialty area, 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.

927B Honors Clinical Internship

1 Credit

Honors Clinical Internship (12) is a required course for the Academy of Health Professions Completer Program. The Clinical Internship is designed to give students supervised practical application of previously studied theory.

927C Honors Medical Terminology

1 Credit

Honors Medical Terminology (12) is based upon the belief that success in any healthcare career is based on a solid understanding of medical terminology. In this course, students will develop fluency in the highly specialized language of health. The primary focus will be learning medical language relating to the body systems, symptoms of conditions, diseases, tests, surgical procedures, and analysis of medical reports. This knowledge will better prepare students to provide treatment in the most efficient manner for the patient's benefit.

927D Honors Occupational Skills

Pharmacy Technician & CCMA

1 Credit

Honors Occupational Skills Pharmacy Technician & CCMA (12) is an elective course which prepares students enrolled in the Academy of Health Professions Program to be eligible to earn two additional certifications in the medical field. Students will participate in classroom and lab-based experiences that prepare them for employment as Pharmacy Technicians and/or Certified Clinical Medical Assistants.

Career and Technology Education (CCTE) - Apprenticeship Maryland Program (AMP)

Apprenticeship Maryland Program (AMP)

The Apprentice Maryland Program (AMP) is a CTE program that gives high school juniors and seniors the opportunity to “earn and learn” while gaining valuable experience as a youth apprentice. The program is designed to lead to sustainable employment and further education based on high-demand career pathways. Students hired by approved employers will be mentored by the ACPS Youth Apprenticeship Coordinator. Participating students must complete a minimum of 450 hours of paid work-based learning under the supervision of an eligible employer. In addition, students will be enrolled in an apprenticeship related instruction course. To be eligible for the program, students must be 16 years or older, have reliable transportation, be on track to graduate, have good attendance, and have two academic references.

990A Apprenticeship Related Instruction

1 Credit

Apprenticeship Related Instruction (11-12) is required to complete one year of related classroom instruction. This course will introduce the student to the information needed to be successful and perform the duties necessary for the job. The school system's Youth Apprenticeship Coordinator (YAC) and designees are responsible for ensuring that this is reflected on the student's schedule and that credit is earned towards high school graduation. In addition, the related classroom instruction must assist the student in meeting the goals outlined in the student's training plan. The YAC must collaborate with the classroom instructors and eligible employer to coordinate the design of a realistic training plan that meets the needs of the eligible employer and the capacity of the classroom instructor and school district.

991A Apprenticeship Work-Based Learning Experience 1

1 Credit

Apprenticeship Work-Based Learning Experience 1 (11-12) is the first part of a work-based learning experience which takes place at a work-site and must be a paid experience (at least minimum wage). All three parts of WBL experience must cumulate to a minimum of 450 hours. This experience is directed by the WBL agreement provided by the school system and a student work plan developed among the student, Youth Apprenticeship Coordinator, and eligible employer.

991B Apprenticeship Work-Based Learning Experience 2

1 Credit

Apprenticeship Work-Based Learning Experience 2 (12) is the second part of a work-based learning experience which takes place at a work-site and must be a paid experience (at least minimum wage). All three parts of WBL experience must cumulate to a minimum of 450 hours. This experience is directed by the WBL agreement provided by the school system and a student work plan developed among the student, Youth Apprenticeship Coordinator, and eligible employer.

991C Apprenticeship Work-Based Learning Experience 3

1 Credit

Apprenticeship Work-Based Learning Experience 3 (12) is the third part of a work-based learning experience which takes place at a work-site and must be a paid experience (at least minimum wage). All three parts of WBL experience must cumulate to a minimum of 450 hours. This experience is directed by the WBL agreement provided by the school system and a student work plan developed among the student, Youth Apprenticeship Coordinator, and eligible employer.

Career and Technology Education (CCTE) - Auto Collision Repair

Auto Collision Repair

This program is a CTE pathway program. It combines technical, academic, and workplace skills in an integrated curriculum in accordance with The Inter-Industry Conference on Auto Collision Repair (I-CAR) curriculum programs, and Automotive Service Excellence (ASE) guidance and directives. The major technical skill knowledge, skills, and abilities for each course offering are outlined below. The Collision Repair and Refinishing Program incorporates the applied academic and workplace skills for each of the required collision repair, refinishing, and painting areas utilizing the I-CAR Live Curriculum. The I-CAR curriculum prepares students for careers and/or further education in collision repair and refinishing within the Transportation Technology Cluster.

Level I

904A Non-Structural Analysis & Damage Repair 2 Credits

Non-Structural Analysis & Damage Repair (11) is a required course for the Auto Collision Repair Completer Program. This course provides the student with the knowledge and skills necessary to pass the written NA3SA Collision Repair and Refinishing End-of Program Exam for Non-Structural Analysis & Damage Repair (B3) 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 non-structural analysis and damage repair applications. Through theory and real-world experiences, students master the concepts and the ability to identify and perform necessary Non-Structural Analysis and Damage Repair tasks utilizing the latest techniques and applications. The I-CAR Live Curriculum is utilized to demonstrate mastery for this area to formulate accurate estimates of cost of repairs.

904B Auto Collision Repair I 1 Credit

Auto Collision Repair I (11) is a required course that will address an introduction to automotive welding; personal and environmental safety practices associated with clothing; respiratory protection and eye protection; entry level automotive service technology principles and practices; hand tools; power tools/equipment; proper ventilation; the handling, storage, measuring and mixing procedures; raising and supporting vehicles; and damage report principles and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations.

Level II

905A Honors Painting & Refinishing

3 Credits

Honors Painting & Refinishing (12) is a required course for the Auto Collision Repair Completer Program. This course provides the student with the knowledge and skills necessary to pass the written ASF Painting and Refinishing Exam for Paint and Refinishing and immediately enter a career in this area and/or attend postsecondary education and/or training. Utilizing the I-CAR Live Curriculum, students develop diagnostic, technical, and academic skills through their participation in classroom instruction and hands-on applications in the areas of surface preparation, paint mixing, matching, application and paint equipment preparation, identification and correction of defects, final detailing, and the ability to identify and perform other necessary painting and refinishing tasks.

Career and Technology Education (CCTE) - Automotive Technology Maintenance & Light Repair

Automotive Technology Maintenance & Light Repair

The Automotive Technology MLR Plus CTE Program of Study (POS) is an instructional program that incorporates the Automotive Service Excellence (ASE) Education Foundation program accreditation standards and task lists. The program prepares students for further education and careers in the Transportation Equipment Pathway and Automotive Technology. Students work in teams to analyze and solve challenging simulated and real-world repair problems utilizing late model vehicles and state-of-the-art diagnostic tools and equipment. Under the supervision of ASE certified automotive instructors, students troubleshoot, solve, and repair complex problems as members of teams and individually.

Level I

902A Electrical/Electronic Systems & HVAC 2 Credits

Electrical/Electronics & HVAC (11) is a course designed to teach the principles of electricity and electronics and apply them at the ASE Education Foundation AST level. It builds on the measurement of electrical parameters such as voltage, current, resistance, power, magnetism, electromagnetism, and magnetic induction to connect with Physical Science courses. Students are taught the concept of Ohm's law in both application and mathematical theory. Detailed topics include the use of a digital multimeter (DMM) for the analysis of series, parallel, and series-parallel circuits. Specific automotive systems covered include batteries, charging and starting systems, lighting, gauges, accessories, electronics, automotive computers and solid-state devices, along with communication systems. Students are taught how to apply electrical/electronic principles to repair car and truck electrical systems using a diagnostic strategy.

902B Introduction to Automobiles 1 Credit

Introduction to Automobiles (11) explores future careers in automotive technologies. It exposes students to the various mechanical systems in automobiles and provides basic experience in maintenance tasks. This is a recommended elective course for Level I students enrolled in the Automotive Technician Program.

Level II

903A Honors Suspension & Steering, and Brakes 2 Credits

Suspension & Steering and Brakes (12) is a required course of the Automotive Technician Program designed to teach the principles of automotive suspension/steering systems and 4-wheel suspension alignment. It builds on the concepts of geometry, gear reduction, hydraulics laws, and characteristics of liquids and how they apply to the operation and diagnosis of power steering and suspension systems. Steering column operation and diagnosis, including supplemental restraint system service, are included. The course covers the fundamentals of short/long-arm and strut suspensions, including: caster, camber, thrust angle, toe-in, steering axis inclination (SAI), including angle, toe-out on turns (turning angle/radius), and how they apply to steering, suspension, and 4-wheel alignment. Wheel balance terms are specifically explained, including static balance, dynamic balance, tramp, and radial force variation. Students learn strategy-based diagnostic routines to help interpret and verify customer concerns and proper operation and to perform tests and inspections to determine the causes and make corrections related to suspension/steering/wheel systems and alignment. These areas include steering columns, power steering, wheels/tires, short/long-arm/strut suspensions, and 4-wheel alignment. Through the inspection, testing, or measurement of component processes, students will apply this knowledge to determine needed repairs and correctly repair a vehicle.

903B Honors MLR Powertrain & Engine Repair Performance 1 Credit

Honors MLR Powertrain & Engine Repair/Performance (12) is a required course for the Automotive Technician Program. This course is designed to teach the principles of automotive engine operation and ASE Education Foundation MLR level service. It builds on the essential laws of physics, thermodynamics, and chemical reactions and how these principles apply to the operation of engine systems. It also covers general engine design and operation, cylinder head/valve train, cylinder block, lubrication, and cooling systems. The student is taught to verify customer concerns and proper operation and to perform tests and inspection at the ASE Education Foundation MLR level based on the ASE Education Foundation MLR (A1) task list. Through the inspection, testing, or measurement-of-components process, the student is taught to apply this knowledge to determine needed repairs and repair vehicles.

Career and Technology Education (CCTE) - Careers in Cosmetology

Careers in Cosmetology

The Careers in Cosmetology Program prepares individuals to care for and beautify hair, skin, and nails. Students are instructed in the art and science of cosmetology as well as all aspects of the industry. Hair services taught include giving shampoos, rinses, scalp treatments, styling, setting, cutting, hair coloring and lightening, permanent waving and chemical relaxing. Skin procedures include facials, make-up, and hair removal. Nail techniques include manicures, pedicures, artificial nail enhancements, advanced nail techniques, and foot/leg and hand/arm massage. Emphasis is placed on hygiene, safety and sanitation as well as State Board of Cosmetologists' rules and regulations. Related areas of instruction include human anatomy and physiology; mathematics and measurement; analysis, diagnosis and histology of hair, skin and nails; chemistry; fundamentals of electricity; product knowledge; customer relations; and employability skills. Salon management is an integral part of the classroom and clinical experience. The 1,500 hour program includes classroom instruction, clinical experience, related mentored work-based learning experience and a senior capstone project. Upon successful completion and the instructor's recommendation the student will be required to take the Maryland State Board of Cosmetologists' Examination. Attendance is monitored throughout the program, and students not meeting the minimum requirements at the end of Level I will be dismissed from the program.

Level I

906A Principles & Practice of Cosmetology

4 Credits

Principles & Practice of Cosmetology (11) is a required course for the Careers in Cosmetology Completer Program. 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 is a fundamental aspect of the practice of cosmetology.

Level II

907A Honors Advanced Cosmetology:

Theory & Application

3 Credits

Honors Advanced Cosmetology (12) is a required course for the Careers in Cosmetology Completer Program. This course allows students to develop and practice more advanced techniques in the field of cosmetology. Students learn to demonstrate various facial treatments, perform various massage and manipulation techniques, perform make-up application, demonstrate hair press and thermal style, select, apply, and explain various hair coloring techniques, describe human body systems and how they relate to cosmetology, perform artificial nail techniques, and apply knowledge of anatomy, physiology, and chemistry and how it relates to the practice of cosmetology.

907B Honors Mastery of Cosmetology

3 Credits

Honors Mastery of Cosmetology (12) 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. In this course students will be eligible to participate in up to 300 hours of a supervised work-based learning experience in a salon setting upon completing 1,000 hours of the program. These work-based learning experiences must be organized around a training plan that is cooperatively developed by the school and employer to add value to and extend a student's career preparation. This instruction is planned, organized, and coordinated to assure that each component contributes to the student's education and employability. A work-based learning agreement is designed in cooperation with the employer and jointly monitored by the mentor and the teacher.

Career and Technology Education (CCTE) - Construction Maintenance - HVAC (NCCER)

Construction Maintenance - HVAC (NCCER)

Construction Maintenance - HVAC (NCCER) is a CTE completer program designed to provide students with entry level skills and instruction in the basic principles of refrigeration, air conditioning, heating, and plumbing. HVAC provides students with an opportunity to learn about the industry as it relates to residential and commercial building. Participants master a variety of HVAC skills. Students apply their knowledge and skills by participating in the "student-built" house project. The course of study descriptions correlate to the modules of the NCCER national standards

Level I

918A Core HVAC NCCER

1 Credit

Core HVAC NCCER (11) is a required course for the NCCER HVAC Completer Program. The NCCER Core Curriculum is taught within this course and is the basis for all construction skills. The course of study descriptions correlate to the modules of the NCCER national standards and related work-based learning opportunities. The modules are designed to be completed in approximately 80 hours of instruction and allow for an estimated 20 hours of related "hand-on" applications/work-based learning opportunities to reinforce and extend the learning.

918B HVAC 1

1 Credit

HVAC 1 (11) is a required course for the NCCER HVAC Completer Program. During this course of study, students are provided an introduction into the world of becoming an HVAC technician and the basic operating procedures of HVAC systems. They learn basic electricity, heating fundamentals, basic install procedures, copper and plastic piping practices, as well as basic carbon steel piping practices.

918C Introduction to HVAC

1 Credit

Introduction to HVAC (11) is an elective course allowing students to gain knowledge of systems relating to heating and air conditioning. Students opting to take this course who are enrolled in the HVAC NCCER Program may expand their knowledge relating to their skill through the continuation of projects designed to support the NCCER Curriculum. Students opting to take this course as an elective offering will learn basic principles of HVAC systems, air filtration methods, climate control, and basic install procedures.

Level II

919A Honors HVAC 2

2 Credits

Honors HVAC 2 (12) is a required course for the HVAC Completer Program. This course offers students specialized training in aspects or topics that are common to various climate control systems (heating, ventilation, air conditioning, and refrigeration systems). Students to the program will learn a variety of skills related to the industry to include skills relating to topics such as alternating currents, compressors, refrigerants and oils, leak detection, metering devices, heat pumps, basic maintenance, chimneys, vents and flues, sheet metal duct systems, fiberglass and fabric duct systems, commercial airside systems, air quality equipment operations, and an introduction to hydronic systems.

919B Honors Occupational Skills in HVAC

1 Credit

Honors Occupational Skills in HVAC (12) is an elective course supporting the skills learned in the HVAC Completer Program. Students enrolled in this course will expand their skills and knowledge relating to installation of HVAC systems and duct work design. This course will allow students to complete projects which support the house project and work toward mastering skills for competitive events in SkillsUSA.

Career and Technology Education (CCTE) - Construction Maintenance -Welding (NCCER)

Construction Maintenance - Welding (NCCER)

Construction Maintenance - Welding (NCCER) is a CTE completer program which provides students with an opportunity to learn about the industry as it relates to welding. Participants master a variety of welding skills including oxyfuel cutting and welding including SMAW. The course of study descriptions correlate to the modules of the NCCER national standards. NCCER meets the American Welding Society (AWS) Entry Level Welder—Phase One and Phase Two requirements of the AWS QC-10 and AWS EG2.0-95 guidelines.

Level I

922A Core Welding NCCER 1 Credit

Core Welding NCCER (11) is a required course for the NCCER Welding Completer Program. The NCCER Core Curriculum is taught within this course and is the basis for all construction skills. The course of study descriptions correlate to the modules of the NCCER national standards and related work-based learning opportunities. The modules are designed to be completed in approximately 80 hours of instruction and allows for an estimated 20 hours of related “hand-on” applications/work-based learning opportunities to reinforce and extend the learning.

922B Intro to Welding 1 NCCER 1 Credit

Intro to Welding 1 NCCER (11) is a required course for the NCCER Welding Completer Program. Students in the program will master a variety of skills through instructional and practical hours earned throughout the course. Those skills include the following: Welding Safety, Oxyfuel Cutting, Air Carbon Arc Cutting, Weld Quality, SMAW Equipment and Set-up, SMAW Groove welds, and SMAW Open root Groove Welds.

922C Particular Topics in Welding 1 Credit

Particular Topics in Welding (11) is an elective course for students who wish to practice and learn skills in Welding. This course is a recommended elective for all Level I students, and this is an open elective for students enrolled in other skill areas who wish to improve their skills in Welding.

Level II

923A Honors Welding 2 NCCER 2 Credits

Honors Welding (12) is a required course for the NCCER Welding Completer Program. In this course, students master knowledge and skills in particular aspects of welding. Program standards are aligned to the requirements of the American Welding Society (AWS). At their discretion, instructors may include some additional NCCER Welding topics for students who are advanced and prepared to expand their skills in Welding. Completion of the instructional modules, paired with student demonstration of mastery of skills, meets AWS Entry Level Welder certification requirements.

923B Honors Advanced Topics in Welding 1 Credit

Honors Advanced Topics in Welding (12) is an elective course for advanced students who wish to master skills in Welding. This course is a recommended elective for all Level II students and is not open for students in other skill areas unless approved by the instructor.

Career and Technology Education (CCTE) - Construction Trades - Carpentry (NCCER)

Construction Trades—Carpentry (NCCER)

Construction Trades—Carpentry (NCCER) is a CTE completer program which provides students with class-room, shop, and on-the-job experience working with carpentry tools and materials. Instructional units include layout, fabrication, assembly, installation, and the repair of structural units, as well as introduction to basic masonry skills. Instruction will also include exposure to operating equipment of the trade. Students learn blueprint reading, layout techniques, construction techniques, use of building materials, hand and power tool safety, and trim/finish work. Advanced students are encouraged to develop independent skills in form construction and work with commercial specifications. Students are taken to a job site where they receive the ultimate “hands-on” experience as they construct an entire house. The course of study descriptions correlate to the modules of the NCCER national standards.

Level I

910A Foundations of Building and Construction Technology (NCCER CORE Carpentry) 1 Credit

Foundations of Building and Construction Technology (11) is the basis for all construction skills and adheres to the modules of the NCCER national standards and related work-based learning opportunities. An introduction to hand tools, power tools, basic rigging, construction drawings, and construction math will be covered, as well as basic communication and employability skills. Hands-on experience in carpentry will allow students to gain a working knowledge of the construction industry.

910B Carpentry I (NCCER) 1 Credit

Carpentry I (11) is a required course for the NCCER Carpentry Completer program and includes demonstration of student mastery of the following topics: wood building materials, fasteners, and adhesives; hand and power tools; floor systems; wall and ceiling framing; roof framing; and windows and trim.

910C Particular Topics in Carpentry

1 Credit

Particular Topics in Carpentry (11) is an elective course that provides the opportunity for students to build fundamental carpentry skills necessary in the construction of a building that may include blue print reading and design, using basic building codes, foundation construction, wood building materials, fasteners and adhesives, hand and power tools, framing, leveling instruments and operations. Work-based learning is incorporated as students collaborate in the home building project.

Level II

911A Honors Carpentry II 1 Credit

Honors Carpentry II (12) is a required course for the NCCER Carpentry Completer program that includes demonstration of student mastery of the following topics: floor systems, ceiling joists and roof framing; basic stair layout; and practical applications of carpentry used in the carpentry industry.

911B Honors Carpentry Capstone 1 Credit

Honors Carpentry Capstone (12) is a required course in the NCCER Carpentry CTE Completer sequence. This course enables the student to utilize skills taught throughout the duration of the program to complete a capstone project. The Capstone Project requirements are developed at the discretion of the course instructor and may include the house project, as well as the Mock Interview requirement of all Senior Program Completers.

911C Honors Advanced Topics in Carpentry 1 Credit

Honors Advanced Topics in Carpentry (12) is an elective course for the NCCER Carpentry Completer Program. This course provides opportunity for students to gain advanced carpentry skills necessary in the construction of a building, which includes instruction in advanced topic areas and hands-on experience to ensure that students can competently complete estimating materials, roofing, energy conservation, exterior and interior finishing, securing building permits and concrete work.

Career and Technology Education (CCTE) - Construction Trades - Electrical

Construction Trades—Electrical (NCCER)

The Construction Trades—Electrical (NCCER) is a CTE completer program which prepares the student to install, operate, maintain, and repair electrically energized systems in residential, commercial, and industrial settings. Students learn methods of wiring, how to read diagrams, schematics, and blueprints, electrical safety, electric motor control wiring, and residential wiring. Students are taken to a job site where they receive the ultimate “hands-on” experience as they construct an entire house. Advanced students learn how to produce schematics and complete curriculum in industrial motor control.

Level I

932A Foundations of Building and Construction Technology (NCCER Core Electrical) 1 Credit

Foundations of Building and Construction Technology (11) is the basis for all construction skills and adheres to the modules of the NCCER national standards and related work-based learning opportunities. An introduction to hand tools, power tools, basic rigging, construction drawings, and construction math will be covered, as well as basic communication and employability skills. Hands-on experience in carpentry will allow students to gain a working knowledge of the construction industry.

932B Electrical I (NCCER) 1 Credit

Electrical I (NCCER) (11) is a required course in the NCCER Electrical Completer Program that includes demonstration of student mastery of the following topics: orientation to the electrical trade, electrical safety, introduction to electrical circuits, electrical theory, introduction to the National Electrical Code, basic electrical construction drawings, electrical test equipment, conductors and cables, alternating current, and practical applications.

932C Electricity—General 1 Credit

Electricity—General (11) is an elective course in the NCCER Electrical Completer Program that provides the opportunity for students to build fundamental electrical skills necessary in the construction of a building which may include interpreting and use of the national electrical code, calculating circuit capacity by reading, drawing, and analyzing electrical schematics, diagrams, and blueprints, and installing and maintaining light, power, audio, video, signal, and alarm circuits.

Level II

933A Honors Electrical II 1 Credit

Honors Electrical II (12) is a required course for the NCCER Electrical Completer Program. This course provides opportunity for students to gain advanced electrical skills necessary in the construction of a building, which includes instruction in advanced topic areas and hands-on experience to ensure that students can competently complete the grounding and bonding of electrical systems, and the operation, installation, testing, maintenance, and repair of motors, generators, transformers, and associated circuitry.

933B Honors Electrical Capstone 1 Credit

Honors Electrical Capstone (12) is a required course in the NCCER Electrical CTE Completer sequence. This course enables the student to utilize skills taught throughout the duration of the program to complete a capstone project. The Capstone Project requirements are developed at the discretion of the course instructor and may include electrical wiring of the house project, as well as the Mock Interview requirement.

933C Honors Industrial Electricity 1 Credit

Honors Industrial Electricity (12) is an elective course for students enrolled in the Electrical Program. This course applies the knowledge and skills that students acquire to the electrical systems used in industry. Because of this emphasis, these courses may also cover the installation of transformers and control devices, emergency generator systems, and other industrial applications.

Career and Technology Education (CCTE) - Criminal Justice/Law Enforcement

Criminal Justice/Law Enforcement

The Criminal Justice/Law Enforcement Program is a Career and Technology Education instructional program which integrates government, academia, and private sector training/educational initiatives to help students understand how the United States and its interests worldwide are protected against threats to public safety, both natural and manmade, through effective communication, preparedness, detection, prevention, response and recovery. The program offers three career strands: Homeland Security Sciences, Criminal Justice/Law Enforcement, and Information/Communications Technology. These three strands align with the six mission areas of the United States Department of Homeland Security: Intelligence and Warning, Protection of Critical Infrastructure and Key Assets, Border and Transportation Security, Domestic Counterterrorism, Defense against Catastrophic Threats, and Emergency Preparedness and Response. NOTE: Students entering the Criminal Justice/Law Enforcement Program must understand that, due to the internship required of our students in this program at local law enforcement agencies, it is mandatory for students to have a background check prior to placement during the senior year.

Level I

912A Foundations of Homeland Security & Emergency Preparedness 1 Credit

Foundations of Homeland Security & Emergency Preparedness (11) is a required course for the Criminal Justice/ Law Enforcement Completer Program. This course will introduce students to Homeland Security and Emergency Preparedness guidelines, concepts, and action plans. Emphasis will be placed on unique aspects of public safety and public health. The course will explore the various methodologies for intelligence gathering and dissemination and will introduce students to various local, state, and federal assets. Students will prepare an action plan that includes initial notification, emergency response (on and off scene), and recovery.

912B Administration of Justice 1 Credit

Administration of Justice (11) is a required course for the Criminal Justice/Law Enforcement Completer Program. This class will introduce students to multiple aspects of criminal justice and law enforcement. Students will explore the criminal process, various forces that impact law enforcement, and the rights of citizens. Students will understand the difference between juvenile and adult justice, and classifications of different crimes. This class will give students general knowledge needed for students to enter various law enforcement careers at the federal, state, and local levels.

912C Law Enforcement

1 Credit

Occupational Skills-Law Enforcement (11) covers specific practical skills related to the law enforcement field rather than providing general study of the skill. This is an elective course and is not a required part of the completer sequence.

Level II

913A Honors Administration of Justice II

1 Credit

Honors Administration of Justice II (12) is a required course for the Criminal Justice/Law Enforcement Completer Program. This class will continue to increase student's knowledge of criminal justice and law enforcement. In this course students will be introduced to evidence collection, analysis, and forensic examination. The role of law enforcement officials as a first responder will also be discussed as well as the duties of police officers. Students will also identify various careers in law enforcement.

913B Honors Internship Experience 1 Credit

Honors Internship Experience (12) is an option for the required final course for the Criminal Justice/Law Enforcement Completer Program. The Internship Experience is the culminating course for the Homeland Security and Emergency Preparedness Program. Students choosing this option will complete an assigned internship experience at a designated location related to the Criminal Justice/Law Enforcement Program. Students, along with their instructor, will work together to determine a site location that best fits with their individual goals.

OR

913C Honors Capstone Experience 1 Credit

Honors Capstone Experience (12) is an option for the required final course for the Criminal Justice/Law Enforcement Completer Program. The Capstone Experience is the culminating course for the Homeland Security and Emergency Preparedness Program. Students choosing this option have the option to complete an industry-mentored project. Students and instructor will work together to determine which type of experience will be most beneficial and supportive of their individual goals.

913F Honors Public Safety

1 Credit

Honors Public Safety (12) is an elective course which introduces students to the field of public safety and extends their knowledge and skills pertaining to the safety and security of homes, workplaces, and the community. These courses cover such topics as policing, law enforcement, emergency service, private security and corrections and may cover all or a subset of these services.

Career and Technology Education (CCTE) - Culinary Arts

Culinary Arts

The Culinary Arts Program partners with the American Culinary Federation (ACF) program to prepare students for successful careers in the food service and hospitality industry. This is a two-year CTE program that educates high school students in professional cooking. Students will progress through a program that includes hands-on education in food production, while developing professionalism and proficiency in cooking, baking, cost control, nutrition, sanitation, and food marketing. Students in this program gain practical experience through (school-based enterprises and/or work-based learning in the culinary industry). When the clinical experience is combined with classroom learning, this program will provide the necessary skills for further education and career success. Students have the opportunity at the end of the program to earn their ServSafe Manager and/or Food Handler Certification from the National Restaurant Association, and also a Certified Fundamental Cook (CFC) Certification from the American Culinary Federation (ACF).

Level I

980A Basic Cooking Principles 1 Credit

Basic Cooking Principles (11) is a required course in the first half of the introduction to the fundamental concepts and techniques in the profession of culinary arts. It provides hands-on clinical experience through school-based enterprises, giving the students the opportunity to develop the technical skills required in future culinary and baking courses as well as the foodservice industry. Students will be introduced to professional standards of the industry, safety and sanitation procedures, knife skills, including handling and care, cooking processes and procedures, product identification, vocabulary and terminology, industry equipment, recipe costing and quantity adjustments. Students participate in demonstrations and group exercises to supplement their development of technical skills and knowledge.

980B Foundation of Professional Cooking 1 Credit

Foundation of Professional Cooking (11) is a required course in the second half of the introduction to the fundamental concepts and techniques in the profession of culinary arts. It provides hands-on clinical experience through school-based enterprises, giving the students the opportunity to develop the technical skills required in future culinary and baking courses as well as the foodservice industry. Students will be introduced to professional standards of the industry, safety and sanitation procedures, knife skills, including handling and care, cooking processes and procedures, product identification, vocabulary and terminology, industry equipment, recipe costing and quantity adjustments. Students participate in demonstrations and group exercises to supplement their development of technical skills and knowledge.

980C Introduction to Food Service 1 Credit

Introduction to Food Service is an elective course (11) that provides a foundation for students interested in pursuing careers in a wide variety of professions in the food services industry. Topics may include basic principles of food preparation, equipment identification and usage, and career opportunities in restaurant, commercial and retail food service preparation, distribution and management.

Level II

981A Honors Professional Cooking 2 Credits

Honors Professional Cooking (12) is a required course for the Culinary Arts Completer Program. This course continues to build on the foundation concepts and techniques from the Culinary Basics course. Students will be instructed on the fundamental concepts, techniques, theories, ingredients, and methodologies involved in the preparation of basic menu items. Students rotate through food handling methods and techniques, portion control, costing, production, plating and garnishing of soups, salads, starches, vegetables, and entrees. Students participate in demonstrations, group exercises, and school-based enterprises to supplement the students' development of technical skills and knowledge.

981B Honors Professional Internship in Cooking 1 Credit

Honors Professional Internship in Cooking (12) is an elective course for the Culinary Arts Completer Program. Students participating in a school based internship will be placed in a professional setting allowing them to apply the skills and knowledge of professional cooking or baking acquired from their previous coursework. The internship includes a minimum of 135 hours.

981C Honors Principles of Restaurant Management 1 Credit **Prerequisites: Level I Culinary Arts Program Completion**

Honors Principles of Restaurant Management (12) is an elective course designed to provide students with an understanding of the American restaurant system, its organizational structure, and its management. This course examines the various leadership and management styles and the fiscal operating procedures necessary for running a successful restaurant business, large or small.

Career and Technology Education (CCTE) - Graphic Communications—PrintED

Graphic Communications – PrintED

The Graphic Communications Program (PrintED) www.gaerf.org is designed to give students an overall understanding of the graphics communication industry and its major operations while teaching competencies that lead to national PrintED certification. PrintED, administered by the Graphic Arts Education and Research Foundation (GAERF), is a national accreditation program based on industry standards for graphic communications courses of study at the secondary and post secondary levels. In Maryland, PrintED is supported by the Printing and Graphics Association Mid-Atlantic, (www.pgama.com) an industry organization that assists with professional development, curriculum, work based learning, and the Skills USA contest.

Level I

920A Fundamentals of Printing 1 Credit

The Fundamentals of Printing course (11) is a required foundation course that all PrintED schools must offer. Fundamentals of Printing provides an overview of the graphic communications industry. Students demonstrate 70 competencies while developing an overall understanding of the industry and its major operations. The competencies include four Subject Areas: Industry Overview; Safety and Health; File Creation to Output; and Offset Press.

920B Introduction to Graphic Communication 1 Credit

Introduction to Graphic Communication (11) is a second required foundation course that all PrintED schools must offer that provides the continuation of an overview of the graphic communications industry. Students demonstrate 43 competencies while developing an overall understanding of the industry and its major operations. The competencies include five Subject Areas: Digital Press; Substrates; Bindery, Finishing and Distribution; Math and Measurement; and Job Application and Interpersonal Skills.

Level II

921A Honors Advanced Graphic Communications 2 Credits

Honors Advanced Graphic Communications (12) is a required course for the Graphic Communications Completer Program. This course has 98 Competencies in Graphic Design. Graphic design is the art of communication, stylizing, and problem-solving through the use of type, space, and image. The field also requires creativity and the knowledge of ever changing technology. The competencies address copyright, ethics and intellectual property rights, creating a digital portfolio, typefaces, page layout, image capture, digital illustration and design principles, and corporate branding. Students demonstrate an understanding of additive and subtractive color, design a logo, create an illustration, and pitch an advertising concept.

921B Honors Advanced Occupational Skills-Graphics 1 Credit

Honors Advanced Occupational Skills (12) is an elective course designed to allow Level II students the opportunity to assist with Print Shop operations and graphic design projects. Students opting to make this course selection must have instructor approval. This course is not open to all program students and is designed to operate as a work-study component of the established program.

Career and Technology Education (CTE) - Interactive Media Production

Interactive Media Production

The Interactive Media Production program is a program within the Art, Media, and Communication Career Cluster. As such, it includes a strong foundation in arts and communication with particular emphasis on design, graphic and media communications, interactive technologies, and project development.

Level I

900A Principles of Arts, Media & Communication

1 Credit

Principles of Arts, Media & Communication (11) is a required course for the Interactive Media Production Completer Program. This course provides students an understanding of all aspects of the Arts, Media and Communication industry. Students will examine the opportunities and requirements of the major career pathways in this industry including: Communication and Broadcast Technologies, Multimedia Production, Graphic Design and Print Communication.

900B Interactive Media & Design Level 1

1 Credit

Interactive Media & Design Level 1 (11) is a required course for the Interactive Media Production Completer Program. This course further develops student mastery of media design and the interactive media production process. Students will advance their knowledge and skills in media design and production through project planning and product development. Students will demonstrate the use of multiple tools and modalities in the production process. During this course an emphasis will be placed on group project development and individual portfolio development using knowledge gained in the areas of Graphic Design, Digital Media, and Interactive Media pathways.

900C Broadcasting Technology 1 Credit

Broadcasting Technology (11) is an elective course providing students with the knowledge and skills to produce television broadcast programs. Typically, students prepare and produce short programs, learning the technical aspects of the operation, and how to evaluate programming and assess audience reaction and impact. Students in the Graphic Communications Program are encouraged to take this course for elective credit.

Level II

901A Honors Interactive Media & Design

Level 2

1 Credit

Honors Interactive Media & Design Level 2 (12) is a required course for the Interactive Media Production Completer Program. Students will advance their knowledge and skills in multimedia design and production through project planning and product development. Students will demonstrate the use of multiple tools and modalities in the production process. Students will update their IMP Portfolios with exemplars of their best work and will advance their knowledge and skills of multimedia design and production through project planning and product development.

901B Honors Interactive Media Portfolio

Capstone

1 Credit

Honors Interactive Media Portfolio Capstone (12) is a required course in the Interactive Media Production Program. The course provides students with the opportunity to apply what they learned in their previous academic and IMP classes to complete a challenging, client-driven project. Students work individually and in teams to design and create a solution to satisfy or fill a client's need or want. Students are also expected to refine the products that comprise their portfolio to meet the specifications identified.

901C Honors Broadcasting Technology

1 Credit

Honors Broadcasting Technology (12) is an elective course providing students with advanced skills and knowledge of video production and broadcast. Students are able to explore video communications, incorporating both the technical and artistic aspects of video media. During this advance course of study, students will create various forms of film media which may include silent films, sport and/or music video. Students in the Graphic Communications Program are encouraged to take this course for elective credit.

Career and Technology Education (CCTE) - IT Networking Academy/P-TECH (CISCO)

IT Networking Academy/P-TECH (CISCO)

The IT Networking Academy (CISCO) is a nationally recognized program that prepares students for successful careers in information technology fields such as computer network design and administration, hardware, software and network installation, local and wide-area network (LAN/WAN) management and systems engineering. **The program is open only to students who are currently enrolled in the P-TECH Program.** The IT Networking Academy (CISCO) prepares high school students with the professional skills they require to pursue quality academic and professional opportunities. Particular emphasis is given to using decision-making and problem-solving techniques in the application of science, mathematics, communication and social studies concepts to solve networking problems.

Level I - PTECH ONLY

930A IT Essentials (A+ Certification)-

P-TECH ONLY

1 Credit

IT Essentials (A+ Certification) (11) is a required course for the IT Networking Academy Completer Program that is open only for students currently enrolled in P-TECH. The course covers fundamental computer and career skills for entry-level IT jobs. The IT Essentials course includes hands-on labs that provide practical experience to prepare students for enterprise networking. Simulation tools will help students hone troubleshooting skills and practice what is learned. Students will develop working knowledge of how computers and mobile devices operate, identify common security threats and vulnerabilities like malware, phishing, spoofing and social engineering, and apply skills and procedures to install, configure, and troubleshoot computers, mobile devices, and software. During the course, students will develop critical thinking and problem solving skills using both real equipment and Cisco Packet Tracer, a network configuration simulation tool. This course prepares students for the CompTIA A+ Certification Exam.

930B Cybersecurity Essentials-

P-TECH ONLY

1 Credit

Cybersecurity Essentials (11) course is a required course for the IT Networking Academy Completer Program that is open only for students currently enrolled in P-TECH. This course develops a foundational understanding of cybersecurity and how it relates to information and network security. The course introduces students to characteristics of cyber crime, security principles, technologies, and procedures to defend networks. Through interactive, multimedia content, lab activities, and multi-industry case studies, students build technical and professional skills to pursue careers in cybersecurity.

930C Advanced IT & Networking 1 Credit

Advanced IT & Networking (11) is an elective course designed to provide authentic learning experiences for students interested in computer technology. Students gain hands-on experience in IT service & repair including inventory control. This course provides work-based experience under the direction of the Career Center Technology Coordinator.

Level II

931A Honors CCNA 1 Intro to Networks

P-TECH ONLY

1 Credit

Honors CCNA 1 Intro to Networks (12) is a required course for the IT Networking Academy Completer Program. This course covers basic networking concepts within the context of the networks encountered every day. Students will develop hands-on networking skills and understand the role networks play in our lives. In this course, students will learn how to plan and install a network using real equipment and connect it to the Internet, practice verifying and troubleshooting network and Internet connectivity, learn how to recognize and mitigate security threats to a home network, configure common Internet applications, set up sharing between computers, and configure basic IP services. Students will apply skills through practice, using labs and Cisco Packet Tracer activities and connect with the global Cisco Networking Academy community.

931B Honors CCNA 2 Routing & Switching Essentials P-TECH ONLY

1 Credit

Honors CCNA 2 Routing & Switching Essentials (12) is a required course for the IT Networking Academy Completer Program. This course is a gateway to entry-level networking jobs and IT careers. The curriculum consists of 4, 70-hour courses: Introduction to Networks, Routing and Switching Essentials, Scaling Networks, and Connecting Networks. The first 2 courses prepare you for the Cisco CCENT certification exam or to study CCNA Security. All 4 courses are recommended before taking the Cisco CCNA Routing and Switching certification exam.

931C Honors Advanced IT

P-TECH ONLY

1 Credit

Honors Advanced IT (12) provides students with work experience in fields related to networking systems. Students in this course will utilize the time to fulfill work order requests throughout the school or for the county board of education. Students are required to document their work site learning experiences. This course may include classroom activities as well, involving further study of the field or discussion regarding experiences that students encounter in the workplace.

Career and Technology Education (CCTE) - Manufacturing Engineering Technology

Manufacturing Engineering Technology

Manufacturing Engineering Technology—CNC Operations and Programming is a CTE Completer Program that prepares students for a beginning career in manufacturing and machine technologies and aligns to the National Institute of Metalworking Skills (NIMS) Machining Level I Credentials. Students will progress through a program that includes hands-on education in precision machining while developing competency in process control, manual operations, process adjustment, part inspection as well as demonstrate usage of machine safety. The majority of instruction will take place at the ACM Western Maryland Works Facility with students have the opportunity to take 39 credits of college and dual enrollment courses.

**Since students will be taking dual enrollment college courses through ACM a 3.0 GPA is required for this program admission.

Level I

940A Measurement, Materials, and Safety

1 Credit

This is a required course designed to prepare student for the required initial NIMS certification in: Measurement, Materials and Safety (11). Students will be introduced to the fundamental concepts and professional standards of the machining industry, including safety, precision measurement, milling, grinding, industry equipment as well as the vocabulary and terminology of the profession. This course includes in-class activities and lab activities. In-class activities include lectures, discussions, student presentations, and research. Lab activities include completing designated procedures by working in teams with industrial tools. During lab activities students will apply knowledge obtained from in-class discussions and readings to further advance their understanding of manufacturing and machine technologies. Team projects are based on real-world scenarios and include group exercises that supplement students' development of their technical skills and knowledge.

940B Job Planning, Benchwork and Layout

1 Credit

This is a required course designed to prepare students for the required initial NIMS certification in: Job Planning, Benchwork and Layout (11). Students will be introduced to the fundamental concepts and professional standards of the machining industry, including safety, precision measurement, milling, grinding, industry equipment as well as the vocabulary and terminology of the profession. This course includes in-class activities and lab activities. In-class activities include lectures, discussions, student presentations, and research. Lab activities include completing designated procedures by working in teams with industrial tools. During lab activities students will apply

knowledge obtained from in-class discussions and readings to further advance their understanding of manufacturing and machine technologies. Team projects are based on real-world scenarios and include group exercises that supplement students' development of their technical skills and knowledge.

Level II

941A CNC Programming and Operations — Part 1

1 Credit

941B CNC Programming and Operations — Part 2

1 Credit

This required 2-credit course is designed to prepare students for two credentialing areas in the CNC Programming and Operations (12) pathway and is broken into two courses: Part 1 and Part 2. Students will take Part 1 in the Fall semester and Part 2 in the Spring semester and will prepare for the following NIMS Machining Level I credentials: CNC Turning Operations, CNC Turning: Programming Set-up & Operations, CNC Milling Operations, and CNC Milling: Programming Set-up & Operations. Students increase the knowledge and skills they gained from the foundation courses by performing CNC turning and milling functions including programming and set-up operations. Students work cooperatively with others and contribute to work efforts with ideas, suggestions, and feedback to improve the process, resolve a problem or improvise a new method. They follow basic quality assurance responsibilities for both single and multiple part production including statistical process control, and they are competent in all safety procedures for CNC machining operations and material handling and disposal.

Career and Technology Education (CCTE) - CCTE Program Electives

950B Welding for HVAC

1 Credit

Welding for HVAC (11-12) is an elective credit course designed for HVAC students. Students will gain metal technology skills necessary for a career in HVAC. This includes safety, use and care of tools, shielded metal arc welding, blue print reading, gas metal arc welding, and oxy-fuel cutting and welding. This course assists students in meeting the requirements for the Plumbers & Steamfitters apprenticeship training program.

950C Advanced Graphics

1 Credit

Advanced Graphics (12) is an elective course designed for Level II graphic students. This course provides graphic students an opportunity of advance skills in the graphics and printing careers. Students will gain advanced skills for employment and postsecondary education.

950G Solar Power

1 Credit

Solar Power (11-12) is an elective course in Photovoltaics. Students will have the opportunity learn the principle of generating electricity from the sun, basics of solar energy concepts, components of a photovoltaic system, and the layout with eventual construction of a total system. Students will explore the types of systems available to the consumer, proper sizing of a system for a particular house along with safety and electrical codes associated with these systems.

950H Advanced Auto Collision Repair

1 Credit

Advanced Auto Collision Repair (12) is an elective course designed to reinforce and expand core concepts learned in the regular auto collision repair classes. Students will experience more individualized instruction in welding, painting and body repair, as well as have the opportunity for additional hands on projects.

950I Auto Collision Repair Elective

1 Credit

Auto Collision Repair Elective (11-12) is an elective course designed to acquaint students with the basic fundamentals of welding, painting and body repair. Students will have the opportunity to work on individual projects with instructor guidance and supervision.

950K HVAC for Welding

1 Credit

HVAC for Welding (11-12) is an elective credit course designed for welding students. This includes use and care of tools, basic mathematics and shop related math, drawing interpretation and plan reading, rigging and signaling, soldering and brazing, and job safety.

950L Union Curricula

1 Credit

Union Curricula (12) is an elective credit course offered to Level II Electrical students who have passed the IBEW (International Brotherhood of Electrical Workers) Apprenticeship aptitude exam. This course is offered in conjunction with the Joint Apprenticeship and Training Committee of Local #307 Electrical Workers. This course is the first year apprenticeship course, and if successful, the student is eligible for an interview into the 5 year apprenticeship electrical workers program. If student is accepted into the apprenticeship program following the interview, credit for the first year apprenticeship program is given and student will continue into the second year of the program. If successful, the student is also eligible to receive 6 ACE credits applied technology towards an Associate Degree at Allegany College of Maryland.

950O Welding Elective

1 Credit

Welding Elective (11-12) is an elective course designed to reinforce and expand the core concepts learned during the first level of the MSDE approved welding program. Students will experience more individualized instruction and gain practical hours in preparation for taking the welding certification.

Computer Science and Engineering Education

Students must complete (1) credit in Computer Science and Engineering Education as a high school graduation requirement. The one credit requirement may be achieved through completion of one of the following course options:

030 Computer Science Discoveries

1 Credit

Computer Science Discoveries (9-12) is an introductory computer science course that empowers students to create authentic artifacts and engage with computer science as a medium for creativity, communication, problem solving, and fun. Students will focus on the following topics: problem solving and computing, web development, interactive animations and games, the design process, data and security, creating apps with devices, and AI and machine learning. The course also fulfills the technology education graduation requirement.

033 AP Computer Science Principles

1 Credit

AP Computer Science Principles (9-12) is a 1 credit course offered in the Comprehensive High Schools which introduces students to the central ideas of computer science, inviting students to develop the computational thinking vital for success across multiple disciplines. The course is unique in its focus on fostering students to be creative and encouraging students to apply creative processes when developing computational artifacts. Students design and implement innovative solutions using an interactive process similar to what artists, writers, computer scientists, and engineers use to bring ideas to life. The AP Computer Science Principles course is designed to be equivalent to a first semester introductory college computing course, and fulfills the technology education graduation requirement.

871 Foundations of Technology

1 Credit

Foundations of Technology (9-12) is a required course divided into the following segments to introduce the fundamentals of the following: (1) Communications Technology —mechanical drawing, graphic representation and introductory computer design (2) Manufacturing Technology — basic processes and techniques of manufacturing a product using different materials. (3) Construction Technology — teaching the development of basic building and product structures. (4) Power and Transportation Technology — focusing on energy converting machines, such as engines, to assist with the movement of materials and products such as cars, etc. This class meets the required technology education credit for graduation.

Computer Science

031 Computer Literacy

1/2 Credit

Computer Literacy (9-12) is an elective course which provides an introduction to Computer Science. The course emphasizes computer information systems, hardware and software, programming, computer operating systems, and software applications. In-depth and hands-on experience with Google Suite products, including Google Drive, Docs, Sheets, Slides and Forms, will be incorporated in the project-based course.

035 Web Design I

1 Credit

Prerequisite: Exploring Computer Science (030), Computer Literacy (031) or Document Processing I (821) & II (822)

Web Design I (10-12) is an elective course designed to acquaint students with basic web design skills. From basic HTML code through dynamic and exciting web site design, students are taught the essential skills necessary to conceptualize, create, and publish a professional website to the Internet. The course uses hands on approach to creating dynamic web sites using the latest Web technologies. Students learn how to make web pages look aesthetically pleasing and to include elements that make them handicapped accessible. Students learn how to implement their web pages to the web through FTP (File transfer protocol) and to add graphics, forms, tables, links, sound, and movement to their web pages.

036 Web Design II

1 Credit

Prerequisite: Web Design I (035)

Web Design II (11-12) is an elective course which is designed to expand students' knowledge of web design with emphasis on maintaining and improving the school's website using Dreamweaver, Flash and Fireworks software. From basic HTML code through dynamic and exciting website design, students are taught the advanced skills necessary to conceptualize, create, and publish a professional website to the Internet. The course uses a hands-on approach to creating dynamic web sites using the latest Web technologies. Students learn how to make web pages look aesthetically pleasing and to include elements that make them handicapped accessible. Students learn how to implement their web pages to the web through FTP (file transfer protocol) and to add graphics, forms, tables, links, sound, and movement to their web pages.

034 AP Computer Science A

1 Credit

AP Computer Science A (10-12) is a one credit course offered in the Comprehensive High Schools that is equivalent to a first-semester, college-level computer science course which introduces students to computer science through programming. Fundamental topics in this course include the design of solutions to problems, the use of data structures to organize large sets of data, the development and implementation of algorithms to process data and discover new information, the analysis of potential solutions, and the ethical and social implications of computing systems. The course emphasizes object-oriented programming and design using the Java programming language.

Engineering Design and Processes CTE Completer (AL, FO, MR)

872A Engineering Design and Processes I

1 Credit

Engineering Design and Processes I (10) is the first required course for the 3-course sequence, Advanced Technology Education CTE program. It introduces students to the requisite skill sets needed in fields of advanced technology education, engineering, and manufacturing. Students will develop a general set of skills that are necessary for careers in engineering and manufacturing technician work, and other related industries. Course content will begin preparing students with core concepts related to the industry-based credential they are working towards. Course content will be delivered through a series of hands-on activities, engineering design problems, and innovative design challenges that apply technology, science, and mathematics concepts and skills.

872B Engineering Design and Processes II

1 Credit

Engineering Design and Processes II (11) is the second required course for the 3-course sequence, Advanced Technology Education CTE program. Students will research, develop, test, and analyze engineering designs using criteria such as design effectiveness, public safety, human factors, and ethics. This course provides an essential experience for students who are interested in technology, innovation, design, engineering, and other related industries. Building on their foundational skills, students will gain a deeper understanding of concepts necessary for successful acquisition of the desired industry-based certification. This course will employ teaching/learning strategies that enable students to explore and deepen their understanding of “big ideas” regarding technology and makes use of a variety of assessment instruments to reveal the extent of understanding. Students will continue to hone their skills in using mathematics and science concepts and applications to make informed decisions. Students will develop a set of technical skills that will lead to successful entry into the workplace as an engineering or manufacturing technician.

Engineering Design and Processes CTE Completer (AL, FO, MR)

872C Engineering Design and Processes III

1 Credit

Engineering Design and Processes III (12) is the third required course for the 3-course sequence, Advanced Technology Education CTE program and will finalize the technical skill set necessary for successful completion of the industry-based examination (AutoCAD). This course is standards-based, with engineering-related curricula designed for upper-level high school students. Students will acquire an engineering and technical base that prepares them for entry into the workforce as a technician or skilled generalist, or to continue studies at a local community college. Students will select, evaluate, and use diverse data to make informed decisions about their design or solution and communicate their analysis and solution to diverse audiences, while using a variety of platforms and materials.

English/ Language Arts

019A College Test Prep/Fall 1/2 Credit

019B College Test Prep/Spring 1/2 Credit

College Test Prep (11-12) is an elective semester course offered in selected schools. Emphasis in the course is placed on test-taking skills and sample content questions similar to test items on the Scholastic Aptitude Test (SAT) and the American College Test (ACT).

042 Honors Journalism I 1 Credit

Honors Journalism I (10-12) is an elective course offered to students interested in learning the basics of journalism. Emphasis is on copy writing, development of editing skills, photography, design, desktop publishing and graphics programs, and financial management. Skills are utilized when students pursue more intense study in the production of a newspaper or yearbook/magazine.

043 Honors Journalism II 1 Credit

Honors Journalism II (11-12) is an elective course offered to students interested in a particular branch of journalism, i.e. yearbook or newspaper. Students learn to write news, feature stories, editorials, and sports stories, as well as advertising copy. They plan layouts, edit copy, proofread, design graphics, and use desktop publishing programs. Students produce a newsletter or homecoming booklet.

044 Honors Journalism III 1 Credit

Honors Journalism III (12) is a course in which students produce a newspaper or yearbook. Students employ the skills and concepts learned in Honors Journalism I and II. They write, design, edit, and finance the production. Students must have successfully completed Honors Journalism II before serving in an editorial capacity on the staff.

121 Developmental Reading 9 1 Credit

Developmental Reading (9) is a remedial reading course designed for students who read significantly below grade level and score at the basic level on the MCAP ELA 8 assessments. Students will receive instruction in a research-based program that addresses decoding, comprehension and fluency skills. The course qualifies as one elective credit. It does not fulfill the English 1 requirement.

122 Developmental Reading 10 1 Credit

Developmental Reading (10) is the continuation of Developmental Reading 9. Students who demonstrate a need for additional reading instruction will qualify for this course. Students will continue to receive instruction in the program begun in 9th grade. This course qualifies for one elective credit. It does not fulfill the English 2 requirement.

English/ Language Arts

131 Honors English 1 1 Credit

Honors English 1 (9) is an elective course which fulfills the English 1 requirement. There is an intensified focus on the areas of literary analysis, composition, and critical thinking. The College and Career Ready Standards dictate the skills covered in this class, as well as the College Board's recommended course of study for Pre-AP English. Rigorous pacing and complexity of issues will challenge students capable of higher-level thinking. The coursework is arranged thematically with an emphasis on literary genres. Completion of summer reading and writing assignments prior to the class is strongly recommended in the Honors program.

132 Honors English 2 1 Credit

Honors English 2 (10) is an elective course which fulfills the English 2 requirement. The College and Career Ready Standards, as well as the College Board's recommended course of study for Pre-AP English, dictate the skills covered. Students will write essays of a greater length and sophistication than that of an English 2 class, demonstrate the proper use of MLA format in all research, and read and analyze a higher level of world literature in terms of language, literary elements and thematic content. Successful completion of summer reading and writing assignments prior to the class is strongly recommended in the Honors program.

133 AP English Language & Composition (Advanced Placement) 1 Credit

Prerequisite: Honors English 2 (132)

Advanced Placement English Language and Composition (11-12) is an elective Honors course which fulfills the English 3 or 4 requirement. It is designed to help students become skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts and to become skilled writers who can compose for a variety of purposes. Skill in writing follows from students' awareness of their own composing process: the way they explore ideas, reconsider strategies, and revise their work. This process is the essence of the AP English Language and Composition course. All College and Career Ready Standards for the 11-12 grade band are covered. Successful completion of summer reading and writing assignments prior to the class is strongly recommended. This course is weighted for GPA at the 5.0 level. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

English/ Language Arts

135 Honors English 3

1 Credit

Honors English 3 (11) is an elective course which fulfills the English 3 requirement. The College and Career Ready Standards dictate the skills covered as they apply to the American literature content. A strong focus of the course will be preparing students for the complexity of AP and college level writing. Students will write essays of a greater length and sophistication than that of an English 3 class, writing expository and persuasive essays and a research paper that demonstrate the proper use of MLA format. Students will read and analyze complex informational, non-fiction, and literary texts in terms of language, structure, literary elements, rhetoric, thematic content, and historical context. Successful completion of summer reading and writing assignments prior to the class is strongly recommended in the Honors program.

141 English 1

1 Credit

English 1 (9) is a required course for all students in Grade 9. The College and Career Ready Standards dictate the skills covered in this class. Students write narrative, explanatory, descriptive, and persuasive essays, as well as short research papers. Students study poetry, short stories, nonfiction, and fiction in order to have a fuller understanding of communication. To fulfill state requirements, and to prepare for the MCAP Assessment, all classes are aligned to the College and Career Ready Standards.

142 English 2

1 Credit

English 2 (10) is a required course for all students in Grade 10. English 2 is designed to enable students to gain conscious control of their language and to help pupils enjoy language as an art and entertainment. The literary focus is world literature. Dialectology is studied, and grammar and mechanics are reviewed. Students write essays, prepare speeches, interpret literature, and critique media. In addition, as in English 1, students will prepare for the MCAP Assessment in English. To fulfill state requirements all classes meet or exceed the assessment limits for the Maryland College and Career Ready Standards.

143 English 3

1 Credit

English 3 (11) is a required course for all students in Grade 11. Students are involved in an integrated language arts program that includes writing expository and persuasive essays and a research paper. The literary focus is American literature. The College and Career Ready Standards dictate the skills covered in this class, and assistance will be given to students who have not achieved a proficient score on the MCAP 10 Assessment.

English/ Language Arts

144 English 4

1 Credit

English 4 (12) is a required course for all students. English 4 is designed to enable students to gain conscious control of their language and to help pupils enjoy language as an art and as an entertainment. The literary focus is British literature. Students write essays, prepare speeches, interpret literature, and critique media. The College and Career Ready Standards for English dictate the skills covered in this class, and assistance will be given to students who have not achieved a proficient score on the MCAP 10 Assessment.

145 AP English Literature & Composition (Advanced Placement)

1 Credit

Prerequisite: Honors English 2 (132)

AP English Literature and Composition (11-12) is an elective Honors course which fulfills the English 3 or 4 requirement. It is designed to engage students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students can deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students will consider a work's structure, style, and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. Writing is an integral part of this course, for the AP examination is weighted toward students writing about literature. Writing assignments focus on the critical analysis of literature and include expository, analytical, and argumentative essays. Successful completion of summer reading and writing assignments prior to the class is strongly recommended. All College and Career Ready Standards for the 11-12 grade band are covered. This course is weighted for GPA at the 5.0 level. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

Family/Consumer Science

852 Skills for Living 1/2 Credit

Skills for Living (9-12) is an elective semester course designed to provide students with an opportunity to acquire basic skills to meet the challenges of their daily lives with confidence. Students will learn basic information and practical skills related to such topics as interpersonal and family relationships, communication, child birth, parenthood and adolescence, healthy living and clothing. The value and responsibility of children are stressed as well as concerns of young people. Students are taught skills in coping and decision making and to realize goals they must set for themselves.

853 Nutrition and Food Preparation 1/2 Credit

Nutrition and Food Preparation (9-12) is an elective semester course that prepares students to make a lifetime of healthy food choices. Topics include healthful eating, meal management, basic kitchen skills, buying and preparing foods, serving foods and dining out. Emphasis will be placed on nutrition and planning balanced meals. Students will practice a variety of culinary skills related to recipe usage, kitchen appliances and equipment, handling food and maintaining a safe and sanitary kitchen.

854 Food Trends 1/2 Credit

Food Trends (9-12) is an elective semester course designed to teach students about cooking in the real world based on *Beyond Oodles and Noodles and Cardboard Mac and Cheese*. It will broaden an understanding and appreciation of food while strengthening management and decision making skills based on food choices and nutritional values. Students will select, prepare, compare and serve foods from various food groups. Students will also compare "home cooked" to packaged convenience foods. As they learn budgeting skills, students will focus on balancing convenience and cost in preparing family meals. An exploration of food-related careers will round out the program.

855 Entertaining with Food 1/2 Credit

Entertaining with Food (9-12) is an elective semester course designed to teach students skills and techniques about the preparation of food as it relates to entertaining at home and as a career based on *The Fine Art of Dining*. Students will have opportunities to plan, prepare, and present their culinary skills using good china and crystal, linen tablecloths, and silver service while focusing on proper etiquette and table manners. It will broaden an understanding and appreciation of fine dining at home and in restaurants. An exploration of food-related careers will round out the program.

Family/Consumer Science

860A Learning About Children I 1/2 Credit

Learning About Children I is an elective semester course designed to provide students with an opportunity to acquire basic skills for effective parenting. Emphasis is placed on the growth and development of the preschool child with practical experience in teaching and observing a child development laboratory at the school.

860B Learning About Children II 1/2 Credit

Learning About Children II is an elective semester course designed to provide students with opportunities to acquire basic skills for effective parenting. Emphasis is placed on the growth and development of the child from birth to age six.

Health Education

481A Comprehensive Health Education I 1/2 Credit

Prerequisite: This ½ credit course is required for graduation and is recommended for students in grade 9 or 10.

Comprehensive Health Education (9-12) is a required one-semester course designed to encourage students to develop skills, attitudes, and behaviors that will enable them to make decisions that promote healthful behaviors. Topics included are: Healthy Eating; Safety and Violence Prevention and Disease Prevention and Control. Additionally, students will have instruction in relation to health enhancing behaviors that include: analyzing influences, accessing valid and reliable information, interpersonal communication, decision making, goal setting, self management, and advocacy.

Health Education

481B Comprehensive Health Education II 1/2 Credit

Prerequisites and other notes: Comprehensive Health Education I. This ½ credit course is required for graduation and is recommended in grades 11 or 12.

Comprehensive Health II (11-12) is a required one-semester course that is designed for students to use the introductory instruction from Comprehensive Health I to expand on the development of skills, attitudes, and behaviors that will enable them to make decisions that promote healthful behaviors. Students will engage in inquiry and problem solving approaches utilizing a developmentally appropriate progression of content related to health education concepts. Topics included are: Mental and Emotional Health; Substance Abuse Prevention; Family Life and Human Sexuality.

Mathematics

019A College Test Prep/Fall 1/2 Credit **019B College Test Prep/Spring 1/2 Credit**

College Test Prep (11-12) is an elective semester course offered in selected schools. Emphasis in the course is placed on test-taking skills and sample content questions similar to test items on the Scholastic Aptitude Test (SAT) and the American College Test (ACT).

301 Integrated Algebra 1 Credit

Integrated Algebra (9) is preparatory course designed to build upon the mathematics that students learned in the middle grades. Based on the Maryland College and Career Ready Standards, this course provides essential topics leading to success in Algebra I. topics include: (1) exploring the relationships among fractions, decimals, percent and ratios; (2) investigating integers, equations, inequalities, functions and patterns, linear equations and their graphs, and formulas to solve real-world problems; and (3) analyzing data using statistics and probability topics. The use of a graphing calculator will be emphasized throughout this course to aid in exploring patterns, understanding concepts, and solving problems. After successful completion of this course, students will enroll in a Algebra I (341).

341 Algebra I 1 Credit

Algebra I (9-12) is a high school graduation requirement course which serves as a gateway to advanced mathematics. The purpose of this course is to formalize and extend the middle school content of the Maryland College and Career-Ready Standards (CCRS). This course focuses on the mastery of five critical areas: (1) developing understanding and investigating relationships between quantities and reasoning with equations; (2) developing understanding and applying linear and exponential relationships; (3) investigating trends and modeling with descriptive statistics; (4) performing arithmetic operations on polynomial expressions, solving equations, inequalities, and systems of equations; and (5) using properties of rational and irrational numbers to develop an understanding of quadratic functions. The Mathematical Practice Standards apply throughout the course and, together, with the Algebra I content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. This course requires students to demonstrate proficiency in the use of a graphing calculator. In addition, students must take MCAP assessment in Algebra I at the conclusion of the course and attain a passing score to satisfy Maryland College and Career Ready (CCR) requirements for high school Algebra. After successful completion of this course, students will enroll in Geometry (362) or Honors Geometry (372).

Mathematics

351 Algebra II 1 Credit **Prerequisite: Geometry (362) or Honors Geometry (372)**

Algebra II (10-12) is an elective course which serves as a gateway to advanced mathematics and prepares students for their first college-level credit-bearing course. Building on linear, quadratic, and exponential functions, students will expand on their knowledge of functions to include polynomial, rational, and radical functions. This course focuses on the mastery of five critical areas: (1) Polynomial, Rational and Radical Relationships, (2) Trigonometric Functions, (3) Modeling with Functions, (4) Inferences and Conclusions from Data, (5) Applications of Probability. The Mathematical Practice Standards apply throughout the course and, together, with the Algebra II content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. This course requires students to demonstrate proficiency in the use of a graphing calculator. In addition, students may be required to take the MCAP assessment in Algebra II at the conclusion of the course and attain a passing score to be identified as College and Career Ready (CCR) in mathematics or to satisfy their high school testing requirement in mathematics.

361 Honors Algebra II 1 Credit **Prerequisite: Honors Geometry (372)**

Honors Algebra II (10-12) is an elective course which serves as a gateway to advanced mathematics and prepares students for their first college-level credit-bearing course. Building on linear, quadratic, and exponential functions, students will expand on their knowledge of functions to include polynomial, rational, and radical functions. This course focuses on the mastery of five critical areas: (1) Polynomial, Rational and Radical Relationships, (2) Trigonometric Functions, (3) Modeling with Functions, (4) Inferences and Conclusions from Data, (5) Applications of Probability. The Mathematical Practice Standards apply throughout the course and, together, with the Algebra II content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Building on these concepts, Honors Algebra II is designed for students seeking more academically challenging coursework. The honors content is more rigorous and has greater depth of the College and Career-Ready Standards for Algebra II. Students are required to collaboratively and independently complete content rich assignments. This course requires students to demonstrate proficiency in the use of a graphing calculator. In addition, students may be required to take the MCAP assessment in Algebra 2 at the conclusion of the course and attain a passing score to be identified as College and Career Ready (CCR) in mathematics or to satisfy their high school testing requirement in mathematics.

Mathematics

362 Geometry

1 Credit

Prerequisite: Algebra I (341)

Geometry (9-12) is a high school graduation requirement course which serves as a gateway to advanced mathematics. The purpose of this course is to formalize and extend students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. This course focuses on the mastery of five critical areas: (1) Congruence, Proof, and Constructions, (2) Similarity, Proof, and Trigonometry, (3) Extending to Three Dimensions, (4) Connecting Algebra and Geometry through Coordinates, (5) Circles With and Without Coordinates. The Mathematical Practice Standards apply throughout the course and, together, with the Geometry content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. In addition, students may be required to take the MCAP assessment in Geometry at the conclusion of the course and attain a passing score to be identified as College and Career Ready (CCR) in mathematics or to satisfy their high school testing requirement in mathematics.

372 Honors Geometry

1 Credit

Prerequisites: Algebra I (341)

Honors Geometry (9-12) satisfies the high school graduation requirement for Geometry and serves as a gateway to advanced mathematics designed for students seeking more academically challenging coursework. The purpose of this course is to formalize and extend students' geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations of geometric relationships, moving towards formal mathematical arguments. This course focuses on the mastery of five critical areas: (1) Congruence, Proof, and Constructions, (2) Similarity, Proof, and Trigonometry, (3) Extending to Three Dimensions, (4) Connecting Algebra and Geometry through Coordinates, (5) Circles With and Without Coordinates. The Mathematical Practice Standards apply throughout the course and, together, with the Geometry content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. The honors content is more rigorous and has greater depth of the College and Career-Ready Standards. Students are required to collaboratively and independently complete content rich college-preparatory assignments. In addition, students may be required to take the MCAP assessment in Geometry at the conclusion of the course and attain a passing score to be identified as College and Career Ready (CCR) in mathematics or to satisfy their high school testing requirement in mathematics.

Mathematics

373 Trigonometry/Pre-calculus

1 Credit

Prerequisites: Algebra II (351) or Honors

Algebra II (361) and Geometry (362) or Honors Geometry (372)

Trigonometry/Pre-calculus (11-12) is an elective course. This course establishes the foundation for additional study in mathematics including calculus and advanced math. The course content is divided into two parts. Part one consists of traditional topics of trigonometry including basic functions, solutions of triangles, identity proofs, sinusoidal graphs, solution of trigonometric equations, and polar numbers. Part two of the course includes the study of advanced algebra topics with computer applications when appropriate. The course includes the extensive use of graphing calculators.

383 Honors Trigonometry/Pre-calculus

1 Credit

Prerequisites: Geometry (362) or Honors Geometry (372) and Honors Algebra II (361)

Honors Trigonometry/Pre-calculus (11-12) is an elective course offered to students who desire an accelerated mathematics experience leading to the future study of calculus and advanced math. The course content is divided into two parts. Part one consists of traditional topics of trigonometry including basic functions, solutions of triangles, identity proofs, sinusoidal graphs, solution of trigonometric equations, and polar numbers. Part two of the course includes the study of advanced algebra topics, including the expansion of logarithmic and exponential functions introduced in Algebra 2. An additional unit of study on limits with an introduction to Calculus concludes the course. This course is supplemented with enrichment activities, college placement practice, and computer applications. This course includes the extensive use of graphing calculators.

384 Honors Calculus

1 Credit

Prerequisites: Trigonometry/Pre-calculus (373) or Honors Trigonometry/Pre-calculus (383)

Honors Calculus (12) is an elective course. This course contains comprehensive material in the areas of differential and integral calculus. Emphasis is placed on application rather than theory. Knowledge of algebra, geometry, and trigonometry is essential for the study of calculus and are essential prerequisites for this course.

Mathematics

390 College and Career Prep Mathematics **1 Credit**

Prerequisite: *Geometry (362); Algebra II (351) suggested*

College and Career Prep Mathematics (12) is an elective course. This course is developed for students who have not met any established college and career readiness (CCR) requirements in Mathematics by the end of the 11th grade. Emphasis is on developing skills in algebraic, statistical, and quantitative reasoning, which align with the multiple mathematics pathways at Maryland institutions of higher education. The course is designed to connect mathematics to career and life through relevant real world contexts, cross-disciplinary problems, and open written responses. Use of technology, including online programs, will be a regular part of the course.

392 Elements of Math **1 Credit**

Prerequisite: *Geometry (362)*

Elements of Math (11-12) is an elective course. This course is a study of mathematical structures that are discrete in the sense of not supporting or requiring the notion of continuity. The following topics will be included: Problem Solving and Critical Thinking, Set Theory, Number Theory, Graph Theory (Networks), Propositional Logic (the study of reasoning), Combinatorics (permutations, combinations, factorial), Probability (average, expected values, sample space, events, conditional probability circuits), and case study analyses of models from areas such as the sciences, medicine, engineering and industry. While not required, this course is designed to be taken after the completion of Algebra II.

394 Advanced Placement (AP) Calculus **1 Credit**

Prerequisite: *Honors Trigonometry/Pre-calculus (383)*

Advanced Placement (AP) Calculus (12) is an elective course. This course prepares students for taking Advanced Placement Examination (AB form) for college credit. The course includes extensive use of graphing calculators. A knowledge of algebra, geometry, and trigonometry/Pre-calculus is essential for the study of calculus and are recommended prerequisites for this course. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

Mathematics

396 Advanced Placement (AP) Statistics **1 Credit**

Prerequisite: *Honors Algebra II (361)*

Advanced Placement (AP) Statistics (11-12) is an elective course. This course prepares students for taking the Advanced Placement Examination for college credit. The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: (1) Exploring Data: Describing patterns and departures from patterns, (2) Sampling and Experimentation: Planning and conducting a study, (3) Anticipating Patterns: Exploring random phenomena using probability and simulation, and (4) Statistical Inference: Estimating population parameters and testing hypotheses. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

398 Applied Probability and Statistics **1 Credit**

Prerequisite: *Geometry (362)*

Applied Probability and Statistics (11-12) is an elective course which will prepare students for an entry level college statistics course. The course is divided into descriptive and inferential statistics: Descriptive statistics includes topics on organizing data; averages and variation; correlation and regression; elementary probability; binomial probability; and the normal distribution. Inferential statistics topics include: confidence intervals for means and proportions; hypothesis testing for means and proportions; inferences about differences, and Chi-square. Graphing calculators and computer based programs are an integral part of the course.

Music

601-604 Small Ensembles I-IV 1 Credit

Small Ensembles (9-12) is an elective instrumental music course that provides students with the opportunity to develop, apply and refine tone, technique, balance, and interpretation, as related to percussion, brass, woodwind, and string. Compositions for small instrumental groups will be prepared and performed in a concert setting. Students must receive approval from the instructor before scheduling this class.

611 American Popular Music 1 Credit

American Popular Music (9-12) is a general music course designed for students who enjoy listening to and learning about a wide variety of music. Music in contemporary society is presented through topics such as jazz, country, rock, electronic music, and 20th Century compositions. Emphasis will be placed on the common elements of these styles as well as their social/cultural context. The course will be divided into several mini-units covering the contemporary period.

613 Drama in the Performing Arts 1 Credit

Drama in the Performing Arts (11-12) is an elective course in which students improve their voice and diction, learn to act, move on stage, gain poise, participate in plays, learn about production, prepare speeches, and learn about costuming. Theater history, improvisation, skit making, public speaking, debate, and one-act play production are emphasized. To gain confidence to speak or interact with others, and to pursue an interest in public speaking or dramatics are the main objectives.

614 Music Theory 1 Credit

Music Theory (11-12) is an elective music course that provides students with introductory music training in musicianship, theory, musical materials, and procedures. A study of melody, harmony, texture, rhythm, form, music analysis, elementary composition, as well as history and style will provide the foundation of this course. Musicianship skills in dictation, listening, sight-singing, and keyboard harmony, will also be integrated into this class. The course will provide students preparation for college level theory and harmony.

615-618 Honors Small Ensembles I-IV 1 Credit

Honors Small Ensembles I-IV (9-12) is an elective instrumental music course, open to students who have completed Small Ensembles I, that provides students with the opportunity to develop, apply and refine tone, technique, balance, and interpretation, as related to percussion, brass, woodwind, string, and voice. Small instrumental combinations of various genres, cultures and sizes will be created to prepare and perform in a concert setting. Honors students will perform alongside and often jointly with large ensemble classes. Enrollees may explore new instruments as beginners. Students must receive approval from the instructor before scheduling this class.

Music

622 American Musical Theater 1 Credit

American Musical Theater (9-12) is an elective music course which focuses on the history and development of musical theater. Musicals from various historical periods are presented with emphasis placed on musical style, character, analysis, plot and musical score.

631- 634 Senior High School Band I-IV 1 Credit

Senior High School Band (9-12) is an elective instrumental music course which provides ensemble performance opportunities in concert and marching settings for students with intermediate to advanced performing skills. The band program emphasizes continued development of technical and musical proficiency and expands the student's repertoire of band literature. Individual excellence is further encouraged through participation in solo and small ensemble performances. The band presents numerous public performances throughout the school year.

635 Honors Senior High School Band III 1 Credit

Prerequisites: 631 and 632

Honors Senior High School Band (11) is an elective instrumental music course which provides ensemble performance opportunities in concert and marching settings for students with advanced performing skills. This course is reserved for students who have successfully completed course 631 and 632. Students will participate in the solo ensemble festival and may audition for all-state and all-county festivals. Leadership roles in the organization are expected of students participating in this course. The band presents numerous public performances throughout the school year.

639 Honors Senior High School Band IV 1 Credit

Prerequisite: 631, 632 and 635

Honors Senior High School Band (12) is an elective honors instrumental music course which provides ensemble performance opportunities in concert and marching settings for students with advanced performing skills. This course is reserved for students who have successfully completed course 631, 632 and 635. Students will participate in the solo ensemble festival and may audition for all-state and all-county festivals. Leadership roles in the organization are expected of students participating in this course. The band presents numerous public performances throughout the school year.

Music

641- 644 Honors Jazz Ensemble I-IV **1 Credit**

Honors Jazz Ensemble (9-12) is an elective instrumental music course available to band students with advanced performing skills. Students use these skills in the performance of jazz, pop, blues, soul, and rock. Improvisation is developed and encouraged throughout this course. Membership is by audition and may be limited by instrumentation. The jazz ensemble presents several public performances throughout the year.

651- 654 Senior High School Chorus I-IV **1 Credit**

Senior High School Chorus (9-12) is an elective vocal music course available to students who demonstrate an interest and ability in singing. Ear training, sight reading, and proper singing techniques are incorporated into the teaching of choral literature. Through the study of selected literature, students are afforded opportunities to experience various styles of choral music. Public performances are scheduled throughout the year.

655 Honors Senior High School Chorus III **1 Credit**

Prerequisite: 651 and 652

Honors Senior High School Chorus (11) is an elective honors vocal music course available to students who demonstrate advanced performance skills. This course is reserved for students who have successfully completed course 651 and 652. Students will audition for all-county chorus and may participate in all-state chorus and the solo ensemble festival. Leadership roles in the organization are expected of students participating in this course. Through the study of selected literature, students are afforded opportunities to experience various styles of choral music. Public performances are scheduled throughout the year.

659 Honors Senior High School Chorus IV **1 Credit**

Prerequisite: 651, 652 and 655

Honors Senior High School Chorus (12) is an elective honors vocal music course available to students who demonstrate advanced performance skills in singing. This course is reserved for students who have successfully completed course 651, 652 and 655. Students will audition for all-county chorus and may participate in all-state chorus and the solo ensemble festival. Leadership roles in the organization are expected of students participating in this course. Through the study of selected literature, students are afforded opportunities to experience various styles of choral music. Public performances are scheduled throughout the year.

Music

661- 664 Honors Show Choir I-IV **1 Credit**

Honors Show Choir (9-12) is an elective vocal music course available to vocal music students with advanced performing skills. Students utilize these skills in the performance of jazz, popular, show and small ensemble literature. Membership is selected by audition and may be limited by voice part. The show choir presents numerous public performances throughout the year.

671- 674 Voice Class I-IV **1 Credit**

Voice Class (9-12) is an elective course for beginning vocal music students who wish to refine singing skills in a more small class setting before joining chorus. Music fundamentals and vocal technique are studied, requiring two concerts performed within the year of the course. Additional performances in solo and small ensemble settings are possible.

681- 684 Senior High School Orchestra I-IV **1 Credit**

Senior High School Orchestra (9-12) provides ensemble performance opportunities for students with intermediate to advanced performing skills. The orchestra program emphasizes continued development of technical and musical proficiency. Individual excellence is further encouraged through participation in solo and small ensemble performances. The orchestra presents several public performances throughout the year.

685 Honors Senior High School Orchestra III **1 Credit**

Prerequisite: 681 and 682

Honors Senior High School Orchestra III (11) is an elective orchestra program course available to students who demonstrate an interest and ability in a stringed instrument. This course is reserved for students who have successfully completed course 681 and 682. Students will participate in the solo and ensemble festival and may audition for the all-state and all-county orchestras. Leadership roles in the organization are expected of students enrolled in this course. The orchestra presents several public performances throughout the year.

689 Honors Senior High School Orchestra IV **1 Credit**

Prerequisite: 681, 682 and 685

Honors Senior High School Orchestra IV (12) is an elective orchestra program course available to students who demonstrate an interest and ability in a stringed instrument. This course is reserved for students who have successfully completed course 681 or 682 and 685. Students will participate in the solo and ensemble festival and may audition for the all-state and all-county orchestras. Leadership roles in the organization are expected of students enrolled in this course. The orchestra presents several public performances throughout the year.

Music

690- 697 Dance/Visual Ensemble

1/2 Credit

Dance/Visual Ensemble (9-12) is an elective semester course that provides basic skills and an understanding of dance. It can include drill team, color guard or traditional dance ensemble—whatever the individual school resources provide. An audition or demonstration of basic skills may be required for admission to this class. There may be an extra-curricular component required to complete the course. Two semesters of Dance/Visual Ensemble fulfill the requirements for the fine arts graduation credit.

671- 674 Voice Class I-IV

1 Credit

Voice Class (9-12) is an elective course for beginning vocal music students who wish to refine singing skills in a more small class setting before joining chorus. Music fundamentals and vocal technique are studied, requiring two concerts performed within the year of the course. Additional performances in solo and small ensemble settings are possible.

681- 684 Senior High School

Orchestra I-IV

1 Credit

Senior High School Orchestra (9-12) provides ensemble performance opportunities for students with intermediate to advanced performing skills. The orchestra program emphasizes continued development of technical and musical proficiency. Individual excellence is further encouraged through participation in solo and small ensemble performances. The orchestra presents several public performances throughout the year.

685 Honors Senior High School

Orchestra III

1 Credit

Prerequisite: 681 and 682

Honors Senior High School Orchestra III (11) is an elective orchestra program course available to students who demonstrate an interest and ability in a stringed instrument. This course is reserved for students who have successfully completed course 681 and 682. Students will participate in the solo and ensemble festival and may audition for the all-state and all-county orchestras. Leadership roles in the organization are expected of students enrolled in this course. The orchestra presents several public performances throughout the year.

Music

689 Honors Senior High School

Orchestra IV

1 Credit

Prerequisite: 681, 682 and 685

Honors Senior High School Orchestra IV (12) is an elective orchestra program course available to students who demonstrate an interest and ability in a stringed instrument. This course is reserved for students who have successfully completed course 681 or 682 and 685. Students will participate in the solo and ensemble festival and may audition for the all-state and all-county orchestras. Leadership roles in the organization are expected of students enrolled in this course. The orchestra presents several public performances throughout the year.

690- 697 Dance/Visual Ensemble

1/2 Credit

Dance/Visual Ensemble (9-12) is an elective semester course that provides basic skills and an understanding of dance. It can include drill team, color guard or traditional dance ensemble—whatever the individual school resources provide. An audition or demonstration of basic skills may be required for admission to this class. There may be an extra-curricular component required to complete the course. Two semesters of Dance/Visual Ensemble fulfill the requirements for the fine arts graduation credit.

Peer Connections/ Mentoring Program

846A1-2 Peer Connections I

(Fall/Spring)

1/2 Credit

Peer Connections I (9) is only open to students selected through the recommendation, referral, and application process. This half credit year-long course entails study skills, goal setting, critical thinking, and academic assistance. Enrichment and motivational activities will help develop social-emotional skills as a part of the transdisciplinary literacy plan. (Please see a school counselor.)

846B1-2 Honors Peer Mentoring I

(Fall/Spring)

1/2 Credit

Honors Peer Mentoring I (9) is only open to students selected through the recommendation, referral, and application process. This half credit year-long course entails study skills, goal setting, critical thinking, and academic assistance. Enrichment and motivational activities will help develop social-emotional skills as a part of the transdisciplinary literacy plan. The cultivation of leadership skills through mentoring/tutoring Peer Connections I students is the key component to this honors level course. (Please see a school counselor.)

847A1-2 Peer Connections II

(Fall/Spring)

1/2 Credit

Prerequisite: *Successful Completion of Peer Connections I or Recommendation of Staff*

Peer Connections II (10) is only open to newly selected students or previously selected students through the recommendation, referral, and application process. This half credit year-long course continues to foster study skills, goal setting, and critical thinking. Students are supported academically and socially-emotionally through mentorship with the Honors Peer Mentoring II-IV enrolled students. Career exploration and ASVAB reflection is a key component for developing a structured plan for career readiness and literacy success. (Please see a school counselor.)

847B1-2 Honors Peer Mentoring II

(Fall/Spring)

1/2 Credit

Prerequisite: *Successful Completion of Peer Connections I or Honors Peer Mentoring I*

Honors Peer Mentoring II (10) is only open to newly selected students or previously selected students through the recommendation, referral, and application process. This half credit year-long course continues to foster study skills, goal setting, and critical thinking. Students are supported academically and socially-emotionally through mentorship and/or cultivating leadership skills by mentoring/tutoring Peer Connections I and II students. This is a course paired with Peer Connections II wherein career/college exploration and PSAT/ASVAB reflection is a key component for developing a structured plan for college-career readiness and literacy success. (Please see a school counselor.)

Peer Connections/ Mentoring Program

848A1-2 Peer Connections III

(Fall/Spring)

1/2 Credit

Prerequisite: *Successful Completion of Peer Connections II*

Peer Connections III (11) is only open to newly selected students or previously selected students through the recommendation, referral, and application process. This half credit year-long course continues to foster study skills, goal setting, and critical thinking. Students are supported academically and socially-emotionally through mentorship with the Honors Peer Mentoring II-IV enrolled students. This course focuses on the college application process including college admission tests, financial aid, college entrance requirements, and career planning. Students will build analytical and synthesis writing skills through individualized research projects. (Please see a school counselor.)

848B1-2 Honors Peer Mentoring III

(Fall/Spring)

1/2 Credit

Prerequisite: *Successful completion of Peer Connections II or Honors Peer Mentoring II*

Honors Peer Mentoring III (11) is only open to newly selected students or previously selected students through the recommendation, referral, and application process. This half credit year-long course refines and supports the critical thinking and reading and writing skills necessary for success in advanced placement course work and optimal performance on AP/SAT exams. This is a paired course with Peer Connections III wherein students support peers academically and socially-emotionally through mentorship and continue to cultivate leadership skills. (Please see a school counselor.)

849A1-2 Peer Connections IV

(Fall/Spring)

1/2 Credit

Prerequisite: *Successful completion of Peer Connections III*

Peer Connections IV (12) is only open to those students having successfully completed Peer Connections III. This half credit year-long course continues to develop and execute the career and college plan identified in Peer Connections III and is highly individualized in order to support students' successes for life, college, and career. (Please see a school counselor.)

849B1-2 Honors Peer Mentoring IV

(Fall/Spring)

1/2 Credit

Prerequisite: *Successful Completion of Peer Connections III or Honors Peer Mentoring III*

Honors Peer Mentoring IV (12) is only open to those students having successfully completed Honors Peer Mentoring III. This half credit year-long course refines and supports critical thinking, reading, and writing skills necessary for success in advanced placement course work and optimal performance on AP/SAT/ACT exams. Students will be in a program leadership role with potential connections to local higher education institutions. This is a paired course with Peer Connections IV wherein students design mentorship activities for academic support for peers and refine social-emotional mentorship. (Please see a school counselor.)

Physical Education

711 Physical Education 1 Credit

Physical Education (9-12) is a required course designed to introduce students to a basic program of physical fitness, team sports, and individual lifetime recreational activities. Emphasis is placed on developing physical skills, acquiring knowledge of movement, rules, and promoting a positive self image as related to social and emotional behavior.

712 Cardio Exercise and Fitness 1/2 Credit

Cardio Exercise and Fitness (10-12) is an elective semester course in which students are introduced to low to mid level aerobics, step aerobics, and rigorous fitness activities. Emphasis is placed on the development of basic knowledge, technique, and attitudes.

713 Weight Training/Fitness 1/2 Credit

Weight Training/Fitness (10-12) is an elective semester course in which students are introduced to all aspects of weight training. Factors such as nutrition, body composition, and the proper use of free weights are emphasized. Cardiovascular conditioning and advanced fitness will also be an integral part of this course.

714 Individual/Lifetime Sports I 1/2 Credit

Individual/Lifetime Sports I (10-12) is an elective semester course in which students are introduced to such lifetime activities as archery, golf, shuffleboard, badminton, cross country, rollerblading and orienteering. Emphasis is placed on basic knowledge, rules, scoring and proper techniques.

715 Individual/Lifetime Sports II 1/2 Credit

Individual/Lifetime Sports II (10-12) is an elective semester course in which students are introduced to such lifetime activities as tennis, angling, modern dance, table tennis and swimming. Emphasis is placed on basic knowledge, rules, scoring and proper techniques.

Physical Education

718 Adventure Sports 1/2 Credit

Adventure Sports (10-12) is an elective semester course in which students participate in activities such as biking, hiking, tubing, snowboarding, wall climbing, outdoor survival and cross country skiing. Emphasis is placed on basic knowledge, skill, attitude and safety.

721A Team Sports & Conditioning Freshman—Fall 1/2 Credit

Team Sports and Conditioning (9-12) is an elective semester course designed to develop physical strength, endurance, coordination, agility, flexibility, balance, and speed in the skilled athlete. Selected students are provided an opportunity to develop these advanced skills in an area of personal preference. This course cannot replace 711 Physical Education required to meet graduation requirements. (The title "Team Training" will appear on the report card.)

721B Team Sports & Conditioning Freshman—Spring 1/2 Credit

Team Sports and Conditioning (9-12) is an elective semester course designed to develop physical strength, endurance, coordination, agility, flexibility, balance, and speed in the skilled athlete. Selected students are provided an opportunity to develop these advanced skills in an area of personal preference. This course cannot replace 711 Physical Education required to meet graduation requirements. (The title "Team Training" will appear on the report card.)

722A Team Sports & Conditioning Sophomore—Fall 1/2 Credit

Team Sports and Conditioning (9-12) is an elective semester course designed to develop physical strength, endurance, coordination, agility, flexibility, balance, and speed in the skilled athlete. Selected students are provided an opportunity to develop these advanced skills in an area of personal preference. This course cannot replace 711 Physical Education required to meet graduation requirements. (The title "Team Training" will appear on the report card.)

Physical Education

722B Team Sports & Conditioning Sophomore—Spring 1/2 Credit

Team Sports and Conditioning (9-12) is an elective semester course designed to develop physical strength, endurance, coordination, agility, flexibility, balance, and speed in the skilled athlete. Selected students are provided an opportunity to develop these advanced skills in an area of personal preference. This course cannot replace 711 Physical Education required to meet graduation requirements. (The title "Team Training" will appear on the report card.)

723A Team Sports & Conditioning Junior—Fall 1/2 Credit

Team Sports and Conditioning (9-12) is an elective semester course designed to develop physical strength, endurance, coordination, agility, flexibility, balance, and speed in the skilled athlete. Selected students are provided an opportunity to develop these advanced skills in an area of personal preference. (The title "Team Training" will appear on the report card.)

723B Team Sports & Conditioning Junior—Spring 1/2 Credit

Team Sports and Conditioning (9-12) is an elective semester course designed to develop physical strength, endurance, coordination, agility, flexibility, balance, and speed in the skilled athlete. Selected students are provided an opportunity to develop these advanced skills in an area of personal preference. (The title "Team Training" will appear on the report card.)

724A Team Sports & Conditioning Senior—Fall 1/2 Credit

Team Sports and Conditioning (9-12) is an elective semester course designed to develop physical strength, endurance, coordination, agility, flexibility, balance, and speed in the skilled athlete. Selected students are provided an opportunity to develop these advanced skills in an area of personal preference. (The title "Team Training" will appear on the report card.)

724B Team Sports & Conditioning Senior—Spring 1/2 Credit

Team Sports and Conditioning (9-12) is an elective course designed to develop physical strength, endurance, coordination, agility, flexibility, balance, and speed in the skilled athlete. Selected students are provided an opportunity to develop these advanced skills in an area of personal preference. (The title "Team Training" will appear on the report card.)

Science

411 Earth/Space Science 1 Credit

Earth/Space Science (9-12) meets the Earth/Space science requirement as part of the 3-course Next Generation Science Standards (NGSS) sequence for Maryland high school graduation. The curriculum includes scientific process skills and content specified in the Next Generation Science Standards including materials and processes that shape a planet, Earth history, plate tectonics, astronomy, and interactions of hydrosphere and atmosphere. Students will study techniques used to investigate the universe and Earth, describe natural forces and apply them to the study of Earth/Space Science, analyze the dynamic nature of the geosphere, investigate methods that geologists use to determine the history of the Earth, and learn how the transfer of energy and mass affect Earth systems. Students will also study integrated performance expectations in the area of physical science to complete the NGSS standards requirement. Physical science topics included are: Newton's 2nd Law of motion, energy, magnetism, electricity, gravitation, waves, and electromagnetic radiation.

412 Environmental Science 1 Credit ***Prerequisite: Biology (432)***

Environmental Science (11-12) is an elective laboratory science course. The curriculum includes scientific process skills and content specified in the Next Generation Science Standards including the movement of matter and energy through the biosphere, interdependence of organisms with their biotic environment, relationships between humans and the Earth's resources, development and application of knowledge and skills gained from environmental issue investigation, culminating with a project which protects and sustains the environment.

412H Honors Environmental Science 1 Credit ***Prerequisite: Biology (432)***

Honors Environmental Science (11-12) is an elective laboratory science course. The curriculum includes scientific process skills and content specified in the Next Generation Science Standards including the movement of matter and energy through the biosphere, interdependence of organisms with their biotic environment, relationships between humans and the Earth's resources, development and application of knowledge and skills gained from environmental issue investigation, culminating with a project which protects and sustains the environment. Students enrolled in Honors Environmental Science will be expected to participate in the ACPS Envirothon training and competition events.

Science

413 Advanced Placement (AP) Environmental Science 1 Credit ***Prerequisite: Honors Biology (430) or Honors Chemistry (440)***

Advanced Placement (AP) Environmental Science (10-12) is an elective laboratory science course designed to be the equivalent of a first-year college environmental science course. The AP Environmental Science can be used to meet the Earth/space science requirement as part of the 3-course Next Generation Science Standards (NGSS) sequence for Maryland high school graduation. Students may earn college credit by passing the College Board AP Examination. The course syllabus approved by the College Board identifies the following topics for study: interdependence of earth systems, human population dynamics, renewable and nonrenewable resources, environmental quality, global order for this course to changes and their consequences, environmental trade-offs, and societal decision-making. Additional performance expectations dealing with space will be added to complete the NGSS standards requirement. Laboratory and field investigations will be required. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

414 Honors Earth/Space Science 1 Credit

Honors Earth/Space Science (9-12) meet the Earth/Space science requirement as part of the 3-course Next Generation Science Standards (NGSS) sequence for Maryland high school graduation. The curriculum includes the same scientific process skills and content specified in the Next Generation Science Standards from the academic Earth/Space Science course but with more in-depth study of the materials and processes that shape a planet, Earth history, plate tectonics, astronomy, and interactions of hydrosphere and atmosphere through the completion of an Honors Investigation Project each marking period. Students will study techniques used to investigate the universe and Earth, describe natural forces and apply them to the study of Earth/Space Science, analyze the dynamic nature of the geosphere, investigate methods that geologists use to determine the history of the Earth, and learn how the transfer of energy and mass affect Earth systems with quarterly student investigation projects. Students will also study integrated performance expectations in the area of physical science to complete the NGSS standards requirement. Physical science topics included are: Newton's 2nd Law of Motion, energy, magnetism, electricity, gravitation, waves, and electromagnetic radiation.

Science

423 Honors Anatomy and Physiology I (CCTE)

1 Credit

Honors Anatomy and Physiology I (11) is an elective laboratory science course at the Center for Career and Technical Education (CCTE) designed for students in the Academy of Health Professions. The content will provide an understanding of the structure and function of the integumentary, nervous, endocrine, lymphatic and reproductive systems. Basic concepts, including chemistry, cytology, disorders and diseases of the human body are emphasized. The laboratory work involves microscopic and physiology exercises and dissection of a fetal pig for the purpose of making comparisons to human anatomy. In addition, students will be introduced to researching and writing scientific papers. Students from other career programs may enroll in this course for a science credit.

430 Honors Biology

1 Credit

Honors Biology (9-12) is a Pre-AP science course that meets the life science requirement as part of the 3-course Next Generation Science Standards (NGSS) sequence for Maryland high school graduation. The curriculum includes scientific process skills and content as specified in the Next Generation Science Standards. This course provides an in-depth introduction to the structure and function of biological molecules, structure and function of cells and organisms, the inheritance of traits, the mechanisms of evolutionary change, and the interdependence of organisms in the biosphere. Honors Biology requires laboratory investigations and synthesis of content knowledge demonstrated by integration of reading and writing in research and laboratory reports. Honors Biology is a prerequisite for AP Biology (435) and highly recommended for students wishing to enroll in College Biology I (439). Students who enroll in Honors Biology in 9th or 10th grade are expected to enroll in College Biology or Advanced Placement science courses in Grades 11 and 12. This course is recommended for students who are considering continuing their education at a four-year college or university especially in a biological science or health field. Students will also study performance expectations in the area of physical science to complete the NGSS standards requirement. Topics in physical science are: periodic trends, electromagnetic forces, reaction rate, attraction and repulsion, energy, and digital storage. Upon completion of this course, students will take the Maryland Comprehensive Assessment Program (MCAP) science assessment. Starting in SY 2023-24, the Life Science MISA score will account for 20% of the final grade in this course for 2027 YOGs and beyond.

432 Biology

1 Credit

Biology (9-12) meets the life science requirement as part of the 3-course Next Generation Science Standards (NGSS) sequence for Maryland high school graduation. The curriculum includes scientific process skills and content as specified in the Next Generation Science

Science

Standards include structure and function of biological molecules, the structure and function of cells and organisms, the inheritance of traits, the mechanisms of evolutionary change, and the interdependence of organisms in the biosphere. All students must pass the Maryland Assessment. Students will also study performance expectations in the area of physical science to complete the NGSS standards requirement. Topics in physical science are: periodic trends, electromagnetic forces, reaction rate, attraction and repulsion, energy, and digital storage. Upon completion of this course, students will take the Maryland Comprehensive Assessment Program (MCAP) science assessment. Starting in SY 2023-24, the Life Science MISA score will account for 20% of the final grade in this course for 2027 YOGs and beyond.

434 Honors Anatomy and Physiology II (CCTE)

1 Credit

Honors Anatomy and Physiology II (12) is an elective laboratory course designed for Health Occupation students at the Center for Career and Technical Education (CCTE). The content will provide an understanding of the structure and function of the skeletal, muscular, circulatory, respiratory, digestive, and urinary systems. Students will gain knowledge in anatomy and physiology, diseases and abnormalities of the human body, and genetics. The laboratory work involves physiology exercises and cat dissection for the purpose of making comparisons to human anatomy. In addition, students will be introduced to researching and writing scientific papers. This course is part of an articulation agreement with Allegany College of Maryland; however, students from other career programs may enroll in this course for a science credit.

435 Advanced Placement (AP) Biology

2 Credits

Prerequisites: Honors Biology (430) and Honors Chemistry (440)

Advanced Placement (AP) Biology (11-12) is an elective, double-period laboratory science course designed to be the equivalent of a first-year college course. Students may earn college credit by passing the College Board AP Examination. The course syllabus approved by the College Board identifies the following topics for study: chemistry of life, cells, cellular energetics, heredity, molecular genetics, evolutionary biology, diversity of organisms, structure and function of plants and animals, and ecology. Laboratory investigations are required, including dissection. Successful completion of summer reading and writing assignments prior to the class is strongly recommended. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

437 Honors Genetics (AL, FO, MR) 1/2 Credit

Honors Genetics (11-12) is an elective semester college preparatory laboratory science course. The course is designed to introduce students to the foundations of genetics including cytogenetics, Mendelian, advanced human, mo-

Science

437 Honors Genetics (AL, FO, MR)

1/2 Credit

Honors Genetics (11-12) is an elective semester college preparatory laboratory science course. The course is designed to introduce students to the foundations of genetics including cytogenetics, Mendelian, advanced human, molecular using Chi Square and the Hardy Weinberg Law to explore population genetics. The sequencing of the Human Genome is studied as a tool that helps develop an understanding of individual patient or disease differences at the molecular or genetic level, enabling a tailored treatment program to be designed. The ethics of genetic testing will also be studied. The course requires a synthesis of content knowledge demonstrated by an integration of reading and writing processes in scientific research papers.

438 Honors Anatomy & Physiology (Comprehensive HS)

1/2 Credit

Honors Anatomy and Physiology (11-12) is an elective semester college preparatory laboratory science course. The course is designed for students pursuing a career in a medical field. The course will provide an understanding of the structure and function of the human body. Basic concepts, including chemistry, cytology, disorders, and diseases of the human body are emphasized. The laboratory work involves microscope investigations, physiology exercises, and dissection of a mammal for the purpose of making comparisons to human anatomy. The course requires a synthesis of content knowledge demonstrated by an integration of reading and writing processes in researching and writing scientific papers.

440 Honors Chemistry

1 Credit

Prerequisite: *Algebra I (341) or Algebra II (351) taken concurrently.*

Honors Chemistry (9-12) is a Pre AP laboratory science course and meets the physical science requirement as part of the 3-course Next Generation Science Standards (NGSS) sequence for Maryland high school graduation. This course prepares students for Advanced Placement Chemistry (445) and college chemistry. The curriculum emphasizes lab safety, extensive mathematical problem-solving and laboratory skills. Computer graphing techniques, probeware and graphical analysis software will be used to enhance the lab component of the course. The curriculum includes scientific process skills and content as specified in the Next Generation Science Standards including atomic theory, bonding, phases of matter, the periodic table, acids, bases, salts, solutions, chemical energy, structure and properties of compounds, thermochemistry, chemical formula writing, types of chemical reactions, balancing chemical equations and stoichiometry. Honors Chemistry is a prerequisite for AP Chemistry (455). Students who enroll in Honors Chemistry in 10th grade are expected to enroll in Advanced Placement science courses and/or Physics in Grades 11 and 12.

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Additional requirements include a synthesis of content knowledge demonstrated through an integration of reading and writing processes in quarterly projects, one of which is aligned with the American Chemical Society (ACS) competition. Students will also study performance expectations in the area of physical science to complete the NGSS standards requirement.

455 Advanced Placement (AP) Chemistry

2 Credits

Prerequisite: *Honors Chemistry (440)*

Advanced Placement (AP) Chemistry (11-12) is a double-period laboratory science course designed to be the equivalent of a first-year college chemistry course. Students may earn college credit by passing the College Board AP Examination. The course syllabus approved by the College Board identifies the following topics for study: atomic theory and atomic structure, chemical bonding, nuclear chemistry, states of matter, solutions, reaction types, stoichiometry, chemical equilibrium, chemical kinetics, thermodynamics and an introduction to organic chemistry. Emphasis is on chemical calculations, mathematical formulation of principles, and lab work. The course requires a synthesis of content knowledge demonstrated by an integration of reading and writing processes which are to be kept in a laboratory notebook. Successful completion of summer reading and writing assignments prior to the class is strongly recommended. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

Science

458 Matter and Energy

1 Credit

Matter and Energy (9-12) meets the physical science requirement as part of the 3-course Next Generation Science Standards (NGSS) sequence for Maryland high school graduation. The course provides an introduction to the scientific process skills and content specified in the NGSS including (but not limited to) atomic structure, bonding, phases of matter, the periodic table, chemical energy, Newtonian mechanics, work, energy, and power; mechanical waves and sound, thermodynamics; electricity, magnetism, and optics. The scientific process skills of observing, hypothesizing, experimenting, recording, analyzing, and communicating the results of laboratory investigations are emphasized throughout the course. The course emphasizes conceptual understanding of problem-solving and laboratory skills as students make observations, collect data, and record findings. Computer applications, probeware, and graphing techniques will be used to enhance the lab component of the course.

463 Honors Physics I

1 Credit

Prerequisites: Algebra (341)

Honors Physics I (11-12) is an elective laboratory science course. The curriculum includes scientific process skills and content as specified in the Next Generation Science Standards including the Newtonian mechanics, work, energy, and power; mechanical waves and sound. It will also introduce electric circuits and magnetism. The course emphasizes conceptual understanding of mathematical problem-solving and laboratory skills as they make observations, and collect and record data. Computer applications, probeware, and graphing techniques will be used to enhance the lab component of the course.

464 Honors Physics II

1 Credit

Prerequisites: Algebra (341)

Honors Physics II (11-12) is an elective laboratory science course. Physics concepts and skills are enhanced as students use laboratory equipment, probeware, and computer applications to collect and analyze data for engineering projects. Content areas include fluid mechanics; thermodynamics; electricity and magnetism; optics; and atomic and nuclear physics. Honors Physics requires laboratory investigations and synthesis of content knowledge demonstrated by integration of reading and writing of laboratory and engineering project reports.

Science

465 Advanced Placement (AP) Physics I

1 Credit

Prerequisites: Algebra (341)

AP Physics I (11-12) is an elective laboratory science course designed to be the equivalent of a first-semester college Physics course. Students may earn college credit by passing the College Board AP Examination. The course is Algebra-based and the syllabus approved by the College Board identifies the following topics for study: Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; mechanical waves and sound. It will also introduce electric circuits. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

467 Advanced Placement (AP) Physics II

1 Credit

Prerequisites: AP Physics I or the equivalent

AP Physics II (11-12) is an elective laboratory science course designed to be the equivalent of a second-semester college course. Students may earn college credit by passing the College Board AP Examination. The course is Algebra-based and the syllabus approved by the College Board identifies the following topics for study: fluid mechanics; thermodynamics; electricity and magnetism; optics; and atomic and nuclear physics. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

Social Studies

201 Local, State and Federal Government 1 Credit

Local, State and Federal Government (10-12) is a required course. The basis for this course is the Maryland State Curriculum, which includes purposes, forms, types of political and economic structures; foundations and principles of government and the constitution; legislative branches (national, state and local); executive branches (national, state and local); judicial branches (national and state); domestic and foreign policy; and participation in government. Students enrolled in this course will be required to take the Maryland High School Government Assessment. This is an end-of-course exam that will count for 20% of the final course grade.

203 Honors Historical Research Methods I 1 Credit

Honors Historical Research Methods I (11-12) is an elective course that introduces students to the process of independent research requiring the use of primary and secondary resources. Students may also be instructed in oral history methodology, including the development of interviewing and transcribing skills. Additionally, students may be instructed in practices and skills related to broadcast journalism and apply such practices and skills as they report on current events. Students will apply their research skills to develop a historical product (s) on local, state, or national history.

204 Honors Historical Research Methods II 1 Credit

Prerequisite: Honors Historical Research Methods I (203) or a C or higher in AP U.S. History

Honors Historical Research Methods (12) is an elective course that is designed for students who desire to continue the course of study used in researching history on the national, state, and local levels. The course is an in-depth study of a particular historical topic for the duration of the school year. Students will be required to conduct historical research that will integrate writing, reading, and technology skills resulting in a historical product (s). Additionally, students may be instructed in practices and skills related to broadcast journalism and apply such practices and skills as they report on current events.

Social Studies

205 Advanced Placement (AP) United States Government and Politics 1 Credit

AP United States Government and Politics (10-12) provides an analytical perspective on government and politics in the United States. This course may be used to fulfill the 201 LSF Government requirement. This course involves both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. political reality. The course must follow certain topics generally covered in college courses. Students may earn college credit hours by passing the College Board AP Examination. Successful completion of summer reading assignments is recommended. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

211 Honors Government 1 Credit

Honors Government (10) is an elective course that prepares students for future Advanced Placement coursework. This course may be used to fulfill the 201 LSF Government requirement. The Maryland curriculum for Government dictates the skills and content covered in this honors course. The curriculum includes all of the content identified for 201 LSF Government. Students will be expected to complete detailed writing assignments, research projects, and activities that require collaboration and critical thinking beyond that of a standard government course. Successful completion of summer assignments is recommended. Each quarter, honor students are required to complete a project designed to supplement, reinforce, and extend key concepts and skills. These projects will account for 10% of a student's grade. Additionally, students in this course must take the Maryland High School Government Assessment, end-of-course exam that will count for 20% of the final course grade.

213 AP Human Geography 1 Credit

AP Human Geography (11-12) is an elective course which will introduce students to the systematic study of patterns and processes that have shaped human understandings, use, and alteration of the Earth's surface. Students employ spatial concepts and landscape analysis to analyze human social organizations and their environmental consequences. Course content is aligned to the recommendations of the College Board AP Human Geography Examination Course. Students may earn college credit hours by passing the College Board AP Examination. Successful completion of summer assignments is recommended. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

Social Studies

220 AP World History: Modern 1 Credit

AP World History: Modern (11-12) is an introductory college-level modern world history course. Students cultivate their understanding of world history from c. 1200 CE to the present through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation. (College Board, 2019). This course may be used to fulfill the 222 Modern World History requirement and students may earn college credit hours by passing the College Board AP Examination. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

222 Modern World History 1 Credit

Modern World History (11-12) focuses on developing students' understanding of world history from approximately 1300 to the present. In world history students interpret evidence and identify significant trends in order to understand major developments across the globe. Students will explore how humans have thought, behaved and interacted across the ages in order to develop an understanding of global patterns of change and continuity. Students of world history study specific people, events, and ideas by situating them in global, interregional, and regional contexts. Organizationally, world history requires students to shift between global, interregional, and regional spatial scales in order to emphasize interactions between different scales of historical study and to identify connections across time and geography. (MSDE, 2019).

223 Economics 1/2 Credit

Economics (11-12) is an elective semester course that examines how goods and services are produced and distributed in different economic systems. Economic policy within the United States, including the role of the Federal Reserve (monetary policy) and Congress (fiscal policy) are examined. Students also study stock markets and their role in free market economies. Within the stock market unit, students participate in a 10-week simulation that creates competition with other schools in the state of Maryland.

Social Studies

242 Honors Modern World History 1 Credit

Honors World History (11) is an elective course that prepares students for future Advanced Placement coursework. This course may be used to fulfill the 222 World History requirement. The Maryland Content Standards and Core Learning Goals for world history dictate the skills and content covered in this honors program that provides for a comprehensive survey of the political, economic, social, and cultural history of the world from approximately 1300 to the present. A strong focus of the honors course will be on skills and processes. Students will analyze and synthesize information from primary and secondary sources of information as they learn to write and support thesis statements via citing text-based information. Additionally, each quarter, honor students are required to complete a project designed to supplement, reinforce, and extend key concepts and skills. These projects will account for 10% of a student's grade.

243 United States History 1 Credit

United States History (9-12) is a required course for all students. The Maryland Curriculum for United States History determines the content, which includes the social, economic, and political growth of the United States from the Progressive response to industrialization through the early 21st century. Throughout the course, students will interpret historical evidence, identify significant trends, and examine the major turning points that define the modern American experience.

Social Studies

243H Honors United States History

1 Credit

Honors United States History (9) is an elective course which fulfills the United States History requirement. The Maryland Curriculum for United States History determines the content, which includes the social, economic, and political growth of the United States from the Progressive response to industrialization through the early 21st century. A strong focus of the honors course will be on skills and processes. Students will analyze and synthesize information from primary and secondary sources of information as they learn to write and support thesis statements via citing text-based information. Students will learn that writing in history is a process. Students will be exposed to multiple resources, including Mini-DBQs, the National Archives, the Stanford History Group, etc. Additionally, each quarter, honor students are required to complete a project designed to supplement, reinforce, and extend key concepts and skills. These projects will account for 10% of a student's grade.

244 Advanced Placement (AP) United States History

1 Credit

Prerequisites: *Local, State and Federal Government (201 or 211) and United States History (243 or 243H)*

Advanced Placement (AP) US History (11-12) is an elective course that is designed to provide students with analytical skills and factual knowledge necessary to deal critically with the problems and resource materials of United States history (course content is aligned to the recommendations of the College Board). Students will learn to analyze and interpret print and non-print primary sources, including documentary materials, maps, statistical tables, and pictorial and graphic evidence of historical events. In addition, students will be able to compare points of view and apply multiple perspectives to negotiate and reach consensus with others as needed to facilitate responsible decision-making. There will be an increasing emphasis on written assignments and analytical/research papers. Students may earn college credit hours by passing the College Board AP Examination. Successful completion of summer assignments is recommended. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

Social Studies

253 Psychology

1 Credit

Psychology (11-12) is an elective course which focuses on the study of behavior with emphasis on understanding the self and others. A wide range of psychological tools are utilized, including personality testing, learning techniques, and experimentation.

254 Advanced Placement (AP) Psychology

1 Credit

Advanced Placement (AP) Psychology (11-12) is the systematic and scientific study of the behavior and mental processes of human beings. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major sub fields within psychology. Students will also learn the methods psychologists use in their science and practice. Students may earn three college credit hours, the equivalent of an introductory college class, by earning a qualifying score on the College Board's AP Examination. Successful completion of summer assignments prior to the class is recommended. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

264 Contemporary World Issues

1 Credit

Contemporary World Issues (12) is an elective course which emphasizes: (1) government, (2) social, political, and economic issues, and (3) other current issues as they occur. In addition, a detailed study will be made on an issue or topic of the student's choosing. An important aspect of this course is the development and application of critical thinking skills and problem solving.

274 Criminal Justice Today

1 Credit

Criminal Justice Today (11-12) is an elective course designed to introduce students to the American criminal justice system through topics such as law enforcement, the correctional system, and the judicial system. Students will be expected to demonstrate an understanding of the rights and freedoms protected by the Constitution, learn about various theories that attempt to explain crime and criminals, learn about the history and structure of the criminal justice system and discuss contemporary issues challenging the criminal justice system.

Special Education

140M Modified English

0 Credit

The 140M Modified English course teaches the basic skills of reading, writing, and speaking as required for daily living. The purpose of this course is to prepare the student to function as independently as possible. Students will acquire basic reading and writing skills and explore a variety of media to obtain information and to read for pleasure. Students will answer questions about information, understand the main idea of passages, sequence events and information in passages, and define vocabulary in modified reading material. Strategies and modifications are incorporated into the course which may be aligned to goals and objectives on a student's Individualized Education Plan. Curriculum is adapted to meet alternate learning outcomes. This course is reserved for students working toward a Maryland High School Certificate and does not offer course credit.

200M Modified Social Studies

0 Credit

The 200M Modified Social Studies course is designed to familiarize the student with basic information on how to function as a member of a community. Legal issues, good citizenship, and the basic tenets of the political process at the local, state and federal level are covered. Exploration of authentic documents is emphasized to study United States history and world culture. Strategies and modifications are incorporated into the course which may be aligned to goals and objectives on a student's Individualized Education Plan. Curriculum is adapted to meet alternate learning outcomes. This course is reserved for students working toward a Maryland High School Certificate and does not offer course credit.

300M Modified Math

0 Credit

The 300M Modified Math course is designed to provide instruction in functional skills in mathematics. The course focuses on preparing students to be as independent as possible in life skills involving basic math skills. Acquisition of basic math skills to solve math equations, interpret data, and solve real word math problems using modified math content will be emphasized. Strategies and modifications are incorporated into the course which may be aligned to goals and objectives on a student's Individualized Education Plan. Curriculum is adapted to meet alternate learning outcomes. This course is reserved for students working toward a Maryland High School Certificate and does not offer course credit.

400M Modified Science

0 Credit

The 400M Modified Science course is designed to familiarize the student with scientific concepts which relate to independent living. Basic skills in the areas of physical, life, and environmental sciences are presented. Strategies and modifications are incorporated into the course which may be aligned to goals and objectives on a student's Individualized Education Plan. Curriculum is adapted to meet alternate learning outcomes. This course is reserved for students working toward a Maryland High School Certificate and does not offer course credit.

Special Education

500M Modified Fine Arts

0 Credit

The 500M Modified Fine Arts class is designed to provide students exposure to a variety of art medium and technique, design, musical styles, and a wide continuum of fine art studies. The principles of this course are designed to help students choose activities that lead to enjoyable and fulfilling leisure time. Strategies and modifications are incorporated into the course which may be aligned to goals and objectives on a student's Individualized Education Plan. Curriculum is adapted to meet alternate learning outcomes. This course is reserved for students working toward a Maryland High School Certificate and does not offer course credit.

800M Modified Family Consumer Science

0 Credit

The 800M Modified Family Consumer Science course is designed to enable the student to function as independently as possible in the areas of home management and life skills. Strategies and modifications are incorporated into the course which may be aligned to goals and objectives on a student's Individualized Education Plan. Curriculum is adapted to meet alternate learning outcomes. This course is reserved for students working toward a Maryland High School Certificate and does not offer course credit.

890M Modified Tech Ed

0 Credit

The 890M Modified Technology Education course is designed to enable the student to function as independently as possible in the area technology, keyboarding, and basic principles of computers. Strategies and modifications are incorporated into the course which may be aligned to goals and objectives on a student's Individualized Education Plan. Curriculum is adapted to meet alternate learning outcomes. This course is reserved for students working toward a Maryland High School Certificate and does not offer course credit.

002, 003, 004, 005 Comprehensive Study Skills

1 Credit

Comprehensive Study Skills (9-12) is an elective course designed to provide training in developing the learning strategies and study skills important for success in school. The course focuses on remembering information, reading and taking notes from textbooks, interpreting graphic aids, taking notes in class, and making good use of study time and space. Students will become aware of the importance of preparing and taking tests, using reference sources, writing research papers, pronouncing unfamiliar words, finding main ideas in the printed text, learning new word meanings and spelling new words. A variety of instructional techniques will be utilized to allow students to become more independent and have the ability to problem solve daily study and organizational challenges within the school setting. This course requires the permission of the instructor.

Special Education

009A, 009B, 009C, 0009D Affective Education

1 Credit

Affective Education (9-12) is an elective course designed to develop appropriate interpersonal skills essential for social and emotional growth. The course focuses on self-concept, communication skills, problem-solving skills, self-control, and goal setting. Students will become more aware of the importance of self-esteem and positive choices. A wide range of teaching strategies, including positive modeling of social skills, and role-playing are utilized. The course requires permission from the instructor.

010 Conflict Resolution

1 Credit

Conflict Resolution (9-12) is an elective course designed to provide multiple ways of handling conflict. The course focuses on strategies for de-escalating, collaborating, compromising, avoidance, delaying, etc. Students will become aware of the importance of self-control and positive choices in dealing with conflict. Various instructional strategies are used in the course and may include social skills practice and role-playing. The course requires permission from the instructor.

011 Skill Streaming

1 Credit

Skill Streaming (9-12) is an elective course designed to develop appropriate emotional and behavioral reactions. The course allows students to develop competence in dealing with inner personal conflicts, using self-control, and contributing to a positive school climate. Students can refine techniques in 50 pro-social skill areas including responding to failure, bullying prevention, stress management, and goal setting. The course requires permission from the instructor.

498 Personal-Social Skills

0 Credit

Personal-Social Skills (9-12) is an elective course designed to provide training in self-awareness, self-confidence, socially responsible behavior, effective interpersonal skills, independence, problem-solving skills, and communicating with others. This course is designed for students working toward a Maryland High School Certificate.

499 Career Exploration

0 Credit

Career Exploration (9-12) is an elective course designed to provide skills to identify career options. Students will expand upon career interest by completing interest inventories, defining work skills, world of work vocabulary, and career goals. Students will review functional skills needed for jobs including basic math, reading, and work environment social skills. Students will practice completing job applications and identifying job preparation skills. Students will receive exposure to job related tasks in the school setting. This course is designed for students working towards a Maryland High School Certificate.

Special Education

499 Career Exploration

0 Credit

Career Exploration (9-12) is an elective course designed to provide skills to identify career options. Students will expand upon career interest by completing interest inventories, defining work skills, world of work vocabulary, and career goals. Students will review functional skills needed for jobs including basic math, reading, and work environment social skills. Students will practice completing job applications and identifying job preparation skills. Students will receive exposure to job related tasks in the school setting. This course is designed for students working towards a Maryland High School Certificate.

725 Adaptive Physical Education

0 Credit

Adaptive Physical Education (9-12) provides developmental activities, games, sports, suited to the interests, capacities, and skill level of students with disabilities. This course does not fulfill the physical education graduation requirement for students with disabilities who can participate in 711 Physical Education with accommodations. This course is designed for students working towards a Maryland High School Certificate.

726 Transition to College

0 Credit

Transition to College at Allegany College of Maryland (ACM) provides job training skills for students who are working towards a Certificate of Completion and wish to continue transition education through age 21. Students will participate in job embedded practices that include Breaking Barriers, Life Skills Enrichment, Road to Success, Vocational Readiness and Skills & Concepts for Employment and Independent Living. This course is designed for students working towards a Maryland High School Certificate.

Technology Education

ADVANCED TECHNOLOGY OFFERINGS:

Advanced Tech Classes cannot be used in place of the required Technology Education Credit.

873 Communication Technology 1/2 Credit

Communication Technology (10-12) is an elective course designed for all students who plan to follow a career in any field that requires reacting to and/or interpretation of technical drawings (e.g., architectural and mechanical design) or the reproduction of all printed material. Hands-on projects include the use of basic graphic design and production. Students will be able to create projects that are of high interest while learning valuable skills.

875 Manufacturing Technology 1/2 Credit

Manufacturing Technology (10-12) is an elective course that emphasizes background in equipment, layout, production tooling skills, work assignments, industrial and managerial safety requirements, raw industrial materials, inventory requirements, machine utilization, and management schedules through the completion of projects. Hands-on activities are incorporated into the course as students create multiple projects that are relevant and of high interest while incorporating manufacturing technology principles.

Technology Education

877 Construction Technology 1/2 Credit

Construction Technology (10-12) is an elective course in which students develop a basic understanding of carpentry, electrical and plumbing techniques, skills that are essential to prepare students for unforeseen issues that may arise as a homeowner. Students will work to construct individual projects, as well as larger group projects incorporating construction technology principles.

World Language

171 French I

1 Credit

French I (9-12) is an elective course in which students learn to communicate about daily life and routine activities, while developing skills of listening, speaking, reading, writing, and using memorized or familiar material. Cultural emphasis will be on greeting, leave-taking, and expressing wants as students attempt to create with the language. Course content will include word order, numbers, common adjectives, adverbs, and question words.

172 French II

1 Credit

Prerequisite: *French I (171)*

French II (10-12) is an elective course which emphasizes everyday survival topics (e.g. personal information, restaurants, asking and giving directions, shopping and money matters, transportation, phone). Courtesy and social requirements are also emphasized with students working on combining one or two word answers from Level I into short sentences.

173 Honors French III

1 Credit

Prerequisites: *French I (171) and French II (172)*

Honors French III (11-12) is an elective honors course. Students participate in face-to-face conversations on familiar topics. Students learn to expand written assignments into paragraphs while expressing preferences and opinions on topics of interest.

174 Honors French IV

1 Credit

Prerequisites: *French I (171), French II (172) and Honors French III (173)*

Honors French IV (12) is an elective honors course. Students begin to discern main ideas and details from conversation regarding current events, weather reports, advertisements, newscasts, etc. Students can initiate conversations, explain topics of interest in detail, and narrate in a variety of tenses. The productive skills of speaking and writing receive more attention than the receptive skills of listening and reading.

181 Spanish I

1 Credit

Spanish I (9-12) is an elective course in which students learn to communicate about daily life and routine activities, while developing skills of listening, speaking, reading, writing, and using memorized or familiar material. Cultural emphasis will be on greeting, leave-taking, and expressing wants as students attempt to create with the language. Course content will include word order, numbers, common adjectives, adverbs, and question words.

182 Spanish II

1 Credit

Prerequisite: *Spanish I (181)*

Spanish II (9-12) is an elective course which emphasizes everyday survival topics (e.g. personal information, restaurants, asking and giving directions, shopping and

World Language

money matters, transportation, phone). Courtesy and social requirements are also emphasized with students working on combining one or two word answers from Level I into short sentences.

183 Honors Spanish III

1 Credit

Prerequisites: *Spanish I (181) and Spanish II (182)*

Honors Spanish III (10-12) is an elective honors course. Students participate in face-to-face conversations on familiar topics. Students learn to expand written assignments into paragraphs while expressing preferences and opinions on topics of interest.

184 Honors Spanish IV

1 Credit

Prerequisites: *Spanish I (181), Spanish II (182) and Honors Spanish III (183)*

Honors Spanish IV (11-12) is an elective honors course. Students begin to discern main ideas and details from conversation regarding current events, weather reports, advertisements, newscasts, etc. Students can initiate conversations, explain topics of interest in detail, and narrate in a variety of tenses. The productive skills of speaking and writing receive more attention than the receptive skills of listening and reading.

185 Honors Spanish V

1 Credit

Prerequisites: *Spanish I (181), Spanish II (182), Honors Spanish III (183) and Honors Spanish IV (184)*

Honors Spanish V (12) is an elective honors course. Students engage in reading for literary appreciation and for information in order to prepare oral and written reports. Grammar is reviewed and discussed as the students' weaknesses are revealed. Creative writing and long-range individual projects on selected topics are expected.

186 AP Spanish

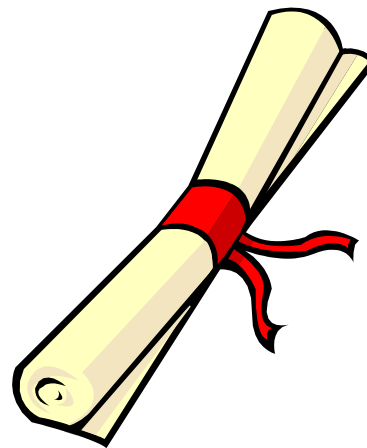
1 Credit

Prerequisites: *Spanish I (181), Spanish II (182) and Spanish III (183)*

AP Spanish Language (11-12) prepares students to demonstrate their level of Spanish proficiency across three communicative modes (Interpersonal [interactive communication], Interpretive [receptive communication], and Presentational [productive communication]), and the five goal areas outlined in the *Standards for Foreign Language Learning in the 21st Century* (Communication, Cultures, Connections, Comparisons, and Communities). The course is meant to be comparable to third year (fifth or sixth semester) college and university courses that focus on speaking and writing in the target language at an advanced level. This course is weighted for GPA at the 5.0 level. Students enrolled in this course are required to take a district comprehensive final examination that will be worth 10% of their final grade.

Section V

Dual Enrollment/ Early College Offering



Procedures for Dual Enrollment Course Selection

- During spring course selection, Grade 11 students (exception P-TECH and Maryland Leads Teacher Education students) with satisfactory credits, assessment requirements, and other eligibility criteria met may enroll in the Dual Enrollment Program for the subsequent school year.
- To be eligible for dual enrollment courses, ACM allows a 3.0 unweighted GPA as the criteria for eligibility. For College Algebra the student must have a “B” or higher. FSU requires successful completion of their college placement test. Any exception to these requirements will be the discretion of the college or university. Upon meeting eligibility requirements, the school guidance counselor will verify that the student’s schedule accurately reflects the college course (s).
- To be eligible for dual enrollment courses, students must have a 90% attendance rate or higher for the year proceeding dual enrollment. Otherwise, the school principal must approve a written request from the parent/student for the student to enroll in the dual enrollment program.
- Students in any dual enrollment program offered in an ACPS school are required to attend the college classes M-F for the entire semester. To be marked present, a student must be in attendance. All dual enrollment courses are M-F. Instruction, work time, and support are provided on these days. Any student missing a day will be marked absent and a note will be required by the attendance office. The ACPS will follow the attendance policy for early college students.
 - The student is required to attend every class session.
 - The student is required to follow the course syllabus and program requirements.
 - Permission to make up absences will be granted only at the instructor’s discretion.
 - The instructor may require evidence to justify an absence.
 - Absences may adversely affect a student’s grade in a course.
 - If a student’s absences endanger the progress in a course, the instructor may drop the student from the class roster.
- As a student in the dual enrollment program, students are enrolled in two places: Allegheny County Public Schools (ACPS) and a college (ACM or FSU). Successful completion of Dual Enrollment courses outlined in the Program of Study awards a student ACPS credit and local college credit. The dual enrollment course will be part of the high school GPA.
- Students enrolled in Dual Enrollment courses may participate in extra curricular activities. Information on Dual Enrollment courses is found in Section V in the Program of Study.
- During course selection, juniors will choose college dual enrollment course (s).
- The college/university should directly invoice the Board of Education for tuition costs. Parents will not pay tuition costs for courses available through the dual enrollment program in ACPS. The Board of Education will make payment for the tuition invoiced amount directly to the college/university.

Dual Enrollment/ Early College

AUTO TECHNOLOGY (CCTE ONLY)

950F Advanced Automotive Brakes

1 Credit and 2 College Credit Hours

Automotive Brakes (12) is a dual enrollment elective available to seniors enrolled in the Auto Technology CTE Program at CCTE. This course studies the construction and operation of base brake systems: hydraulic systems, servo and non-servo brake systems, power brake systems and front and rear disc brakes systems. Rotor and drum machining and servicing of all of the components of the brake system is included. This course will be offered during the Fall semester only.

950S Advanced Steering and Suspension (CCTE Only)

1 Credit and 4 College Credit Hours

Steering and Suspension (12) is a dual enrollment elective available to seniors enrolled in the Auto Technology CTE Program at CCTE. Study of the construction, operation, and maintenance of the various suspensions and steering units, steering gears, constant velocity joints, and front and rear axle assemblies. It includes the theory, service and troubleshooting of computerized suspension systems and traction control systems, and also covers computerized 4-wheel alignment. This course will be offered during the Spring semester only.

COMPUTER SCIENCE

038 College Computer Literacy

1 Credit and 3 College Credit Hours

College Computer Literacy (12) is an elective course which qualifies for dual credit. Students completing this course will receive both high school and college credit, and course grades will be calculated into both GPAs. Students will acquire and demonstrate proficiency in their understanding of basic computer terminology, the use of basic operating system features, e-mail, internet, word processing, spreadsheets, data-bases, and presentation software. This is an online learning opportunity for senior students who are self-motivated learners. Students enrolled as seniors at CCTE during the 2019-2020 school year in the IT Networking Program are encouraged to take this course, and all P-TECH students are required to take this course prior to the end of the 10th grade year. Note: This course will be offered in an asynchronous, online format.

Dual Enrollment/ Early College

039 College Computer Logic

1 Credit and 4 College Credit Hours

College Computer Logic (12) is an elective course which qualifies for dual credit. Students completing this course will receive both high school and college credit, and course grades will be calculated into both GPAs. This is the first course in the study of computer programming languages. Topics include details of computer logic, data storage and concepts, computer arithmetic, control structures, and file processing concepts. Major emphasis will be given to computer programming problem analysis and planning with structured flow charting techniques. Several common programming languages will be explored. This is an online learning opportunity for senior students who are self-motivated learners. Students enrolled as seniors at CCTE during the 2019-2020 school year in the IT Networking Program are encouraged to take this course, and all P-TECH students in the four year pathway are required to take this course during the 10th grade year. Note: This course will be offered in an asynchronous, online format.

ECONOMICS

280 College Principles of Macroeconomics

1 Credit and 3 College Credit Hours

College Principles of Macroeconomics (12) is an elective course offered in ACPS high schools. College credit is awarded through Allegany College of Maryland. An introduction to basic economic concepts regarding demand and supply, comparative economic systems, and national accounts, employment theory, and fiscal and monetary policy, emphasizing the interplay of households, business, and government in various economic situations. Note: This course will be offered in an asynchronous, online format.

ENGLISH

134 College English

1 Credit and 3 College Credit Hours

Prerequisite: Appropriate placement assessment scores for reading and writing.

Corequisite: Reading 93 may be taken concurrently with English 101 as a corequisite if all other prerequisites have been met.

College English (12) introduces senior students to different modes of exposition, including narration, comparison/contrast, and cause and effect. The brief essay is emphasized. Students are also instructed in the use of the library and basic research tools, emphasizing documentation of sources and avoidance of plagiarism. A final essay and objective examinations are required. Students must select the ACPS college course and register with the college/university to receive college credit.

Dual Enrollment/ Early College

ENGLISH

136 College Speech

1 Credit and 3 College Credit Hours

College Speech (12) is a survey course incorporating intrapersonal, interpersonal, and public speaking. A student will acquire theory and develop skills in interviewing, small group discussing, and informative/persuasive speaking. Students must select the ACPS college course and register with the college/university to receive college credit.

138 College Intro to Literature

1 Credit and 3 College Credit Hours

College Intro to Literature (12) is a thematic study of literature, looking across genres and cultures at contemporary topics, designed to engage students in the careful reading and critical analysis of imaginative literature. Continued development of writing skills, especially literary criticism, is fostered. Students must select the ACPS college course and register with the college/university to receive college credit.

MATH

386 College Differential Equations

1 Credit and 4 College Credit Hours

Prerequisite: *Passing grade in Math 389 College Calculus III*

College Differential Equations (11-12) is an elective course which qualifies for dual credit. Topics include solution of equations of order one with elementary applications; linear differential equations—homogeneous and nonhomogeneous equations; variations of parameters; inverse differential operators; and Laplace transforms. A graphing calculator, such as a TI-84, may be required. (Students need one credit of math each year to meet the four year math requirement.)

388 College Calculus II

1 Credit and 4 College Credit Hours

Prerequisite: *In order to take College Calculus II, students must earn a passing score on the AP Calculus AB Exam or by passing College Calculus I.*

College Calculus II (11-12) is an elective course which qualifies for dual credit. Topics include a hyperbolic functions, further techniques of integration, polar coordinates, parametric equations, and infinite series. A graphing calculator, such as TI-84, may be required. (Students need one cred of math each year to meet the four year math requirement)

Dual Enrollment/ Early College

389 College Calculus III

1 Credit and 4 College Credit Hours

Prerequisite: *Passing grade in Math 388 College Calculus II*

College Calculus III (11-12) is an elective course which qualifies for dual credit. Topics include a continuation of application of the definite and indefinite integral along with transcendental and hyperbolic functions, further techniques of integration, polar coordinates, parametric equations, and infinite series. A graphing calculator, such as a TI-84, may be required. (Students need one credit of math each year to meet the four year math requirement.)

395 College Algebra

1 Credit and 3 College Credit Hours

Prerequisite: *In order to take College Algebra, students must have a 3.0 or higher unweighted GPA and a grade of B or higher in Algebra II or a C or better in Honors Algebra II.*

College Algebra (12) begins with a review of topics in intermediate algebra such as operations with exponents, radicals, and solutions of the linear and quadratic equations. The course progresses through the study of functions, solving and graphing equations, and solutions to systems of equations. Topics will be taught with a focus on problem solving and applications. This course reflects the importance the outside world places on thinking and problem solving. Students engage in solving realistic problems using information and the technological tools available in real life. A graphing calculator, such as a TI-84 may be required. (Students need one credit of math in their senior year to meet the four year math requirement.)

397 College Probability and Statistics

1 Credit and 3 College Credit Hours

Prerequisite: *Students must have attained College and Career Readiness (CCR) status by any acceptable CCR measure.*

College Probability and Statistics (12) is an elective course which qualifies for dual credit. Topics include basic probability concepts, descriptive statistics, and inferential statistics. Students will conduct an independent project and prepare an analysis in both descriptive and inferential statistics as part of this course. Scientific and graphing calculators play an integral role in the development of the topics. (Students need one credit of math in their senior year to meet the four year math requirement.)

Dual Enrollment/
Early College

SCIENCE
431 College Biology I **2 Periods**
1 Credit and 4 College Credit Hours

College Biology I (12) is an elective semester laboratory science course offered in ACPS high schools. This course is a double period course (fills 2 periods in student's schedule). The course is designed to provide an introduction to the general characteristics and basic concepts of living organisms, which include the cell, chemical aspects, physical aspects, energy flow, homeostasis, and genetics. College Biology I is considered a general education course accepted at most University of Maryland colleges and universities.

439 College Biology II **2 Periods**
1 Credit and 4 College Credit Hours

Prerequisite: College Biology I (439)
College Biology II (12) is an elective semester laboratory science course offered in ACPs high schools. This course is a double period course (fills 2 periods in a student's schedule). The course is a continuation of College Biology I and includes the diversity of living organisms, evolution, ecology. Laboratory work involves dissection of organisms. College Biology II may or may not be accepted by University of Maryland colleges and universities as a general education course. Students should check with their chosen college or university to determine whether College Biology II will fulfill the course requirements for their major program of study.

453 College Chemistry I **2 Periods**
1 Credit and 4 College Credit Hours

College Chemistry I (12) is an elective semester laboratory science course offered in ACPs high schools. This course is a double period course (fills 2 periods in student's schedule). The course is designed as a study of the fundamental principles of chemistry, including the structure of matter, the periodic table, energy relationships, and the chemistry of some of the common elements and their compounds. College Chemistry I is considered a general education course accepted at most University of Maryland colleges and universities.

245 College US History I

1 Credit and 3 College Credit Hours

College United States History (12) is an elective semester course offered in ACPs high schools. The curriculum provides for a survey of various forces on American life ranging from European background to the close of Reconstruction. Students will earn 3 college credit hours upon successful completion of the course.

Dual Enrollment/
Early College

246 College US History II
1 Credit and 3 College Credit Hours

College United States History II (12) is an elective semester course offered in ACPS high schools. This survey course is a study of industrial, economic, political, and social developments in the United States from the end of Reconstruction to modern times, including an analysis of conflicts which have shaped contemporary events. Students will earn 3 college credit hours upon successful completion of the course.

255 College Psychology

1 Credit and 3 College Credit Hours

College Psychology (12) is an elective course offered in ACPS high schools. The curriculum is a survey of the nature and purpose of psychology, the dynamics of adjustment, sensory development, psychometry, and the application of psychological knowledge to practical problems. Students will earn 3 college credit hours upon successful completion of the course.

281 College Sociology

1 Credit and 3 College Credit Hours

College Sociology (12) is an elective course offered in ACPs high schools. College credit is awarded through Allegany College of Maryland. The curriculum consists of an overview of principles of sociology using empirical knowledge and the application of the scientific method. Basic principles of social interaction, social roles, organization, processes, stratification, social change, group dynamics, and valuation will be reviewed. Students will earn 3 college credit hours upon successful completion of the course.

913D College Criminal Law

**1 Credit and 3 College Credit Hours
(FALL SEMESTER)**

A study of substantive criminal law as it is applied at local, state and federal levels. Elements of crimes as prosecuted in a court of law are examined, and court decisions are used to study the sources and types of criminal laws. This course is an online opportunity for students enrolled in the Criminal Justice/Law Enforcement Program at CCTE only.

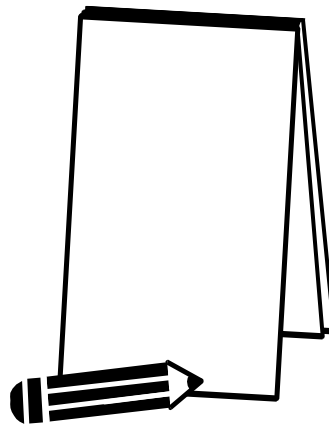
913E College Criminal Evidence and Procedure

**1 Credit and 3 College Credit Hours
(SPRING SEMESTER)**

Examines the principles and techniques of criminal procedure employed during trials to determine the admissibility of physical and testimonial evidence. An analysis of laws and court decisions relating to the admissibility is emphasized. This course is an online opportunity for students enrolled in the Criminal Justice/Law Enforcement Program at CCTE only.

Section VI

General Scheduling



ACPS High School Scheduling and Dual Enrollment Timeline for 2025-2026 Academic School Year

February 5- February 21	Counselors visit classrooms (in-person or virtually) to speak with students in grades 8-11 about graduation requirements and course selection.		
	CCTE counselor visits comprehensive high schools for recruitment presentation to 10th grade students.		
February 24– March 3	Students select courses on-line in ASPEN.		
	Once the course selection window is closed, counselors meet with each student in grades 8 – 11 to verify student requests and to update the four year plan.		
March 4 – March 17	Principals, counselors and supervisors review student requests to determine course offerings, number of sections needed for each course, and to assess staffing needs.		
March 18 - March 25	Principal and counselor attend Build Meeting at the Board. Teachers will be assigned and the framework for the Master Schedule will be developed.		
	March 18	9:00–11:00	Mountain Ridge
	March 19	9:00-11:00	CCTE
	March 20	9:00-11:00	Fort Hill
	March 25	9:00-11:00	Allegany
April/May	Once the master schedule is built, counselors review student schedule conflicts and meets with students to resolve conflicts, amend and/or select alternate courses.		
May	Counselor disseminates summer school information for students needing credit Recovery or for those planning to take original credit Summer School.		
June*	Counselor reviews student course failures and reschedules failed courses as needed.		
	Counselor adjusts student schedules upon changes in staffing.		
August 11	School's schedule is finalized, and student schedules are posted.		
August	Counselor makes schedule changes upon student/parent request.		

*Because students and parents can view schedules on-line, paper copies will not be printed and distributed in June.

**Students transferring in from out-of-county or out-of-state placements with weighted courses recognized by the College Board or an accredited college or university will be assigned weighted credit in the following manner:

100H	Honors course	1 credit	050H	Honors course	½ credit
100A	AP/College course	1 credit			

Allegany County Public Schools Transition Activities for Students Moving from Middle to High School:

- Classroom presentation to all 8th grade students on high school course selection, graduation requirements and the effects of these choices on post-secondary education are conducted by the middle school and high school counselors.
- A parent presentation on high school course selection, graduation requirements and the effects of these choices on post-secondary education is conducted by the middle school and high school counselors.
- Middle School Counselors meet individually with each 8th grade student to review course selections, discuss high school and post-secondary education goals, and complete a tentative Four Year High School Plan.
- A transition meeting for each 8th grade special education student is held at the high school to discuss proper placement and to discuss any concerns about entering high school. Special education facilitator, middle and high school special education teachers, student, parent (s), and high school counselor attend the meeting.
- 8th grade students visit and tour the high school, if feasible, to learn about all opportunities, both academic and extracurricular.
- 8th grade students also take a field trip to the Career Center, if feasible, to tour the skill areas and become aware of the opportunities available there.
- Incoming 9th grade students attend an orientation meeting within the first week of school. Administrators present school policies, procedures, and expectations to 9th grade students. School counselors provide students and parents with information related to being on track for college and career readiness.
- Middle and High School Counselors meet to discuss at-risk students (attendance, behavior, family, academic, etc.) twice a year.
- During MP1 and subsequent nine weeks, middle school counselors meet individually with 6th grade students and high school counselors meet individually with 9th grade students who are struggling with the transition to high school and assist them with the areas in which they are having difficulty. Individualized student supports through the MTSS tiers are provided to students experiencing difficulty.