A Message from the Interim Superintendent

Dear Students, Parents, and Guardians:

Welcome to Baltimore County Public Schools’ nationally recognized high school program, which is designed to satisfy graduation requirements and provide students with a fulfilling education that will prepare them for colleges and careers. This Course Registration Guide outlines core courses in all content areas, as well as the many elective courses offered in Baltimore County Public Schools.

As we implement our district’s strategic plan, Blueprint 2.0, we focus on providing high quality courses and supporting our teachers and administrators in ensuring rigorous instruction and dialogue in every classroom, every day. Our expectation is that every student acquires the knowledge and skills necessary to become a globally competitive citizen in a culturally diverse world. To accomplish this goal, we partner with school leaders, teachers, students, families, and community members to build a culture of deliberate excellence within Baltimore County Public Schools.

The academic choices students make during their high school years can have a lasting impact on their careers and personal lives. We encourage students to make informed and intelligent decisions in collaboration with their parents and guardians. Teachers, school counselors, and administrators are invaluable resources in this process and can help students select courses that are challenging and aligned with graduation requirements and career and college goals. By working together as members of Team BCPS, we can and will provide students with a high school experience that is academically challenging, rewarding, and relevant to the future.

Sincerely,

Verletta White
Interim Superintendent
Introduction

2019-2020 Course Registration Guide

The vision of Baltimore County Public Schools (BCPS) is to produce graduates who have the content knowledge, skills, and attitudes to reach their full potential as globally competitive graduates. All students will achieve when the necessary conditions for learning are provided. Students are encouraged to use the Course Registration Guide to plan with their parents or guardians to select courses and programs that will best prepare them for a successful high school experience. Teachers, school counselors, and administrators are available to help students plan their high school programs. School counselors will schedule appointments to meet with students and parents to assist them in planning for academic and career goals.

The Course Registration Guide aligns with the Baltimore County Public Schools’ Blueprint 2.0, the five-year strategic plan that builds on the successes of the system’s Blueprint for Progress, Blueprint 2.0 is a framework for improving student achievement and provides clear direction for everyone involved in education in Baltimore County. Blueprint 2.0 delineates the school system’s vision, purpose, core value statements, strategic initiatives, and goals and progress indicators. These goals and indicators are concrete, measurable statements of expectations for all students, with an emphasis on critical 21st century skills. This framework is built on a foundation of clear standards, quality instruction, and individual accountability. Blueprint 2.0 can be found on the Baltimore County Public Schools Web site.

The Course Registration Guide outlines the rigorous curricula, standards, and requirements expected of Baltimore County Public Schools’ graduates. The Guide includes Descriptions of Assessments, Programs, and Requirements; Student/Parent Educational Planning forms; Baltimore County Public Schools Graduation Requirements; Career and Technology Education (CTE) Elective and Required Technology Education Courses; and Approved Career and Technology Education Completer Programs by office. The courses described in this Guide reflect rigorous curriculum implemented through high quality instruction. These courses support the performance goals as stated in the Blueprint for Progress.

We take pride in offering a variety of quality programs designed to provide students with fulfilling high school experiences.

Consultants

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Michael Bennett, Facilitator, JROTC
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Maria Everett, Coordinator, Secondary Mathematics
Alicia Fales, Supervisor, School to Career Transition
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Kim Shinozaki, Coordinator, World Languages
Bryan Stoll, Coordinator, Magnet Programs
Dr. Erin Sullivan, Coordinator, ESOL
Sonia Synkowski, Resource Teacher, Music and Dance Education
Tiffany Wendland, Coordinator, Science
Dr. Melissa Lembo Whisted, Executive Director, Academic Services
Dr. Heather Wooldridge, Coordinator, College and Career Readiness
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NOTICE OF NONDISCRIMINATION
Baltimore County Public Schools does not discriminate on the basis of gender, race, disability, color, or national origin and do comply with Title VI, Title VII, Title IX, and Section 504 of the civil rights regulations in all educational programs. All courses are open to both male and female students. For further information, contact the Office of Equity and Assurance, Baltimore County Public Schools, 6901 Charles Street, Towson, Maryland 21204 (443) 809-2444.
The Purpose of the Course Registration Guide

Ways to Use this Document

1) As a reference tool
   a. Students and families may refer to the Course Registration Guide to help them to locate information related to a variety of topics. This source tool can help improve a family’s understanding of courses and options available within Baltimore County Public Schools.

2) To locate graduation requirements
   a. A section of this guide is dedicated to an examination of the graduation requirements as outlined at the printing of this document.

3) To create or update a 6 Year Plan
   a. A section of this guide provides an explanation of the 6 Year Plan, an academic and post-secondary advising tool. There is also a sample of the document included that students and families can use to begin the process that will continue with the support of a School Counselor.

4) To learn about courses
   a. The Course Registration Guide includes course listings with detailed descriptions. Below is an image that provides an explanation of the components of a course listing.

   Course Title
   Indicates any prerequisites needed for this course

   Course Number(s) associated with this course

   Number of credits earned with this course

   Description of course

   Course Title: English 10 - World Literature
   Course Number: 10.1000.0
   Course Number: 10.1000.4 (H)

   Prerequisite: Successful completion of English 9.

   Credit: 1

   Note: This course provides a Service Learning component.

   English 10, an integrated language arts program of literature, composition, grammar, usage, and mechanics focuses on developing awareness of various world cultures as expressed through literature. The program continues developing skills in reading/interpreting, writing, listening, speaking, language, thinking, and research through the study of a variety of literary genres. Some themes/issues in this course make connections to the grade 10 world history course. This is a High School Assessment course.

   Indicates any additional information for this course

5) To learn about Completer Programs
   a. A Completer Program is required for graduation and consist of a sequence of courses in a particular career pathway.

Important Notes:
- Check the web based version of this document for changes and updates to information including offered courses, programs and graduation requirements.
- This guide is best used in combination with registration materials provided by local schools.
- Not all courses listed in this guide are available in all schools.
- Where courses are offered at five or fewer schools, those schools are listed.
- Some courses are determined by enrollment.

Alternative Activities

In compliance with Section 7-112 of the Education Article of the Annotated Code of Maryland, those courses with alternative activities provided are indicated within this catalog. To request an alternative activity, please see your child’s teacher or school administrator.
6 Year Planning

Developing an Academic and Post-Secondary Plan for Your Future

Baltimore County Public Schools is committed to graduating globally competitive students with post-graduation plans that align with their strengths, interests, and long-term career goals. In support of this mission, our district is offering every student in Grades 7 through 12 the opportunity to develop a 6 Year Plan. Each student meets annually with their School Counselor to develop the plan, which starts by identifying the student’s unique interests and aspirations in order to determine a rigorous high school course schedule leading to on-time graduation, and goals for college and career.

Parts of the 6 Year Plan

Student Ambitions

Any academic plan should begin with the student’s interests. We ask questions on the 6 Year Plan survey to learn more about things like interests, hobbies, extracurricular involvement, favorite subjects in school and college and career aspirations.

Goal Setting

The second step in the 6 Year Plan process is to connect student ambitions to a plan for the future. An important component of academic advising is helping students to find the links between their aspirations and talents and their current and future coursework. Students create SMART Goals that can be viewed and tracked by their parents and their counselor.

Course Recommendations

The third step in the 6 Year Plan process is discussing courses that students can take that align with their ambitions and their future plans. Part of this process involves looking for opportunities to take more challenging courses wherever possible.

Exploring Opportunities

The fourth step in creating a 6 Year Plan is to discuss educational opportunities that may help each student to reach their individual goals. Students discuss with their School Counselor programs that may be available both inside and outside of BCPS and ways that your family can learn more about them.
HOW CAN PARENTS SUPPORT THE 6 YEAR PLAN PROCESS?

- Talk to your child about their interests. Ask questions about their talents, their favorite subjects in school, and their hobbies. Help students to explore the commonalities so that they can identify strengths and interests that will one day lead to a career.
- Help your child to identify extra-curricular programs that relate to their strengths and interests to help them to continue to cultivate and explore these areas. These may be programs inside and outside of school.
- Talk to your child about their short term and long term goals. Help your child to develop meaningful goals that are specific, measurable, attainable, realistic, and time-sensitive.
- Work with your child to identify supports and resources that they may have both inside and outside of school that will help them to stay on track with their short term and long term goals.
- Talk to your child about how their schoolwork relates to their goals. Help them to identify courses that will help them along the path to achieving their goal.
- Encourage your child to take more challenging courses whenever appropriate. Explore the connection between those challenging courses and your child’s goals for the future.
- Support your child in identifying the tools available both inside and outside of school which can help them as they attempt to take more rigorous courses. Encourage them to learn about coach class or peer tutoring supports that may be available for students at your school.
- Explore resources with your child that will help them to learn about academic and extracurricular opportunities that may be of interest to them. Learn more about offerings such as Educational Options, Career & Technology Education Completer Programs, AVID, Early College Access, Magnet Programs and much more by exploring Baltimore County Public School’s website.
- Throughout all steps in the 6 Year Plan process, consult with your child’s School Counselor to learn more about options and recommendations.
The Baltimore County Public Schools Graduation Requirements are outlined on this page. All Baltimore County Public Schools offer both required and elective courses. Students must meet Maryland high school assessment requirements as established by the Maryland State Department of Education. **IMPORTANT NOTE** — Graduation requirements are subject to change. Please check the [BCPS website](http://www.bcps.org) for updates or changes to credit requirements and/or assessment requirements.

### COURSE CREDITS

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<thead>
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<th>Subject</th>
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<tr>
<td>English</td>
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<td>Social Studies</td>
<td>3.5 credits</td>
</tr>
<tr>
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<tr>
<td>Science</td>
<td>3 credits</td>
</tr>
<tr>
<td>Physical Education</td>
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</tr>
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<td>Health</td>
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<td>Technology Education</td>
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</tr>
<tr>
<td>Fine Arts</td>
<td>1 credit</td>
</tr>
<tr>
<td>Completion of at least one of the following completer sequences</td>
<td>4 credits in a specified sequence of courses in an approved Career &amp; Technology Education Program</td>
</tr>
<tr>
<td></td>
<td>2 credits in World Language earned in high school AND 2 credits in any elective (science and math electives are recommended)</td>
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<td></td>
<td>2 credits in Advanced Technology courses AND 2 credits in any elective</td>
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### STUDENT SERVICE LEARNING

75 hours of pre-approved student service learning
BCPS Graduation Requirements  
Students entering 9th Grade during the 2018-2019 School Year

The Baltimore County Public Schools Graduation Requirements are outlined on this page. All Baltimore County Public Schools offer both required and elective courses. Students must meet Maryland high school assessment requirements as established by the Maryland State Department of Education. **IMPORTANT NOTE** – Graduation requirements are subject to change. Please check the [BCPS website](http://www.bcps.org) for updates or changes to credit requirements and/or assessment requirements.

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<td>1 American Government credit, 1 World History credit, 1 United States History credit and a .5 Economics credit are required.</td>
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</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td>3 credits</td>
</tr>
<tr>
<td>1 credit must be Algebra and 1 credit must be Geometry. Most colleges require at least Algebra 1, Geometry and Algebra 2. <strong>MARYLAND STATE REQUIREMENT FOR STUDENTS GRADUATING IN 2018 AND LATER:</strong> Students graduating in 2018 and later must be enrolled in a math course during each year of high school. <em>Students should consult counselors or math instructors about their mathematics sequence.</em></td>
<td></td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td>3 credits</td>
</tr>
<tr>
<td>1 credit must be earned in Biology or Living Systems. High school students must take high school level science courses that meet all Next Generation Science Standards (NGSS). <em>Students should consult counselors and science instructors about their science sequence.</em></td>
<td></td>
</tr>
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### STUDENT SERVICE LEARNING

- 75 hours of pre-approved student service learning
BCPS Graduation Requirements
Students entering 9th Grade during the 2017-2018 School Year

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<td></td>
<td>1 credit must be Biology or Living Systems and two additional science courses</td>
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<tr>
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<td>Physical Education</td>
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### STUDENT SERVICE LEARNING

75 hours of pre-approved student service learning
Graduation Requirements
Courses that Fulfill Specific Graduation Requirements

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<tr>
<th>Fine Arts Requirement</th>
<th>Course Number</th>
<th>Number of Credits</th>
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<tr>
<td>Dance I</td>
<td>5200100</td>
<td>1 credit</td>
</tr>
<tr>
<td>Dance II</td>
<td>5200200</td>
<td>1 credit</td>
</tr>
<tr>
<td>Dance III</td>
<td>5200300</td>
<td>1 credit</td>
</tr>
<tr>
<td>Dance III</td>
<td>5200304</td>
<td>1 credit</td>
</tr>
<tr>
<td>Dance IV</td>
<td>5200400</td>
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<td>Dance IV</td>
<td>5200404</td>
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<td>Dance IV</td>
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<td>Dance Company</td>
<td>5271104</td>
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<td>Dance Company</td>
<td>5271105</td>
<td>1 credit</td>
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<tr>
<td>Dance for Athletes</td>
<td>5456000</td>
<td>1 credit</td>
</tr>
<tr>
<td>Ballet I</td>
<td>5210105</td>
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</tr>
<tr>
<td>Ballet II</td>
<td>5210205</td>
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<td>Modern Dance I</td>
<td>5220105</td>
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<td>Modern Dance II</td>
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<tr>
<td>Dance I/GT</td>
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<tr>
<td>Dance II/GT</td>
<td>5202205</td>
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<tr>
<td>Jazz I</td>
<td>5230000</td>
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<td>Theater Arts I</td>
<td>1030100</td>
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<td>Theater Arts I</td>
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<tr>
<td>Art Seminar</td>
<td>4092000</td>
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<td>Fundamentals of Art</td>
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<tr>
<td>Music and Audio Technology</td>
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<tr>
<td>Music Theory I</td>
<td>4551100</td>
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<td>Music Theory – Advanced Placement</td>
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<td>Music for Life</td>
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<td>1 credit</td>
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<tr>
<td>Class Piano</td>
<td>4527100</td>
<td>1 credit</td>
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<tr>
<td>Guitar</td>
<td>4528100</td>
<td>1 credit</td>
</tr>
<tr>
<td>Chorus, Orchestra or Band</td>
<td>see guide for course numbers</td>
<td>1 credit</td>
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</table>

<table>
<thead>
<tr>
<th>Health Requirement</th>
<th>Course Number</th>
<th>Number of Credits</th>
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</thead>
<tbody>
<tr>
<td>Health 9/10</td>
<td>5110100</td>
<td>½ credit</td>
</tr>
<tr>
<td>Health 11/12</td>
<td>5110200</td>
<td>½ credit</td>
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<table>
<thead>
<tr>
<th>Physical Education Requirement</th>
<th>Course Number</th>
<th>Number of Credits</th>
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<tbody>
<tr>
<td>Fitness Foundation/Fitness Mastery</td>
<td>5009000</td>
<td>1 credit</td>
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<table>
<thead>
<tr>
<th>Technology Education Requirement</th>
<th>Course Number</th>
<th>Number of Credits</th>
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<tr>
<td>Foundation of Engineering</td>
<td>5512500</td>
<td>1 credit</td>
</tr>
<tr>
<td>Engineering Principles and Applications (honors)</td>
<td>5535004</td>
<td>1 credit</td>
</tr>
<tr>
<td>Engineering Technology (GT)</td>
<td>5545005</td>
<td>1 credit</td>
</tr>
<tr>
<td>Introduction to Engineering Design – PLTW (honors)***</td>
<td>5602004</td>
<td>1 credit</td>
</tr>
<tr>
<td>Foundations of Computer Science (honors)</td>
<td>3535004</td>
<td>1 credit</td>
</tr>
<tr>
<td>Advanced Placement Computer Science (AP)</td>
<td>3535106</td>
<td>1 credit</td>
</tr>
</tbody>
</table>

*** Offered ONLY at schools with the Project Lead The Way Engineering CTE Completer Program
Learning About Requirements and Options

Student Service Learning

**BCPS has attempted to include enough service-learning class projects into the curriculum so that students – even if they have transferred into BCPS or have been absent for some projects – will still be able to earn 75 hours strictly from school-based projects. Ten hours can be earned through each project in middle school course.**

**What is Service-Learning?**

According to the Maryland State Department of Education, service-learning is: “...a teaching method that combines meaningful service to the community with curriculum-based learning. Students improve their academic skills by applying what they learn in school to the real world; they then reflect on their experience to reinforce the link between their service and their learning.”

**The Maryland Service-Learning Requirement**

The Maryland State Board of Education passed a service-learning requirement in July 1992 that requires students to earn 75 service-learning hours prior to graduation. School systems were given the option of allowing students to gain service hours during the middle school grades in addition to high school grades. Here is a chart of the current course with infused hours:

<table>
<thead>
<tr>
<th>Grade 6</th>
<th>Grade 7</th>
<th>Grade 8</th>
<th>Grades 9 - 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business/Comp. Science</td>
<td>Health</td>
<td>Science</td>
<td>Science (Biology, Earth Systems)</td>
</tr>
<tr>
<td>Health</td>
<td>English</td>
<td>Health</td>
<td>English 9</td>
</tr>
<tr>
<td>English</td>
<td>Social Studies</td>
<td>Family and Consumer</td>
<td>American Government</td>
</tr>
<tr>
<td>Tech Ed (where offered)</td>
<td></td>
<td>Sciences (where offered)</td>
<td>Tech Ed (where offered)</td>
</tr>
</tbody>
</table>

Students also may complete Independent service-learning projects outside of school. All Independent service-learning projects should be pre-approved by the school-based coordinator to ensure alignment with the standards and guidelines. Approved hours completed outside of school will count toward the graduation requirement. Each year, BCPS recognizes the top 5 students in Grades 8 who earn more than 75 Independent Hours and the top 10 graduating seniors who earn 150 or more Independent service-learning hours.

**Components of a Service-Learning Project**

Preparation is the first step of service-learning. During this step, students work with teachers and/or community members to: Identify issues affecting the community, related to health, education, the environment, or public safety. Select project sites and how to address a selected issue. Plan service-learning reflection. Explore the concept of active citizenship.

Action is the next step of service-learning. Students can carry out their service in one of the following ways:

**Direct Service** – Students have face-to-face contact with service recipients. Examples include tutoring other students, serving meals at a homeless shelter, and working with the elderly in a senior citizen community.

**Indirect Service** – Students perform a service without having direct contact with the recipient. Usually resources are channeled to help alleviate a problem. Examples include food and clothing drives, environmental projects, and raising money for a cause through activities such as a walk-a-thon.

**Advocacy** – Students educate others about a selected issue with the goal of eliminating the causes of a particular problem. Examples include writing letters to legislators or newspaper editors, creating web pages, creating and displaying posters within the community, writing and performing informative plays, creating educational materials for other target groups, and legislative testimony.

**Reflection** is the final step of service-learning. During reflection, students look back at the completed project and review what they have learned. Reflection may be done individually (e.g., journals, scrapbooks, or teacher-student meetings) or as a group (e.g., class evaluation of the project based on the goals and outcomes).

More information about the Baltimore County Service-Learning Program can be found on the [BCPS website: Service Learning Information](#).
Maryland High School Certificate

The decision to award a student with a disability a Maryland High School Certificate of Program Completion may not be made until after the beginning of the student’s last year in high school unless the student is participating in the Alternate Maryland School Assessment program (ALT-MSA). This is intended to ensure that all students, as required by both the Individuals with Disabilities Education Act and No Child Left Behind, continue to have access to the general curriculum and the school systems remain committed to the progress of students with disabilities until the last year of the student’s eligibility. [COMAR 13A.03.02.09 D (3)]

Program Completion Options Available to Students

To be awarded the Maryland High School Diploma, a student must have earned a minimum of 21 credits, passed all required high school assessments, and accrued 75 hours of service learning at the completion of grade 12. The following alternatives are available to students on a limited and approved basis. Each request is considered individually. The general procedures to be used in applying for options begin with a written waiver request from parent(s)/guardian(s) and submitted to the principal for review and recommendation. An appeal of the principal’s recommendation must be made in writing to the appropriate Community Superintendent.

Early admission is permitted if, by the end of the grade 11, a student has been accepted to an accredited college or to an approved vocational, technical, or post-high school before high school graduation and wants to complete Baltimore County Public Schools credit requirements during the first year in college or in the approved post-high school program. All state competency and student service requirements must be met before early admission is granted. At the conclusion of a full year of study (generally agreed to be 24 semester hours), a written request for the high school diploma is submitted to the superintendent with a letter from the postsecondary institution to the high school principal indicating successful completion of a year of study. [Granted under the authority of COMAR 13A.03.02.10 C (1).]

General Educational Development (GED) Testing Program may satisfy the requirements for a Maryland High School Diploma provided the student has achieved satisfactory performance on approved general educational development tests. [Granted under the authority of COMAR 13A.09.10.02.]

- Waivers of full-time attendance may be granted for:
- Concurrent enrollment in college and the senior year of high school.
- Concurrent enrollment in work-based experience.
- Full-time enrollment in an Extended Day program.

To participate, students must attend scheduled classes, and then leave the school building and grounds in order to pursue the approved released-time program. Students and/or parents/guardians must provide transportation to carry out the optional program. Students must obey any other rules necessary to implement their programs.

Alternatives for structuring programs are permitted for individuals or groups of students to fulfill graduation requirements. An alternative plan may include a waiver of the fourth year if all credit, competency prerequisites, and student service requirements are met and if the local superintendent or designee determines that this waiver is in the best interest of the student(s). Consideration for and implementation are done on a case-by-case basis. [Granted under the authority of COMAR 13A.03.02.11.]

Students who intend to apply for any of these options must see their school counselor to incorporate these options into their academic plan.

Advanced Placement Program (AP)

The Advanced Placement Program represents a cooperative effort between secondary schools and colleges and universities. It is a program of introductory college-level courses for students who are willing and able to apply themselves to college-level studies during their high school years. The Advanced Placement Program offers the opportunity to sharpen academic skills in preparation for college and to demonstrate accomplishment through successful completion of AP exams.

Participation in AP courses demonstrates to colleges and universities students' willingness to complete more difficult courses and can be advantageous in the admissions process. Students who successfully complete AP courses and exams are exempted from introductory courses by many colleges and universities. See your school counselor for the Advanced Placement courses offered in your school.

- AP Capstone Diploma™: The College Board grants an AP Capstone Diploma to students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing.
- AP Seminar and Research Certificate™: The College Board grants an AP Seminar and Research Certificate to students who earn scores of 3 or higher in both AP Seminar and AP Research.
PSAT 8/9 and PSAT/NMSQT

The Preliminary SAT®8/9 and the Preliminary SAT/National Merit Scholarship Qualifying Tests (PSAT8/9 and PSAT/NMSQT) are cosponsored by the College Board and National Merit Scholarship Corporation (NMSC). They are standardized tests that provide practice for the SAT® and measure critical reading skills, math problem-solving skills and writing skills. The scores from the PSAT/NMSQT® are used to determine eligibility and qualification for the National Merit Scholarship Program. Baltimore County Public Schools’ pays for all enrolled students in grade 9 to take the PSAT8/9 and for all students in grades 10 and 11 to take the PSAT/NMSQT annually.

ACT

The ACT® test is a college admissions test that consists of four tests: English, Mathematics, Reading, and Science Reasoning with an optional Writing test. The main four tests are scored individually on a scale of 1-36 and a Composite Score is provided which is the whole number average of the four scores. The ACT® test assesses high school students’ general educational development and their ability to complete college-level work. The multiple-choice tests cover four skill areas: English, mathematics, reading, and science. The Writing Test, which is optional, measures skill in planning and writing a short essay.

SAT

The SAT Reasoning Test is a college admissions test that measures the critical reading, writing, and mathematical reasoning skills students have developed over time. It is used by colleges as one measure of a student’s readiness for college level course work. Students who intend to take the SAT should consider the course sequences shown on the following pages for the English/Language Arts and Mathematics programs in order to prepare to master the requisite content for success on the SAT. Baltimore County Public Schools’ pays for all enrolled students in grade 11 to participate in a system-wide, school-day administration of the SAT each spring.
BCPS MATHEMATICS PROGRAM Grades 6-12

Grade 6
- GT/AA 6
- Math GT 6

Grade 7
- GT/AA 7
- MS Algebra 1

Grade 8
- GT/AA 8
- Geometry

Grade 9
- GT/AA 9
- Algebra 2

Grade 10
- GT/AA 10
- Precalculus or College Algebra & Trig Analytic Geo

Grade 11
- AP Calculus AB
- Honors Precalc
- Trig Analytic Geo
- SAT
- Statistics
- College Algebra

Grade 12
- AP Calculus BC
- SAT
- AP Calculus AB or Honors Calculus
- Trig Analytic Geo or College Algebra
- Trig with Alg or PreCalculus Mathematics
- SAT
- Algebra 2
- SAT
- Sets, Functions, & Probability

PSAT/SAT Review/Prep
*Successful completion of Algebra 1 and Geometry recommended.
### Glossary of Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AA</td>
<td>Advanced Academics</td>
</tr>
<tr>
<td>ALT-MISA</td>
<td>Alternate Maryland Integrated Science Assessment</td>
</tr>
<tr>
<td>AP</td>
<td>Advanced Placement (Program)</td>
</tr>
<tr>
<td>AVID</td>
<td>Advancement Via Individual Determination</td>
</tr>
<tr>
<td>BCPSS</td>
<td>Baltimore County Public Schools</td>
</tr>
<tr>
<td>CAD</td>
<td>Computer Aided (Technical) Drafting</td>
</tr>
<tr>
<td>CAM</td>
<td>Computer Automated Manufacturing</td>
</tr>
<tr>
<td>CCBC</td>
<td>Community College of Baltimore County</td>
</tr>
<tr>
<td>CINS</td>
<td>Computer Information Systems (Information Technology)</td>
</tr>
<tr>
<td>CIP</td>
<td>Classification of Instructional Programs</td>
</tr>
<tr>
<td>CTE</td>
<td>Career and Technology Education</td>
</tr>
<tr>
<td>ESL</td>
<td>English for Speakers of Other Languages</td>
</tr>
<tr>
<td>EFL</td>
<td>English as a Foreign Language</td>
</tr>
<tr>
<td>GT</td>
<td>Gifted and Talented (Education)</td>
</tr>
<tr>
<td>FARMS</td>
<td>Free and Reduced Meals</td>
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<tr>
<td>HTML</td>
<td>Hypertext Markup Language</td>
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<tr>
<td>HSA</td>
<td>(Maryland) High School Assessments</td>
</tr>
<tr>
<td>H</td>
<td>Honors</td>
</tr>
<tr>
<td>IB</td>
<td>International Baccalaureate</td>
</tr>
<tr>
<td>JROTC</td>
<td>Junior Reserve Officers Training Corps</td>
</tr>
<tr>
<td>MISA</td>
<td>Maryland Integrated Science Assessment</td>
</tr>
<tr>
<td>NGSS</td>
<td>Next Generation Science Standards</td>
</tr>
<tr>
<td>PARCC</td>
<td>Partnership for Assessment of Readiness for College and Careers</td>
</tr>
<tr>
<td>PSAT/NMSQT</td>
<td>Preliminary Scholastic Assessment Test/National Merit Scholarship Qualifying Test</td>
</tr>
<tr>
<td>RMVP</td>
<td>Retail Merchandising and Visual Presentation</td>
</tr>
<tr>
<td>SAT</td>
<td>Scholastic Assessment Test</td>
</tr>
<tr>
<td>TOEFL</td>
<td>Test of English as a Foreign Language</td>
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### SCHOOL ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Name</th>
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<tbody>
<tr>
<td>CT</td>
<td>Catonsville High</td>
</tr>
<tr>
<td>CH</td>
<td>Chesapeake High</td>
</tr>
<tr>
<td>DL</td>
<td>Dulaney High</td>
</tr>
<tr>
<td>DN</td>
<td>Dundalk High</td>
</tr>
<tr>
<td>ET</td>
<td>Eastern Technical High</td>
</tr>
<tr>
<td>FH</td>
<td>Franklin High</td>
</tr>
<tr>
<td>CC</td>
<td>George Washington Carver Center for Arts and Technology</td>
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<tr>
<td>KN</td>
<td>Kenwood High</td>
</tr>
<tr>
<td>LN</td>
<td>Lansdowne High</td>
</tr>
<tr>
<td>LR</td>
<td>Loch Raven High</td>
</tr>
<tr>
<td>MM</td>
<td>Milford Mill Academy</td>
</tr>
<tr>
<td>NT</td>
<td>New Town High</td>
</tr>
<tr>
<td>OV</td>
<td>Overlea High</td>
</tr>
<tr>
<td>OM</td>
<td>Owings Mills High</td>
</tr>
<tr>
<td>PR</td>
<td>Parkville High</td>
</tr>
<tr>
<td>PT</td>
<td>Patapsco High School and Center for the Arts</td>
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<tr>
<td>PH</td>
<td>Perry Hall High</td>
</tr>
<tr>
<td>PK</td>
<td>Pikesville High</td>
</tr>
<tr>
<td>RA</td>
<td>Randallstown High</td>
</tr>
<tr>
<td>RC</td>
<td>Rosedale Center</td>
</tr>
<tr>
<td>SPT</td>
<td>Sollers Point Technical High</td>
</tr>
<tr>
<td>SP</td>
<td>Sparrows Point High</td>
</tr>
<tr>
<td>TW</td>
<td>Towson High</td>
</tr>
<tr>
<td>WST</td>
<td>Western School of Technology</td>
</tr>
<tr>
<td>WD</td>
<td>Woodlawn High</td>
</tr>
</tbody>
</table>
Descriptions of Programs

Advancement via Individual Determination (AVID)

Advancement Via Individual Determination (AVID) is a college readiness system for elementary through higher education that is designed to increase the academic success of students. The AVID College Readiness System (ACRS) accelerates student learning, uses research-based methods of effective instruction, provides meaningful and motivational professional learning, and acts as a catalyst for systemic reform and change. AVID promotes student success in rigorous college preparation curricula. AVID is available for selected students in grades 4-12. AVID courses are elective classes that focus on academic and social skills for students who are college bound.

Career and Technology Education Completer Programs

Career and Technology Education (CTE) programs of study provide high school students with both academic and technical/workplace skills aligned with current and emerging workforce needs. Through CTE, students are taught subject matter related to career pathways—which include four-year college degree programs, community college programs, registered apprenticeships, and industry certification. Course descriptions for Career and Technology Education programs in Business Education, Family and Consumer Sciences, School to Career Transition, Technical Programs, and Technology Education are described at the end of the Course Registration Guide. Completer programs are also listed. A completer program contains a minimum of four credits (not individual courses) offered in a prescribed sequence in a program area. Upon graduation students can enter employment, register for apprenticeship, earn industry certification, attend a private/postsecondary school, and/or earn a certificate or degree at a two- or four-year college. Capstone Work Study may be available to eligible students in their junior and senior year. Note: Program availability is limited to students in the area or community of the high school or technical center. Magnet schools and programs require an application, usually by late November the year prior to high school.

English for Speakers of Other Languages (ESOL)

English Learners receiving English language support attend high school at an ESOL center. Based on their level of English proficiency, students take a combination of ESOL and content courses. ESOL I confers English 9 credit, while ESOL II confers English 12 credit. ESOL III and ESOL IV may be applied as foreign language credits for English Learners. ESOL Math will be applied as a math credit. All other ESOL courses confer elective credits. In the spring of each school year, students are assessed for progress and/or exit from the ESOL program using the state mandated ELP test of English language proficiency in listening, speaking, reading, and writing. Criteria for exit from the program are set by the state and are uniform across the state of Maryland.

Advanced Academics/Gifted and Talented K-12 Education

Advanced Academics/Gifted and Talented Education serves students who, when compared with others of their age, experiences, or environment, demonstrate high potential or performance in academic, creative, or technical areas. These students require learning experiences beyond the standard curriculum. Curriculum enrichment and acceleration are the means by which instructional experiences are differentiated to encourage the development of students’ outstanding potential. These instruction experiences provide research-based differentiated curricula to meet the needs of students who demonstrate or have the potential to demonstrate advanced learning capabilities, K-12. The overarching goal of Advanced Academics/Gifted and Talented Education is to enhance students’ capabilities to develop the learning and thinking characteristics of experts: advanced content knowledge organized around key ideas and principles applied meaningfully in problem solving.

International Baccalaureate Program (IB)

The International Baccalaureate (IB) Program provides motivated students with an opportunity to pursue a rigorous university preparatory curriculum with a global perspective. Students in Grades 9 and 10 participate in interdisciplinary units across all content areas. In grades 11 and 12, students participate in an IB Diploma program. Based on individual interest, students will select and explore a variety of courses in depth and breadth to develop individualized research and community-based action projects. Students completing IB courses and exams may receive college credit for courses taken in high school, similar to the way students receive credit for Advanced Placement courses. The IB program is one high school magnet program option, which requires an application be submitted by the application deadline the year prior to enrollment. (KN)
MAGNET PROGRAMS

Magnet programs are theme-related curricula and instructional programs that may not be available as comprehensive school program options; serve as incubators for innovative instructional practices; draw students across student attendance boundaries, in accordance with state-rated capacity; and are accessed through a centralized application and admissions process. Baltimore County Public Schools presently has a wide variety of elementary, middle, and high school magnet programs across the county. Magnet schools and programs require an application, submitted by the application deadline the year prior to enrollment.

REQUEST FOR CREDIT FOR COURSES OUTSIDE OF BCPS BY CURRENTLY ENROLLED STUDENTS

All Courses other than the approved Dual Credit courses at the Community College of Baltimore County (CCBC) taken for high school credit by students who are currently enrolled in Baltimore County Public Schools must be approved prior to being taken and must be reviewed by BCPS curricular offices for Maryland curriculum alignment to state curriculum expectations and BCPS' standards of rigor. No Maryland State required testing course may be taken for credit outside of the Baltimore County Public Schools by students concurrently enrolled in BCPS. Students must see their counselor for the approved application forms prior to taking any course other than the approved Dual Credit courses at CCBC for credit outside of BCPS. All fully online courses taken outside of BCPS must be pre-approved by the school counselor and enrollment must be facilitated by BCPS. Students may only take fully online courses approved by MSDE.

DUAL CREDITS

Dual Credit courses are approved college courses that meet high school graduation requirements for Maryland and standards of rigor for BCPS. The Dual Credit Program in partnership with the Community College of Baltimore County (CCBC) offers select, pre-approved college courses that provide both high school and college credit for BCPS students attending CCBC. Students in the Dual Credit Program in partnership with CCBC can qualify for a 50% tuition reduction or fee tuition. Students who wish to take a college course at a college/university other than CCBC are required to submit a Request for Courses Taken Outside of BCPS for High School Credit form prior to registration. Please see your school counselor for more information.

TUITION FREE

Students in their sophomore, junior and/or senior year(s) who meet the minimum 2.5 unweighted grade point average (G.P.A.) requirement can take up to four credit-bearing college courses and/or continuing education certification courses tuition free at the Community College of Baltimore County (CCBC) during the fall and spring semesters only. Students who meet the requirement are responsible for all college fees and books at CCBC unless they are approved for free and reduced meals (FARMS). Fees are waived for students who are approved for FARMS. Students must be concurrently enrolled at a BCPS High School and CCBC. College credits are awarded for successful completion of credit-bearing college courses. Please see your school counselor for specific eligibility requirements and details.

50% TUITION REDUCTION

Students in their freshman, sophomore, junior and/or senior year(s) can take college courses at a 50% reduced tuition rate at the Community College of Baltimore County (CCBC) during the fall, winter, spring or summer semesters. Students are responsible for all college fees and books. Students must be concurrently enrolled in a BCPS high school and at CCBC. College credits are awarded for successful completion of college courses. Please see your school counselor for specific eligibility requirements and details.

DIPLOMA TO DEGREE (D2D)

The Diploma to Degree (D2D) program is designed for students who want to graduate from Baltimore County Public Schools (BCPS) with a high school diploma and to simultaneously earn an Associate of Arts Degree in General Studies at the Community College of Baltimore County (CCBC). Focused on academic rigor and preparation for the twenty-first century work force, this program allows students to earn college credits that they can easily transfer to Maryland colleges and universities in pursuit of advanced degrees. Students must earn a college readiness score on the PSAT in their 9th grade year to be considered for this program. Students can earn the credits that will allow them to graduate with both a high school diploma and an associate degree through a number of options:

CCBC coursework - earn college credits by taking a college course.
Credit by exam - earn college credits by achieving a certain score on an exam such as the AP Test.
Articulation - receive college credit for approved courses taken in high school.
Dual credit - take a college course that awards both high school and college credit.
DIPLOMA TO CREDENTIAL (D2C)
The Diploma to Career program is designed for BCPS students who want to earn workplace certification or credit certificate with their high school diploma. Students enrolled in a BCPS Career and Technology Education (CTE) Pathway program may apply certain high school courses towards the certification. Please see your school counselor for specific eligibility requirements and details.

EDUCATIONAL OPTIONS
Middle and high school students may choose to access ubiquitous learning using cutting edge digital learning strategies and resources such as blended learning, online courses, purchased digital content, BCPS created and curated digital learning objects accessed through BCPS One, virtual instruction delivered through webinars, and real time student performance data that allows our students and teachers to engage in responsive teaching and learning anchored in performance and mastery. Students may access programs through the Office of Educational Options to:

- Expand the range of courses and opportunities available to them.
- Take a course when there are too few students in the school to assign a teacher to teach that course.
- Access courses that conflict with their schedules.
- Access courses beyond their regular schedule.
- Recover or advance credits.

The following programs and opportunities are offered to students through the Office of Educational Options:

- **eLearning**: Students access regularly scheduled middle and high school courses aligned with BCPS course scope and sequence through BCPS One and virtual webinars. Courses are blended to include independent online work, peer-to-peer group work and teacher directed instruction.

- **Extended Day Learning Program (EDLP)**: BCPS high school students access courses scheduled beyond the regular school day in the evenings or on Saturday morning at one of five high schools in Baltimore County. Courses are self-paced and blended to include independent online work, peer-to-peer group work and teacher directed instruction.

- **Extended Year Learning Program (EYLP)**: Students access personalized middle school reading and mathematics support or high school courses during the summer, most often at the middle or high school in their attendance area. Courses are self-paced and blended to include independent online work, peer-to-peer group work and teacher directed instruction.

- **Maryland Virtual Learning Opportunities (MVLO)**: Students access MSDE approved high school courses online through vendor provided platforms with vendor provided instructors. Students work independently with the support of a school-based coach. Students must be enrolled in their home school to access online courses.

- **School Programs for Acceleration and Recovery of Credits (SPARC)**: Students access high school courses flexibly scheduled at their home school. Courses are self-paced and blended to include independent online work, peer-to-peer group work and teacher directed instruction. Students must be enrolled in their home school to access SPARC courses.

Each program has unique course offerings; please visit the Educational Options webpage for more information about specific courses available. Both EYLP and SPARC course offerings are determined by the needs of the high schools hosting the programs.

MARYLAND SCHOLARS
In Maryland, we are committed to ensuring that:

- High school graduates are well prepared to succeed in college, the workplace, and in life.
- Our workforce is highly skilled and productive.
- Our young people have the opportunity to contribute to and benefit from a strong, prosperous economy.

A program originally sponsored by the U.S. Department of Education – State Scholars Initiative – is helping us achieve these goals. Based on highly selective criteria, Maryland was chosen by The Center for State Scholars as one of the first five states to implement a State Scholars program that is designed to encourage students to complete a rigorous course of study in high school.

In partnership with Governor, State Superintendent of Schools, and 24 local superintendents, the Maryland Business Roundtable for Education – a nonprofit coalition of leading employers – is working to increase the percentage of Maryland high school students completing a course of study that will prepare them for post-secondary success in higher education or the workforce.
A major focus for the Scholars program is engaging Grade 8 and 9 students in the importance of their course selections for high school and the pivotal role higher level math and science courses play in future career opportunities, and reinforcing these messages throughout high school.

Maryland Scholars is an integral component of MBRT’s multi-faceted, award-winning Achievement Counts campaign—which demonstrates to students, parents, and the community the critical connection between achievement in school and success in the workplace and in life. Each strategic and interwoven component of the campaign—Speakers Bureau, Maryland Scholars, Parents Count, BeWhatIWantToBe Web site—was designed to strengthen and reinforce the others and to establish a continuum of effort that motivates and supports middle and high school students.

The Maryland Scholars Course of Study
- 4 credits of English
- 3 credits of Mathematics (Algebra I, Geometry, Algebra II)
- 3 credits of Science (Biology, Chemistry, and one additional lab science—Physics preferred)
- 3 credits of Social Studies/History credits
- 2 credits of the same World Language

(Students must attain a 3.0 GPA to qualify.)

The Maryland Scholars Course of Study (Graduating classes 2016 and beyond)
- 4 credits of English
- 4 credits of Mathematics (including Algebra I, Geometry, Algebra 2)
- 3 credits of Science (Biology, Chemistry, Physics**)
- 3 credits of Social Studies (U.S. History, World History, Government)
- 2 credits of the same World Language

Courses in bold are beyond state graduation requirements
**A 3rd lab science may be substituted for Physics.
(Students must attain a 3.0 GPA to qualify.)

The Maryland Scholars program provides workplace volunteers to help motivate and guide Grades 8 and 9 students as they prepare to select courses for their high school schedule and incentives to encourage students to stay in the program throughout high school.

Maryland Business Roundtable for Education 5520 Research Park Drive, Suite 150
Baltimore, Maryland 21228
410-788-0333
ART

MISSION

The Baltimore County Visual Arts Program is aligned with the national and state standards for visual arts and guided by the Blueprint 2.0. Its mission is to educate all students in creative thinking, creative production, and the artistic process while developing their understanding and appreciation of the artistic achievements of people from different times, places, and cultures. The Office of Visual Arts supports the implementation of a rich, rigorous visual arts curriculum and encourages a culture of artistic thinking, learning, creative production, and achievement of excellence.

Art History-Advanced Placement
Course Number: 40.2300.6
Prerequisite: None
Credit: 1
Students examine and critically analyze major forms of artistic expression from the past and present and from a variety of global cultures. In this course students engage in both visual and historical study about art and its contexts in order to prepare for the AP Art History Exam.

Art Seminar
Course Number: 40.9200.0
Prerequisite: None
Credit: ½
Note: This course is for ½ of an elective credit. This course allows students to explore art concepts and media through the study of past and present cultures. It is designed to acquaint them with the visual arts as a means of self-expression, to use design criteria to make consumer judgments, and to develop an awareness of art expressions throughout history.

Art and Technology
Course Number: 40.2200.0 Credit: ½
Note: This course is for ½ of an elective credit. Students will be provided opportunities to understand ways that art and design concepts can be used for visual communication and presentation. They will study advances in technology and use technological applications with traditional art tools for developing purposeful visual products.

Fundamentals of Art (Art I)
Course Number: 40.1010.0
Course Number: 40.1010.5 (GT)
Prerequisite: None
Credit: 1
Note: This is the foundation course for a concentrated study in art and satisfies the 1 credit Fine Arts graduation requirement. Students will develop the foundational skills needed to communicate ideas visually while developing understandings about the contributions of various artists/craftsmen to their cultures. Emphasis is placed on observational drawing and exploring composition and design in the art of various cultures using drawing, painting, and 3-D media. Students will be encouraged to keep a sketchbook and a portfolio.

Intermediate Art
Course Number: 40.3000.0
Course Number: 40.3000.0
Course Number: 40.3000.5 (GT)
Prerequisites: Successful completion of Fundamentals of Art
Credit: 1
This course provides opportunities for students to refine skills developed in Fundamentals of Art. Students will study and critique artistic styles and trends and apply knowledge gained in their own work. Emphasis is placed on working from observation using drawing, painting, and 3-D media and incorporating imaginative ideas to begin developing a personal style. Students in this course will be required to maintain a sketchbook and a portfolio.

Digital Arts
Course Number: 40.2100.0
Course Number: 40.2100.5 (GT)
Prerequisites: Successful completion of Fundamentals of Art
Credit: 1
This course provides opportunities in career exploration in a variety of graphic arts fields. It develops the student's ability to use technology for visual communication and focus on art processes.
that develop awareness of the attitudes and
disciplines required in the graphic arts field.
Emphasis is placed on the development of skills and
understandings in the following areas: drawing and
design for illustration, advertising, and
construction/display and the use of drawing and
graphic arts applications on the computer.

Digital Arts Studio
(AP Studio Art: 2D Design)
Course Number: 40.4500.0
Course Number: 40.4500.5 (GT)
Course Number: 40.450.6 (AP)
Prerequisites: Successful completion of Digital Arts
Credit: 1

Emphasis is on developing knowledge and skill in the
contemporary art and technology of image
processing and developing an understanding of
art/technology applications in contemporary
enterprises and institutions. Students will apply
knowledge of design concepts and traditional art
media in developing effective aesthetic expression,
technical competency, and critical judgment to
various image digitizing and manipulating technology
applicable for a variety of purposes. Students will
maintain a portfolio of artwork, which may be used
for AP and/or college or scholarship competitions.

Digital Arts Studio Advanced (AP Studio Art: 2D Design)
Course Number: 40.4510.0
Course Number: 40.4510.5 (GT)
Course Number: 40.4510.6 (AP)
Prerequisites: Successful completion of Digital Arts Studio
Credit: 1

Emphasis is on refining skills and knowledge in
design, digital image processing, and
experimentations in traditional art media and the
computer to produce multimedia artwork that
include animation, Web page design, video, etc. with
the purpose of developing an understanding of
art/technology applications in contemporary
enterprises and institutions. Students will maintain
a portfolio of artwork that will serve a variety of
purposes: applications for AP, college or scholarship
competitions, and/or as professional presentations
for jobs.

Photography I
Course Number: 40.4010.0
Course Number: 40.4010.5 (GT)
Prerequisite: Successful completion of Fundamentals of Art
Credit: ½
Note: Photography I & II courses should be scheduled consecutively. Students may be required to use their personal cameras and to supply some of the materials needed for photography projects. A fee may be required.

In these courses students will have opportunities to learn the basic processes and techniques of photography which include elements of the 35mm and digital camera, composition in photography, and film processing.

Photography II
Course Number: 40.4020.0
Course Number: 40.4020.5 (GT)
Prerequisite: Successful completion of Fundamentals of Art and Photography I
Credit: ½

Note: Photography I & II courses should be scheduled consecutively. Students may be required to use their personal cameras and to supply some of the materials needed for photography projects. A fee may be required.

In these courses students will have opportunities to learn the basic processes and techniques of photography which include elements of the 35mm and digital camera, composition in photography, and film processing.

Photojournalism
Course Number: 40.4210.0
Course Number: 40.4210.5 (GT)
Prerequisites: Successful completion of Photography I and II and Journalism I
Credit: 1

Photojournalism I provides an introduction to the field of photojournalism. Students will build on technical expertise and artistic understanding gained in Photography I and II and the information gathering and writing techniques gained in Journalism I to become effective reporters. They will work on assignments focusing on spot and general news, sports, features, illustration, and human interest both inside and outside the school.

Photojournalism Advanced (AP Studio Art: 2D Design)
Course Number: 40.4310.0
Course Number: 40.4310.5 (GT)
Course Number: 40.4310.6 (AP)
Prerequisite: Successful completion of Photojournalism Credit: 1

Photojournalism II develops the skills and characteristics necessary to become effective photojournalists while learning the philosophy and history of photojournalism. Students will critically examine their work as they develop a portfolio that encompasses all of the major areas of photojournalism. This portfolio may be submitted to fulfill the requirements of the AP 2D Design Portfolio.

Photography Studio (AP Studio Art: 2D Design)
Course Number: 40.4100.5 (GT)
Prerequisites: Successful completion of Photography I and II
Credit: 1

Note: A fee may be required

Students will explore and develop skills in composition, advanced techniques in digital and/or darkroom film processing, and presentation of artwork. Students will explore the purposes of photography and begin to develop a portfolio of artwork. This portfolio may be considered for submission to the AP 2D Design Portfolio exam.

Photography Studio Advanced (AP Studio Art: 2D Design)
Course Number: 40.4110.0
Course Number: 40.4110.5 (GT)
Course Number: 40.4110.6 (AP)
Prerequisite: Successful completion of Photography Studio Credit: 1

Note: A fee may be required

In advanced courses, emphasis will be on composition, advanced techniques in digital and/or darkroom film processing, and presentation of artwork. Students will explore the purposes of photography and develop a portfolio of artwork. This portfolio may be submitted to fulfill the requirements of the AP 2D Design Portfolio.

Design in Clay I
Course Number: 40.8210.0
Course Number: 41.8210.5 (GT)
Prerequisite: Successful completion of Fundamentals of Art
Credit: ½

Students will explore a variety of hand-building clay techniques using design criteria. Students will have opportunities to explore functional and non-functional clay works through an analysis of past and
contemporary collections and apply their knowledge in design.

Design in Clay II  
Course Number: 40.8220.0  
Course Number: 40.8220.5 (GT)  
Prerequisites: Successful completion of Design in Clay I  
Credit: ½  
Students will solve a variety of design problems in clay to reflect personal expression. Students will study functional and non-functional artwork and apply their knowledge to the creation of personal work reflecting a variety of purposes.

Design in Clay and Mixed Media  
Course Number: 40.8410.0  
Course Number: 40.88410.5 (GT)  
Prerequisites: Successful completion of Design in Clay II  
Credit: 1  
Students will solve a variety of design problems in clay and other sculptural materials to reflect personal expression. Students will explore the sculptural forms and techniques and begin to develop a portfolio of artwork. This portfolio may be considered for submission to the AP 3D Design Portfolio exam.

Design in Clay and Mixed Media Advanced  
(AP Studio Art: 3D Design)  
Course Number: 40.8420.0  
Course Number: 40.8420.5 (GT)  
Prerequisites: Successful completion of Design in Clay & Mixed Media  
Credit: 1  
In advanced courses, emphasis is on an in-depth exploration of media and techniques as students are empowered to make more purposeful artistic decisions. Students will develop a portfolio of artworks that reflect their personal aesthetic. This portfolio may be submitted to fulfill the requirements of the AP 3D Design Portfolio.

Art in the Theatre  
Course Number: 40.8310.0  
Prerequisite: None  
Credit: ½  
This course acquaints students with the fundamentals of set design and related crafts. Emphasis is on stage design and construction, costume design, make-up, and the history of art in the theatre.

Art and Artifacts: Clues to Distant Cultures  
Course Number: 43.4050.0  
Course Number: 43.4050.4 (H)  
Prerequisite: None  
Credit: ½  
Students assume roles of art historians, archeologists, and anthropologists as they analyze the material culture of Ancient Egypt, Classical India, Classical China, the Islamic Empire, and Feudal Japan. Included within course work will be museum experiences at The Walters Art Gallery.

VISUAL ARTS ADVANCED PLACEMENT COURSES

AP visual arts courses are scheduled whenever they are justified by enrollment. Students enrolled in advanced placement courses are eligible for AP credit. Each AP course includes portfolio development based on the criteria of the AP Studio Art program: quality (originality of ideas and concepts presented, visual impact, use of media), concentration (ability to focus on an idea or concept and explore several ways to present the idea or concept), and breadth (willingness to explore new media).

Art History-Advanced Placement  
Course Number: 40.2300.6  
Credit: 1  
Note: This course may be offered online or in person.

Studio (AP Studio Art: Drawing, AP Studio Art: 2D Design, AP Studio Art: 3D Design)  
Course Number: 40.3120.6  
Credit: 1
Photography Studio Advanced (AP Studio Art: 2D Design)
Course Number: 40.4110.6
Credit: 1

Photojournalism Advanced AP (AP Studio Art: 2D Design)
Course Number: 40.4310.6
Credit: 1

Digital Arts Studio (AP Studio: 2D Design)
Course Number: 40.4500.6
Credit: 1

Digital Arts Studio Advanced (AP Studio: 2D Design)
Course Number: 40.4510.6
Credit: 1

Figure Drawing 1 AP (AP Studio Art: Drawing)
Course Number: 42.6110.6
Credit: 1

Figure Drawing 2 AP (AP Studio Art: Drawing)
Course Number: 42.6120.6
Credit: 1

Painting IV AP (AP Studio Art: Drawing)
Course Number: 42.6640.6
Credit: 1

Figure Sculpture II AP (AP Studio Art: 3D Design)
Course Number: 42.6820.6
Credit: 1

Sculpture 3 GT/AP (AP Studio Art: 3D Design)
Course Number: 42.6330.6 (AP)
Credit: 1

Sculpture 4 GT/AP (AP Studio Art: 3D Design)
Course Number: 42.6340.6 (AP)
Credit: 1

AP Studio Photo Magnet (AP Studio Art: 2D Design)
Course Number: 42.4730.6
Credit: 1

Televideo Production Advanced AP (AP Studio Art: 2D Design)
Course Number: 42.4530.6
Credit: 1

VISUAL ARTS INTERNATIONAL BACCALAUREATE PROGRAM (IB)

International Baccalaureate visual arts courses provide students opportunities to develop their personal aesthetic, imaginative, and creative faculties through the study of Art History, Criticism, Art Principles, and Studio practices. Working with the elements of art and principles of design, students are able to analyze, critique, and understand historical exemplars to form their own work. Students use observation, investigation, sketch notation, and writing to thoroughly explore a variety of topics. Studio experiences in a variety of media allow them to express visual ideas generated through research. All students have portfolio exhibits at the end of their senior year.

IB Art and Design 1
Course Number: 40.1110.7
Credit: 1

IB Art and Design 2
Course Number: 40.1120.7 Credit:
VISUAL ARTS MAGNET COURSES

Magnet courses are unique courses that can only be offered as part of an approved magnet program and/or school.

Foundations of Art (CC, PT, MM)
Course Number: 42.1000.0
Course Number: 42.1000.5 (GT)
Credit: 2

Studio 2 Drawing/Painting GT/AP (AP Studio Art: Drawing) MAG (CC, PT, MM)
Course Number: 42.6420.5 (GT)
Credit: 1

Photography 1M (CC, PT, MM)
Course Number: 42.4110.5
Credit: 1

Photography 2M (CC, PT, MM)
Course Number: 42.4120.5
Credit: 1

Photography 3M (CC, PT, MM)
Course Number: 42.4130.0
Course Number: 42.4130.5
Credit: 1

Photography 4M (CC, PT, MM)
Course Number: 42.4410.0
Course Number: 42.4140.5
Credit: 1

AP Studio Photo M (AP Studio Art: 2D Design) MAG (CC, PT, MM)
Course Number: 42.4730.6
Credit: 1

Multimedia Production MAG (CC, CH, LN, PT, MM)
Course Number: 42.4410.0
Credit: 1

Multimedia Production GT MAG (CC, CH, LN, PT, MM)
Course Number: 42.4410.5
Credit: 1

Multimedia Production Intermediate MAG (CC, CH, LN, PT, MM)
Course Number: 42.4420.0
Credit: 1

Multimedia Production Intermediate GT MAG (CC, CH, LN, PT, MM)
Course Number: 42.4420.5
Credit: 1

Multimedia Production Advanced MAG (PT, MM)
Course Number: 42.4430.0
Credit: 1

Multimedia Production Advanced GT (CC, CH, LN, PT, MM)
Course Number: 42.4430.5
Credit: 1

Televideo Production MAG (CC, CH, KN, LN, PT)
Course Number: 42.4500.0
Credit: 1

Televideo Production GT MAG (PT)
Course Number: 42.4500.5
Credit: 1

Televideo Production Intermediate MAG (CC, CH, KN, LN, PT)
Course Number: 42.4520.0
Credit: 1

Televideo Production Intermediate GT MAG (CC, CH, KN, LN, PT)
Course Number: 42.4520.5
Credit: 1

Televideo Production Advanced MAG (CC, CH, KN, LN, PT)
Course Number: 42.4530.0
Credit: 1

Televideo Production Advanced GT MAG (CC, CH, KN, LN, PT)
Course Number: 42.4530.5
Credit: 1

Televideo Production Advanced AP MAG (CC, CH, KN, LN, PT)
Course Number: 42.4530.6
Credit: 1

Televideo Production AP MAG (CC, CH, KN, LN, PT)
Course Number: 42.4530.7
Credit: 1

Figure Drawing 1 MAG
Course Number: 42.6110.0
Credit: 1

Figure Drawing 1 GT/AP (AP Studio Art: Drawing) MAG (CC, PT)
Course Number: 42.6110.5 (GT)
Course Number: 42.6110.6 (AP)
Credit: 1

Figure Drawing 2 MAG
Course Number: 42.6120.0
Credit: 1

Figure Drawing 2 GT/AP (AP Studio Art: Drawing) MAG (CC, PT)
Course Number: 42.6120.5 (GT)
Course Number: 42.6120.6 (AP)
Credit: 1

Painting 1 GT MAG (PT, MM)
Course Number: 42.6210.5
Credit: 1

Painting 2 GT MAG (PT, MM)
Course Number: 42.6220.5
Credit: 1

Painting 3 GT/AP (AP Studio Art: Drawing) MAG (CC, PT, MM)
Course Number: 42.6230.5 (GT)
Course Number: 42.6230.6 (AP)
Credit: 1

Painting 4 GT/AP (AP Studio Art: Drawing) MAG (CC, PT)
Course Number: 42.6240.5 (GT)
Course Number: 42.6240.6 (AP)
Credit: 1

Sculpture 1 GT MAG (PT)
Course Number: 42.6310.5
Credit: 1

Sculpture 2 GT MAG (CC, PT)
Course Number: 42.6120.6 (AP)
Credit: 1
Sculpture 2 GT MAG (CC, PT)
Course Number: 42.6320.5
Credit: 1

Sculpture 3 GT/AP (AP Studio Art: 3D Design) MAG (CC, PT)
Course Number: 42.6330.5 (GT)
Course Number: 42.6330.6 (AP)
Credit: 1

Sculpture 4 GT/AP (AP Studio Art: 3D Design) MAG (CC, PT)
Course Number: 42.6340.5 (GT)
Course Number: 42.6340.6 (AP)
Credit: 1

Figure Sculpture I GT MAG (CC)
Course Number: 42.6810.5 (GT)
Credit: 1

Figure Sculpture II GT/AP (AP Studio Art: 3D Design) MAG (CC)
Course Number: 42.6820.5 (GT)
Course Number: 42.6820.6 (AP) Credit: 1
COLLEGE AND CAREER READINESS

MISSION

The Office of College and Career Readiness provides tools, support, and opportunities to students and staff members through the implementation of Advancement Via Individual Determination (AVID), Early College Access Programs (ECAP), and Mentoring programs so that all students graduate from BCPS ready for college, careers, and productive lives.

AVID, is a college readiness system designed to increase the academic success of students who are traditionally underrepresented in higher education through the use of research based writing, inquiry, collaboration, organization, and reading (WICOR) strategies. AVID promotes student success in rigorous college-preparatory curricula.

Effective Learning Habits for College and Career Readiness (ELH4CCR) is a series of courses designed to increase the academic success of students through executive functioning, social, and emotional strategies and skills.

AVID 9
Course Number: 81.0100.0
Prerequisite: None
Credit: 1
The AVID (Grade 9) course is an elective class for college bound students. It will provide academic, tutorial, career goal planning, and social support for students through the AVID curriculum (WICOR) and AVID High School Libraries focus on Writing, Inquiry, Collaboration, Organization, and Reading. To ensure success in college-prep courses, students work independently and as partners, as well as in teacher and tutor-led collaborative groups. Note-taking, outlining, writing, speaking, reading, test-taking strategies, maintaining organized notebook binders, self-awareness, and preparation for PSAT online are stressed. Students receive introductory information and direction regarding AP classes and may participate in AP classes. In addition, the AVID course includes college motivational activities.

AVID 10
Course Number: 81.0200.0
Prerequisite: None
Credit: 1
This Grade 10 course continues with the AVID WICOR curriculum, advancing to more rigorous individual and small-group instruction in support of all the student's academic courses, and college-awareness activities. Instructional emphasis is on writing skills and helping students to successfully pass High School Assessments. Students continue to receive instruction and practice using PSAT online. Students are given guidance and support in preparation for enrollment in AP classes. AVID tutorials meet individual and group needs for real-time academic support through teacher or tutor-led collaborative work. Tutors serve as role models and as sources of information about college life and expectations. By the end of this course, students are expected to enroll in one or more AP courses.

AVID 11
Course Number: 81.0300.0
Prerequisite: None
Credit: 1
This Grade 11 AVID course is an elective class for students who are college bound. To ensure success in college-prep courses, students work independently, as well as in teacher or tutor-led collaborative groups. Note-taking, outlining, writing, speaking, reading, test-taking strategies, SAT preparation, and self-awareness are stressed. The course provides college motivational and career exploration activities. Students use problem solving and decision-making skills. In addition, students work independently and with others in a variety of settings using critical thinking skills to organize information acquired from a variety of sources such as electronic technology and research. Grade 11 students begin to complete writing, reading, and research projects as required in the College Readiness Curriculum. By the end of this course, students are expected to enroll in at least two or more AP courses.

AVID 12 (Honors)
Course Number: 81.0400.4 (H) (Senior Seminar)
Prerequisite AVID 11
Credit: 1
This AVID Senior Seminar is the culmination of the students’ years in the AVID program. Like all AVID courses, it encompasses WICOR curriculum and tutors. The course involves substantial critical reading and writing, as well as preparation for weekly Socratic Seminars. Students working with tutors are expected to eventually act as moderators for Socratic Seminars. Students receive support in test-readiness for external exams such as AP and International Baccalaureate. Students enrolled in the Senior Seminar are required to complete weekly timed writings and analytical discourses in subjects across the curriculum. Grade 12 students increase completion of more complex and in-depth writing, reading, and research projects as required in the
College Readiness Curriculum. In addition, students are required to make written and oral presentations to the class on topics related to college admissions, contemporary issues, and social concerns. During this course, students are expected to apply for admission to several colleges and/or universities. 

AVID Tutorial
Course Number: 81.1000.0 (students in grade 12 who tutor)
Prerequisite: Grade 12 students must have achieved at least a C or better in an AP Course.
Credit: 1

The tutorial is a practicum course for Grade 12 AP students who are not in an AVID class. The AVID school coordinators offer tutorial training for the AP students. Grade 12 AP students assist AVID students in the tutorial session with Socratic questioning so that the AVID students will take responsibility for their learning and actively engage in the learning process. The AVID tutorial process uses the AVID curriculum, writing, inquiry, collaboration, and reading skills. Grade 12 AP students are academic coaches who assist students with organizational and time management skills, research, rigorous learning, and college preparatory requirements to help them transition successfully to college.

Effective Learning Habits for College and Career Readiness
Course Number: 10.9510.0
Credit: ½
This course is designed for high school students, primarily grade nine students transitioning from middle school. The course will begin by focusing on positive belief systems about academic success. Students will then address college and career connections beginning with an overview of national standardized tests for college entrance. The course will also review study skills and the basics for managing time. Students will end the course with an analysis of student transcripts and resume writing skills. This course is an abbreviated version of the 1 credit course.

Effective Learning Habits for College and Career Readiness
Course Number: 10.9500.0
Credit: 1
This course is designed for high school students, primarily grade nine students transitioning from middle school. The course will begin by focusing on positive belief systems about academic success. Students will then address college and career connections beginning with an overview of national standardized tests for college entrance. The course will also review study skills and the basics for managing time. Students will end the course with an analysis of student transcripts and resume writing skills.
DANCE EDUCATION

MISSION

Guided by Blueprint 2.0, Dance Education contributes to the BCPS commitment to improve achievement for all students and provide a well-rounded education. The mission of the Office of Music and Dance Education is to provide direction and support for schools in delivering a comprehensive, engaging, and challenging dance program for all children in grades K-12 in alignment with the Maryland Fine Arts Standards for Dance and the National Core Arts Standards. The vision of the dance education program is to provide students with the opportunity to be artistically educated in dance having acquired skills in artistic movement, observation, performance, communication, critical and creative thinking, and healthy behaviors in order to meet the increasing challenges of life in the 21st century. All students have a right to an arts education as a fundamental part of their overall education.

The purpose of the Dance Education curriculum is to provide developmentally appropriate practices that build on a sequential program of dance experiences, which contribute to the overall achievement of all students. Dance courses are carefully designed with experiences that include perception and response activities with movement, historical, social, and cultural dance forms, creative expression and production, aesthetics, and personal development for a successful and healthy lifetime. Honor’s and Gifted and Talented courses in Dance III, IV, and Company are offered at the teacher’s discretion.

Note: Dance II, III, IV, and Company require regular attendance at all performances in order to demonstrate performance competencies. Students will receive the performance dates at the beginning of the course. Demonstration of performance competencies through day and evening performances is considered equivalent to an exam and is included as a portion of the course grade. Students must be enrolled in an appropriate Fine Arts Dance course to participate in events that represent our schools, such as the County Dance Festival, All-County, All-State, Regional, National, and other enrichment dance activities.

Dance for Athletes
Course Number: 5456000
Prerequisites: None
Credit: 1
Note: This course meets the fine arts requirement for graduation. Course 5456000 meets the fine arts requirement for graduation.
Dance for Athletes is a comprehensive movement course intended to provide cross training in fine arts dance for student athletes/non-dancers with limited dance experience. Each unit of study includes dance technique, anatomy, history, in-class evaluations, written reflections, and peer-to-peer collaboration. This course will not satisfy the Grade 9 or 10 physical education requirement. This course can be repeated for credit.

Dance I (Introductory)
Course Number: 52.0010.0
Prerequisites: None
Credit: 1
Note: This course meets the fine arts requirement for graduation. Course 52.0010.0 meets the fine arts requirement for graduation.
Dance I is an introductory movement course in the fundamentals of ballet, modern, and jazz. Each unit of study includes dance technique, history, anatomy, written/reading assignments, in-class evaluations, and a countywide final exam. Additional study includes cultural and social dance forms. This course will not satisfy the Grade 9 or 10 physical education requirement.

Dance II (Beginning)
Course Number: 52.0020.0
Prerequisites: Successful completion of Dance I or by audition with the dance teacher.
Credit: 1
Note: This course meets the fine arts requirement for graduation. Course 52.0020.0 meets the fine arts graduation requirement.
Dance II is offered to students who have had Dance I or have one to three years of sufficient outside training. Units of study include ballet, modern, and jazz with further instruction in cultural and social forms, history, anatomy, improvisation, and composition. Students will have written/reading assignments, in-class evaluations, and a countywide final exam. There is one required performance in a dance concert. This course will not satisfy the Grade 9 or 10 physical education requirement.

Dance III (Intermediate) *
Course Number: 52.0030.0
Course Number: 52.0030.4 (H)
Course Number: 52.0030.5 (GT)
Prerequisites: Admission to the course is by audition or successful completion of Dance II.
Credit: 1
Note: This course fulfills the fine arts requirement for graduation. Course 52.0030.0 meets the fine arts requirement for graduation.
Dance III continues the work in ballet, modern, and jazz techniques. Students will begin to focus on the development of performance skills. Anatomy, dance history, improvisation, and composition will enrich
the course of study. Twentieth century theatrical and social dance will be explored experientially and historically. Students will have written/reading assignments, in-class evaluations, and a countywide final exam. Students will perform in various concerts throughout the year. This course may be repeated for credit.

Dance IV (Intermediate/Advanced) *
Course Number: 52.0040.0
Course Number: 52.0040.4 (H)
Course Number: 52.0040.5 (GT)
Prerequisites: Admission to this course is by audition or successful completion of Dance III.
Credit: 1
Note: This course meets the fine arts requirement for graduation.
Dance IV is an intermediate/advanced course offered to students interested in progressing to an advanced level and gaining more performance experiences. Further development in ballet, modern, jazz, and historical, cultural, social forms is correlated with a concentration on performance.
Students will have written/reading assignments, in-class evaluations, student/teacher assessments, a mid-term, and final exam.
Students will perform throughout the year. This course may be repeated for credit.

Dance Company (Advanced) *
Course Number: 52.7110.4 (H)
Course Number: 52.7110.5 (GT)
Prerequisites: Students are accepted through an audition.
Credit: 1
Note: Weekly, evening rehearsals are required to prepare for upcoming concerts/assemblies. Participation in countywide, state, and national fine arts dance events may require evening and weekend commitment.
Dance Company is an advanced performance course offered to students in Grades 9-12. Advanced development in ballet, modern, and jazz correlates with a concentration on performance. Historical, cultural, and social dance forms will be included in history and criticism activities. Interdisciplinary work will be included in student projects. Students will have written/reading assignments, in-class student and teacher evaluations, a mid-term, and final exam. The company will perform in a variety of settings throughout the year that will require extra-curricular dedication from the student. This course may be repeated for credit.
Honors and GT Credit are available on an individual basis. Additional responsibilities may include leadership, choreography, attendance at concerts, and projects. See your dance teacher.

DANCE MAGNET COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Course Number</th>
<th>Credit</th>
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<tbody>
<tr>
<td>Ballet I</td>
<td>52.1010.5</td>
<td>1</td>
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<tr>
<td>Modern Dance I</td>
<td>52.2010.5</td>
<td>1</td>
</tr>
<tr>
<td>Modern Dance II</td>
<td>52.2020.5</td>
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<td>Modern Dance III</td>
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<td>Dance Composition I</td>
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<td>Dance Composition II</td>
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<td>Modern Dance IV</td>
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<td>Jazz I (Elective)</td>
<td>52.3000.0</td>
<td>1</td>
</tr>
</tbody>
</table>
ENGLISH/LANGUAGE ARTS
MISSION
The Office of Language Arts seeks to improve student achievement by developing curriculum which is aligned with the Maryland College and Career Readiness Standards, providing professional development for the systematic implementation of the curriculum, and selecting instructional materials that are appropriate and engaging. To that end, students will be provided opportunities for creative expression on the level of their capacities and interests and taught, through experiences with literature, the language techniques and literary forms used by accomplished writers and the significant themes that reflect the human condition. Students will learn to listen attentively, to evaluate what they hear, and develop competence in those reading skills necessary for the performance of school tasks and for the use of reading as an instrument of personal achievement, enlightenment, and enjoyment throughout life.

English 9, 10, 11, and 12 are required for graduation. Multiple levels of the required courses, English 9-12, are offered in the schools. All English elective courses count as elective graduation credits and cannot be used to fulfill the four-credit English requirement.

Standard, honors, and GT levels of English are offered as enrollments justify. In these classes, the instructional level and materials are modified according to the needs of the students. Suggested course sequences are shown below.

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<tr>
<td>Honors Program</td>
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<td>Honors English 11 or AP English Language and Composition</td>
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<td>GT Program</td>
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<td>English 11 AP English Language and Composition</td>
<td>English 12 AP English Literature and Composition</td>
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</tbody>
</table>

English 9
Course Number: 10.0900.0 Course Number: 10.0900.4 (H) Prerequisite: None Credit: 1
Note: This course provides a Service Learning component.
The English 9 program culminates the study of literary genre initiated in middle school and provides a balanced program of reading, writing, speaking, listening, grammar, usage, and mechanics skills within the context of literature. Participating in a variety of integrated, student-centered, interdisciplinary activities, students learn to process information efficiently, examine ideas critically, and express themselves effectively in the real-life worlds of study, work, and leisure.

English 9 GT
Course Number: 10.0900.5 (GT) Prerequisite: Successful completion of GT 8 English or a teacher recommendation for placement Credit: 1
Note: This course provides a Service Learning component.
The English 9 GT program introduces several approaches to literary criticism which students use to examine the universal themes expressed in a variety of genres and forms from both early and modern literature. Open-ended and structured writing experiences, significant research opportunities, and frequent oral/aural activities ensure the continued growth in all major skill areas.

English 10
Course Number: 10.1000.0 Course Number: 10.1000.4 (H) Prerequisite: Successful completion of English 9 Credit: 1
The English 10 program is an integrated language arts program of literature, composition, grammar, usage, and mechanics focuses on developing awareness of various world cultures as expressed through literature. The program continues developing skills in reading/interpreting, writing, listening, speaking, language, thinking, and research through the study of a variety of literary genres. Some themes/issues in this course make connections to the Grade 10 world history course.

English 10 GT
Course Number: 10.1000.5 (GT)
Prerequisite: Successful completion of GT 9 English or a teacher recommendation for placement.
Credit: 1

The English 10 GT program is organized thematically to present the universality of the search for meaning in society through its expression in a variety of cultures and historical time periods. The focus on literary criticism begun in GT English 9 is continued with the introduction of three new approaches and is synthesized with the study of a literary work that addresses the interplay of all the approaches. A formal research paper, frequent open-ended and structured writing experiences, and specific attention to syntactical structures, usage, and mechanics further the development of composing and language skills.

English 11
Course Number: 10.1100.0 Course Number: 10.1100.4 (H)
Prerequisite: Successful completion of English 10 is recommended.
Credit: 1

The English 11 program builds on the awareness of the diversity of cultures and literature begun in Grade 10. This course provides a balanced program of reading, writing, speaking, listening, grammar, usage, and mechanics skill development within the context of an expanded and updated canon of American literature reflecting the cultural and ethnic mosaic of American society. The themes and issues studied make direct connections to the Grade 11 American history course.

AP English 11 - English Language & Composition
Course Number: 10.1100.6 (AP)
Prerequisite: Successful completion of GT 10 English or a teacher recommendation for placement.
Credit: 1

AP English 11 incorporates opportunities for AP English Language and Composition preparation into a rigorous 11th program that integrates composing, interpreting, and language experiences growing out of a largely chronological study of American literature. There are opportunities for critical and analytical examination of nonfiction, rhetorical and stylistic analysis, the study of argumentation, and language study in relation to the developing American English and the individual writer's style. Students complete a formal research paper on an American writer and the individual writer's style. Since this course involves intensive preparation for the AP test in English Language and Composition, students are expected to take the AP test.

English 12 - Honors
Course Number: 10.1200.4
Prerequisite: Successful completion of English 11 is recommended.

English 12 - Standard
Course Number: 10.1200.0
Prerequisite: Successful completion of English 11 is recommended.
Credit: 1

The Standard English 12 program is designed to transition students to college. It incorporates opportunities for students to focus on developing improved skills in the area of reading and writing for college-readiness. Students will write text-based responses in a variety of modes with attention to documentary analysis and argument writing. Additionally, the course is designed to assist students in test-taking skills, especially as related to the strengthening of critical reading and writing skills.

AP English 12 - English Literature and Composition
Course Number: 10.1200.6 (AP)
Prerequisite: Successful completion of AP 11 English or a teacher recommendation for placement.
Credit: 1

This course is a multi-layered study of British literature that includes an examination of the political, social, cultural, and philosophical contexts that helped shape the dominant writers of each major literary period. A unifying thread throughout is a focus on the growth and development of the English language from its Anglo-Saxon roots to our modern systems of grammar. Students compose a variety of analytical and creative pieces as they continue to develop and refine their own writing style. Since this course involves intensive preparation for the AP test in English Literature and Composition, students are expected to take the AP test.

ENGLISH ELECTIVES

Credits from these courses may not be used to fulfill the four credit graduation requirement for English. Some courses run for one semester and will be awarded ½ credit; some courses are year-long and run for two periods, will receive 2 credits.

Journalism I
Course Number: 10.1510.0
Credit: 1  
Course Number: 10.1810.0  Credit: ½  
Prerequisite: None
Journalism I prepares students with the fundamentals for writing, producing, and editing school newspapers.

Journalism II  
Course Number: 10.1520.4 (H)  Credit: 1  
Course Number: 10.1560.4 (H)  Credits: 2  
Course Number: 10.1820.4 (H)  Credit: ½  
Prerequisites: Successful completion of Journalism I.
This advanced course provides the production staff for the local school newspaper. Skills developed in Journalism are applied to all levels of newspaper preparation and distribution.

Journalism II: Desktop Publishing  
Course Number: 10.1620.4 (H)  Credits: 1  
Prerequisite: Successful completion of Journalism I.
In schools with desktop publishing capabilities, this advanced course provides the production staff for the local school newspaper. Students will gain skills in keyboarding and computer-assisted graphic layout and design as the skills developed in Journalism and understanding of appropriate technological systems are applied to all levels of newspaper preparation and distribution.

Journalism III  
Course Number: 10.1530.4 (H)  Credit: 1  
Course Number: 10.1830.4 (H)  Credit: ½  
Prerequisites: Successful completion of Journalism II.
For this course, students must accept major leadership responsibility, usually as an editor, for the school paper. This group must meet with the Journalism II production staff at least three periods a week.

Journalism IV  
Course Number: 10.1540.5 (GT)  Credit: 1  
Course Number: 10.1840.5 (GT)  Credit: ½  
Prerequisites: Successful completion of Journalism III.
In this course, students continue to refine newspaper skills of writing, layout, and management in an editorial or management position.

Language and Composition  
Course Number: 10.9100.4 (H)  Credit: 1  
Course Number: 10.9110.4 (H)  Credit: ½  
Prerequisite: None
Note: This course is an elective for sophomores and juniors to be taken concurrently with Honors English 10, English 11, or AP English classes.
This course is designed to provide students who have not previously enrolled in AP or GT classes with additional opportunities to develop the skills in critical thinking, analytical reading, and college-level writing that they need to be successful on the AP English tests.

Film Appreciation and Criticism  
Course Number: 10.7000.4 (H)  Credit: 1  
Course Number: 10.7010.4(H)  Credit: ½  Prerequisite: None
This elective is open to students in Grades 10-12. It offers students the opportunity to engage critically with visual text by addressing cinematic reading strategies and textual analysis.

SAT Preparation - Mathematics  
Course Number: 80.0910.0  Credit: ½  
Prerequisite: Successful completion of Algebra I and Geometry are recommended. Completion of PSAT required.
This course is designed for those students who are preparing to take the SAT. It will include an analysis of the test as well as practice exercises in test-taking mathematics techniques.

SAT Preparation Reading/Writing  
Course Number: 80.0970.0  Credit: ½  
Prerequisite: Completion of PSAT required.
This course is designed for those students who are preparing to take the SAT. Instruction will focus on critical reading and writing strategies as well as practice exercises in test-taking techniques necessary for success on the test. Students who have not met the requirements for College and Career Readiness may be enrolled in this course in Grade 12 in order to change their status.

Accelerated English  
Course Number: 10.1150.0  Prerequisite: This elective is for students who passed English 10 but did not pass the grade level assessment on their first attempt.
Credit: ½  
This course is designed to assist these students in developing improved skills in test-taking, critical reading, informative and persuasive writing.
grammar, usage, and mechanics. This course could assist students in 11th grade who need to complete an English Bridge project.

Critical Reading
Course Number: 10.8580.0
Credit: 1
Prerequisite: None
This course is designed to assist students in developing college-level reading skills including a focus on before, during and post reading strategies that are appropriate for the rigor of high school and college texts. The course could include explicit teaching in word study for students with deficits in that area.

Speech I
Course Number: 10.2510.0
Credit: 1
Course Number: 10.2550.0
Credit: ½
Prerequisite: None
This is an introductory course in interpersonal communication and public speaking. It is designed to serve as either a self-contained program or as a springboard to more advanced courses and activities in public speaking, competitive speaking, or mass communication. It is not a speech correction course.

Speech II
Course Number: 10.2520.4 (H)
Credit: 1
Course Number: 10.2560.4 (H)
Credit: ½
Prerequisite: Successful completion of Speech I.
This course focuses on public speaking. Students will gain skills beyond those taught in Speech I and will be exposed to a wider variety of speeches and public speaking opportunities.

Speech III
Course Number: 10.2530.4 (H)
Credit: 1
Course Number: 10.2570.4 (H)
Credit: ½
Prerequisites: Successful completion of Speech I and II.
This is an advanced public speaking course. In it, students will polish their public speaking skills, continue to gain experience in a wide variety of types of public speaking, and participate in more types of public speaking opportunities, including contests, tournaments, and leagues.

Speech IV
Course Number: 10.2540.5 (GT)
Credit: 1
Course Number: 10.2580.5 (GT)
Credit: ½
Prerequisites: Successful completion of Speech I, II, and III.
This course is an advanced public speaking course in which students will hone their competitive speaking skills and further develop their expertise in a variety of types of public speaking venues, including local, state, and national contests, tournaments, and leagues.

Technical Theatre I
Course Number: 10.3110.0
Prerequisite: None
Credit: 1
This course provides the fundamentals of technical theatre to students having special aptitude for stagecraft -- set design and construction, lighting, and audio effects.

Technical Theatre II
Course Number: 10.3120.4 (H)
Prerequisite: Successful completion of Technical Theatre I.
Credit: 1
This advanced course provides the technical staff for school theatrical productions. Skills developed in Technical Theatre I will be applied to all levels of theatrical productions.

Theatre Arts I
Course Number: 10.3010.0
Credit: 1
Course Number: 10.3050.0
Credit: ½
Prerequisite: None
Note: If completed for one credit, this course satisfies 1 credit of the fine arts graduation requirement. If completed for ½ credit, this satisfies ½ credit of the fine arts credit requirement. This course develops an understanding of theatre arts, including activities for voice and body. It includes an introduction to aspects of the visual theatre (scenery, lighting, costumes, and make-up).

Theatre Arts II
Course Number: 10.3020.4 (H)
Credit: 1
Course Number: 10.3060.4 (H)
Credit: ½
Prerequisites: Successful completion of Theatre Arts I.
Note: If Theatre Arts I was taken for ½ credit, Theatre Arts II will satisfy another ½ credit of the Fine Arts graduation requirement. In addition to a more refined approach to creative drama and technical theatre, this course includes script interpretation, character development, and scenic design.
Theatre Arts III
Course Number: 10.3030.4 (H)
Credit: 1
Prerequisites: Successful completion of Theatre Arts I and II.
This course is directed to students having special aptitude for theatre. In addition to in-class coursework, students will be responsible for independent projects from such areas as creative drama for children, reader's theatr, puppet theatre, and design and production.

Theatre Arts IV
Course Number: 10.3040.5 (GT)
Credit: 1
Prerequisites: Successful completion of Theatre Arts I, II, and III.
In this course, students will be responsible for independent projects in such areas as creative drama for children, reader's theatre, puppet theatre, design, and production.

Technical Writing
Course Number: 10.4510.0
Credit: 1
Course Number: 10.4610.0
Credit: ½
Prerequisite: None
In this course, students will learn the basics of technical writing.

Introduction to Creative Writing
Course Number: 10.1360.0
Credit: 1
Course Number: 10.1370.0
Credit: ½
Prerequisite: None
This course introduces all aspects of creative writing, including poems, short stories, short plays, and essays.

Advanced Creative Writing
Course Number: 10.1420.4 (H)
Credit: 1
Course Number: 10.1470.4 (H)
Credit: ½
Prerequisite: Successful completion of Introduction to Creative Writing.
This course will focus on advanced skills in writing sketches, short stories, plays, poetry, and essays.

Yearbook I
Course Number: 10.1910.0
Credit: ½
Course Number: 10.2010.0
Credit: 1
Prerequisite: None
Yearbook I develops the skills necessary to produce the school yearbook; copy writing, photography, layout, budgeting, promotion, and art design are addressed.

Yearbook II
Course Number: 10.1920.4 (H)
Credit: ½
Course Number: 10.2020.4 (H)
Credit: 1
Prerequisites: Successful completion of Yearbook I
In this course, the student continues to apply yearbook skills, extend areas of expertise, and assume more responsibility, usually in an editorial or management position, in the production of the school yearbook.

Yearbook III
Course Number: 10.1930.4 (H)
Credit: ½
Course Number: 10.2030.4 (H)
Credit: 1
Prerequisites: Successful completion of Yearbook I and II
In this course, the student continues to apply yearbook skills, extend areas of expertise, and assume more responsibility in an editorial or management position in the production of the school yearbook.

Yearbook IV
Course Number: 10.1940.5 (GT)
Credit: ½
Course Number: 10.2040.5 (GT)
Credit: 1
Prerequisites: Successful completion of Yearbook I, II, and III
In this course, students continue to refine yearbook skills and assume more responsibility in an editorial or management position in the production of the school yearbook.

Yearbook II: Publishing Enterprises
Course Number: 10.2100.4 (H)
Credit: 1
Prerequisites: Successful completion of Yearbook I
This course is designed to teach those skills necessary for layout, design, and publishing of a yearbook.

ENGLISH ADVANCED PLACEMENT COURSES
Advanced Placement English courses are scheduled whenever they are justified by enrollment. Students enrolled in advanced placement courses are eligible for GT credit. Each advanced placement course includes a study of critical reading, author's style, argument, and writing. Successful completion of course and scoring high on the AP test may give
ENGLISH INTERNATIONAL

BACCALAUREATE COURSES (IB)
International Baccalaureate English courses fulfill the rigorous requirements needed for the Honors level courses as set forth by the International Baccalaureate Program. Students will be engaged in in-depth study of author's diction, historical context for writing, author's style, and internal meaning of the works. Additionally, students will hone their own writing skills through study of language usage, engaging in numerous writing assignments, and by critically reading the writing of authors, peers, and themselves.

English 9 Pre-Diploma (KN, MM)
Course Number: 10.0910.7 (IB)
Credit: 1

English 10 Pre-Diploma (KN, MM)
Course Number: 10.1010.7 (IB)
Credit: 1

English 11 IB (KN, MM)
Course Number: 10.1120.7 (IB)
Credit: 1

English 12 IB (KN, MM)
Course Number: 10.1220.7 (IB)
Credit: 1

ENGLISH MAGNET COURSES

Advanced Journalism (CC)

Course Number: 10.1700.5 (GT)
Credit: 1

Technical Theatre III (CC)
Course Number: 10.3130.4 (H)
Credit: 1

Design & Production I (CC, PT)
Course Number: 10.3210.5 (GT)
Credit: 1

Design & Production II (CC, PT)
Course Number: 10.3220.5 (GT)
Credit: 1

Course 10.3250.5 (GT)
Credit: 2

Design & Production III (CC, PT)
Course Number: 10.3260.5 (GT)
Credits: 2

Design & Production IV (CC, PT)
Course Number: 10.3270.5 (GT)
Credits: 2

Fiction to Script (CC)
Course Number: 10.1460.5 (GT)
Credit: 1/2

Musical Acting (CC, PT)
Course Number: 10.3310.5
Credit: 1

Advanced Movement in Theater (CC)
Course Number: 10.3320.5 (GT)
Credit: 1/2

Fundamentals of Acting (CC, PT)
Course Number: 10.3400.5 (GT)
Credit: 1

Acting I (CC, PT)
Course Number: 10.3410.5 (GT)
Credit: 1

Course Number: 10.3440.5 (GT)
Credit: 2

Acting II (CC, PT)
Course Number: 10.3420.5 (GT)
Credit: 1

Course Number: 10.3450.5 (GT)
Credits: 2

Acting Shakespeare (CC, PT)
Course Number: 10.3480.5 (GT)
Credit: 1

Performance Styles (CC)
Course Number: 10.3510.5 (GT)
Credit: 1/2
Theatre Technology (CC)
Course Number: 10.3610.5
(GT) Credit: 1
Assistantship for Introduction to the Theatre (CC, PT)
Course Number: 10.3900.0
Credit: ½
Assistantship for Technical Theatre (CC, PT)
Course Number: 10.3910.0
Credit: ½
Literary Forms (CC)
Course Number: 10.6410.5
(GT) Credit: 1
Poetic Traditions (CC)
Course Number: 10.6420.5
(GT) Credit: 1
Free Verse (CC)
Course Number: 10.6500.5
(GT) Credit: ½
Advanced Topics in Fiction (CC)
Course Number: 10.6550.5
(GT) Credit: ½
Film Making (CC)
Course Number: 10.6610.5

Advanced Literature Seminar (CC)
Course Number: 10.9260.5
(GT) Credit: 1
Course Number: 10.9270.5
(GT) Credit: ½
Writing Seminar (CC)
Course Number: 10.9300.5
(GT) Credits: 2
Course Number: 10.9320.5
(GT) Credit: 1
Writing Seminar: Literary Nonfiction Writing (CC)
Course Number: 10.9310.5
(GT) Credit: ½
Writing Seminar:
Screenwriting (CC)
Course Number: 10.9330.5 (GT) Credit:
½
Theatre Production Seminar (CC, PT)
Course Number: 10.9420.5 (GT) Credits: 2
Movement in Theatre (CC, PT)
Course Number: 10.3300.5 (GT) Credit: 1
ENGLISH for SPEAKERS of OTHER LANGUAGES (ESOL)

MISSION
The Office of ESOL empowers English Learners by providing culturally and linguistically responsive instruction and support services. The Office of ESOL supports student achievement through the design, implementation and assessment of curricula focused on the academic language necessary for success in content areas. By incorporating the WIDA standards of the Language of Math, the Language of Science, the Language of Social Studies, the Language of Language Arts and Social and Instructional Purposes students are increasingly prepared for the language demands associated with the grade-level content classes.

Newcomer ESOL courses
Course Number: 31.1050.0 ESOL Newcomer (if data indicate academic deficit)* (DN, LN, OM, PR, WD)
Prerequisite: None
Credit: 1

Course Number: 31.6010.0 ESOL Math (if data indicate a math deficit) (DN, LN, OM, PR, WD)
Prerequisite: None
Credit: 1
Note: ESOL math earns a mathematics credit

Course Number: 31.7150.0 ESOL Academic Foundations (DN, LN, OM, PR, WD)
Prerequisite: None
Credit: 1

*Only students between 1-1.9 proficiency on the WIDA-APT test who are new to the United States and who have interrupted schooling, limited formal schooling, or other gaps in their education should be scheduled into ESOL Newcomer.

Level I (Beginning) ESOL courses
Course Number: 31.11010.0 ESOL I (DN, LN, OM, PR, WD)
Prerequisite: None
Credit: 1

Course Number: 31.5010.0 ESOL American Culture (DN, LN, OM, PR, WD)
Prerequisite: None
Credit: 1

Course Number: 31.31100.0 Learning Through Content I (DN, LN, OM, PR, WD)
Prerequisite: None
Credit: 1
Note: ESOL I is equivalent to English 9 credit.
Beginning English Learners enroll in courses from among those listed above that target their specific needs. American Culture is a course appropriate for any English learner who is new to American school at a proficiency level of 1 or 2.

Level II (Intermediate) ESOL courses
Course Number: 31.1020.0 ESOL II (DN, LN, PR, OM, WD)

Course Number: 31.5030.0 ESOL American Government Support (DN, LN, OM, PR, WD)
Prerequisite: EFL I or score on placement test.
Credit: 1

Course Number: 31.31200.0 Learning Through Content II (DN, LN, OM, PR, WD)
Prerequisite: LTL I or score on placement test
Credit: 1

Note: ESOL II is equivalent to English 12 credit.
Intermediate English Learners have either entered Baltimore County Public Schools with an intermediate level of English proficiency or have progressed through the ESOL program to this level. These students combine ESOL courses from those listed above determined by individual student needs with mainstream classes.

Level III (High Intermediate) ESOL course
Course Number: 31.3030.0 ESOL III (DN, LN, PR, OM, WD)
Prerequisite: ESOL II or score on placement test.
Credit: 1

Note: This course meets the foreign language graduation requirement.
High intermediate English Learners have either entered Baltimore County Public Schools at a higher proficiency level or they have progressed through the ESOL program to this level.

Level IV (Advanced) ESOL course
Course Number: 31.100.0 ESOL IV (DN, LN, PR, OM, WD)
Prerequisite: ESOL III or score on placement test.
Credit: 1

Note: This course meets the foreign language graduation requirement.
HEALTH EDUCATION

MISSION

The mission of the Office of Health Education is to provide a comprehensive PreK-12 health education program based on sound research, stakeholder collaboration, and performance skills. The curriculum is aligned with national and state standards and is designed to motivate and assist all students in maintaining and/or improving their wellness and reducing injury and disease-related risks.

The health education curriculum provides students with the knowledge and skills needed to adopt and maintain healthy lifestyles and become health-literate individuals. The health-literate individual has the ability to access, understand, appraise, apply, and advocate for health information and services in order to maintain or enhance one’s own health and the health of others.

Health 9/10 and Health 11/12 both meet the health education graduation requirement. Health 9/10 is offered for either Grade 9 or 10. Health 11/12 is offered for either Grade 11 or 12.

Health 9/10

Course Number: 51.1010.0
Course Number: 51.1010.5 (GT)
Prerequisite: None
Credit: ½
Note: Offered for either Grade 9 or 10. This course meets the health education graduation requirement. This course will focus on developing knowledge and skills in the early high school years to address health and wellness issues affecting youth as cited by the Center for Disease Control and Prevention. Topics covered in this course include healthy eating, mental and emotional health, safety and injury prevention, personal development, drug/alcohol abuse prevention, and disease control and prevention.

Health 11/12

Course Number: 51.1020.0
Course Number: 51.1020.5 (GT)
Prerequisite: None
Credit: ½
Note: Offered for either Grade 11 or 12. This course meets the health education graduation requirement. This course will focus on developing knowledge and skills in the later high school years to address health and wellness issues affecting youth as cited by the Center for Disease Control and Prevention. Topics covered in this course include healthy eating, mental and emotional health, safety and injury prevention, personal development, drug/alcohol abuse prevention, and disease control and prevention.

Health (Advanced)

Course Number: 51.1100.0
Course Number: 51.1100.4 (H)
Prerequisite: Successful completion of Health 9/10, Health 9/10 GT, Health 11/12, or Health 11/12 GT
Credit: ½
Note: This is an elective course. This course is available to those students who would like to extend their knowledge of health topics such as: esteem building, decision making, nutrition, drug abuse, consumer health, human sexuality, and HIV/AIDS. Students will explore current health issues and career opportunities. Through discussions, group presentations, guest speakers, research opportunities, and advocacy projects, students will develop the skills to take active roles in their current and future wellness.
LIBRARY MEDIA

MISSION
The mission of the library media program of instruction is to prepare students as “knowledge workers” by integrating information and technology literacy skills with all curricular content. The library media specialist is the catalyst that inspires students to choose reading for pleasure by providing an age/level appropriate and current collection of reading materials. Library media centers provide comprehensive services related to the organization and management of print, digital, video-on-demand resources, and related information technologies to provide equitable instruction and access by the educational community to information resources that support teaching and learning.

Independent Research Seminar - Semester
Course Number: 86.9000.0
Course Number: 86.9000.4 (Honors)
Course Number: 86.9000.5 (GT)
Prerequisite: None
Credit: ½
This course will lead students to the completion of original and independent research. Students will work independently with a faculty team support to generate a research question, conduct a literature review, contact content-area experts and engage them as mentors, develop hypotheses, collect and analyze data and present their findings at the annual Student Independent Research Symposium. Students will be taught statistical analysis, research methods and how to write a thesis-type report to accompany their research. Students will be encouraged to continue their study, data collection, and/or prototype development and may apply for an internship through the School to Career program to work with a mentor from a local university, community-based organization, or research facility. The course research framework is accessible by clicking on this link.

Independent Research Seminar - Year
Course Number: 86.9010.0
Course Number: 86.9010.4 (Honors)
Course Number: 86.9010.5 (GT)
Prerequisite: None
Credit: 1
This course will lead students to the completion of original and independent research. Students will work independently with a faculty team support to generate a research question, conduct a literature review, contact content-area experts and engage them as mentors, develop hypotheses, collect and analyze data and present their findings at the annual Student Independent Research Symposium. Students will be taught statistical analysis, research methods and how to write a thesis-type report to accompany their research. Students will be encouraged to continue their study, data collection, and/or prototype development and may apply for an internship through the School to Career program to work with a mentor from a local university, community-based organization, or research facility.
MATHEMATICS MISSION

All Baltimore County students will learn rigorous mathematics in an active, engaging environment and will be taught by effective, highly qualified teachers. Instruction will be appropriate for every student and will integrate cutting-edge technology into an application-based mathematical program building the foundation for interested students to step into the world of science, engineering, and applied and pure mathematics. Teachers in mathematics classrooms will create an instructional environment for students to gain an appreciation of mathematics and to understand how mathematics is a viable subject connected to all aspects of everyday life.

Algebra I, Geometry, and Algebra II meet the University of Maryland System entrance requirements and satisfy the Maryland graduation requirements for mathematics. Gifted and talented/Advanced Academic and Honors sections of courses are advanced courses for the Maryland High School Certificate of Merit. In these classes, the instructional level and materials are modified according to the needs of the students. Course selections will vary according to the academic level and occupational goals of students. Course sequences are shown below.

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<td><strong>Standard Program</strong></td>
<td>Algebra I</td>
<td>Geometry</td>
<td>Algebra II or Sets, Functions, and Probability</td>
<td>Pre-College Math or Trigonometry with Algebra or other Mathematics courses including Advanced Placement Statistics</td>
</tr>
<tr>
<td><strong>Honors Program</strong></td>
<td>Honors Geometry</td>
<td>Honors Algebra II</td>
<td>Honors Trigonometry with Analytic Geometry and/or Honors College Algebra or Honors Pre-Calculus</td>
<td>Honors Trigonometry with Analytic Geometry or Honors College Algebra or Honors Calculus or AP Calculus AB and/or AP Statistics</td>
</tr>
<tr>
<td><strong>GT/AA Program</strong></td>
<td>GT/AA Algebra II</td>
<td>GT/AA Pre-Calculus or Trigonometry with Analytic Geometry and College Algebra</td>
<td>AP Calculus 1 AB and/or AP Statistics</td>
<td>AP Calculus II BC and/or AP Statistics</td>
</tr>
</tbody>
</table>

Algebra I
Course Number: 20.2100.0  Prerequisite: None  Credit: 1
Algebra I provides the foundation for a program in advanced algebra based mathematics courses. This course completes the study of linear functions and introduces exponential relationships and functions. Students also complete an in-depth study of quadratic functions. Algebra I requires the use of a graphing calculator.

Sets, Functions, and Probability
Course Number: 20.2350.0  Prerequisites: Successful completion of Algebra I and Geometry is recommended.  Credit: 1

This course involves the study of concepts beyond the Algebra and Geometry courses and assumes that students have taken prerequisite courses. The course presents topics that lead to a future complete study in Algebra II and will develop new concepts necessary for success on the SAT.

Algebra II
Course Number: 20.2200.0
Course Number: 20.2200.4 (Honors)
Course Number: 20.0850.5 (GT/AA)
Prerequisites: Successful completion of Algebra I is required. Teacher recommendation is required for Honors Algebra II. (Students who received a D in Algebra I are encouraged to retake the course in Summer School.)  Credit: 1
This course extends the study of linear, quadratic, and exponential functions, to include polynomial, rational, radical, and logarithmic functions. Algebra II requires the use of a graphing calculator.

Geometry
Course Number: 20.3000.0
Course Number: 20.3000.4 (Honors)
Course Number: 20.0900.5 (GT/AA)
Prerequisites: Successful completion of Algebra I is recommended. (Students who received a D in Algebra I are encouraged to retake the course in Summer School.) Only 1 credit in Geometry may be earned.
Credit: 1
This course develops the important ideas of Euclidean geometry from a transformational approach, the analytic-synthetic method of proof, and lays a foundation for subsequent courses in mathematics and science. High school geometry is primarily deductive and employs methods of logical reasoning.

Trigonometry with Algebra
Course Number: 20.2400.0
Prerequisites: Successful completion of Algebra I, Geometry and Algebra II is required.
Credit: 1
This course reviews and extends the concepts from Algebra II to support the study of Trigonometry. Students will use graphing utilities to examine functions and their inverses, trigonometric functions and their graphs, polar coordinates, identities, formulas and equations, and the solving of right triangles. The course also features preparation for the mathematics portion of the SAT. Trigonometry with Algebra requires the use of a graphing calculator.

Pre-College Mathematics: Advanced Algebra
Course Number: 20.2500.0
Prerequisites: Successful completion of Algebra I, Geometry and Algebra II is required.
Credit: 1
This senior level elective mathematics course uses applications to enhance understanding of advanced algebraic topics like linear models and systems, quadratic and rational functions, exponential and logarithmic functions, and conic sections. The goal is to prepare students to transition from high school to college level mathematics seamlessly.

SAT Preparation - Mathematics
Course Number: 80.0910.0
Credit: ½
Prerequisite: Successful completion of Algebra I and Geometry are recommended. Completion of PSAT required.
This course is designed for those students who are preparing to take the SAT. It will include an analysis of the tests as well as practice exercises in test-taking mathematics techniques.

SAT Preparation - Critical Reading/Writing
Course Number: 80.0970.0
Prerequisite: Completion of PSAT required.
Credit: ½
This course is designed for those students who are preparing to take the SAT. Instruction will focus on critical reading and writing strategies as well as practice exercises in test-taking techniques necessary for success on the test.

Trigonometry with Analytic Geometry
Course Number: 20.4010.4 (Honors)
Course Number: 20.4010.5 (GT/AA)
Prerequisites: Successful completion of Algebra II and Geometry and teacher recommendation are required.
Credit: 1
This course serves as a foundation for students who will be taking calculus. It focuses on right triangle trigonometry, circular functions, graphs of trigonometric functions, inverse trigonometric functions, trigonometric identities, coordinate geometry, oblique triangles, vectors, conic sections, parametric equations, and polar coordinates. This course requires the use of a graphing calculator.

College Algebra
Course Number: 20.2800.4 (Honors)
Course Number: 20.2820.5 (GT/AA)
Prerequisites: Successful completion of Algebra I, Geometry and Algebra II and teacher recommendation are required.
Credit: 1
Designed as a college freshman level course, this course focuses on function theory and topics from linear algebra. College Algebra requires the use of a graphing calculator.

Pre-Calculus
Course Number: 20.4900.4 (Honors)
Course Number: 20.4910.5 (GT/AA)
Prerequisites: Successful completion of Algebra I, Geometry and Algebra II and teacher recommendation are required.
Credit: 1
Pre-calculus is an advanced course that combines selected topics from function theory, linear algebra, trigonometry, and analytic geometry in preparation for Calculus I and II. Pre-calculus requires the use of a graphing calculator.

Calculus (Honors)
Course Number: 20.5040.4
Prerequisites: Successful completion of Pre-calculus or College Algebra and Trigonometry with Analytic
Geometry are required.
Credit: 1
This course is designed for seniors who desire an introduction to calculus in anticipation of taking calculus as college freshmen. The course presents the theory and techniques of differential and integral calculus with applications but does not maintain the pace or level of rigor appropriate for students planning to take the AP tests. This course requires the use of a graphing calculator.

AP Calculus 1 AB
Course Number: 20.5120.6
Prerequisites: Successful completion of Pre-calculus or College Algebra and Trigonometry/Analytic Geometry and teacher recommendation are required.
Credit: 1
This course is designed for students who desire advanced standing in college. It deals with the theory and techniques of differential and integral calculus with applications. Students are provided a structured preparation for the AP exam (AB). Students in the GT/AA program must take this course in Grade 11 in order to enroll in GT/AA Mathematics 12: AP Calculus II BC. This course is available to seniors in the honors program. The use of a graphing calculator is required.

AP Calculus II BC
Course Number: 20.5300.6
Prerequisites: Successful completion of AP Calculus AB is required.
Credit: 1
This course is designed to provide students in the gifted and talented mathematics program with a sound background in multivariable calculus. Topics include vector-valued functions, partial derivatives, directional derivatives, multiple integrals, vector fields, line and surface integrals, and Green’s and Stokes’ Theorems. Calculus II requires the use of a graphing calculator.

Statistics and Probability (Honors)
Course Number: 20.6030.4
Credit: 1
This course features the study of techniques in descriptive statistics for one variable, bivariate, and categorical data; frequency and probability of distributions; and the introduction of hypothesis testing.

Statistics: AP
Course Number: 20.6030.6
Credit: 1
Prerequisites: Successful completion of College Algebra and Trigonometry/Analytic Geometry or Pre-calculus is recommended.

Credit: 1
This calculator-assisted course features the study of techniques in descriptive and inferential statistics and includes frequency and probability distributions, Central Limit Theorem, hypothesis testing and confidence intervals, correlation and regression for bivariate data, analysis of variance, and nonparametric statistics. Students successfully completing this course will be prepared for the AP test in statistics.

Multivariable Differential Calculus
Course Number: 20.7000.5
Prerequisites: Successful completion of AP Calculus BC.
Credit: 1
This course is designed to provide students in the gifted and talented mathematics program with a sound background in multivariable differential calculus. Topics include vector-valued functions, partial derivatives, directional derivatives, multiple integrals, vector fields, line and surface integrals, and Green’s and Stokes’ Theorems.

Linear Algebra
Course Number: 20.2830.5
Prerequisites: Successful completion of AP Calculus II BC.
Credit: 1
This introductory course is designed to provide students in the gifted and talented mathematics program with a sound background in linear algebra. Topics include matrices, linear equations, vector spaces, bases and coordinates, linear transformations, eigenvectors and eigenvalues, and diagonalization.

Differential Equations
Course Number: 20.2600.5
Prerequisites: Successful completion of AP Calculus BC.
Credit: 1
This introductory course is designed to provide students with a sound background in differential equations. The course presents basic techniques and methods for solving ordinary differential equations, covering many if not all of the topics found in most first-quarter college courses in differential equations.

MATHEMATICS ADVANCED PLACEMENT COURSES
Advanced Placement mathematics courses are scheduled whenever they are justified by enrollment. Students enrolled in advanced placement courses are eligible for GT credit. Each advanced placement course includes a study of major mathematical concepts and principles, and includes opportunities
that develop problem-solving and communication skills.

AP Calculus I AB
Course Number: 20.5120.6 Credit: 1

AP Statistics
Course Number: 20.6030.6
Credit: 1

AP Calculus II BC
Course Number: 20.5300.6
Credit: 1

MATHEMATICS INTERNATIONAL
BACCALAUREATE (IB)

International Baccalaureate mathematics courses contain a body of knowledge ranging from algebra concepts, statistics, and geometry, to trigonometry and differential calculus which students are required to learn and apply. In their use of mathematical concepts and principles, students develop an ability to recognize patterns and structures, organize and present information, make generalizations, and demonstrate an understanding of and the appropriate use of mathematical modeling. A compulsory project is a course requirement, thus encouraging students to integrate mathematical concepts and principles to analyze and evaluate a unique topic.

Mathematics SL
Course Number: 20.1910.7
Credit: 1

Mathematics HL 1
Course Number: 20.1920.7
Credit: 1

Mathematics HL 2
Course Number: 20.1930.7
Credit: 1
MUSIC MISSION

Guided by Blueprint 2.0, Music Education contributes to the BCPS commitment to improve achievement for all students and provide a well-rounded education. The mission of the Office of Music and Dance Education is to provide direction and support for schools in delivering a comprehensive, engaging, and challenging music program for all children grades K-12 in alignment with the Maryland Fine Arts Standards for Music and the National Core Arts Standards. Student performance, active engagement, and development of requisite skills and content knowledge are the hallmark of music instruction in our schools. The Office of Music and Dance Education works to help students develop an understanding of and appreciation for the role music plays in contemporary society and to help them become a musically knowledgeable lifelong learner.

Extra-curricular countywide enrichment activities provide students with additional experiences to develop higher levels of performance skills. Baltimore County Public Schools was recognized by the President's Committee on the Arts and the Humanities as a school system offering high quality fine arts education for all students. Additionally, BCPS was named as one of the top 100 communities for music education by the American Music Conference in 2006-2017.

Notes: All students must earn one full credit in Fine Arts. This Fine Arts graduation requirement may be satisfied by successful completion of AP Music Theory, Music and Audio Technology, Guitar, Music for Life, Class Piano, Band, Chorus, or Orchestra. Courses such as band, chorus, and orchestra require regular attendance at all performances in order to demonstrate performance competencies. Students will receive these dates at least one month prior to performances. Demonstration of performance competencies through day and evening performances is considered equivalent to an exam and is included as a portion of the course grade. Students must be enrolled in their appropriate school performance ensemble to participate in events that represent our schools such as District and State Assessments, All-Honors, All-State, Solo and Ensemble, and other enrichment musical activities.

<table>
<thead>
<tr>
<th>Programs</th>
<th>Fine Arts Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard</strong></td>
<td>Class Piano, Guitar, Music and Audio Technology, Music for Life, Concert Band, Symphonic Band, Mixed Chorus, Choral Ensemble, Tenor Bass Chorus, Treble Chorus, Concert Choir, Concert Orchestra, Symphonic Orchestra, Jazz Ensemble, Percussion Ensemble, Steel Drum Ensemble</td>
</tr>
<tr>
<td><strong>Honors</strong></td>
<td>Class Piano, Guitar, Music and Audio Technology, Music Theory, Symphonic Winds, Wind Ensemble, Chorale, Tenor Bass Chorus, Treble Chorus, Concert Choir, Chamber Choir, Symphonic Orchestra, Chamber Orchestra, Jazz Ensemble, Percussion Ensemble, Steel Drum Ensemble</td>
</tr>
<tr>
<td><strong>AP</strong></td>
<td>AP Music Theory</td>
</tr>
<tr>
<td><strong>GT</strong></td>
<td>Class Piano, Guitar, Music and Audio Technology, Wind Ensemble, Chamber Choir, Chamber Orchestra</td>
</tr>
</tbody>
</table>

Music and Audio Technology
Course Number: 45.8050.0 Course Number: 45.8060.4 (H)
Course Number: 45.8070.5 (GT)
Prerequisite: None
Credit: 1
Note: Successful completion of the above course satisfies the fine arts graduation requirement.
Course content will include the latest innovations and advances in the field of Music Technology. Topics will include digital sampling, sequencing, original computer-generated compositions, MIDI, and multi-track recording. In a laboratory setting, students will use technology to compose, edit, arrange, perform, and record their own music. The ability to read music is not required.

Class Piano
Course Number: 45.2710.0 Course Number: 45.2720.4 (H)
Course Number: 45.2730.5 (GT)
Prerequisite: None
Credit: 1
Note: Successful completion of the above course satisfies the fine arts graduation requirement.
In a group setting, students will acquire the basic skills required to play the piano. Reading music notation, theory, and music elements are taught in order to provide the skills necessary to pursue musical interests.

Guitar
Course Number: 45.2810.0 Course Number: 45.2820.4 (H)
Course Number: 45.2830.5 (GT)
Prerequisite: None
Credit: 1
Note: Successful completion of the above course satisfies the fine arts graduation requirement.
Students are given the opportunity to study music through performance on the guitar. They will learn to read musical notation as they acquire performance skills and play various styles of music.

Music Theory
Course Number: 45.5110.4 (H)
Prerequisite: None
Credit: 1
Note: Successful completion of the above course satisfies the fine arts graduation requirement.
Music Theory improves students' basic understanding of music, especially as it contributes directly to appreciation and performance. It includes study in music reading and notation, ear training, keyboard training, harmony, analysis, and composition.

Music Theory-Advanced Placement
Course Number: 45.5300.6
Prerequisite: Music Theory or permission of instructor.
Credit: 1
Note: Successful completion of the above course satisfies the Fine Arts graduation requirement.
AP Music Theory concentrates instruction on a higher level of theoretical music training commensurate with college level expectations. Successful completion of the exam awards AP credit.

Band
Course Number: 45.2020.0 Concert Band
Course Number: 45.2030.0 Symphonic Band
Course Number: 45.2400.4 Wind Ensemble (H)
Course Number: 45.2400.5 Wind Ensemble (GT)
Credit: 1
Prerequisite: Requirements for admission may be selective and schools may require an audition for acceptance into this course.
Note: Successful completion of the above course satisfies the fine arts graduation requirement.
The various bands are offered to students interested in instrumental ensemble music experiences and who have the necessary background for the particular group. The course provides an opportunity for musical growth through the study and performance of a variety of instrumental literature. Students will develop skills and confidence in playing an individual part while working closely with others in a group.

Chorus
Course Number: 45.4100.4 Tenor Bass Chorus (H)
Course Number: 45.4210.0 Choral Ensemble
Course Number: 45.4220.0 Chorus
Course Number: 45.4310.0 Treble Chorus Course Number
45.4450.0 Concert Choir Course Number
45.4500.4 Chorale (H)
Course Number: 45.4800.4 Chamber Choir (H)
Course Number: 45.4800.5 Chamber Choir (GT)
Credit: 1
Prerequisite: Requirements for admission may be selective and schools may require an audition for acceptance into this course.
Note: Successful completion of the above course satisfies the fine arts graduation requirement.
The various choruses are offered to students interested in singing. The courses provide an opportunity for musical growth through the study and performance of a variety of vocal literature. Students will develop skills and confidence in singing an individual part while working closely with others in a group.

Orchestra
Course Number: 45.3010.0 Concert Orchestra
Course Number: 45.3020.0 Symphonic Orchestra
Course Number: 45.3020.4 Symphonic Orchestra (H)
Course Number: 45.2100.4 Chamber Orchestra (H)
Course Number: 45.2100.5 Chamber Orchestra (GT)
Prerequisite: Requirements for admission may be selective and schools may require an audition for acceptance into this course.
Note: Successful completion of one of the courses listed above satisfies the Fine Arts graduation requirement.
Credit: 1
The various orchestras are offered to students interested in instrumental ensemble music experience and who have the necessary background for the particular group. The course provides an opportunity for musical growth through the study and performance of a variety of instrumental literature. Students will develop skills and confidence in playing an individual part while working closely with others in a group.

Jazz Ensemble
Course Number: 45.2410.0
Course Number: 45.2410.4 (H)
Prerequisite: Requirements for admission may be selective and schools may require an audition for acceptance into this course.
Credit: 1
Note: Successful completion of the above course satisfies the fine arts graduation requirement. Students will study and perform a variety of literature ranging from big band swing charts to Latin and rock arrangements. The fundamentals of improvisation will be taught along with the interpretation of jazz notation. The ensemble will be involved in presenting public performances throughout the year.

MUSIC ADVANCED PLACEMENT COURSES
Advanced Placement music courses are scheduled whenever they are justified by enrollment. Students enrolled in AP courses are eligible for GT credit.

Music Theory-Advanced Placement
Course Number: 45.5300.6
Credit: 1

MUSIC INTERNATIONAL BACCALAUREATE (IB)

IB Music Theory
Course Number: 45.5110.7
Credit: 1

MUSIC MAGNET COURSES
Only students who have applied and have been accepted into approved magnet schools or programs can take magnet courses.

History of Jazz
Course Number: 45.7010.4
Credit: ½

Music Seminar
Course Number: 45.9400.4
Credit: ½

Music Theory I/GT
Course Number: 45.5110.5
Credit: 1

Opera/Musical Theatre Workshop I
Course Number: 45.5710.5
Credit: 1

Opera/Musical Theatre Workshop II
Course Number: 45.5720.5
Credit: 1

Band 9
Course Number: 45.4610.5
Credit: 2

Chorus 9
Course Number: 45.4620.5
Credit: 2

Strings 9
Course Number: 45.3000.5
Credit: 2

Voice 1/GT
Course Number: 45.4910.5
Credit: 1

Voice 2/GT
Course Number: 45.4920.5
Credit: 1

Voice 3/GT
Course Number: 45.4930.5
Credit: 1

Voice 4/GT
Course Number: 45.4940.5
Credit: 1
PHYSICAL EDUCATION

MISSION

The purpose of the physical education program is to contribute to each student's growth and development in the physical, cognitive, and social domains through a movement-based curriculum. This involves the delivery of a planned sequential K-12 instructional program that teaches skills, knowledge, and behaviors to promote lifelong fitness and activity. These components are all necessary to assist the student to become a physically literate individual who has the knowledge, skills, and confidence to enjoy a lifetime of healthful physical activity. The curriculum is aligned with national standards and is designed to educate students on improving, maintaining, and/or enhancing their personal health and wellness.

At the high school level, emphasis is placed on personalized fitness and student choice in selecting elective courses of interest.

REQUIRED COURSE

Fitness Foundations/Fitness Mastery
Course Number: 50.0900.0
Prerequisite: None
Credit: 1

Note: This is the only course which meets the Physical Education graduation requirement. There are no waivers for this requirement. Physical limitations or disabling conditions will be accommodated with an adapted program (Fitness Foundations/Fitness Mastery is required before taking electives).

In the Fitness Foundations/Fitness Mastery course, students will receive instruction and information about personal fitness components and self-management skills. With this information, students will be able to integrate the knowledge to design, plan, and perform an individualized fitness program based on personalized fitness goals. A variety of evidence-based assessments and physical activities related to skill performance, fitness, and health are analyzed and explored. The course will concentrate on concepts involving cardiorespiratory/aerobic fitness, muscular strength and endurance, body composition, and flexibility. Specific aspects of health-related fitness components will be explained and applied to activities. As students will extend and refine their abilities, they will also explore and participate in individual and team sports, along with adventure and rhythmic activities as related to personal fitness. Students will learn how to adjust their personal fitness plans as their interests and physical abilities change throughout their lives.

Note: According to IDEA, students with disabilities must be provided the opportunity to enroll in a physical education class each year they are enrolled in school. Only students receiving a Maryland High School Certificate may take the Fitness Foundations/Fitness Mastery course multiple times in the appropriate environment. If students are receiving adapted physical education services they would continue to receive the service.

ELECTIVE COURSES

Electives require the successful completion of the Fitness Foundations/Fitness Mastery Course.

All electives are designed to meet the specific interests of students in adventure activities, aerobics and body conditioning, individual sports, team sports, and weight training. Electives provide additional experiences for students to participate in activities of their particular interests throughout their high school career. They extend and refine specific physical skills, life skills, and health-related components of fitness. Once an introductory elective course is completed, the course can be taken multiple times for credit using the advanced course number.

Adventure Elective
Course Number: 50.1510.0 Advent. Elective
Course Number: 50.1520.0 Advent. Elective
Credit: 1
Prerequisite: Successful completion of Fitness Foundations/Fitness Mastery course.

Aerobics and Body Conditioning
Course Number: 50.3010.0 Aerobics and Body Conditioning (ABC) Introductory
Course Number: 50.3020.0 ABC Advanced
Credit: ½
Prerequisite: Successful completion of Fitness Foundations/Fitness Mastery course.
Individual Elective
Course Number: 50.1310.0 Ind. Elective - Introductory
Credit: 1
Course Number: 50.1320.0 IE - Advanced
Course Number: 50.1350.0 IE - Introductory
Credit: ½
Prerequisite: Successful completion of Fitness Foundations/Fitness Mastery course.

Physical Education Elective
Course Number: 50.1010.0 Phys. Educ. Elective - Introductory
Course Number: 50.1020.0 PE - Advanced
Course Number: 50.1040.0 PE - Introductory
Course Number: 50.1050.0 PE - Advanced
Credit: ½
Prerequisite: Successful completion of Fitness Foundations/Fitness Mastery course.

Team Elective
Course Number: 50.1410.0 Team Elective - Introductory
Course Number: 50.1420.0 Team Elective - Advanced
Course Number: 50.1450.0 Team Elective - Introductory
Course Number: 50.1460.0 Team Elective - Advanced
Credit: ½
Prerequisites: Successful completion of Fitness Foundations/Fitness Mastery course.

Weight Training
Course Number: 50.4010.0 Weight Training - Introductory
Course Number: 50.4020.0 Weight Training - Advanced
Credit: 1
Course Number: 50.4110.0 Weight Training - Introductory
Course Number: 50.4120.0 Weight Training - Advanced
Credit: ½
Prerequisite: Successful completion of Fitness Foundations/Fitness Mastery course.

Leadership PE & REC
Course Number: 50.8010.0 Leadership PE & Rec (LPR) - Introductory
Course Number: 50.8020.0 LPR - Advanced
Course Number: 50.8110.0 LPR - Introductory
Course Number: 50.8120.0 LPR - Advanced
Credit: ½
Prerequisite: Successful completion of Fitness Foundations/Fitness Mastery course.
The leadership elective courses develop leadership skills in physical education and recreation and allow students to carry out specific responsibilities in connection with the routine organization of a class and assistance with planned learning experiences. In the advanced courses, there will be practical experiences geared toward a better understanding of the many areas of physical education and recreation.
SCIENCE MISSION

The mission of the Office of Science PreK-12 is to work collaboratively with all stakeholder groups to define a vision for science education aligned with the Next Generation Science Standards (NGSS) and to provide leadership for the development, implementation, and assessment of that vision for Baltimore County Public Schools. These efforts are all directed toward one goal—accessing all standards for all students to support a well-rounded science curriculum that will help students to become globally competitive citizens. The Office of Science staff is committed to actively engaging students in science and engineering practices (SEP) and applying crosscutting concepts (CCC) to deepen the understanding of core ideas. They understand that the best way for students to learn is to carryout science investigations and engineering design projects related to the Disciplinary Core Ideas (DCI).

Standard, honors, and advanced academic levels of science courses are offered as enrollments justify. In these classes, the instructional level and materials are modified according to the needs of the students. Course selections will vary according to the academic level and career goals of students. Examples of suggested course sequences are shown below.

<table>
<thead>
<tr>
<th>Programs</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Program</strong></td>
<td>Earth Systems</td>
<td>Living Systems</td>
<td>Integrated Physics and Chemistry (IPC)</td>
<td>Science elective</td>
</tr>
<tr>
<td><strong>Honors Program</strong></td>
<td>Honors Earth Systems</td>
<td>Honors Living Systems</td>
<td>IPC or Honors Chemistry</td>
<td>Honors Physics</td>
</tr>
<tr>
<td><strong>GT/Advanced Academics Program</strong></td>
<td>AA/GT Earth Systems</td>
<td>AA/GT Living Systems</td>
<td>AA/GT Chemistry</td>
<td>AA/GT Physics</td>
</tr>
</tbody>
</table>

*Animals may be used for experimentation/dissection in this course; however, alternative activities may also be provided.

NOTE: In the following course descriptions, “successful completion” suggests a grade of “C” or better.

Anatomy and Physiology*

Course Number: 25.5020.4 (H)
Prerequisites: Successful completion of Biology or Living Systems and Chemistry or IPC is recommended.
Credit: 1
Anatomy and Physiology provides a comprehensive overview of human body systems and stresses both the structure (microscopic and macroscopic) and functioning of those systems. Research using original articles, historical papers, and other resources are required. A project or term paper may also be required.

Animal Behavior*

Course Number: 25.1080.0
Prerequisites: Successful completion of Biology or Living Systems and Environmental Science, IPC, or Chemistry is recommended.
Credit: 1
Students in the Animal Behavior course will use knowledge of life cycles, parental behavior strategies, and environmental factors to analyze population dynamics.

Aquatic Science*

Course Number: 25.6010.0
Prerequisites: Successful completion of Biology or Living Systems and Environmental Science, IPC, or Chemistry is recommended.
Credit: 1
Students in Aquatic Science will use inquiry and knowledge of ecological principles to investigate Maryland’s aquatic freshwater and tidal water environments and to demonstrate the interrelationships between the biotic and abiotic components.

Astronomy

Course Number: 25.7100.0
Magnet Course Number: 25.7150.5 (GT)
Prerequisites: Successful completion of Earth Systems, Biology or Living Systems, and Chemistry or IPC is recommended.
Credit: 1
Students will use their knowledge of astronomy to provide an explanation for the development of the modern model of the universe.
Biology: AP*
Course Number: 25.1070.6
Prerequisites: Successful completion of Biology or Living Systems, Algebra II and Chemistry or IPC is recommended.
Credits: 2
The AP Biology course is equivalent to a two-semester college introductory biology course. The content of the course is grouped into the four big ideas of evolution, cell biology, genetics and ecology. This is a lab intensive course. Students who take AP Biology will also develop advanced inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. The result will be readiness for the study of advanced topics in subsequent college courses.

Biotechnology*
Course Number: 25.4530.4 (H)
Prerequisites: Successful completion of Biology or Living Systems and Chemistry or IPC is required. Concurrent enrollment in Physics is also recommended.
Credit: 1
This course combines science research techniques and hands-on laboratory activities to study molecular biology, genetics, recombinant DNA, protein synthesis, aquaculture, hydroponics, biological pest management, electrophoresis, DNA fingerprinting, environmental and ecological management techniques, and bioethics. Development of protocols for the Science and Engineering Practices are taught for use in independent research projects. The course may be co-taught by science and technology teachers.

Chemistry
Course Number: 25.1100.0
Prerequisites: Successful completion of Biology or Living Systems and Algebra I is recommended.
Credit: 1
The fundamentals of chemistry with relevant laboratory applications are investigated in this course. Topics such as atomic theory, atomic structure, chemical bonding, writing formulas and equations, chemical reactions, solutions, acids and bases, and environmental chemistry are included. Science and Engineering Practices are emphasized.

Chemistry: Honors
Course Number: 25.1100.4 (H)
Prerequisites: Successful completion of Biology or Living Systems and Algebra I is recommended.
Credit: 1
This course provides a quantitative and qualitative approach to the fundamentals of chemistry. Students do an in-depth study of the topics listed under Chemistry including; acid-base equilibria, electrochemistry, thermodynamics, and redox reactions. Problem-solving and the Science and Engineering Practices are emphasized.

Chemistry: Gifted and Talented/Advanced Academics
Course Number: 25.1100.5 (GT)
Prerequisites: Successful completion of Biology or Living Systems and concurrent enrollment in Algebra II or higher is recommended.
Credit: 2
This course covers quantitative, qualitative, and descriptive chemistry with an emphasis on computational problem solving skills. The lab program stresses both qualitative and analytical chemistry. Organic and nuclear chemistry may be included. Problem-solving and the Science and Engineering Practices are emphasized.

Earth Systems
Course Number: 25.0960.0
Prerequisites: None
Credit: 1
Earth Systems is a problem-based course designed to investigate processes that operate on Earth and also address its place in the universe. Earth consists of a set of systems: atmosphere, hydrosphere, geosphere, and biosphere—that are intricately interconnected. Students will explore how small changes, including human impacts, in one part of one system can have large and sudden consequences in parts of other systems or have no effect at all.

Earth Systems Honors
Course Number: 25.0960.4
Prerequisites: Concurrent enrollment in Geometry is recommended.
Credit: 1
Earth Systems is a complex, problem-based course designed to investigate processes that operate on Earth and also address its place in the universe. Earth consists of a set of systems: atmosphere, hydrosphere, geosphere, and biosphere—that are intricately interconnected. Students will explore how small changes, including human impacts, in one part of one system can have large and sudden consequences in parts of other systems or have no effect at all.

Earth Systems Gifted and Talented/Advanced Academics
Course Number: 25.0960.5
Prerequisites: Successful completion or concurrent enrollment in Geometry is recommended.
Credit: 1
Earth Systems is a complex, problem-based course designed to use critical thinking to investigate processes that operate on Earth and also address its place in the universe. Earth consists of a set of systems: atmosphere, hydrosphere, geosphere, and biosphere—that are intricately interconnected. Students will explore and design solutions for how small changes, including human impacts, in one part of one system can have large and sudden consequences in parts of other systems or have no effect at all.

Ecology of Maryland and the Chesapeake Bay*
Course Number: 25.6100.0
Prerequisites: Successful completion of Biology or Living Systems and Earth/Space Science or Earth Systems or Environmental Science and Chemistry or IPC is recommended.
Credit: 1
This course analyzes the ecology, geology, and geography of the state of Maryland and examines the entire Chesapeake Bay watershed, its tributaries, and the Chesapeake Bay. Students will be asked to design and defend a plan for an aquatic or wetland restoration proposal.

Environmental Science: AP *
Course Number: 25.3030.6
Prerequisites: Successful completion of Earth Systems, Biology or Living Systems, Chemistry or IPC, and Algebra I is recommended.
Credit: 1
The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science. Topics in the course include Earth systems and resources, the living world, population, land and water use, energy resources and consumption, pollution, and global change. It is a rigorous science course that stresses scientific principles and analysis and that often include a laboratory component.

Forensic Science
Course Number: 25.4810.0
Credit: ½
Course Number: 25.4800.4 (H)
Credit: 1
Prerequisites: Successful completion of Biology or Living Systems and Chemistry is recommended.
This course emphasizes the integration of science in the legal process. Students learn the role of the forensic scientist and crime laboratory in a criminal investigation, as well as crime scene procedures including the simulation of a crime scene investigation and proper collection and analysis of evidence. Students learn about toxicology and anthropology and appropriate scientific analysis of physical evidence. Problem solving and critical thinking are emphasized during extensive hands-on laboratory activities. Students also receive an introduction into the workings and application of microspectro-photometry, gas chromatography, and the polarizing microscope. Supplemental case readings may be required.

Forensic Science: Gifted and Talented/Advanced Academics
Course Number: 25.4810.5 (GT)
Credit: ½
Course Number: 25.4800.5 (GT)
Credit: 1
Prerequisites: Successful completion of Biology or Living Systems and Chemistry or IPC is required. Concurrent enrollment in Physics is also recommended.
The gifted and talented Forensic Science program includes all of the topics from Forensic Science but also takes an in-depth look at chromatography, polarizing microscopy, and analysis of drugs using spectrophotometry. Independent problem-solving, and supplemental case readings are also required.
Horticulture
Course Number: 25.2040.0
Prerequisites: Successful completion of Biology or Living Systems is recommended.
Credit: 1
Horticulture is designed for students who are interested in learning or pursuing a career in how to plant and raise garden vegetables, flowering plants, shrubs, and trees, creating a landscape design, plant conservation or who are interested in aquaponics or the floral and/or landscaping industry.

Integrated Physics and Chemistry
Course Number: 25.1400.0
Prerequisites: Earth Systems and Living Systems are recommended.
Credit: 1
Integrated Physics and Chemistry is a problem-based course designed to investigate how systems or processes depend on physical and chemical sub-processes. To understand the physical and chemical basis of a system, one must consider the structure of matter at the atomic and subatomic scale and discover how it influences the system's larger scale structures, properties, and function. The goal is to help students see that there are mechanisms of cause and effect in all systems.

Integrated Physics and Chemistry Honors
Course Number: 25.1400.4
Prerequisites: Successful completion of Earth Systems and Living Systems is recommended.
Credit: 1
Integrated Physics and Chemistry Honors is a complex, problem-based course designed to investigate how systems or processes depend on physical and chemical sub-processes. To understand the physical and chemical basis of a system, one must consider the structure of matter at the atomic and subatomic scale and discover how it influences the system's larger scale structures, properties, and function. The goal is to help students apply the mechanisms of cause and effect in all systems.

Integrated Physics and Chemistry Gifted and Talented/Advanced Academics
Course Number: 25.1400.5
Prerequisites: Successful completion of Earth Systems and Living Systems is recommended.
Credit: 1
Integrated Physics and Chemistry Gifted and Talented/Advanced Academics is a complex, problem-based course designed to investigate how systems or processes depend on physical and chemical sub-processes. To understand the physical and chemical basis of a system, one must consider the structure of matter at the atomic and subatomic scale and discover how it influences the system's larger scale structures, properties, and function. The goal is to help students evaluate the interconnected and interacting components of life.

Microbiology
Course Number: 25.1180.4 (H)
Prerequisites: Successful completion of Biology or Living Systems and Chemistry is recommended.
Credit: 1
Microbiology is the study of organisms that are microscopic, unicellular, or exist in cell clusters. Students study these organisms as biological entities. The course includes eukaryotes, such as fungi and protists, as well as prokaryotes. Microbiology also includes the study of the immune system and the body's reaction to invasion by pathogens.
Oceanography/Marine Science
Course Number: 25.6000.0
Prerequisites: Successful completion of Biology or Living Systems and Earth Systems or Earth/Space Science and Chemistry is recommended.
Credit: 1
In Oceanography/Marine Science, students will identify, locate, and describe the major bodies of water on Earth's surface. Included in this study are ecosystem dynamics, ocean currents and waves, plate tectonics and the geology of the sea floor, as well as the various physical and chemical factors which interact to influence climate and weather to form suitable habitats for marine organisms.

Paramedical Biology
Course Number: 25.5400.0
Prerequisites: Successful completion of Biology or Living Systems is recommended.
Credit: 1
In Paramedical Biology, students use their knowledge of human anatomy and physiology to explain how body systems react to and are affected by injuries and medical emergencies. Included in this study are the legal aspects of patient care and the health care provider’s rights and responsibilities under the law. Students learn how to gather information at the scene of a medical emergency and provide basic life support techniques. Additionally, students will study selected aspects of human anatomy and physiology. The course includes hands-on laboratory work, outside readings, and investigation of allied health careers.

Physics
Course Number: 25.1200.0
Prerequisite: Successful completion of Biology or Living Systems, Chemistry, and Algebra II is recommended.
Credit: 1
This course is designed for students who intend to specialize in any kind of technical or scientific work. The course includes laboratory investigations in the study of motion, force, energy, momentum, electricity, magnetism, light, and relativity. Problem-solving and Science and Engineering Practices are emphasized.

Physics: Honors
Course Number: 25.1200.4 (H)
Prerequisite: Successful completion of Earth Systems, Biology or Living Systems, and Chemistry and concurrent enrollment in Trigonometry/Analytic Geometry or higher is recommended.
Credit: 1
This program includes all topics from Physics as well as topics selected from friction, electromagnetic induction, and modern physics. Students use mathematics to solve vector problems, prove and derive formulas, and perform error analysis in laboratory work. Independent problem solving and supplemental readings are included. Science and Engineering Practices are emphasized.

Physics: Gifted and Talented/Advanced Academics
Course Number: 25.1200.5 (GT)
Prerequisites: Successful completion of Earth Systems, Biology or Living Systems, and Chemistry and concurrent enrollment in Trigonometry/Analytic Geometry or higher is recommended.
Credit: 1
This course is the equivalent of a first-semester college course in algebra-based physics, taught over a full year to enable students to develop a deep understanding of the physics content and to focus on applying their knowledge through inquiry labs. The course includes Newtonian mechanics (including rotational dynamics and angular momentum), work, energy, and power; mechanical waves and sound. It also introduces electric circuits, static electricity and magnetism.

Physics 1: Algebra-based: AP
Course Number: 25.1890.6
Prerequisites: Successful completion of AP Physics 1 and Trigonometry/Analytic Geometry is recommended.
Credit: 1
This course is the equivalent of a first-semester college course in algebra-based physics, taught over a full year to enable students to develop a deep understanding of the physics content and to focus on applying their knowledge through inquiry labs. The course is organized around seven big ideas that cover Newtonian mechanics (including rotational dynamics and angular momentum), work, energy, and power; mechanical waves and sound. It also introduces electric circuits.

Physics 2: Algebra-based: AP
Course Number: 25.1910.6
Prerequisites: Successful completion of AP Physics 1 and Trigonometry/Analytic Geometry is recommended.
Credit: 1
This course is the equivalent to a second-semester college course in algebra-based physics, taught over a full year to enable students to develop a deep understanding of the physics content and to focus on applying their knowledge through inquiry labs. The course is organized around seven big ideas that cover fluid mechanics, thermodynamics, electricity and magnetism, optics, atomic and nuclear physics.
Physics C: AP
Mechanics only
Course Number: 25.1900.6
Credit: 1
Electricity and Magnetism only
Course Number: 25.1380.6
Credit: 1
Mechanics and Electricity and Magnetism
Course Number: 25.1290.6
Credit: 2
Prerequisites: Successful completion of Physics or AP Physics 1 and Precalculus is recommended. Concurrent enrollment in Calculus is recommended. This course builds on the conceptual understanding attained in a first course in physics and normally forms the college sequence that serves as the foundation in physics for students majoring in the physical sciences or engineering. The sequence is parallel to or proceeded by mathematics courses that include calculus. Methods of calculus are used in formulating physical principles and in applying them to physical problems. Strong emphasis is placed on solving a variety of challenging problems, some requiring calculus, as well as continuing to develop a deep understanding of physics concepts sequence in two major areas: mechanics, and/or electricity and magnetism.

Pre-College Science
Course Number: 25.7200.4 (H)
Prerequisites: Successful completion of Biology or Living Systems and Algebra I is recommended.
Credit: 1
This course is for students who may decide late in their high school career that they would like to go to college. The course has been designed to fill potential gaps in learning and provides science content information as well as training in skills that students will need to be successful in college-level science courses. This course approaches science from an historical perspective and examines the thinking behind many important scientific achievements in the fields of Biology, Chemistry, and Physics.

Projects*
Course Number: 25.1360.4 (H)
Prerequisite: Successful completion of Biology or Living Systems and IPC or Chemistry and Physics is recommended.
Credit: 1
The Projects course is designed for students who want to further their science application skills through independent research projects. Students use skills and knowledge from earth, life and physical Science, and mathematics and apply them to self-selected experiments and projects. All students compete in at least one Museum of Industry competition. Every project/experiment must be accompanied by documentation of pre-project planning, experiment proposal, data from testing, analysis of results, and self-evaluation of the plan and project. Individual and/or group presentations are also required.

Zoology*
Course Number: 25.4010.0
Credit: ½
Course Number: 25.4000.0
Credit: 1
Prerequisite: Successful completion of Biology/Living Systems is recommended.
In Zoology, students complete a phylogenetic survey of the animal kingdom from simple invertebrate to complex vertebrate species.

SCIENCE ADVANCED PLACEMENT COURSES
Advanced Placement science courses are scheduled whenever they are justified by enrollment. Students enrolled in Advanced Placement courses are eligible for GT credit. Each advanced placement course includes a study of major scientific concepts, principles, and unifying themes, and includes laboratory work that supports the development of research skills.

Biology: AP*
Course Number: 25.1070.6
Credits: 2

Chemistry: AP
Course Number: 25.1790.6
Credit: 2

Environmental Science: AP *
Course Number: 25.3030.6
Credit: 1

Physics 1: AP
Course Number: 25.1890.6
Credit: 1

Physics 2: AP
Course Number
Credit: 1

Physics C: AP-Mechanics only
Course Number: 25.1900.6
Credit: 1

Physics C: AP-Electricity and Magnetism only
Course Number: 25.1380.6
Credit: 1
Physics C: AP - Mechanics and Electricity and Magnetism  
Course Number: 25.1290.6  
Credit: 2

SCIENCE INTERNATIONAL  
BACCALAUREATE PROGRAMME (IB)  
International Baccalaureate science courses contain a body of knowledge together with scientific practices and techniques which students are required to learn and apply. In their application of science and engineering, students develop an ability to analyze, evaluate, and synthesize scientific information. A compulsory project encourages students to appreciate the environmental, social, and ethical implications of science. The project is collaborative and interdisciplinary: students analyze a topic or problem which can be investigated in each of the science disciplines offered by the school. It is also an opportunity for students to explore scientific solutions to global questions.

Biology 9: Pre-IB*  
Course Number: 25.1010.7  
Credit: 1

Biology 11 IB, Honors Level*  
Course Number: 25.1040.7  
Credit: 1

Biology 12 IB, Honors Level*  
Course Number: 25.1050.7  
Credit: 1

Chemistry 10: Pre-IB  
Course Number: 25.1110.7  
Credit: 1

Chemistry IB, Standard Level  
Course Number: 25.1120.7  
Credit: 1

Physics IB, Standard Level  
Course Number: 25.1220.7  
Credit: 1

Note: IB courses are available only to students who have been admitted to the International Baccalaureate (IB) program. Registration for IB courses is predicated upon satisfactory completion of the requirements outlined in the International Baccalaureate curriculum.

SCIENCE MAGNET COURSES  
Environmental Photography
SOCIAL STUDIES

MISSION

Social studies is the integrated study of the social sciences and humanities to promote civic competence. Within the school program, social studies provides coordinated, systematic study drawing upon such disciplines as anthropology, archaeology, economics, geography, history, law, philosophy, political science, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world. (National Council for Social Studies.) To that end, social studies instruction is based on content that draws upon appropriate elements of the human and environmental condition, supports intellectual integrity, and facilitates the development of skills and processing. An effective social studies program ensures the academic development of students through appropriate balances between domestic and global contexts, between skills and concepts, between the present and past, and among the disciplines being employed. Effective social studies instruction is student-centered, relevant, rigorous, and provides student opportunities to apply the knowledge and skills required of successful adults.

Standard, honors, and gifted and talented levels of social studies courses are offered as enrollments justify. In these classes, the instructional level and materials are modified according to the needs of the students. Course selections will vary according to the academic level and occupational goals of students. Course sequences are shown below.

Students are required to earn 3½ credits in social studies. American Government, World History, United States History, and Economics and Public Issues are required. Multiple levels of the required courses through Grade 12 are offered in the schools. In these classes, the instructional level and materials are modified according to the needs of the students.

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Abnormal Psychology (Honors)

Course Number: 15.1310.4
Prerequisite: Grade 12 standing and completion of Psychology are recommended.
Credit: ½
Students define and analyze abnormal behavior from a variety of perspectives. The major types and ranges of abnormal behavior are examined in detail, with special emphasis on causation and symptoms. The course culminates with analysis of treatment approaches and their respective techniques.

African American History

Course Number: 15.3000.0
Course Number: 15.3000.4 (Honors)

Prerequisite: Grade 11 or 12 standing is recommended.
Credit: ½
This case study of the minority experience in American society is designed to develop an understanding of the consequences, causes, and character of the African American experience. The course provides a variety of academic and cultural activities, beginning with a historical and cultural understanding of Africa. It examines the cultural impact and economics of the slave trade, the development of the African American culture, and the continuing struggle for freedom. Appropriate political, social, and economic issues will be presented for analysis. The study of African American achievements will be reinforced with field experiences.
American Government Grade 9
Course Number: 15.0900.0
Course Number: 15.0900.4 (Honors)
Prerequisite: None
Credit: 1
Note: This course provides a Service Learning component. This course satisfies the grade level requirement for Drug Education and is a HSA course.
This course helps students develop skills and acquire insights essential to an understanding of American political, economic, and social life at the national, state, and local levels. Attention will be on political, economic, and social issues and preparation for responsible citizenship.

American Government Grade 9: GT
Course Number: 15.0900.5 (GT)
Credit: 1
Prerequisite: Participation by selection only.
Note: This course provides a Service Learning component. This course satisfies the grade level requirement for Drug Education and is a HSA course.
This course is a study of American political, economic, and social issues in national, state, and local government. In addition to factual content, the processes, institutions, and values of the American political, economic, and social systems are analyzed. Students apply understanding of government by completing ongoing issues analysis projects.

Archaeology
Course Number: 15.1600.0
Prerequisite: Grade 11 or 12 standing is recommended.
Credit: ½
This course offers students experiences that will enable them to develop archaeological perspectives on the past and present. Activities involve work with local history, historical preservation, and genealogy.

Art and Artifacts: Clues to Distant Cultures
Course Number: 15.4050.0
Course Number: 15.4050.4 (Honors)
Credit: ½
Students assume roles of art historians, archaeologists, and anthropologists as they analyze the material culture of Ancient Egypt, Classical India, Classical China, the Islamic Empire, and Feudal Japan. Students will focus upon the influences that human and physical environments have on art and the influences art have on culture. The course suggests and provides guidelines for museum experiences at The Walters Art Museum.

Big History
Course Number: 15.22004
Course Number: 15.22005 (Honors)
Credit: 1.0
Big History examines the past, explains the present, and imagines the future. It's a story about people of the world. Big History is a course that goes beyond specialized and self-contained fields of study to grasp history as a whole. It is designed for anyone seeking answers to the big questions about the history of the Universe.

Civil Rights and Civil Liberties
Course Number: 15.6050.0
Prerequisite: Grade 11 or 12 standing is recommended.
Credit: ½
This course provides a focused analysis of the historical issues related to equality for African Americans. Special emphasis is placed upon the consequences of slavery, as well as segregation and discrimination in the nineteenth and twentieth century. The course concludes with investigations of the modern civil rights movement and its impact on contemporary society.

Cultural Diversity
Course Number: 15.3020.0
Prerequisite: Completion of United States History is recommended.
Credit: ½
This elective course analyzes diversity within the U.S. through anthropological, historical, and sociological approaches. The course is initiated with an analysis of the multicultural nature of American society. Students then determine the opportunities and challenges of life within a diverse society using a continuum of intergroup relations and conclude with an analysis of a public policy issue related to multiculturalism.

Economics and Public Issues
Course Number: 15.1500.0
Course Number: 15.1500.4 (Honors)
Prerequisites: Completion of American Government, World History, and United States History is recommended.
Credit: ½
Note: This course satisfies the grade level requirement for Drug Education, the Economics graduation requirement, and Maryland Financial Literacy Standards.
Economics and Public Issues will prepare students for the economic interactions they will encounter as producers, consumers, and citizens. A primary focus of the course will be personal financial literacy. The course will also provide students with skills they need as they assume roles as consumers, producers, and citizens.
European History: AP
Course Number: 15.2030.6
Prerequisites: Completion of American Government Grade 9 and World History is recommended.
Credit: 1
This course is designed to prepare students to take an AP exam for college credit. Students will conduct in-depth analysis of European history from the Renaissance to the present. Course content will be based on demands of the exam and processes required for success on the examination.

Human Geography: AP
Course Number: 15.1750.6
Prerequisite: Grade 12 standing is recommended.
Credit: 1
This course is designed to prepare students to take an advanced placement examination for college credit. Students will conduct in-depth analysis of the causes and consequences of human interactions with their physical surroundings. Course content will be based on demands of the examination and processes required for success on the examination.

Facing History: The Holocaust
Course Number: 15.1910.0
Course Number: 15.1910.4 (Honors)
Prerequisite: Grade 11 or 12 standing is recommended.
Credit: ½
Students in this course will develop an appreciation for justice, a concern for interpersonal understanding, and sensitivity for those who have been wronged. Using the Holocaust as a case study, students will identify historical patterns of racism in order to connect the past with the present. Students will then apply their understandings of human behavior in order to recognize different forms of prejudice and discrimination in a variety of settings.

Introduction to International Relations (Honors)
Course Number: 15.2100.4
Credit ½
Note: Completion of World History is recommended
This elective course gives students the opportunity to trace the historical development of international relations. Students will analyze the relationships and behavior of nations toward each other, including the role of the United States in the international community. The course content will span history and focus on key concepts that have repeatedly influenced diplomatic initiatives.

Films and History
Course Number: 15.1810.0
Prerequisite: Grade 11 or 12 standing is recommended.
Credit: ½
Students will develop criteria for judging the accuracy of historical films. They will view and analyze films that portray various periods of history and research life during the portrayed historical eras to determine their historical accuracy. This will enable them to determine if movies about a historical period can be viewed for educational value and to raise questions they should consider when watching a historical film.

Juvenile Justice
Course Number: 15.6020.0 Prerequisite: None
Credit: ½
This course will help students develop successful patterns of behavior by making them more aware of what triggers conflict and confrontation. Juvenile Justice will improve understanding of legal terminology, provide a greater sense of self-awareness and understanding of rules, and increase skills of communication. Students will analyze the purposes and consequences of the distinctions between the juvenile and adult legal systems. While examining issues and problems which affect our society, students will develop a sense of citizenship and responsibility.

Introduction to International Relations
Course Number: 15.2100.4
Credit ½
Note: Completion of World History is recommended
This elective course gives students the opportunity to trace the historical development of international relations. Students will analyze the relationships and behavior of nations toward each other, including the role of the United States in the international community. The course content will span history and focus on key concepts that have repeatedly influenced diplomatic initiatives.

Macro and Micro Economics: AP
Course Number: 15.1400.6
Prerequisites: Completion of American Government Grade 9, World History, and United States History is recommended.
Credit: 1
Note: This course satisfies the grade level requirement for Drug Education, the graduation requirement for Economics, and Maryland Financial Literacy Standards.
This course is designed to prepare students to take AP exams for college credit, including micro and macro economics. Course content will be based on demands of the exams and processes required for success on the exams.
Military History
Course Number: 15.2400.0
Prerequisites: Completion of World History and United States History is recommended.
Credit: ½
Military History presents students with an opportunity to enrich their study of World History and United States History.
Students will analyze the meanings, motivations, and methods underlying war in different societies over time. The course investigates the development of military institutions within global and comparative frameworks.

Modern History: Europe and the World in the Twentieth Century
Course Number: 15.2000.0
Course Number: 15.2000.4 (Honors)
Credit: ½
Note: Grade 11 or 12 standing is recommended.
This course addresses major political, economic, social, and intellectual events and forces which have shaped Europe in the twentieth century and which have had repercussions beyond Europe. The institution and development of a Communist system in Russia, the rise of Nazism in Germany and the Holocaust which resulted from it, the two World Wars and their settlements, and the realignments of world power since 1945 are emphasized.

Philosophy (Honors)
Course Number: 15.1800.4
Prerequisite: Grade 11 or 12 standing is recommended.
Credit: ½
This course examines philosophical questions about the nature of being, the mind, ethical behavior, and life. A range of important philosophical systems and several ethical dilemmas that have consistently perplexed thoughtful people will be examined. This course should appeal to students who have a strong interest in questions rather than answers, the unknown rather than the known, ideas rather than facts, and the "why" rather than the "what."

Psychology
Course Number: 15.1300.0
Prerequisite: Grade 12 standing is recommended.
Credit: ½
This is a study of human behavior, examined within the context of the behavioral sciences of psychology and sociology.
Fundamental to this course is a focus on identity development, schools of psychology, normal and abnormal behaviors, and treatment. Students are afforded opportunities to consider and apply findings of psychological research toward understandings of the dynamics of human behavior.

Psychology: AP
Course Number: 15.1350.6
Prerequisite: Grade 12 standing is recommended.
Credit: 1
This course is designed to prepare students to take an AP exam for college credit. Students will analyze the approaches, methods, and applications of psychology. There is a special emphasis on physiological processes and resulting impacts on human behavior. Course content will be based on demands of the exam and processes required for success on it.

United States Government and Politics: AP
Course Number: 15.5030.6
Prerequisites: Completion of American Government Grade 9, World History, and United States History is recommended or participation by selection.
This course can be used as a HSA course.
Credit: 1
This course is designed to prepare students to take an advanced placement examination for college credit in U.S. Government and Politics. Students will conduct in-depth analysis of our governmental structures and processes and political behaviors of individuals, groups, and institutions. Course content will be based on demands of the examination and processes required for success on the examination.

United States History Grade 11
Course Number: 15.1100.0
Course Number: 15.1100.4 (Honors)
Prerequisite: Completion of World History is recommended.
Credit: 1
A thematic chronological format beginning with the Reconstruction era provides the structure for this study of U.S. History that helps students understand the evolution and relevance of their national heritage. Themes are presented chronologically, emphasizing more recent U.S. History and development of historical thinking skills. Opportunities for analysis of historical issues and for research are imbedded within this course.
SOCIAL STUDIES ADVANCED

PLACEMENT COURSES

Advanced placement courses are scheduled whenever they are justified by enrollment. Students enrolled in advanced placement courses are eligible for GT credit. Each advanced placement course includes a study of major concepts, relationships and interpretations, and requires students to assume roles as historians and social scientists.

European History: AP
Course Number: 15.2030.6
Prerequisites: Completion of American Government Grade 9 and World History is recommended.
Credit: 1

United States Government and Politics: AP
Course Number: 15.5030.6
Prerequisites: Completion of American Government Grade 9, World History, and United States History is recommended or participation by selection
This course can be used as a HSA course.
Credit: 1

Human Geography: AP
Course Number: 15.1750.6
Prerequisite: Grade 12 standing is recommended.
Credit: 1

Macro and Micro Economics: AP
Course Number: 15.1400.6 (AP)
Prerequisites: Completion of American Government Grade 9, World History, and United States History is recommended.
Credit: 1

Psychology: AP
Course Number: 15.1350.6
Prerequisite: Grade 12 standing is recommended.
Credit: 1

U.S. History Grade 11: AP
Course Number: 15.1100.6
Prerequisite: Participation by selection only.
Credit: 1

World History Grade 10: AP
Course Number: 15.1010.6
Prerequisite: Participation by selection only.
Credit: 1

This course requires students to analyze and interpret global history through periodization and themes such as interaction, continuity and change, impacts of technology and demography, social and gender structures, cultural and intellectual developments, and functions and structures of states. This course will be directed toward assisting students to pass the AP exam in World History. Completion of the course satisfies the graduation requirement for World History.

SOCIAL STUDIES INTERNATIONAL

BACCALAUREATE PROGRAM (IB)

International Baccalaureate social studies courses
prepare students for success in a world that is becoming increasingly global, technological, interactive, and interdependent. As stated in the “Nature of the Subject,” in the IB History Program, the goal is to “explain trends and developments, continuity and change through time and through individual events.” IB social studies courses analyze “individuals and societies in the widest context: political, social, economic, religious, technological and cultural.” Toward that end, students will engage in processes of inquiry, explanation and interpretation, and analyze the roles of the historian and social scientist in the generation and applications of knowledge. Students will demonstrate their abilities to meet program goals and objectives through examinations and presentation of in-depth research.

American Government Pre-IB (KN, MM)
Course Number: 15.0910.7 (IB)
Credit: 1

United States History 10 Pre-IB (MM)
Course Number: 15.1100.7(IB)
Credit: 1
This course prepares students for the Advanced Placement United States History examination.

World History 11 IB (, MM)
Course Number: 15.1120.7(IB)
Credit: 1

World History 12 IB (MM)
Course Number: 15.1220.7(IB)
Credit: 1

Theory of Knowledge (KN, MM)
Course Number: 15.4100.7(IB)
Credit: 1

Psychology IB (KN, MM)
Course Number: 15.1360.7(IB)
Credit: 1

History of the Americas 11 IB (KN)
Course Number: 15.1170.7(IB)
Credit: 1

History of the Americas 12 IB (KN)
Course Number: 15.1270.7(IB)
Credit: 1
Note: IB courses are available only to students that have been admitted to the International Baccalaureate (IB) program. Registration for these courses is prerequisite on satisfactory completion of the requirements outlined in the International Baccalaureate curriculum.

SOCIAL STUDIES MAGNET COURSES

American Government, Law and Public Policy (T)
Course Number: 15.0910.5
Credit: 1

World History Development of Law (T)
Course Number: 15.1020.5
Credit: 1

U.S. History Law Related Education (T)
Course Number: 15.1130.5
Credit: 1

Economics and Public Issues: GT (T)
Course Number: 15.1500.5
Credit: ½

Introduction to Law, Research, and Writing (T)
Course Number: 15.6010.5
Credit: ½

Trial Advocacy (T)
Course Number: 15.6040.5
Credit: 1

International Law and Comparative Government (T)
Course Number: 15.6500.5
Credit: ½
WORLD LANGUAGES
MISSION
The Office of World Languages is focused on building student proficiency in at least 2 world languages through the design, implementation, and assessment of proficiency-based curricula in Chinese, French, German, Japanese, Latin, and Spanish. In addition, the office oversees the identification of appropriate proficiency-based resources and materials, and provides support and training to teachers on the best practices involved in teaching for proficiency. GT and AP courses are scheduled wherever enrollments justify.

Chinese
Course Number: 30.8010.0 Chinese I
Course Number: 30.8020.0 Chinese II
Course Number: 30.8030.4 Chinese III (H)
Course Number: 30.8040.4 Chinese IV (H)
Course Number: 30.8050.6 Chinese V (AP)
Course Number: 30.8060.6 Chinese VI (AP)
Prerequisite: It is recommended that students continue through the longest possible sequence.
Credit: 1
These courses develop an understanding of the Chinese people and civilization. Students communicate in spoken and written Chinese while developing their listening, speaking, reading, and writing skills. Students study the history, literature, music, art, political systems, and social institutions of China.

French
Course Number: 30.2010.0 French I
Course Number: 30.2020.0 French II
Course Number: 30.2030.4 French III (H)
Course Number: 30.2040.4 French IV (H)
Course Number: 30.2050.6 French V (AP)
Course Number: 30.2060.6 French VI (AP)
Course Number: 30.2070.6 French VII (AP)
Course Number: 30.2110.4 French I-II (H)
Prerequisite: It is recommended that students continue through the longest possible sequence.
Credit: 1
These courses develop an understanding of the Francophone people and their civilizations. Students communicate in spoken and written French while developing their listening, speaking, reading, and writing skills. Students study the history, literature, music, art, political systems, and social institutions of French-speaking countries.

German
Course Number: 30.5010.0 German I
Course Number: 30.5020.0 German II
Course Number: 30.5030.0 German III
Course Number: 30.5030.4 German III (H)
Course Number: 30.5040.4 German IV (H)
Prerequisite: It is recommended that students continue through the longest possible sequence.
Credit: 1
These courses develop an understanding of the Germanic people and their civilizations. Students communicate in spoken and written German while developing their listening, speaking, reading, and writing skills. Students study the history, literature, music, art, political systems, and social institutions of German-speaking countries.

Japanese (CT, OM)
Course Number: 30.7010.0 Japanese I
Course Number: 30.7020.0 Japanese II
Course Number: 30.7030.4 Japanese III (H)
Course Number: 30.7040.4 Japanese IV (H)
Course Number: 30.7050.6 Japanese V (AP)
Course Number: 30.7060.6 Japanese VI (AP)
Course Number: 30.7070.6 Japanese VII (AP)
Prerequisite: It is recommended that students continue through the longest possible sequence.
Credit: 1
These courses develop an understanding of the Japanese people and civilization. Students communicate in spoken and written Japanese while developing their listening, speaking, reading, and writing skills. Students study Japanese literature, art, history, music, political systems, and social institutions. AP courses include an in-depth study of the structure, vocabulary, and culture of the language along with the processes necessary for success on the exam. Because this course is designed to prepare students to take an AP exam, they are expected to take the test.

Latin
Course Number: 30.1010.0 Latin I
Course Number: 30.1020.0 Latin II
Course Number: 30.1030.4 Latin III (H)
Course Number: 30.1040.4 Latin IV (H)
Course Number: 30.1050.6  Latin V (AP)
Course Number: 30.1060.6  Latin VI (AP)
Prerequisite: It is recommended that students continue through the longest possible sequence.
Credit: 1
In the sequential courses, emphasis is on the Latin language and its influence on the English language as well as on all Roman languages. Students study Roman life — its leaders, government, education, literature, music, and art. AP courses include an in-depth study of the structure, vocabulary, and culture of the language along with the processes necessary for success on the exam. Because this course is designed to prepare students to take an AP exam, they are expected to take the test.

Spanish
Course Number: 30.3010.0  Spanish I
Course Number: 30.3020.0  Spanish II
Course Number: 30.3030.0  Spanish III
Course Number: 30.3030.4  Spanish III (H)
Course Number: 30.3040.4  Spanish IV (H)
Course Number: 30.3050.6  Spanish V (AP)
Course Number: 30.3060.6  Spanish VI (AP)
Course Number: 30.3070.6  Spanish VII (AP)
Course Number: 30.3120.4  Spanish I-II (H)

Prerequisite: It is recommended that students continue through the longest possible sequence.
Credit: 1
The sequential courses develop an understanding of the Hispanic people and civilizations. Students communicate in spoken and written Spanish while developing their listening, speaking, reading, and writing skills. Students study the history, literature, music, art, political systems, and social institutions of Spanish-speaking countries.

WORLD LANGUAGES ADVANCED PLACEMENT COURSES
Advanced Placement world languages courses are scheduled whenever they are justified by enrollment. Each advanced placement course includes an in-depth study of the structure, vocabulary, and culture of the language along with the processes necessary for success on the exam. Because these courses are designed to prepare students to take an AP exam for college credit, students are expected to take the test.

Chinese AP 5
Course Number: 30.8050.6  Chinese V (AP)
Credit: 1

French Language and Culture- AP
Course Number: 30.2050.6  French V (AP)
Course Number: 30.2060.6  French VI (AP)
Course Number: 30.2070.6  French VII (AP)
Credit: 1

Japanese Language and Culture- AP
Course Number: 30.7050.6  Japanese V (AP)
Course Number: 30.7060.6  Japanese VI (AP)
Course Number: 30.7070.6  Japanese VII (AP)
Credit: 1

Latin - AP
Course Number: 30.1050.6  Latin V (AP)
Course Number: 30.1060.6  Latin VI (AP)
Credit: 1

Spanish Language and Culture--- AP
Course Number: 30.3050.6  Spanish V (AP)
Credit: 1

Spanish Literature and Culture AP
Course Number: 30.3060.6  Spanish VI (AP)
Course Number: 30.3070.6  Spanish VII (AP)
Credit: 1

WORLD LANGUAGES INTERNATIONAL BACCALAUREATE (IB)
International Baccalaureate Spanish courses at Kenwood High School and Milford Mill Academy are aimed at promoting an understanding of another culture through the study of a second language. The main emphasis is on language acquisition and use in a range of contexts and for different purposes.

Spanish II Pre IB 9
Course Number: 30.3020.0
Credit: 1

Spanish III Pre IB 10
Course Number: 30.3030.0
Credit: 1

Spanish IB 11
Course Number: 30.3030.7
Credit: 1

Spanish IB 12
Course Number: 30.3050.7
Credit: 1
CAREER and TECHNOLOGY EDUCATION (CTE): ELECTIVE COURSES AND COMPLETER PROGRAMS

WHAT IS CAREER AND TECHNOLOGY EDUCATION?

Career and Technology Education (CTE) is a program that enables students to prepare for their roles as individuals, family members, and citizens. First and foremost, CTE is about education in middle school, high school, and college that provides students with:

- Academic subject matter taught with relevance to the real world, often called “contextual learning.”
- Personal and employability skills, from task and skill expertise to workplace ethics.
- Educational pathways that help them explore interests and careers while progressing through school.
- Postsecondary career pathways that include registered apprenticeship, industry certification, community college certificate/associate degree programs, and four-year college degree programs.

CTE programs provide students with BOTH relevant career skills preparation AND rigorous academic skills.

WHAT IS THE MISSION OF THE OFFICE OF CAREER & TECHNOLOGY EDUCATION?

The mission of the office of CTE is to provide expertise and vision to schools as they deliver integrated programs that prepare learners academically, technically, and interpersonally for careers and lifelong learning.

WHAT ARE CAREER AND TECHNOLOGY EDUCATION ELECTIVE COURSES?

CTE elective courses allow students to take one or more courses related to the mission of the content areas without entering a completer program. Elective courses are available in family and consumer sciences, JROTC, school to career transition, and in technology education. The courses offered vary by school.

WHAT ARE CAREER & TECHNOLOGY EDUCATION COMPLETER PROGRAMS?

A completer program is a sequence of courses in a specific career pathway that provides a minimum of four credits in a CTE program (not individual elective courses). All completer programs are approved by the Maryland State Department of Education (MSDE), and completion of the required CTE completer credits meets MSDE graduation requirements at the high school level. Students who successfully complete a CTE program in most career pathways are eligible for articulated community college credit. (Some CTE programs of study offer as many as 21 articulated [FREE] college credits.)

Students who wish to follow a CTE career completer program may pursue career paths at their comprehensive high schools or may apply to one of the magnet career and technology high schools in Baltimore County. Students are encouraged to become “dual completers” by combining a CTE completer program with the University System of Maryland entrance requirements. This dual completer program will allow students to develop their full range of talents and abilities, to prepare for gainful employment, and/or to enter a community college, a four-year college or university, or an apprenticeship program.

HOW DO YOU OBTAIN MORE INFORMATION ABOUT THE CAREER & TECHNOLOGY EDUCATION PROGRAMS?

Contact your local high school, the offices of CTE, or consult your school’s professional school counselor to obtain more information about programs and school locations for those programs.

Career and technology education (CTE) programs of study provide high school students with:

✓ Academic subject matter taught with relevance to the real world.
✓ Workplace, personal, academic, and technical skills.
✓ Educational pathways that help them explore interests and careers.
✓ Pathways that include four-year college degree programs, community college certificate/associate degree programs, registered apprenticeship, and industry certification.

Did you know...?
✓ You will be prepared for both college AND careers?
✓ You may receive FREE college credit by successfully completing a CTE program?
✓ You may be eligible for industry credentials and related scholarships?
✓ Your home high school may have a program of study in a career pathway that is of interest to you?
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✓ Academic subject matter taught with relevance to the real world.
✓ Workplace, personal, academic, and technical skills.
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✓ You may be eligible for industry credentials and related scholarships?
✓ Your home high school may have a program of study in a career pathway that is of interest to you?

CTE Programs of Study* and Electives – 2019-2020 School Year

<table>
<thead>
<tr>
<th>Cluster/Program or Elective Courses</th>
<th>Carver</th>
<th>Eastern</th>
<th>Milford Mill</th>
<th>Solters Point</th>
<th>Western</th>
<th>Comprehensive High Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arts, Media &amp; Communication Cluster Completer Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>School to Career Supervisor</td>
</tr>
<tr>
<td>Graphic/Print Communications Technology</td>
<td></td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Kenwood</td>
</tr>
<tr>
<td>Interactive Media Production</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>Catonsville, Chesapeake*, Dundalk, Franklin, New Town, Parkville, Pikesville</td>
</tr>
<tr>
<td>Business, Management, &amp; Finance Cluster Completer Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Business Education Supervisor</td>
</tr>
<tr>
<td>Construction &amp; Development Cluster Completer Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Technical Programs Supervisor</td>
</tr>
<tr>
<td>Carpentry Careers</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Perry Hall, Owings Mills, Kenwood, Lansdowne*</td>
</tr>
<tr>
<td>Electrical Careers</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Lansdowne*</td>
</tr>
<tr>
<td>Mechanical Construction/Plumbing Careers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Kenwood</td>
</tr>
<tr>
<td>Heating/Ventilation/Air Conditioning/Welding</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Dulaney</td>
</tr>
<tr>
<td>Construction Design and Management</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sparrows Point</td>
</tr>
<tr>
<td>Building &amp; Construction Technology</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Consumer Services, Hospitality &amp; Tourism Cluster Completer Programs</td>
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<td></td>
<td>Technical Programs Supervisor</td>
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<tr>
<td>Cosmetology Careers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>Kenwood, Lansdowne*, New Town, Parkville, Woodlawn</td>
</tr>
<tr>
<td>Culinary Arts &amp; Restaurant Management</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Nutrition &amp; Food Science Associate</td>
<td></td>
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</tr>
</tbody>
</table>

* A CTE program of study is a sequence of courses in a specific career pathway that provides a minimum of four credits in an approved CTE completer program. All CTE programs of study are approved by the Maryland State Department of Education (MSDE), and meet MSDE graduation requirements.

* Denotes a magnet program at a comprehensive school; applications may be required.
<table>
<thead>
<tr>
<th>Cluster/Program or Elective Courses</th>
<th>Career</th>
<th>Easton</th>
<th>Milford Mill</th>
<th>Sollers Point</th>
<th>Western</th>
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</thead>
<tbody>
<tr>
<td>Environmental, Agricultural &amp; Natural Resource Systems Cluster Completer Programs</td>
<td></td>
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<td>Technical Programs Supervisor</td>
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<tr>
<td>Agriculture Science: Animal, Plant, and Mechanical</td>
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<td>Hereford</td>
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<tr>
<td>Environmental Technology</td>
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<tr>
<td>Health &amp; Biosciences Cluster Completer Programs</td>
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<td>Technical Programs Supervisor</td>
<td></td>
</tr>
<tr>
<td>Academy of Health Professions</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Overlea*, Randallstown*</td>
</tr>
<tr>
<td>Project Lead The Way: Biomedical Sciences</td>
<td>X</td>
<td>Franklin, Lansdowne*, New Town, Perry Hall, Woodlawn</td>
<td></td>
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<td></td>
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<tr>
<td>Human Resource Services Cluster Completer Programs</td>
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<td>School to Career Supervisor</td>
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<tr>
<td>Child Care and Early Childhood Education</td>
<td>X</td>
<td>Catonsville, Dulaney, Kenwood, Lansdowne*, New Town, Patapsco, Woodlawn</td>
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<tr>
<td>School Age Child Development &amp; Care Services</td>
<td></td>
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<td>Parkville</td>
<td></td>
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<tr>
<td>Homeland Security and Emergency Preparedness</td>
<td></td>
<td>Dundalk, Perry Hall, Pikesville</td>
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<tr>
<td>Teacher Academy of Maryland</td>
<td>X</td>
<td>Dundalk, Franklin, Owings Mills, Parkville*, Woodlawn</td>
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<tr>
<td>Information Technology Cluster Completer Programs</td>
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<td>Business Education Supervisor</td>
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<tr>
<td>Information Technology: Computer Science</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Catonsville, Chesapeake*, Dulaney, Franklin, Hereford, Loch Raven, Owings Mills, Perry Hall, Sparrows Point, Woodlawn</td>
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<tr>
<td>Information Technology: Networking</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>New Town, Parkville</td>
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<tr>
<td>Manufacturing Engineering &amp; Technology Cluster Completer Programs</td>
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<td>Technology Education Supervisor</td>
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<tr>
<td>Engineering Careers</td>
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<td>Catonsville, Chesapeake*, Dulaney, Dundalk, Owings Mills, Parkville*, Pikesville, Woodlawn*</td>
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<tr>
<td>Project Lead The Way: Engineering</td>
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<td>Transportation Technology Cluster Completer Programs</td>
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<td>Automotive Service Technology</td>
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<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Diesel Truck and Power Systems Technology</td>
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<tr>
<td>School To Career Transition Completer Program</td>
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<td>School to Career Supervisor</td>
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<tr>
<td>Career Research and Development</td>
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<td></td>
<td>All Comprehensive High Schools</td>
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<tr>
<td>School To Career Transition Elective Courses</td>
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<td>School to Career Supervisor</td>
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</tr>
<tr>
<td>Internship</td>
<td></td>
<td></td>
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<td>All Comprehensive High Schools</td>
<td></td>
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<tr>
<td>Junior Reserve Officers' Training Corps-JROTC Leadership Program Elective Courses</td>
<td></td>
<td></td>
<td></td>
<td>JROTC Facilitator</td>
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<tr>
<td>Army JROTC</td>
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<td></td>
<td></td>
<td>Lansdowne*, Patapsco</td>
<td></td>
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<tr>
<td>Air Force JROTC</td>
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<td></td>
<td></td>
<td>Kenwood</td>
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<tr>
<td>Navy JROTC</td>
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<td>Dundalk, Randallstown, Woodlawn</td>
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<tr>
<td>Marine Corps JROTC</td>
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<td>Chesapeake*, Franklin, Overlea, Parkville</td>
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<tr>
<td>Technology Education Required and Elective Courses</td>
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<td>Technology Education Supervisor</td>
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<tr>
<td>High School Technology Education</td>
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<td></td>
<td></td>
<td>Required and elective course offerings vary by school</td>
<td></td>
</tr>
</tbody>
</table>

For more information about Career and Technology Education, contact your local high school, or the CTE Office at 443-809-8921, or visit the website by clicking on this link.
CTE: Value Added Opportunities - Certification & Postsecondary Credits

Career and Technology Education (CTE) programs provide students with college and career readiness skills. In many programs, industry certification and/or post-secondary opportunities may be available. CTE programs may be linked to post-secondary opportunities by articulation agreements. Programs which are articulated may be used for advanced standing or credits at specific colleges/technical schools (when a “B” or better average is maintained and other requirements are met in that program).

<table>
<thead>
<tr>
<th>Program</th>
<th>Academic and/or Industry Affiliation and Assessment</th>
<th>Specific Test/Certification Available</th>
<th>Articulation and Credits Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy of Health Professions</td>
<td>Red Cross/American Heart Association</td>
<td>First Aid/CPR</td>
<td>CCBC- 3</td>
</tr>
<tr>
<td></td>
<td>National Health Science Foundation</td>
<td>CCMA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maryland Board of Nursing</td>
<td>Pharmacy Technician</td>
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<tr>
<td></td>
<td>Community College of Baltimore County (CCBC)</td>
<td>Certified Nursing Assistant</td>
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<td></td>
<td></td>
<td>Geriatric Nursing Assistant</td>
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<td>Administrative Services</td>
<td>Microsoft Office Specialist (MOS)</td>
<td>MOS</td>
<td>CCBC- 21</td>
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<td>Community College of Baltimore County (CCBC)</td>
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<td>Advanced Technology Education</td>
<td>Community College of Baltimore County (CCBC)</td>
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<td>CCBC- 3</td>
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<tr>
<td>Agriscience: Animal and Plant</td>
<td>Curriculum for Agriculture Science Education (CASE)</td>
<td>CASE End of Course Assessments</td>
<td>CCBC- 2</td>
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<td>Community College of Baltimore County (CCBC)</td>
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<tr>
<td>Automotive Service Technology</td>
<td>ASE Student Skills Standards Assessment</td>
<td>ASE Student Certification-Maintenance and Light Repair</td>
<td>CCBC- 4</td>
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<td>Community College of Baltimore County (CCBC)</td>
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<tr>
<td>Biomedical Sciences: PLTW</td>
<td>Project Lead The Way (PLTW)</td>
<td>PLTW End of Course Assessments Transcribed Credits</td>
<td>Stevenson University- 3</td>
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<tr>
<td></td>
<td>Stevenson University</td>
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<td>transcripted</td>
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<tr>
<td></td>
<td>Community College of Baltimore County (CCBC)</td>
<td></td>
<td>CCBC - 3</td>
</tr>
<tr>
<td>Business Management</td>
<td>College Board – Advanced Placement</td>
<td>AP Economics Dual Enrollment</td>
<td>CCBC- 6</td>
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<td></td>
<td>Community College of Baltimore County (CCBC)</td>
<td></td>
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<tr>
<td>Career Research and Development</td>
<td>Community College of Baltimore County (CCBC)</td>
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<td>CCBC- 3</td>
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<tr>
<td>Carpentry</td>
<td>National Center for Construction Education and Research (NCCER)</td>
<td>NCCER Core</td>
<td>CCBC- 6</td>
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<td>Associated Builders and Contractors (ABC)</td>
<td>NCCER Carpentry Level I</td>
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<td></td>
<td>International Code Council (ICC)</td>
<td>ABC Advanced Credit</td>
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<td>Community College of Baltimore County (CCBC)</td>
<td>ICC- Residential Code</td>
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<td></td>
<td>OSHA 10-hour</td>
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<tr>
<td>Child Care Services</td>
<td>Community College of Baltimore County (CCBC)</td>
<td>90-hour Certification</td>
<td>CCBC- 6</td>
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<tr>
<td>Construction Design and Management</td>
<td>Autodesk</td>
<td>Autodesk – AutoCAD</td>
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<td></td>
<td>Morgan State University</td>
<td>Autodesk - Revit</td>
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<tr>
<td>Building and Construction Technology</td>
<td>National Center for Construction Education and Research (NCCER)</td>
<td>NCCER Core</td>
<td>CCBC- 6</td>
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<td></td>
<td>Associated Builders and Contractors (ABC)</td>
<td>NCCER Level I</td>
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<td></td>
<td>International Code Council (ICC)</td>
<td>ABC Advanced Credit</td>
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<td>Community College of Baltimore County (CCBC)</td>
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<td>Cosmetology</td>
<td>Maryland Board of Cosmetology</td>
<td>Maryland Certification and Licensure</td>
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<td>Criminal Justice Technology</td>
<td>Community College of Baltimore County (CCBC)</td>
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<td>CCBC- 11</td>
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<td>Program</td>
<td>Academic and/or Industry Affiliation and Assessment</td>
<td>Specific Test/Certification Available</td>
<td>Articulation and Credits Available</td>
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<td>Culinary Arts &amp; Restaurant Management</td>
<td>ProStart</td>
<td>ProStart Year I</td>
<td>CCBC- 17</td>
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<td>ProStart Year II</td>
<td>AACC - available</td>
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<tr>
<td>Diesel Truck &amp; Power Systems</td>
<td>ASE Student Skills Standards Assessment</td>
<td>ASE Student Certification</td>
<td>CCBC- 12</td>
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<td>Community College of Baltimore County (CCBC)</td>
<td>- Diesel Engines</td>
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<tr>
<td>Electrical Careers</td>
<td>National Center for Construction Education and Research (NCCER)</td>
<td>NCCER Core</td>
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<tr>
<td></td>
<td>Associated Builders and Contractors (ABC)</td>
<td>NCCER Electrical Level I</td>
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<td>International Code Council (ICC)</td>
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<td>OSHA 10-hour</td>
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<td>Engineering Careers</td>
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<td>CCBC- 9</td>
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<td>Engineering: PLTW</td>
<td>Project Lead The Way (PLTW) University of Maryland Baltimore County (UMBC)</td>
<td>PLTW End of Course Assessments</td>
<td>3 Transcribed UMBC</td>
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<td>Community College of Baltimore County (CCBC)</td>
<td>Transcripted Credits</td>
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<td>Environmental Technology</td>
<td>GIS (Geographic Information Systems)</td>
<td>Sediment and Erosion Control</td>
<td>CCBC- 3 with portfolio</td>
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<td>Maryland Department of the Environment</td>
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<td>Community College of Baltimore County (CCBC)</td>
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<tr>
<td>Finance &amp; Accounting</td>
<td>Community College of Baltimore County (CCBC) College Board – Advanced Placement</td>
<td>Dual Enrollment AP - Economics</td>
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<tr>
<td>Graphic/Print Communications</td>
<td>Graphic Arts Education and Research Foundation (GAERF) – PrintED</td>
<td>Graphic Communications Digital File Preparation/Digital File Output</td>
<td>CCBC- 6 with portfolio</td>
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<td>Community College of Baltimore County (CCBC)</td>
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<tr>
<td>Heating, Ventilation, and Air Conditioning (HVAC)</td>
<td>National Center for Construction Education and Research (NCCER)</td>
<td>NCC ER Core</td>
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<td>Associated Builders and Contractors (ABC)</td>
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<td></td>
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<td>OSHA 10-hour</td>
<td></td>
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<td>Homeland Security and Emergency Preparedness</td>
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<td>CCBC- 6</td>
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<td>Information Technology: Networking</td>
<td>Cisco</td>
<td>CCENT</td>
<td>CCBC-3-15</td>
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<td>Community College of Baltimore County (CCBC)</td>
<td>CCNA</td>
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<td>A+ Security + CompTia IT Fundamentals</td>
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<td></td>
<td>Dual Enrollment</td>
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<td>Information Technology: Computer Science</td>
<td>College Board – Advanced Placement Community College of Baltimore County (CCBC)</td>
<td>AP - Computer Science Principles</td>
<td>CCBC- 15</td>
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<td>AP – Computer Science A</td>
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<td></td>
<td>Dual Enrollment</td>
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<td>Interactive Media Production (IMP)</td>
<td>Adobe Certified Associate (ACA) Community College of Baltimore County (CCBC)</td>
<td>ACA—Adobe Certified Associate</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>with portfolio</td>
</tr>
<tr>
<td>JROTC: Air Force</td>
<td>United States Armed Services Community College of Baltimore County (CCBC)</td>
<td>JROTC Certification</td>
<td>CCBC- 3</td>
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<tr>
<td>JROTC: Army</td>
<td>United States Armed Services</td>
<td>JROTC Certification</td>
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<tr>
<td>JROTC: Marines</td>
<td>United States Armed Services</td>
<td>JROTC Certification</td>
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<tr>
<td>JROTC: Navy</td>
<td>United States Armed Services</td>
<td>JROTC Certification</td>
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<tr>
<td>Marketing</td>
<td>Community College of Baltimore County (CCBC) College Board – Advanced Placement</td>
<td>Dual Enrollment AP - Economics</td>
<td>CCBC- 9</td>
</tr>
<tr>
<td>Program</td>
<td>Academic and/or Industry Affiliation and Assessment</td>
<td>Specific Test/Certification Available</td>
<td>Articulation and Credits Available</td>
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<td>---------------------------------</td>
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<td>-----------------------------------------------------------------</td>
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</tr>
</tbody>
</table>
| Mechanical Construction/Plumbing| National Center for Construction Education and Research (NCCER)  
Associated Builders and Contractors (ABC)  
Community College of Baltimore County (CCBC) | NCCER Core  
NCCER Plumbing Level I  
ABC Advanced Credit  
OSHA 10-hour | CCBC- 9 |
| School Age Child Development    | Community College of Baltimore County (CCBC)  
90-Hour Certification |                                                                 | CCBC- 6 |
| Teacher Academy of Maryland     | Educational Testing Service  
Towson University  
Community College of Baltimore County (CCBC) | ParaPro  
Praxis Core |                                                                 |
|                                 |                                                                 |                                                                 | CCBC- 3  
Coppin State Univ - 3  
Hood College - 3  
Saint Mary's College of Maryland - 3  
Salisbury Univ - 3  
Stevenson Univ - 3  
Towson University - 3 |

For more information about Career and Technology Education, contact your local high school, or the CTE Office at 443-809-8921, or follow this link to the website.
CTE: Technology Education Program of Courses

In order to comply fully with the MSDE, COMAR, and state curriculum requirements for Technology Education, Baltimore County Public Schools has implemented a program of course work based on student performance levels. The goal of this program of courses is to develop students who are technologically literate. The International Technology & Engineering Educators Association defines technological literacy as “the ability to use, manage, understand, and assess technology.”

The following is a listing of Baltimore County Public Schools’ courses approved to meet the Maryland Technology Education Graduation Requirement. Note: [H] denotes Honors Level - [GT] denotes Gifted & Talented Level

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>55.1250.0</td>
<td>Foundations of Engineering</td>
<td>1</td>
<td>Designed for Grade 9-12 students</td>
</tr>
<tr>
<td>55.3500.4</td>
<td>Engineering Principles and Applications [H]</td>
<td>1</td>
<td>Designed for Grade 10-12 students enrolled in Chemistry and Geometry or above</td>
</tr>
<tr>
<td>55.3500.5</td>
<td>Engineering Technology [GT]</td>
<td>1</td>
<td>Designed for Grade 11 or 12 students enrolled in Physics and College Algebra or above enrolled in physics and college algebra or above.</td>
</tr>
<tr>
<td>56.0200.4</td>
<td>Introduction to Engineering Design [H] – PLTW</td>
<td>1</td>
<td>Offered only at: Catonsville, Chesapeake, Dulaney, Dundalk, Owings Mills, Parkville, Pikesville, Woodlawn</td>
</tr>
</tbody>
</table>

Foundations of Computer Science (35.3500.4) and AP Computer Science Principles (35.3510.6) also satisfy the Technology Education Basic Graduation Credit.

Advanced Technology Electives and Graduation Options

WHAT ARE ADVANCED TECHNOLOGY EDUCATION COURSES?

Advanced technology education is an instructional program in which students develop advanced skills and understandings related to the use, assessment, design, and production of technological systems. It is a series of course offerings that meet Maryland’s high school graduation pathway for advanced technology education. Advanced technology education courses provide expectations and opportunities for students to:

- Work independently at an accelerated pace.
- Engage in more rigorous and complex content and processes.
- Develop authentic products that reflect students’ understanding of key concepts.

Courses involve accelerated and enriched learning experiences that require abstract and higher-order thinking skills. Completion of two or more advanced technology education credits enables students to achieve an enhanced level of technological literacy where students are intrinsically engaged with the community and advocate for technology at defined levels of society. Advanced technology education courses prepare students for further education in the areas of science, technology, engineering, or mathematics (STEM).

Courses Meeting the Advanced Technology Education Pathway

The following is a listing of Baltimore County Public Schools’ courses approved to meet the Maryland Advanced Technology Education Graduation credit requirement.

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Course Title</th>
<th>Credit Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>55.1600.0</td>
<td>Advanced Design Applications</td>
<td>1</td>
</tr>
<tr>
<td>56.0110.0</td>
<td>Advanced Design Applications -PET</td>
<td>½</td>
</tr>
<tr>
<td>56.0120.0</td>
<td>Advanced Design Applications -MAN/CON</td>
<td>½</td>
</tr>
<tr>
<td>55.1500.0</td>
<td>Advanced Technological Applications</td>
<td>1</td>
</tr>
<tr>
<td>56.0130.0</td>
<td>Advanced Technological Applications –INFO/REC</td>
<td>½</td>
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<tr>
<td>56.0140.0</td>
<td>Advanced Technological Applications –BIO/MED</td>
<td>½</td>
</tr>
<tr>
<td>55.8500.4</td>
<td>Engineering Design [Honors]</td>
<td>1</td>
</tr>
<tr>
<td>55.8500.5</td>
<td>Engineering Design [GT]</td>
<td>1</td>
</tr>
<tr>
<td>56.0100.0</td>
<td>Technology and Society</td>
<td>1</td>
</tr>
</tbody>
</table>
TECHNOLOGY EDUCATION COURSES

Note: [A] = Meets Advanced Technology Education Credit; [T] = Meets Basic Technology Education Credit Requirement

Foundations of Engineering
Course Number: 55.1250.0 Prerequisite: None
Credit: 1 [T]
Foundations of Engineering prepares students to understand and apply technological concepts and processes that are the cornerstone for the high school technology program. Group and individual activities engage students in creating ideas, developing innovations, and engineering practical solutions. Technology content, resources, and laboratory/classroom activities apply student applications of science, mathematics, and other school subjects in authentic situations.

Engineering Principles and Applications
Course Number: 55.3500.4 (H)
Prerequisites: Successful completion or concurrent enrollment in Chemistry and Geometry are recommended before enrollment in this course.
Credit: 1 [T] [H]
This Grade 10-12 course is designed to complement and support the development of skills and knowledge in the areas of science, technology, engineering, and math. Geometry and chemistry content are integrated into this course through the examination of molecular models, biotechnology, beam, bridge, and barge engineering design challenges. This course is intended to provide the basic technology education course credit experience required for graduation.

Engineering Technology
Course Number: 55.3500.5 (GT)
Prerequisites: Note: Successful completion or concurrent enrollment in Physics and College Algebra or above are recommended before enrollment in this course.
Credit: 1 [T] [GT]
This Grade 11-12 course is intended to provide the basic technology education course credit experience required for graduation. It is designed to complement and support the development of skills and knowledge in the areas of science, technology, engineering, and mathematics. This course covers topics in a variety of engineering disciplines. It examines the methods and processes used in the civil, surveying, construction, biotechnical, electrical, mechanical, and other engineering fields. Topics include soil mechanics, project management, technical organization, and measurement equipment.

Advanced Design Applications
Course Number: 55.1600.0
Prerequisites: Completion of Basic Technology Education credit courses is required. Credit: 1 [A]
Note: Elective for Grades 10-12.
This course is designed to develop technological literacy in the areas of manufacturing, construction, energy/power, and transportation. The use of hands-on activities provides students with opportunities to participate in a wide range of problem solving and critical thinking activities.

Advanced Technological Applications
Course Number: 55.1500.0
Prerequisites: Completion of Basic Technology Education credit course is required. Credit: 1[A]
This course is designed to develop technological literacy in the areas of information and communication, entertainment, recreation, medical and agricultural, and related biotechnologies. The use of hands-on activities provides students with opportunities to participate in a wide range of problem solving and critical thinking activities.

Engineering Design
Course Number: 55.8500.4 (H) 55.8500.5 (GT)
Prerequisites: Completion of Engineering Principles and Applications, Engineering Technology, or Advanced Design Applications is required.
Credit: 1[A]
This course prepares students to understand and apply engineering concepts and processes. Group and individual activities engage students in creating ideas, developing innovations, and engineering practical solutions. Engineering and design content, resources, and laboratory/classroom activities encourage student applications of science, mathematics, and other school subjects in authentic situations.

Technology and Society
Course Number: 56.0100.0
Prerequisite: Completion of Basic Technology Education credit course is required.
Credit: 1[A]
Technology and Society teaches critical thinking skills as they relate to the creation and use of technology. Students are prepared to analyze issues, consider their validity, formulate positions, and defend these positions. Technology and Society helps students disentangle the elements of an issue, allowing them to make informed decisions. Through the study of contemporary issues of science and technology, students are introduced to structured methods for assessing technology and science issues and developing defensible options and positions.
CTE: Junior Reserve Officers Training Corps (JROTC)

MISSION

The mission of the Junior Reserve Officers Training Corps (JROTC) is to instill a value of citizenship, service to the United States, personal responsibility, and a sense of accomplishment. It does not seek any particular commitment to the military. The JROTC program strengthens character, teaches discipline, promotes an understanding of the requirements for national security, encourages self-discipline, and develops respect for authority.

PREREQUISITES

Students must be enrolled and attending regular courses of instruction at the school hosting the JROTC program; be a US citizen, national or legal alien; be physically qualified to participate in physical education; be selected by the JROTC instructor with the approval of the principal; must be meeting graduation and academic requirements; must display acceptable standards of conduct; must be willing to meet the standards of military grooming. Fees may be required.

This is a progressive three-year co-educational elective leadership program, offering one credit per year toward graduation. JROTC is designed to improve the students’ interpersonal skills by developing self-discipline, character and communication skills. Throughout this program, students will gain an understanding of their rights, privileges and responsibilities as American citizens. For students seeking postsecondary education, this program may provide scholarship opportunities. Students, who choose to enter the armed forces and have successfully completed this program and earned their high school diploma, may be given up to a two pay-grade advancement at the time of enlistment. Students enrolled in JROTC are under no obligation to join the armed forces. Also, membership in the JROTC program is not a guarantee of one’s eligibility to enter the armed forces after graduation. All JROTC Leadership Education courses address leadership education; citizenship; personal growth and responsibility; career exploration and public service; and, general military subjects.

The JROTC program is conducted only in a limited number of carefully selected high schools and academies in the United States. Its primary goal is to familiarize student cadets with basic military and traditions of the Armed Forces, without incurring any obligation of future military service or recruitment for any specific service.

<table>
<thead>
<tr>
<th>PROGRAMS</th>
<th>GRADE 9</th>
<th>GRADE 10</th>
<th>GRADE 11</th>
<th>GRADE 12</th>
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<tr>
<td>Air Force</td>
<td>Air Force JROTC I</td>
<td>Air Force JROTC II</td>
<td>Air Force JROTC III</td>
<td>Air Force JROTC IV</td>
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<tr>
<td>Army</td>
<td>Army JROTC I</td>
<td>Army JROTC II</td>
<td>Army JROTC III</td>
<td>Army JROTC IV</td>
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<tr>
<td>Marine</td>
<td>Marine JROTC I</td>
<td>Marine JROTC II</td>
<td>Marine JROTC III</td>
<td>Marine JROTC IV</td>
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<tr>
<td>Navy</td>
<td>Navy JROTC I</td>
<td>Navy JROTC II</td>
<td>Navy JROTC III</td>
<td>Navy JROTC IV</td>
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</table>

AIR FORCE JROTC (KN)

Air Force JROTC I
Course Number: 86.5110.0
Credit: 1
Prerequisite: None

Air Force JROTC II
Course Number: 86.5210.0
Credit: 1
Prerequisite: Leadership Education I

Air Force JROTC III
Course Number: 86.5310.0
Credit: 1
Course Number: 86.5300.4 (Honors)
Credit: ½
Course Number: 86.5310.4 (Honors)
Credit: 1
Prerequisite: Leadership Education II

Air Force JROTC IV
Course Number: 86.5410.0
Credit: 1
Course Number: 86.5400.4 (Honors)
Credit: ½
Course Number: 86.5410.4 (Honors)
Credit: 1
Prerequisite: Leadership Education III
### ARMY JROTC (LN, PT)

**Army JROTC I**  
Course Number: 86.6110.0  
Credit: 1  
Prerequisite: None

**Army JROTC II**  
Course Number: 86.6210.0  
Credit: 1  
Prerequisite: Leadership Education I

**Army JROTC III**  
Course Number: 86.6310.0  
Credit: 1  
Course Number: 86.6300.4 (Honors)  
Credit: ½  
Course Number: 86.6310.4 (Honors)  
Credit: 1  
Prerequisite: Leadership Education II

**Army JROTC IV**  
Course Number: 86.6410.0  
Credit: 1  
Course Number: 86.6400.4 (Honors)  
Credit: ½  
Course Number: 86.6410.4 (Honors)  
Credit: 1  
Prerequisite: Leadership Education III

### MARINE JROTC (CH, FH, MMA, OV, PR)

**Marine JROTC I**  
Course Number: 86.3110.0  
Credit: 1  
Prerequisite: None

**Marine JROTC II**  
Course Number: 86.3210.0  
Credit: 1  
Prerequisite: Leadership Education I

**Marine JROTC III**  
Course Number: 86.3310.0  
Credit: 1  
Course Number: 86.3300.4 (Honors)  
Credit: ½  
Course Number: 86.3310.4 (Honors)  
Credit: 1  
Prerequisite: Leadership Education II

**Marine JROTC IV**  
Course Number: 86.3410.0  
Credit: 1  
Course Number: 86.3400.4 (Honors)  
Credit: ½  
Course Number: 86.3410.4 (Honors)  
Credit: 1  
Prerequisite: Leadership Education III

### NAVY JROTC (DN, RA, WD)

**Navy JROTC I**  
Course Number: 86.4110.0  
Credit: 1  
Prerequisite: None

**Navy JROTC II**  
Course Number: 86.4210.0  
Credit: 1  
Prerequisite: Leadership Education I

**Navy JROTC III**  
Course Number: 86.4310.0  
Credit: 1  
Course Number: 86.4300.4 (Honors)  
Credit: ½  
Course Number: 86.4310.4 (Honors)  
Credit: 1  
Prerequisite: Leadership Education II

**Navy JROTC IV**  
Course Number: 86.4410.0  
Credit: 1  
Course Number: 86.4400.4 (Honors)  
Credit: ½  
Course Number: 86.4410.4 (Honors)  
Credit: 1  
Prerequisite: Leadership Education III
CTE: SCHOOL TO CAREER TRANSITION ELECTIVES
Capstone Work Experience and Internships

Suggested internship/capstone selection criteria can be found in the Coordination Handbook for Work-based Learning Programs.

CAPSTONE WORK EXPERIENCE (CWE), PROGRAM-BASED LEARNING EXPERIENCES
See cluster/completer program/course listings under business education, FACS, technical programs, and technology education. Fees and transportation may be required.

INTERNSHIPS
This elective program provides students the opportunity to extend and to apply their career-based classroom learning under the supervision of a mentor. With direction from their supervisors/mentors, student interns will observe, explore, and discover solutions to authentic problems in the workplace. Students will maintain a reflective journal of their experiences and develop a portfolio that includes an enrichment project related to their career placements. Students may complete career-field-related projects under the direction of their mentors. Prerequisite: None

Credits: ½ to 2

<table>
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<tr>
<th>Intern Math/ Science/ Engineering</th>
<th>Course Number: 86.9710.4 (H)</th>
<th>Credit: ½</th>
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<tbody>
<tr>
<td>Course Number: 86.9710.5 (GT/AA)</td>
<td>Course Number: 86.9410.4 (H)</td>
<td>Course Number: 86.9410.5 (GT/AA)</td>
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<td>Course Number: 87.0220.4 (H)</td>
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<td>Credits: 2</td>
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<td>Intern Arts/ Humanities</td>
<td>Course Number: 86.9720.4 (H)</td>
<td>Credit: ½</td>
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<td>Course Number: 86.9720.5 (GT/AA)</td>
<td>Course Number: 86.9420.4 (H)</td>
<td>Course Number: 86.9420.5 (GT/AA)</td>
</tr>
<tr>
<td>Course Number: 87.1220.4 (H)</td>
<td>Course Number: 87.1220.5 (GT/AA)</td>
<td>Credits: 2</td>
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<tr>
<td>Intern Business/ Finance</td>
<td>Course Number: 86.9730.4 (H)</td>
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<tr>
<td>Course Number: 86.9730.5 (GT/AA)</td>
<td>Course Number: 86.9430.4 (H)</td>
<td>Course Number: 86.9430.5 (GT/AA)</td>
</tr>
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<td>Course Number: 87.3220.4 (H)</td>
<td>Course Number: 87.3220.5 (GT/AA)</td>
<td>Credits: 2</td>
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<tr>
<td>Intern Health/ Human/ Public Services</td>
<td>Course Number: 86.9740.4 (H)</td>
<td>Credit: ½</td>
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<td>Course Number: 86.9740.5 (GT/AA)</td>
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</tr>
<tr>
<td>Intern Computer Science/ Info Tech</td>
<td>Course Number: 86.9750.4 (H)</td>
<td>Credit: ½</td>
</tr>
<tr>
<td>Course Number: 86.9750.5 (GT/AA)</td>
<td>Course Number: 86.9450.4 (H)</td>
<td>Course Number: 86.9450.5 (GT/AA)</td>
</tr>
<tr>
<td>Course Number: 87.5220.4 (H)</td>
<td>Course Number: 87.5220.5 (GT/AA)</td>
<td>Credits: 2</td>
</tr>
</tbody>
</table>
CTE: ALL CAREER CLUSTERS

CAREER RESEARCH AND DEVELOPMENT COMPLETER PROGRAM

The following program is an MSDE-approved CTE-completer sequence of courses. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree.

Note: Program availability is limited. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Introduction to Career Research and Development</th>
<th>Advanced Career Research and Development</th>
<th>CRD Work-Based Learning Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Grade 10</td>
<td>Grade 11</td>
<td>Grades 11 and/or 12</td>
</tr>
<tr>
<td>B</td>
<td>Grade 11</td>
<td>Grade 12</td>
<td>Grade 12</td>
</tr>
<tr>
<td>C</td>
<td>Grade 12</td>
<td>Grade 12</td>
<td>Grade 12</td>
</tr>
<tr>
<td>D</td>
<td>Grade 9</td>
<td>Grades 11 or 12</td>
<td>Grades 11 and/or 12</td>
</tr>
</tbody>
</table>

CAREER RESEARCH AND DEVELOPMENT (CRD)  CIP: 86.0000

This four-credit CTE career-completer program prepares students with the academic, technical, and workplace readiness skills that will enable further education and/or employment in a career field upon graduation from high school. The CRD program consists of two in-school courses, a portfolio development project, and a mentored workplace experience with a focus on workplace skill development. Students will identify a career pathway of interest and determine steps to achieve their education and career goals. Financial literacy and independence planning are essential components of the CRD program. Students who successfully complete the program may earn three articulated college credits with CCBC. Fees may be required.

**Introduction to Career Research and Development**

Course Number:  86.1110.0  1 credit  
                 86.1120.0-A  ½ credit  
                 86.1130.0-B  ½ credit

This course provides students with instruction in Maryland’s Career Development Framework, including self-awareness, career awareness and exploration, workplace readiness, and financial literacy. Students will begin a portfolio to document their career goals, skills, interests, and pathway planning. This course may be used as an elective course for students who are seeking other completers.

**Advanced Career Research and Development**

Course Number:  86.1210.0  1 credit  
                 86.1220.0-A  ½ credit  
                 86.1230.0-B  ½ credit

This course requires students to apply their career development knowledge to further their career preparation. The course explores all aspects of a career, including transitions, advancements, and job satisfaction. Advanced financial literacy, including personal budgeting is taught. Students continue to develop their portfolios. Advanced CRD is recommended to be taken concurrently with Work-Based Learning Experience to provide the opportunity for students to apply classroom learning in a workplace setting.

**CRD Work-Based Learning Experience**

Course Number:  86.1290.4 (H)  2 credits  
                 86.1270.4 (H)  1 credit
Prerequisite: Concurrent enrollment in Career Research and Development coursework; 16 years of age.

This course requires students to apply their career development knowledge to a work experience in a career area of their choice. Students’ skill development is measured by an individualized learning plan and related reflections. Emphasis is placed on workplace readiness skill development. Some students may become registered as apprentices. The completer requires two credits of work-based learning.
CTE: ARTS, MEDIA, AND COMMUNICATION CLUSTER

Graphic/Print Communication, Interactive Media Production

The following BCPS CTE-completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone work experience (CWE) may be available to eligible students in the junior or senior years.

Note: Program availability is limited. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program.

<table>
<thead>
<tr>
<th>COMPLETER PROGRAMS</th>
<th>GRADE 9</th>
<th>GRADE 10</th>
<th>GRADE 11</th>
<th>GRADE 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Graphic/Print Communication</td>
<td>Graphic Comm. 1</td>
<td>Graphic Comm. 2</td>
<td>Graphic Comm. 3 and 4</td>
<td>Optional Graphic Comm. CWE</td>
</tr>
<tr>
<td>Interactive Media Production</td>
<td>Interactive Media 1</td>
<td>Interactive Media 2</td>
<td>Interactive Media 3 and 4</td>
<td>Optional Interactive Media CWE</td>
</tr>
</tbody>
</table>

GRAPHIC/PRINT COMMUNICATION TECHNOLOGY (KN, WST) CIP: 10.0350

The Graphic/Print Communication Technology program will provide students with the fundamental workplace, technical application, and interpersonal skills necessary to enter and to succeed in the diverse career area of graphic/print communications. Artistic expression, computer operations, graphics and imagery software applications (Adobe Illustrator, InDesign, Photoshop, and PageMaker), electronic publishing, mechanical art, digital photography, image assembly, offset and screen printing processes, and communication/teamwork skills will provide students with the knowledge needed to enter the workplace directly, to receive on-the-job training, and/or to seek postsecondary education. Partnerships with Printing & Graphics Association MidAtlantic and CCBC are available; national certification through PrintED may be obtained. Students who successfully complete the program may earn articulated college credits with CCBC. Fees may be required.

Graphic Communication Technology 1
Course Number: 62.5010.0
Prerequisite: None
Credit: 1

Graphic Communication Technology 2
Course Number: 62.5020.0
Prerequisite: Graphic Communication Technology 1
Credit: 1

Graphic Communication Technology 3
Course Number: 62.5030.4(H)
Prerequisite: Graphic Communication Technology 2
Credit: 1

Graphic Communication Technology 4
Course Number: 62.5040.4 (H)
Prerequisite: Graphic Communication Technology 3
Credit: 1

Graphic Communication Technology CWE
Course Number: 62.5080.4 (H)
1 credit
62.5090.4 (H)
Credit: 2
Prerequisite: Graphic Communication Technology 1-2
INTERACTIVE MEDIA PRODUCTION (CC, CH, CT, DN, ET, FR, NT, PK, PI)  CIP: 10.0150

This program provides students with experience in web site development, internet technology, computer graphics, digital media and entertainment production, and project management. Courses emphasize experimentation in a variety of media, using the computer to produce multimedia works of art. Students will develop skills in photo/video imagery, animation, non-linear video editing software, web page design, basic game development, and mobile/handheld application development. The program emphasizes the completion of a professional portfolio in the multimedia arts which can be used to apply for AP programs, art scholarship competitions, employment, and continuing education programs. National certification as an Adobe Certified Associate (ACA) may be obtained. Students who complete the program successfully may earn articulated college credits with CCBC. The IMP Program at Dundalk High School will focus on the video production pathway. Fees may be required.

Interactive Media Production 1
Course Number: 62.6000.0
62.6000.5 (GT/AA)
Prerequisite: None
Credit: 1

Interactive Media Production 2
Course Number: 62.6010.0
62.6010.5 (GT/AA)
Prerequisite: Interactive Media Production 1
Credit: 1

Interactive Media Production 3
Course Number: 62.6020.4 (H)
62.6020.5 (GT/AA)
Prerequisite: Interactive Media Production 2
Credit: 1

Interactive Media Production 4
Course Number: 62.6030.4 (H)
62.6030.5 (GT/AA)
Prerequisite: Interactive Media Production 3
Credit: 1

Interactive Media Production CWE
Course Number: 62.6050.4 (H)
Credit: 1
Course Number: 62.6070.4 (H)
Credit: 2
Prerequisite: Interactive Media Production 1-2
CTE: BUSINESS, MANAGEMENT, AND FINANCE and INFORMATION TECHNOLOGY CLUSTERS

Business Management, Finance and Accounting, Administrative Services, Marketing, Academy of Finance, IT: Computer Science, IT: Networking Academy

The following BCPS CTE completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone or work experience (CWE) may be available to eligible students in the junior or senior year.

Note: Program availability is limited. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program:

<table>
<thead>
<tr>
<th>COMPLETER PROGRAMS</th>
<th>GRADE 9</th>
<th>GRADE 10</th>
<th>GRADE 11</th>
<th>GRADE 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Management CIP# 520251</td>
<td>Principles of Business, Administration, and Management (1)</td>
<td>Accounting I (1) or Principles of Accounting (1)</td>
<td>Advanced Business Management (1)</td>
<td>Business Capstone (1) or Macro and Micro AP Economics (1) or Internship or College Business Course</td>
</tr>
<tr>
<td>Finance and Accounting CIP# 520354</td>
<td>Principles of Business, Administration, and Management (1)</td>
<td>Accounting I (1) or Principles of Accounting (1)</td>
<td>Accounting II (1)</td>
<td>Business Capstone (1) or AP Economics or Internship or College Business Course</td>
</tr>
<tr>
<td>Administrative Services CIP# 520451</td>
<td>Principles of Business, Administration, and Management (1)</td>
<td>Accounting I (1) or Principles of Accounting (1)</td>
<td>Information Systems Management I (1)</td>
<td>Information Systems Management II (1)</td>
</tr>
<tr>
<td>Marketing CIP# 521451</td>
<td>Principles of Business, Administration, and Management (1)</td>
<td>Accounting I (1) or Principles of Accounting (1)</td>
<td>Marketing I (1)</td>
<td>Marketing II (1) or AP Economics (1)</td>
</tr>
<tr>
<td>Information Technology—Computer Science CIP# 110250</td>
<td>Foundations of Computer Science (1)</td>
<td>AP Computer Science Principles (1)</td>
<td>AP Computer Science A (1)</td>
<td>Linux Essentials (1) or Internship or College Computer</td>
</tr>
<tr>
<td>COMPLETER PROGRAMS</td>
<td>GRADE 9</td>
<td>GRADE 10</td>
<td>GRADE 11</td>
<td>GRADE 12</td>
</tr>
<tr>
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</tr>
<tr>
<td>Information Technology Cisco Networking Pathway CIP# 110950 (Course availability may vary by site.)</td>
<td>Computer Repair (1)</td>
<td>Network Operations Systems (1)</td>
<td>Networking Completer I (1)</td>
<td>Networking Completer II (1)</td>
</tr>
<tr>
<td>Information Technology Cisco Networking Pathway CIP# 110950 (Course availability may vary by site.)</td>
<td>Networking Completer I (1)</td>
<td>Networking Completer II (1)</td>
<td>Networking Completer III (1)</td>
<td>Networking Completer IV (1)</td>
</tr>
<tr>
<td>Information Technology Cisco Networking Pathway CIP# 110950 (Course availability may vary by site.)</td>
<td>Networking Completer I (1)</td>
<td>Networking Completer II (1)</td>
<td>Cyber Security (1)</td>
<td>Networking Defense (1)</td>
</tr>
</tbody>
</table>
CTE: Business, Management, and Finance Cluster Programs

ADMINISTRATIVE SERVICES  CIP: 52.0451
This pathway is designed to help students develop managerial and technical skills in a state-of-the-art office. The courses model a company, with the teacher assuming the role of the employer. The courses will provide MOS (Microsoft Office User Specialist) certification opportunities which set a global standard for desktop productivity in corporations, academic institutions, staffing agencies, training organizations, and individuals by using Microsoft Office applications. Technology is viewed and taught as a tool for problem solving and decision-making. Students are encouraged to analyze, synthesize, and evaluate situations at home, school, or work and apply technology to complete tasks efficiently and effectively. Coursework articulates to the community college.

BUSINESS MANAGEMENT  CIP: 52.0251
This pathway focuses on management. A majority of jobs are created by small businesses started by entrepreneurially minded individuals, many of whom go on to create big businesses. People exposed to business education frequently express that they have more opportunity to exercise creative freedom, have higher self-esteem, and an overall greater sense of control over their own lives. As a result, many experienced business people, political leaders, economists, and educators believe that fostering a robust entrepreneurial culture will maximize individual and collective economic and social success on a local, national, and global scale. Few subjects can provide more valuable knowledge and insight into career opportunities. Coursework articulates to the community college.

FINANCE AND ACCOUNTING  CIP: 52.0354
This pathway provides students with accounting knowledge that will prepare them for post-high school levels of education and entry-level positions in the workforce. Focus is on accounting procedures necessary to address long and short-term assets and investments, long and short-term liabilities, inventory management and accounting rations used in the decision-making process. A comprehensive study of the accounting procedures used in establishing corporations, declaring and paying dividends, and the formation and dissolution of partnerships, distribution of net income and owner’s equity statements are included. Career pathways for accounting will be examined. Awareness of ethical decision-making models will be reinforced throughout. Coursework articulates to the community college.

MARKETING  CIP: 52.1451
This pathway provides students in-depth, comprehensive, project-based learning opportunities. Students will apply their understanding of consumer buying behavior and relationships; the tools and techniques used by organizations that identify the factors that influence marketing strategy decisions; market segmentation and target marketing; the elements of the marketing mix (product, price, promotion, and place); as well as pricing strategies to create a written professional marketing plan. Students will integrate their knowledge of legal issues, ethics, diversity and social responsibilities in developing their marketing plan. Coursework articulates to the community college.
Information Technology (IT) Cluster Programs

IT: CISCO NETWORKING (ET, MM, NT, PR, SPT, WST)  CIP: 11.0950
Cisco views the IT Essentials / Networking Academy as a small part of an individual's path to lifelong learning. After completing CCENT certification, a student may choose to start a job, continue their education, or both. The CCENT curriculum also provides a computer science background for students who plan to pursue a post-secondary or advanced degree in computer science or engineering. “This program prepares students for advanced study in IT and for industry certification (CCNA), the first step in a Cisco career certification path. Students learn how to install and configure switches and routers in multi-protocol networks using local and wide area networks; provide troubleshooting services; and improve network performance and security. Students advance their understanding of IT Networking through the Cisco Academy with the opportunity for a range of industry certifications, such as CompTIA (A+). Security+, and Cisco CCENT.” (MSDE) Coursework articulates to the community college.

IT: Computer Science  CIP: 11.0250
This program prepares students for further study and careers in the field of Computer Science. Students complete a sequence of four courses, starting with an overview of the Computing and Information Technology field and progressing through a more in-depth study of computer science. Throughout the program, students will learn all aspects of Computer Science including: programming, hardware design, networks, graphics, databases and information retrieval, cyber security, software design, programming languages, logic, programming paradigms, translation between levels of abstraction, artificial intelligence, the limits of computations, applications in information technology and information systems, and social issues (internet security, privacy, and intellectual property). Students may sit for the AP Computer Science Principles and the AP Computer Science A exams.

CTE COURSES in the BUSINESS CLUSTERS

Advanced Business Management H  
Course Number: 35.0510.4  
Prerequisite: Principles of Business, Admin. & Mgt.  
Credit: 1  
This course provides students with knowledge that will prepare them for post-high school levels of education and entry-level positions in the workforce. Focus will be on the role of business in society; the changing nature of contemporary business practices; major management concepts, theories, and theorists, the processes of management (functional, operational, human relations), business law and ethics, and business communications. Upon completion, opportunities will be made for students to earn college credit through such methods as articulation agreements with local colleges, and dual enrollment. This course aligns to the MSDE State Curriculum.

Accounting I H  
Course Number: 35.2010.4  
Prerequisite: None  
Credit: 1  
This course emphasizes basic accounting principles. Students learn how to interpret business forms and how to prepare a simple set of accounting records; journals, ledgers, and financial statements. This course is aligned with the MSDE State Curriculum.

Accounting II H  
Course Number: 35.2020.4  
Prerequisite: Accounting I  
Credit: 1  
This course reviews and extends the accounting principles learned in Accounting I and helps develop a marketable skill in keeping, analyzing, and interpreting accounting records and statements. This course is aligned with the MSDE State Curriculum.

Business Capstone H  
Course Number: 35.1400.4  
Prerequisite: Advanced Bus. Mgt., or Accounting II  
This course is designed to be the second of two sequential business management or accounting courses in the completer requirement for students enrolled in the Business Management or Finance and Accounting pathways. Students will apply the knowledge and skills acquired in previous business courses to settings through the Business Final Capstone Project and Presentation. This course aligns to the MSDE state curriculum.
Computer Science A AP (College Board approved teachers)
Course Number: 35.3520.6 (AP)
Prerequisite: None
Credit: 1
This course is designed to provide students with a learning experience equivalent to that of an introductory college course in computer science. AP Computer Science A emphasizes object-oriented programming methodology with a concentration on problem solving and algorithm development, and includes the study of data structures, design, and abstraction. The AP Computer Science A course is compatible with those topics that are covered in a typical college CS1 course.

Computer Science Principles AP
Course Number: 35.3510.6
Prerequisite: None
Credit: 1
This course advances students' understanding of the technical aspects of computing including programming and algorithm design, computer system organization and operation, and data representation and information organization. This course includes the use of several programming languages, based on the specific project or problem students must solve. This course may also count as the Technology Education Graduation Requirement.

C++ Programming GT
Course Number: 35.3450.5
Prerequisite: None, HTML/JavaScript/Web Design preferred.
Credit: 1
Students will code, compile, and debug computer programs using the proper programming protocol for the C++ language.

Career Strategies
Course Number: 35.9400.0
Prerequisite: None
Credit: ½
This course will allow students to set goals, identify continuing educational opportunities, and improve course selection in order to explore multiple career paths. After developing a career plan, students will create a portfolio, explore school resources, prepare for college, and develop solid interpersonal skills.

Computer Repair
Course Number: 35.3650.0
Prerequisite: None (This course is only to be offered as part of the Cisco Networking Completer.)
Credit: 1
This course focuses on computer components and operating system architecture. It is aligned to Comp TIA's A+ computer repair certification program. Students enrolled in this course may take the Comp TIA A+ certification exam prior to completion of the course.

Cyber Security H
Course Number: 35.3780.4
Prerequisite: Network Completer II (This course is only to be offered as part of the Cisco Networking Completer.)
Credit: 1
Note: An e-learning Cyber Security course may be available for non-Cisco students through the Maryland Virtual Learning site.
This course offers in-depth coverage of the current risks and threats to an organization's data, combined with a structured way of addressing the safeguarding of these critical electronic assets. The course provides a foundation for those responsible for protecting network services, devices, traffic, and data. Additionally, the course provides the broad-based knowledge necessary to prepare students for further study in other specialized security fields.

Foundations of Computer Science
Course Number: 35.3500.4
Prerequisite: None
Credit: 1
This course is the first course in the new Computer Science program of study. This course is designed to introduce students to the breadth of the field of computer science through an exploration of engaging and accessible topics. Rather than focusing the entire course on learning particular software tools or programming languages, the course is designed to focus the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. This course may also count as the Technology Education Graduation Requirement.
Information Systems Management I GT
Course Number: 35.2690.5 (GT/AA)
Prerequisite: None
Credit: 1
Information Systems Management is designed to help students develop managerial and technical skills in a state-of-the-art technological office. Strong technical skills and Microsoft Office skills will be emphasized. Students will develop soft skills and learn managerial skills.

Information Systems Management II GT
Course Number: 35.2670.5 (GT/AA)
Prerequisite: Information Systems Management I
Credit: 1
Information Systems Management II is designed to help students develop managerial and technical skills in a state-of-the-art technological office. The program models a company, with the teacher assuming the role of the employer. This course will prepare students for MOS (Microsoft Office Specialist) certification, which sets a global standard for desktop productivity in corporations, academic institutions, staff agencies, training organizations, and individuals by using Microsoft Office applications.

Linux Essentials H
Course Number: 35.3530.4
Prerequisite: Foundations of Computer Science, AP Computer Science Principles, and AP Computer Science A or any Cisco Networking course.
Credit: 1
The Linux Essentials course, developed by Cisco NetAcad partner NDG, teaches students the fundamentals of the Linux operating system and command line, and basic open source concepts. It’s designed for students who want a comprehensive introduction to the Linux operating system. This course uses a "learn by doing" approach. Each learner has hands-on access to the Linux virtual machine to practice, explore, and test Linux command-line concepts. From the fourth chapter on, the course provides step-by-step labs to help students build knowledge progressively and learn Linux commands that require practice to master. This course is for students in the Computer Science or Cisco Networking programs.

Marketing I H
Course Number: 35.4100.4
Prerequisite: None
Credit: 1
This course introduces students to areas of marketing, distribution, and entrepreneurship. Classroom instruction, combined with the high school’s DECA activities, enables the students to gain a basic understanding of distribution as well as career opportunities. Activities include guest speakers, competitive events, projects, and student research based on individual occupational goals. Although employment is not required for this course, students are encouraged to secure part-time employment. Work-based learning is a strong component of this program, and therefore, will be treated as a priority. This course is aligned with the MSDE State Curriculum.

Marketing II H
Course Number: 35.4110.4
Prerequisite: Marketing I
Credit: 1
The purpose of this course is to allow students to develop the management skills necessary to start their own business and function in the corporate environment. Students will apply the foundations of marketing learned in the level one course. Our business partners requested the integration of soft skills. In response, this course will include decision-making skills, communication, team building, problem solving, and customer service. This course is aligned with the MSDE State Curriculum.

Network Completer I H
Course Number: 35.3730.4
Prerequisite: None
Credit: 1
This course is for students enrolled in the Cisco networking program of study. This course is the Cisco Net Academy’s Introduction to Networks (ITN) course. It is the first course in the Cisco CCNA Routing and Switching curriculum teaching students the architecture, structure, functions and components of the Internet and other computer networks. By the end of the course, students will be able to build simple LANs, perform basic configurations for routers and switches, and implement IP addressing schemes.

Network Completer II H
Course Number: 35.3740.4
Prerequisite: Network Completer I
Credit: 1
This course is for students enrolled in the Cisco networking program of study. This course is the Cisco Net Academy’s Routing and Switching Essentials course. It is the second course in the CCNA Routing and Switching curriculum teaching students how to configure a router and a switch for basic functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with RIPv1, RIPv2, single-area and multi-area OSPF, virtual LANs, and inter-VLAN routing.
Network Completer III H
Course Number: 35.3750.4
Prerequisite: Network Completer II
Credit: 1
This course is for students enrolled the Cisco networking program of study. This course is the Cisco Net Academy’s Scaling Networks course. It is the third course in the CCNA Routing and Switching curriculum teaching students how to configure routers and switches for advanced functionality. By the end of this course, students will be able to configure and troubleshoot routers and switches and resolve common issues with OSPF, EIGRP, and STP.

Network Completer IV H
Course Number: 35.3760.4
Prerequisite: Network Completer III
Credit: 1
This course is for students enrolled the Cisco networking program of study. This course is the Cisco Net Academy’s Connecting Networks course. It is the fourth and final course in the CCNA Routing and Switching curriculum covering the WAN technologies and network services employed by converged applications in a complex network. By the end of this course, students will be able to configure and troubleshoot network devices and resolve common issues with data link protocols.

Network Defense H
Course Number: 35.3790.4
Prerequisite: Cyber Security
Credit: 1
(This course is only to be offered as part of the Cisco Networking Completer.)
Network Defense and Countermeasures focuses on understanding the architecture for network defense and leads to the Security+ certification. Topics include network attacks and defenses, firewall systems, design and configuration, VPN configuration, designing and configuring intrusion detection systems, intrusion signatures, and network security policies and configurations.

Principles of Accounting GT
Course Number: 35.2000.5
Prerequisite: None
Credit: 1
Accounting principles are emphasized in this course which uses a college level text. The course is designed for the student who wants to major in business administration in college. Note: Approval by the department chair is recommended.

Principles of Business, Administration, and Management
Course Number: 35.0310.0
Prerequisite: None
Credit: 1
The Principles of Business, Administration, and Management course provides students with knowledge of the types of businesses, as well as various applications, laws, and theories of business. Along with a brief historical perspective, business terminology and principles will be emphasized. Students will learn to analyze the functions of business through evaluating, planning, organizing, and controlling. Students will develop the communication skills that will be necessary for success in the workplace and college.
CONSTRUCTION AND DEVELOPMENT CLUSTER
Building and Construction Technology, Carpentry, Electrical Careers, HVAC, Mechanical Construction/Plumbing

The following BCPS CTE completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone work experience (CWE) may be available to eligible students in the junior or senior year.

Note: Program availability is limited. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program:

<table>
<thead>
<tr>
<th>Programs</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building and Construction</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Building and Construction Technology 1 and 2</td>
<td>Building and Construction Technology 3 and 4</td>
<td>Building and Construction Technology CWE</td>
</tr>
<tr>
<td>Technology</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carpentry</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Carpentry 1 and 2</td>
<td>Carpentry 3 and 4</td>
<td>Carpentry CWE</td>
</tr>
<tr>
<td>Construction Design and</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Intro to Construction Design and Management</td>
<td>Advance Design and 3D Modeling</td>
<td>Advanced Construction Management</td>
</tr>
<tr>
<td>Management</td>
<td></td>
<td>Principles of Construction Design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electrical Careers</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Electrical 1 and 2</td>
<td>Electrical 3 and 4</td>
<td>Electrical CWE</td>
</tr>
<tr>
<td>HVAC</td>
<td>Students are encouraged to start in Grade 9</td>
<td>HVAC 1 and 2</td>
<td>HVAC 3 and 4 HVAC Appliance Repair</td>
<td>HVAC CWE</td>
</tr>
<tr>
<td>Mechanical Construction/Plumbing</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Mechanical Constr/Plumbing 1 and 2</td>
<td>Mechanical Constr/Plumbing 3 and 4</td>
<td>Mechanical Constr/Plumbing CWE</td>
</tr>
</tbody>
</table>
Building and Construction Technology (ET, MM, SPT)  CIP: 46.0415

Building and Construction Technology provides students with knowledge and principles of carpentry, plumbing, electrical, and HVAC systems. This hybrid construction program involves the construction of modular units, with a high degree of completion of interior elements, and presents the construction side of the manufactured construction industry. Additional curriculum modules, covering project management and project supervision as it relates to all areas of Construction Trades, are offered as supplemental resources. Students who successfully complete the program are eligible for certification through National Craft Assessment and Certification (NCCER) and Occupational Safety and Health Administration (OSHA). Students completing the program successfully may be eligible for advanced placement and/or testing opportunities through union or non-union apprenticeship programs and/or receive college credit at a postsecondary institution through an articulation agreement with CCBC. Upon graduation students can enter employment, complete journeyperson apprenticeship, and/or earn a degree at a two-year or four-year college. Fees may be required.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Prerequisite</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>62.8000.0</td>
<td>None</td>
<td>1</td>
</tr>
<tr>
<td>62.8010.0</td>
<td>Building and Construction Tech 1</td>
<td>1</td>
</tr>
<tr>
<td>62.8020.4 (H)</td>
<td>Building and Construction Tech 2</td>
<td>1</td>
</tr>
<tr>
<td>62.8030.4 (H)</td>
<td>Building and Construction Tech 3</td>
<td>1</td>
</tr>
<tr>
<td>62.8040.4 (H)</td>
<td>Building and Construction Tech 4</td>
<td>1</td>
</tr>
<tr>
<td>62.8050.4 (H)</td>
<td>Building and Construction Tech 5</td>
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</tr>
<tr>
<td>62.8080.4 (H)</td>
<td>Building and Construction Tech CWE</td>
<td>1</td>
</tr>
</tbody>
</table>

Carpentry Careers (CC, KN, LN, OM, PH)  CIP: 46.5200

Students in the carpentry careers program acquire information and experience related to residential and commercial construction. Safety, hand and power tools, leveling instruction, foundation layout, floor and wall construction, roof construction, blueprint reading, forming, and job estimating are units of instruction emphasized for carpentry students. Carpentry students will complete the National Center for Construction Education and Research (NCCER) Core Learning and Carpentry Level One certification exams. Students completing the program successfully are eligible for advanced placement in first year apprenticeship in the Associated Builders and Contractors (ABC) Apprenticehip Program. They may also be eligible for advanced placement and/or testing opportunities through other union or non-union apprenticeship programs and/or receive college credit at a postsecondary institution through an articulation agreement with CCBC. Upon graduation students can enter employment, complete journeyperson apprenticeship, and/or earn a degree at a two-year or four-year college. Fees may be required.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Prerequisite</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>61.9100.0</td>
<td>None</td>
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<tr>
<td>61.9110.0</td>
<td>Carpentry 1</td>
<td>1</td>
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<tr>
<td>61.9120.4 (H)</td>
<td>Carpentry 2</td>
<td>1</td>
</tr>
<tr>
<td>61.9130.4 (H)</td>
<td>Carpentry 3</td>
<td>1</td>
</tr>
<tr>
<td>61.9140 (H)</td>
<td>Carpentry 4</td>
<td>1</td>
</tr>
<tr>
<td>61.9150.4 (H)</td>
<td>Carpentry 5</td>
<td>1</td>
</tr>
</tbody>
</table>
CONSTRUCTION DESIGN AND MANAGEMENT (CDM) (MM, SP)  CIP: 15.1350
The Construction Design and Management (CDM) program is a four-course project-based CTE Program of Study. Project-based learning (PBL) is a dynamic classroom teaching method in which students actively explore real-world problems and challenges to acquire a deeper knowledge about the subject matter. Students gain knowledge and skills by completing and revising projects that address complex questions, problems, or challenges. The instructor doubles as a facilitator, working with students to frame worthwhile questions, structuring meaningful tasks, coaching both knowledge development and social skills, and carefully assessing what students have learned from the experience. PBL also creates opportunities for groups of students to collectively gather information and think critically, thus developing essential collaboration skills required in the workplace. Students will develop an understanding of the design and construction process. Each course uses the project-based learning approach to advance students’ understanding of the design-build-maintain process. Advanced architectural drafting and design skills are developed through lab-based instruction using Autodesk software tools (AutoCAD and Revit Architecture). Throughout the program, students will develop a portfolio to demonstrate knowledge of each phase of the design and construction management process. Students will also have the opportunity to earn industry certification in AutoCAD and/or Revit.

ELECTRICAL CAREERS (FH, LN) CIP: 46.5300
Students receive instruction in the procedures required for the installation and repair of wiring and control systems for residential and commercial systems. Instruction includes basic electrical theory, circuitry, circuit protection, installation of lighting and power circuits (both commercial and residential), and the use of electrical test equipment. Theory taught in the instructional portion of this program follows the requirements established by the National Electrical Code. Students completing the program successfully are eligible for advanced placement in apprenticeship in the ABC apprenticeship training program. They may also be eligible for advanced placement and/or testing opportunities through other union or non-union apprenticeship programs and/or receive college credit at a postsecondary institution through an articulation agreement. Upon graduation, students can enter employment, complete journeyman apprenticeship, and/or earn a degree at a two-year or four-year college. Students who complete the program successfully may earn articulated college credits with CCBC. Fees may be required.

Electrical Careers 1
Course Number: 62.4000.0
Prerequisite: None
Credit: 1

Electrical Careers 2
Course Number: 62.4010.0
Prerequisite: Electrical 1
Credit: 1

Electrical Careers 3
Course Number: 62.4020.4 (H)
Prerequisite: Electrical 2
Credit: 1

Electrical Careers 4
Course Number: 62.4030.4 (H)
Prerequisite: Electrical 3
Credit: 1

Electrical Careers 5
Course Number: 62.4040.4 (H)
Prerequisite: Electrical 4
Credit: 1

Electrical Careers CWE
Course Number: 62.4060.4 (H)
Prerequisite: Varies by school offerings.
Credit: 1
Course Number: 62.4070.4 (H)
Credit: 2
HEATING VENTILATION AND AIR CONDITIONING (HVAC) CAREERS (DL)

CIP: 47.5200

The HVAC program is a comprehensive program that prepares students with related academic, workplace readiness, technical, and lifelong learning skills that are needed in the modern workplace. The program will introduce students to the latest climate control systems with hands-on training on central air, heat pumps, oil and gas furnaces, and most light commercial units being used today. Senior level summer and capstone work experience may also allow credit for HVAC apprenticeship work experience standards. Students successfully completing the program and who obtain a state apprenticeship license will receive credit for one year of their state apprenticeship. They may be eligible for advanced placement in first year apprenticeship in the ABC apprenticeship training program and may also be eligible for advanced placement and/or testing opportunities through other union or non-union apprenticeship programs. Upon graduation, students can enter employment, complete journeyperson apprenticeship, and/or earn a degree at a two-year or four-year college. Students who complete the program successfully may earn articulated college credits with CCBC. 

**HVAC Careers 1**
Course Number: 62.4200.0
Prerequisite: None
Credit: 1

**HVAC Careers 2**
Course Number: 62.4210.0
Prerequisite: HVAC 1
Credit: 1

**HVAC Careers 3**
Course Number: 62.4220.4 (H)
Prerequisite: HVAC 2
Credit: 1

**HVAC Careers 4**
Course Number: 62.4230.4 (H)
Prerequisite: HVAC 3
Credit: 1

**HVAC Welding**
Course Number: 62.4260.4 (H)
Prerequisite: HVAC 4
Credit: 1

**HVAC Appliance Repair**
Course Number: 62.4250.4 (H)
Prerequisite: HVAC 4
Credit: 1

**HVAC Careers CWE**
Course Number: 62.4270.4 (H)
Prerequisite: Varies by school offerings.
Credit: 1
Course Number: 62.4280.4 (H)
Credit: 2

MECHANICAL CONSTRUCTION/PLUMBING CAREERS (WST, KN) CIP: 46.5500

The program prepares students to install and maintain water supply systems, waste removal systems, and various fixtures that provide for personal comfort in the home or commercial business setting. Students learn and freely use the tools of the trade along with blueprint reading, residential plumbing, joining cast-iron pipe, making flare and compression joints, commercial plumbing drain and waste piping, venting, and faucet/fixture repair installation. Students may be eligible for first-year apprenticeship in the ABC apprenticeship training program and may also be eligible for advanced placement and/or testing opportunities through other union or non-union apprenticeship programs. Upon graduation, students can enter employment, complete journeyperson apprenticeship, and/or earn a degree at a two-year or four-year college. Students who complete the program successfully may earn articulated college credits with CCBC. Fees may be required.

**Mechanical Constr/Plumbing 1**
Course Number: 62.4110.0
Prerequisite: None
Credit: 1

**Mechanical Constr/Plumbing 2**
Course Number: 62.4120.0
Prerequisite: Mechanical Constr/Plumbing 1
Credit: 1
Mechanical Constr/Plumbing 3
Course Number: 62.4130.4 (H)
Prerequisite: Mechanical Constr/Plumbing 2
Credit: 1

Mechanical Constr/Plumbing 4
Course Number: 62.4140.4 (H)
Prerequisite: Mechanical Constr/Plumbing 3
Credit: 1

Mechanical/Plumbing CWE
Course Number: 62.4160.4 (H)
Prerequisite: Varies by school offerings.
Credit: 1
Course Number: 62.4170.4 (H)
Credit: 2
CONSUMER SERVICES, HOSPITALITY, AND TOURISM CLUSTER
Cosmetology, Culinary Arts and Restaurant Management, Nutrition and Food Science Associate (ProStart)

The following BCPS CTE completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone work experience (CWE) may be available to eligible students in the junior or senior year.

Note: Program availability is limited. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program:

<table>
<thead>
<tr>
<th>Programs</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cosmetology Careers</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Cosmetology 1, 2, 3</td>
<td>Cosmetology 4, 5, 6</td>
<td>Cosmetology 7, 8, 9</td>
</tr>
<tr>
<td>Culinary Arts and Baking &amp; Pastry</td>
<td>Culinary Arts I–IV (see school matrix)</td>
<td>Baking and Pastry pathway courses</td>
<td>Baking and Pastry pathway courses</td>
<td></td>
</tr>
<tr>
<td>Culinary Arts and Restaurant Management</td>
<td>Introduction to Culinary Arts or Culinary Arts I</td>
<td>Culinary Arts 1 and 2</td>
<td>Culinary Arts 3 and 4</td>
<td>Culinary Arts CWE</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Culinary Arts Elective</td>
</tr>
<tr>
<td>Nutrition &amp; Food Science Associate</td>
<td>Nutrition and Foods I</td>
<td>Nutrition and Foods 2 (Nutrition and Food Science)</td>
<td></td>
<td>Nutrition and Food Science Internship</td>
</tr>
</tbody>
</table>

COSMETOLOGY CAREERS (CC, MM, SPT, WST) CIP: 12.0450
The cosmetology careers program prepares individuals to care for and beautify hair, nails, and skin. The primary purpose of the program is to train the students in the basic manipulative skills, safety judgments, proper work habits, and desirable attitudes necessary to obtain licensure and for competency in entry-level positions in cosmetology or a related career field. Hair techniques taught include giving shampoos, rinses, and scalp treatments; styling, setting, cutting, hair coloring and lightening, permanent waving, and relaxing; skin techniques include facials and make-up; nail techniques include manicures, pedicures, artificial nail techniques, and hand and arm massages. Emphasis is placed on hygiene, sanitation, decontamination, and infection control. Related areas of instruction include bones, muscles, nerves, chemistry, electricity, computer imaging, product knowledge, customer relations, and salon management. Students may further their education and acquire more practical experience by working in a private salon, or enrolling in a business management program at the community college level. Fifteen hundred hours of instruction qualifies the student to sit for the operators’ licensing examination in Maryland in the senior year of high school. Students must complete an assessment process for program selection. Students are required to apply for and sit for the State of Maryland Board of Cosmetology license examination prior to graduation to qualify for completer status. Fees are required.
Cosmetology 1
Course Number: 61.7010.0
Prerequisite: None
Credit: 1

Cosmetology 2
Course Number: 61.7020.0
Prerequisite: Cosmetology 1
Credit: 1

Cosmetology 3
Course Number: 61.7030.0
Prerequisite: Cosmetology 2
Credit: 1

Cosmetology 4
Course Number: 61.7040.4 (H)
Prerequisite: Cosmetology 3
Credit: 1

Cosmetology 5
Course Number: 61.7050.4 (H)
Prerequisite: Cosmetology 4
Credit: 1

Cosmetology 6
Course Number: 61.7060.4 (H)
Prerequisite: Cosmetology 5
Credit: 1

Cosmetology 7
Course Number: 61.7070.4 (H)
Prerequisite: Cosmetology 6
Credit: 1

Cosmetology 8
Course Number: 61.7080.4 (H)
Prerequisite: Cosmetology 7
Credit: 1

Cosmetology 9
Course Number: 61.7090.4 (H)
Prerequisite: Cosmetology 8
Credit: 1

Cosmetology Extension
Course Number: 61.7100.4 (H)
Prerequisite: Cosmetology 9
Credit: 1

Cosmetology CWE
Course Number: 61.7110.4 (H)
Prerequisite: Varies by school offerings.
Credit: 1
Course Number: 61.7130.4 (H)
Credit: 2

CULINARY ARTS: BAKING AND PASTRY PROGRAM (SPT)
The baking and pastry program provides students with instruction in advanced bakery production of breads and desserts, basic food and bakeshop production, service skills, and human relations skills utilizing the ProStart program developed by the National Restaurant Association Education Foundation and materials developed by the American Culinary Federation (ACF). Students may earn industry certification and credit toward becoming a Certified Pastry Culinarian (CPC). Upon completion of the program they may earn articulated college credits. Fees may be required.

Professional Baking and Pastry 1
Course Number: 61.8210.0
Credit: 1

Professional Baking and Pastry 2
Course Number: 61.8220.0
Credit: 1

Culinary Basics: Fundamentals of Cooking 1
Course Number: 61.8310.0
Credit: 1

Culinary Basics: Fundamentals of Cooking 2
Course Number: 61.8320.0
Credit: 1

Professional Cooking/Baking Internship 1
Course Number: 61.8410.0
Credit: 1

Professional Cooking/Baking Internship 2
Course Number: 61.8420.0
Credit: 1
CULINARY ARTS & RESTAURANT MANAGEMENT (ET, CC, SPT, WST) CIP: 20.0401

The culinary arts and restaurant management program provides students with a challenging and diverse curriculum in one of the world's fastest growing fields. Students explore job opportunities and career pathways included in the food service industry by utilizing the ProStart program developed by the National Restaurant Association Education Foundation. Instruction includes basic food and bakeshop production, nutrition, and management training. Computer technology is integrated through purchasing, food cost analysis, and inventory control. Service skills, human relations skills, and menu development are included in the restaurant management curriculum. Students completing the sanitation course successfully qualify to take the ServSafe certification examination for national certification. Additional practical experience is gained through banquet and buffet production, as well as community involvement. Postsecondary advancement is available with culinary colleges and universities, apprenticeships, and community pathways. Students who complete the program successfully may earn articulated college credits with The Community College of Baltimore County. The course titles and sequences for the culinary arts program vary by school. See the individual school matrix for the course sequence by school. Fees may be required.
This instructional program prepares students for entry-level positions and postsecondary study in the areas of dietetics, food science and nutrition, and food service in commercial and/or institutional settings. Students explore careers related to the preparation and service of food and the planning of healthy diets in a variety of circumstances. Scientific principles are applied to the study of food selection, production, preparation, and processing. Computer technology and applications are a vital component of this program. Students who complete the program may earn articulated college credits. Fees may be required.

Nutrition and Foods I
Course Number: 66.0300.0
Prerequisite: None
Credit: 1

Nutrition and Food II (Nutrition and Food Science)
Course Number: 66.0310.4 (H)
Prerequisite: Successful completion of Nutrition and Foods I is required before taking this course.
Credit: ½

Food Preparation and Management
Course Number: 66.0320.4 (H)
Prerequisite: Successful completion of Nutrition and Foods I is required before taking this course.
Credit: ½

Intercultural Nutrition and Foods
Course Number 65.2100.0
Prerequisite: Successful completion of Nutrition and Foods I is required before taking this course.
Credit: 1

Nutrition and Food Science Internship
Course Number: 66.0330.4 (H)
Prerequisites: Successful completion of Nutrition and Foods I, Nutrition & Food Science, & Food Preparation & Management is required before taking this course.
Credits: 2
CTE: ENVIRONMENTAL, AGRICULTURE, AND NATURAL RESOURCES CLUSTER

Agriscience, Environmental Technology

The following BCPS CTE completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone work experience may be available to eligible students in the junior or senior year. Capstone work experience (CWE) may be available to eligible students in the junior or senior year.

Note: Program availability is limited. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of courses, and how the courses may be offered. Please see your school counselor for specific course numbers for your school and program:

<table>
<thead>
<tr>
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<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriscience</td>
<td>• CASE Intro to Agriculture, Food, and Natural Resources (AFNR)</td>
<td>• Zoology &amp; Wildlife Mgt.</td>
<td>• CASE AFNR</td>
<td>• CASE ASA</td>
</tr>
<tr>
<td></td>
<td>• CASE (Agricultural Science Animal) ASA</td>
<td>• Veterinary Science</td>
<td>• CASE ASA</td>
<td>• CASE ASP</td>
</tr>
<tr>
<td></td>
<td>• CASE (Agricultural Science Plant) ASP</td>
<td>• CASE AFNR</td>
<td>• Zoology &amp; Wildlife Mgt.</td>
<td>• Zoology &amp; Wildlife Mgt.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CASE ASA</td>
<td>• Landscape Design</td>
<td>• Landscape Design</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• CASE ASP</td>
<td>• Vet Science</td>
<td>• Turf Management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Agricultural Mechanics</td>
<td>• Agricultural Seminar</td>
<td>• Agricultural Seminar</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>(Ag Mechanics)</td>
<td>CASE/Animal/ Plant CWE</td>
</tr>
<tr>
<td>Curriculum for Agricultural Education (CASE)</td>
<td>• Introduction to Agriculture, Food, and Natural Resources (CASE AFNR)</td>
<td>• Principles of Agricultural Science – Animal (ASA)</td>
<td>• Animal and Plant Biotechnology</td>
<td>• Agricultural Business, Research, and Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Principles of Agricultural Science – Plant (ASP)</td>
<td>• Food Science and Safety</td>
<td></td>
</tr>
<tr>
<td>Environmental Technology</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Environmental Tech 1 and 2</td>
<td>Environmental Tech 3 and 4</td>
<td>Environmental Tech CWE</td>
</tr>
</tbody>
</table>
AGRISCIENCE: RENEWABLE NATURAL RESOURCES (HH) CIP: 03.0101
The program prepares individuals to apply essential technical knowledge, practical skills, and interpersonal relationship skills to serve a variety of clients and professionals in animal and environmental sciences. Instruction includes: study of animal anatomy and physiology, nutrition, animal husbandry techniques, applying diagnostic skills, disease prevention, animal behavior, wildlife management, natural resources, conservation, and ecology. Many of the careers in this field require two or four years of postsecondary education. Students who complete the program successfully may earn articulated college credits with The CCBC. Fees may be required.

AGRISCIENCE: HORTICULTURE (HH) CIP: 01.0601
The plant and environmental sciences program prepares individuals to apply the essential technical knowledge, practical skills, and interpersonal relationship skills necessary to produce, market, and work in the major career pathways of the horticulture/floriculture, plant, and environmental sciences field. Instruction in the horticulture pathway includes safety, propagation of horticulture crops, establishment and maintenance of landscape and floral designs, identification of various horticultural crops, basic mechanical skills, maintenance of trees and shrubs, business management, and interpersonal communications. Many of the careers in this field require two or four years of postsecondary education. Students who complete the program successfully may earn articulated college credits with CCBC. Fees may be required.

CURRICULUM FOR AGRICULTURE SCIENCE EDUCATION (CASE) (HH) CIP: 01.0050
Curriculum for Agricultural Science Education (CASE) is an ambitious project started by the National Council for Agricultural Education in 2007. The project goal is to implement a national curriculum for secondary agricultural education that provides a high level of educational experiences to enhance the rigor and relevance of agriculture, food, and natural resources (AFNR) subject matter. Besides elevating the rigor of AFNR knowledge and skills, CASE provides purposeful enhancement of science, mathematics, and English language understanding. CASE curriculum utilizes science inquiry, and concepts are taught using activity-, project-, and problem-based instructional strategies.

AgSci CASE/Intro to Natural Resources
Course Number: 61.6100.0
Prerequisite: None
Credit: 1

AgSci CASE/Principles of Animal Science
Course Number: 61.6330.4 (H)
Prerequisite: AgSci CASE Intro to Natural Resources
Credit: 1

AgSci CASE/Principles of Plant Science
Course Number: 61.6340.4 (H)
Prerequisite: AgSci CASE Intro to Natural Resources
Credit: 1

AgSci CASE/Animal and Plant Biotechnology
Course Number: 61.6330.4 (H)
Prerequisite: AgSci CASE Intro to Natural Resources
Credit: 1

AgSci CASE/Agricultural Research and Development
Course Number: 61.6300.4 (H)
Prerequisite: AgSci CASE Intro to Natural Resources
Credit: 1

AgSci CASE/Food Science and Safety
Course Number: 61.6220.4 (H)
Prerequisite: AgSci CASE Intro to Natural Resources
Credit: 1

Agriculture Science CWE
Course Number: 61.6380.4 (H)
Prerequisite: three or more credits in Agriculture Science
Credit: 2
Environmental Technology is a career field that utilizes the principles of science, engineering, and computer technology to protect and enhance the environment and human health. This program emphasizes the application of environmental sciences through the use of technology, hands-on projects, and field activities. A sequence of courses covers: natural resources, water, land and air systems, environmental sampling and analysis, pollution prevention and control, waste management, and Geographic Information Systems. Student projects include construction and maintenance of an aquaculture system, wetland creation and management, habitat assessment, landscaping, native plant horticulture, soil and water quality monitoring, and mapping environmental data. During their senior year, students who qualify are encouraged to undertake a school-to-work transition experience such as an internship or work study position. Many of the careers in this field require two or four years of postsecondary training and education. Students who complete the program successfully may earn articulated college credits with CCBC. Fees may be required.

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Prerequisite</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Tech 1</td>
<td>None</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Tech 2</td>
<td>Environmental Tech 1</td>
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<td>Environmental Tech 3</td>
<td>Environmental Tech 2</td>
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<tr>
<td>Environmental Tech 4</td>
<td>Environmental Tech 3</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Tech GIS</td>
<td>Environmental Tech 1</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Tech CWE</td>
<td>Environmental Tech 4</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Course Number: 61.6410.0</td>
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</tr>
<tr>
<td></td>
<td>Prerequisite: None</td>
<td></td>
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<tr>
<td></td>
<td>Credit: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Number: 61.6420.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prerequisite: Environmental Tech 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Credit: 1</td>
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<tr>
<td></td>
<td>Course Number: 61.6430.4 (H)</td>
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</tr>
<tr>
<td></td>
<td>Prerequisite: Environmental Tech 2</td>
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<td></td>
<td>Credit: 1</td>
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<tr>
<td></td>
<td>Course Number: 61.6440.4 (H)</td>
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<tr>
<td></td>
<td>Prerequisite: Environmental Tech 3</td>
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<tr>
<td></td>
<td>Credit: 1</td>
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<tr>
<td></td>
<td>Course Number: 61.6450.4 (H)</td>
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<tr>
<td></td>
<td>Prerequisite: Environmental Tech 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Credit: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Number: 61.6470.4 (H)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prerequisite: Environmental Tech 4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Credit: 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course Number: 61.6480.4 (H)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Credit: 2</td>
<td></td>
</tr>
</tbody>
</table>
CTE: HEALTH AND BIOSCIENCES CLUSTER

Academy of Health Professions, Project Lead the Way: Biomedical Sciences

The following BCPS CTE completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone work experience (CWE) may be available to eligible students in the junior or senior year.

Note: Program availability is limited. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program:

<table>
<thead>
<tr>
<th>Programs</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy of Health Professions</td>
<td>Students are encouraged to start in Grade 9</td>
<td>AoHP 1</td>
<td>AoHP 3</td>
<td>AoHP 5</td>
</tr>
<tr>
<td>(AoHP)</td>
<td></td>
<td>AoHP 2</td>
<td>AoHP 4</td>
<td>AoHP CWE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Or Specialty AoHP Course</td>
<td>Or Specialty AoHP Course</td>
<td></td>
</tr>
<tr>
<td>Project Lead the Way: Biomedical</td>
<td>Principles of the Biomedical Sciences</td>
<td>Human Body Systems</td>
<td>Medical Interventions</td>
<td>Biomedical Innovation PLTW</td>
</tr>
<tr>
<td>Sciences</td>
<td></td>
<td></td>
<td></td>
<td>Biomed CWE</td>
</tr>
</tbody>
</table>

ACADEMY OF HEALTH PROFESSIONS (ET, OV, RA, SPT, WST) CIP: 51.0050

This program provides students with project and problem-based learning, clinical and internship experiences, and classroom and lab instruction related to the field of healthcare. 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. Students may then choose from several course combinations to complete the four-course sequence. Students may participate in a supervised clinical experience course, design and participate in an internship, and/or enroll in a pre-requisite college course. Depending upon the location, students may have the opportunity to apply what they are learning to real-life healthcare situations in a medical specialty course, such as Certified Nursing Assistant and Pharmacy Technician. Students may earn state and/or nationally recognized credentials after passing licensure examinations. Course offerings, internship opportunities and articulated college credit may vary at program locations.

PROJECT LEAD THE WAY: BIOMEDICAL SCIENCES (FH, LN, NT, PH, PT, WD) CIP: 51.1150

This program is designed to meet the needs for more employees who are qualified science and health professionals. Biomedical sciences is a broad field encompassing many different medical and healthcare disciplines. This program will give students the foundation skills to prepare for high skill, high wage positions in biomedical sciences. The project lead the way biomedical sciences program is based on the National Standards for Science, Mathematics, and English Language Arts, and the Accountability Criteria for the National Health Care Cluster Foundation Standards. The biomedical science courses include Principles of Biomedical Science, Human Body Systems, Medical Interventions, and Biomedical Innovation. Fees may be required.

PLTW BioMed Principles of Biomedical Science
Course Number: 63.5200.4 (H)
Prerequisite: None

PLTW BioMed Human Body Systems
Course Number: 63.5210.4 (H)
Prerequisite: Concurrent enrollment or prior enrollment in Principles of BioMed
Credit: 1

PLTW BioMed Medical Interventions
Course Number: 63.5220.5 (GT/AA)
Prerequisite: Concurrent enrollment or prior enrollment in Human Body Systems
Credit: 1

PLTW BioMed Biomedical Innovations
Course Number: 63.5230.5 (GT/AA)
Prerequisite: Concurrent enrollment or prior enrollment in Medical Interventions
Credit: 1

PLTW BioMed Research and Development CWE
Course Number: 63.5240.5 (GT/AA)
Prerequisite: Concurrent enrollment or prior enrollment in Biomedical Innovations
Credit: 1
Course Number: 63.5270.5 (GT/AA)
Credit: 2
CTE: HUMAN RESOURCE SERVICES CLUSTER
Child Care Services, Criminal Justice Technology, Homeland Security and Emergency Preparedness, School Age Child Development and Care, Teacher Academy of Maryland

The following BCPS CTE completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone work experience may be available to eligible students in the junior or senior year. Capstone work experience (CWE) may be available to eligible students in the junior or senior year.

Note: Program availability is limited. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program:

<table>
<thead>
<tr>
<th>Completer Programs</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Childcare and Early Childhood Education</td>
<td>Child Development I</td>
<td>Child Development II and</td>
<td>Child Development Internship</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Decisions in Family Living or</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Independent Living or Nutrition</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>and Foods I</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>and Emergency Preparedness</td>
<td>Enforcement Pathway or</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Homeland Security Science</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Pathway or Information/Communication Technology Pathway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>School Age Child Development &amp; Care</td>
<td>Child Development I</td>
<td>School Age Child Devel &amp; Care</td>
<td>School Age Child Development &amp; Care Internship</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>and Decisions in Family Living</td>
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<tr>
<td></td>
<td></td>
<td>or Independent Living or Nutrition and Foods</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>and Foods I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher Academy of Maryland</td>
<td>Teaching as a Profession</td>
<td>Child and Adolescent Development</td>
<td>Foundations of Curriculum and Instruction</td>
<td>Education Academy Internship</td>
</tr>
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</tbody>
</table>
CHILDCARE AND EARLY CHILDHOOD EDUCATION (CT, KN, LN, MM, NT, PT) CIP: 20.0201
This instructional program prepares students to work in fields related to the education and care of young children from birth to age eight in early childhood settings, such as day care centers, pre-school programs, and kindergarten. Developmental stages of children, learning theories, and methods and materials of teaching young children are included in this program. Application of skills continues through working in a child development lab. The 90-hour childcare certificate issued by the state of Maryland may be earned through successful completion of this program. Students who complete the program may earn articulated college credits at CCBC.

Child Development I
Course Number: 66.0200.0
Course Number: 66.0200.4 (H)
Prerequisite: None
Credit: 1

Child Development II
Course Number: 66.0210.0
Course Number: 66.0210.4 (H)
Prerequisite: Successful completion of Child Development I
Credit: 1

PLUS A MINIMUM OF TWO CREDITS FROM THE FOLLOWING COURSES:

Decisions in Family Living
Course Number: 66.0230.0
Prerequisite: None
Credit: 1

Nutrition and Foods I
Course Number: 66.0300.0
Prerequisite: None
Credit: 1

Independent Living
Course Number: 66.0800.4 (H)
Prerequisite: None
Credit: ½

Child Development Internship
Prerequisite: Successful completion of Child Development I and II.
Course Number: 66.0240.4 (H)
Credit: 1
Course Number: 66.0250.4 (H)
Credit: 2

HOMELAND SECURITY AND EMERGENCY PREPAREDNESS (DN, PH, PK) CIP: 43.0350
The homeland security and emergency preparedness (HSEP) program is a CTE 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 pathways: homeland security sciences, criminal justice/law enforcement, and information/communications technology. These three pathways 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. See the school matrices for the sequence of pathway courses.

Foundations of Homeland Security
Course Number: 66.1100.0
Prerequisite: None
Credit: 1

Homeland Security Science
Course Number: 66.1400.0
Prerequisite: Successful completion of Foundations of Homeland Security
Credit: 1

Homeland Security Science Research Methods & Applications
Course Number: 66.1410.4(H)
Prerequisite: Successful completion of Foundations of Homeland Security
Credit: 1
CRIMINAL JUSTICE/LAW ENFORCEMENT PATHWAY:
Foundations of Homeland Security
Course Number: 66.1100.0
Prerequisite: None
Credit: 1

Administration of Justice 1
Course Number: 66.1210.0
Prerequisite: Successful completion of Foundations of Homeland Security is required before taking this course.
Credit: 1

Administration of Justice 2
Course Number: 66.1220.4 (H)
Prerequisite: Successful completion of Foundations of Homeland Security and Homeland Security Science are required before taking this course.
Credit: 1

Internship in Homeland Security
Prerequisite: Successful completion of the preceding sequence of courses for this pathway is required before taking this course.
Course Number: 66.1500.4 (H)
Credit: 1
Course Number: 66.1520.4 (H)
Credits: 2
Prerequisite: Successful completion of Administration of Justice 1 is required before taking this course.
Credit: 1

Internship in Homeland Security
Prerequisite: Successful completion of the preceding sequence of courses for this pathway is required before taking this course.
Course Number: 66.1500.4 (H)
Credit: 1
Course Number: 66.1520.4 (H)
Credits: 2

SCHOOL AGE CHILD DEVELOPMENT AND CARE (PR) CIP: 20.0201
This instructional program prepares students to work successfully with school age children in a variety of work environments and to pursue postsecondary education in the field. They study the growth and development of children ages 6 -12 and learn about teaching and classroom management strategies. Classroom observations, job shadowing, career planning, and portfolio development are essential components of the program. Students are afforded first-hand experiences with school-age children. The 90-hour school-age childcare certificate issued by the State of Maryland may be earned through successful completion of this program. Students who complete the program may earn articulated college credits at CCBC.

Child Development I
Course Number: 66.0200.0
Course Number: 66.0200.4 (H)
Prerequisite: None
Credit: 1

School Age Child Development & Care
Course Number: 66.0700.4
Prerequisite: Successful completion of CD/ERP I is recommended before taking this course.
Credit: 1

PLUS TWO CREDITS FROM THE FOLLOWING COURSES:

School Age Child Development & Care Internship
Prerequisite: Successful completion of School Age Child Development & Care is required before taking this course.
Course Number: 66.0750.4 (H)
Credit: 1
Course Number 66.0770.4 (H)
Credits: 2

Decisions in Family Living
Course Number: 66.0230.0
Prerequisite: None
Credit: 1
The Teacher Academy of Maryland (TAM) completer program prepares students for postsecondary education and careers in the field of education. The program focuses on teaching as a profession, and includes information on human growth and development, learning theory, and curriculum and instruction. Students participate in internship experiences that include exposure to multiple age levels and subjects. Students who complete the program may earn articulated college credits.

**Child Development**
Course Number: 66.0200.0
Course Number: 66.0200.4
Prerequisite: None.
Credit: 1

Or

**Child and Adolescent Development**
Course Number: 66.0900.0
Prerequisite: None.
Credit: 1

Plus the following courses:

**Teaching as a Profession**
Course Number: 66.0910.4 (H)
Prerequisites: None
Credit: 1

**Foundations of Curriculum and Instruction**
Course Number: 66.0920.4 (H)
Prerequisite: Completion of Child Development or Child and Adolescent Development and Teaching as a Profession. Credit: 1

**Education Academy Internship**
Prerequisite: Successful completion of the preceding sequence of courses is required before taking this course.
Course Number: 66.0930.0
Course Number: 66.0930.4 (H)
Credit: 1
Course Number: 66.0970.4 (H)
Credit: 2
The following BCPS CTE completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone work experience (CWE) may be available to eligible students in the junior or senior year.

Note: Program availability is limited. Also, courses are often specific to schools. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s counseling office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program:

<table>
<thead>
<tr>
<th>Completer Programs</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Lead The Way: Engineering</strong></td>
<td></td>
<td></td>
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</tbody>
</table>

ENGINEERING CAREERS (ET) CIP: 14.0101

The engineering careers program is designed for highly motivated students who intend to enter a college engineering program after high school. The program incorporates national standards and emphasizes the preparation of each student for the rigorous natural sciences, mathematics, and computer programming courses required for the mastery of an engineering curriculum. In addition, this program exposes students to the different disciplines of the profession. This enables each student to test his or her decision to choose engineering and evaluate possible college engineering majors. Students will receive classroom and hands-on experiences in engineering disciplines with emphasis on mechanical, electrical/electronics, civil, architectural, and fluid engineering. Students who complete the program successfully may earn articulated college credits with CCBC. Fees may be required.

Engineering Careers 1
Course Number: 56.0310.4 (H)
Prerequisite: None
Credit: 1

Engineering Careers 2
Course Number: 56.0320.4 (H)
Prerequisite: Engineering 1
Credit: 1

Engineering Careers 3
Course Number: 56.0330.4 (H)
Prerequisite: Engineering 2
Credit: 1

Engineering Careers 4
Course Number: 56.0340.4 (H)
Prerequisite: Engineering 3
Credit: 1
PROJECT LEAD THE WAY (PLTW) ENGINEERING (CH, CT, DL, DN, OM, PK, PR, WD)
CIP: 15.5000
This CTE program of study is a sequence of courses which follows a proven hands-on, real-world problem-solving approach to learning. Throughout the program, students learn and apply the design process, acquire strong teamwork and communication proficiency and develop organizational, critical-thinking, and problem-solving skills. The program prepares students for further education and careers in engineering and engineering technology. Students who complete the program successfully may earn articulated college credits with CCBC, UMBC, and other PLTW university partners.

Introduction to Engineering Design – PLTW (CH, CT, DL, DN, OM, PK, PR, WD)
Course Number: 56.0200.4 (H)
Credit: 1 [T] [H]
The major focus of this course is the design process and its application. Through hands-on projects, students apply engineering standards and document their work. Students use industry standard 3D modeling software to help them design solutions to solve proposed problems, document their work using an engineer’s notebook, and communicate solutions to their peers and members of the professional community.

Principles of Engineering – PLTW (CH, CT, DL, DN, OM, PK, PR, WD)
Course Number: 56.0210.4 (H)
Prerequisite: Completion of Introduction to Engineering Design-PLTW
Credit: 1 [T] [H]
This survey course exposes students to major concepts they’ll encounter in a post-secondary engineering course of study. Topics include mechanisms, energy, statics, materials, and kinematics. Students develop problem-solving skills and apply their knowledge of research and design to create solutions to various challenges, document their work and communicate solutions.

Digital Electronics – PLTW (CH, CT, DL, PK, PR, WD, DN, OM)
Course Number: 56.0220.4 (H)
Prerequisite: Completion of Introduction to Engineering Design-PLTW
Credit: 1 [H]
This PLTW pre-engineering foundation course introduces students to applied digital logic, a key element of careers in engineering and engineering technology. This course explores the smart circuits found in watches, calculators, video games, and computers. Students use industry-standard computer software in testing and analyzing digital circuitry.

Computer Integrated Manufacturing – PLTW (DN, PR)
Course Number: 56.0260.5 (GT/AA)
Prerequisite: Completion of Introduction to Engineering Design-PLTW
Credit: 1 [GT/AA]
How are things made? What processes go into creating products? Is the process for making a water bottle the same as it is for a musical instrument? How do assembly lines work? How has automation changed the face of manufacturing? While students in this PLTW engineering specialization course discover the answers to these questions, they’re learning the history of manufacturing, robotics and automation, manufacturing processes, computer modeling, manufacturing equipment, and flexible manufacturing systems.
Civil Engineering and Architecture – PLTW (CH, DL, PK, WD)
Course Number: 56.0230.5 (GT/AA)
Prerequisite: Completion of Introduction to Engineering Design-PLTW
Credit: 1 [GT/AA]
This PLTW pre-engineering pathway course provides an overview of the fields of civil engineering and architecture, while emphasizing the interrelationship and dependence of both fields on each other. Students use state-of-the-art software to solve real world problems and communicate solutions to hands-on projects and activities.

Environmental Sustainability – PLTW
Course Number: 56.0270.5 (GT/AA)
Prerequisite: Completion of Introduction to Engineering Design-PLTW
Credit: 1 [GT/AA]
In Environmental Sustainability, students investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply issues, and renewable energy. Through hands-on activities and simulations, students research and design potential solutions to these true-to-life challenges.

Aerospace Engineering - PLTW (CH, DL, OM)
Course Number: 56.0240.5 (GT/AA)
Prerequisite: Completion of Introduction to Engineering Design-PLTW
Credit: 1 [GT/AA]
This PLTW pre-engineering pathway course introduces students to the world of aeronautics, flight, and engineering. Students in this course will apply scientific and engineering concepts to design materials and processes that directly measure, repair, improve, and extend systems in different environments.

Engineering Design & Development – PLTW (CH, DL, DN, PK, PR, WD)
Course Number: 56.0250.5 (GT/AA)
Prerequisite: Completion of Introduction to Engineering Design-PLTW, Principles of Engineering-PLTW, and Digital Electronics-PLTW
Credit: 1 [GT/AA]
Note: Capstone course for Grade 12
In this capstone course, students work in teams to design and develop an original solution to a valid open-ended technical problem by applying the engineering design process. Students are expected to compete in the PLTW final project/portfolio events.
CTE: TRANSPORTATION TECHNOLOGY CLUSTER

Automotive Service Technology, Diesel Truck and Power Systems

The following BCPS CTE completer programs are approved by MSDE. A completer program contains a minimum of four credits offered in a prescribed sequence in a program area. Upon graduation, students will be able to enter employment, register for an apprenticeship, earn industry certification, and/or attend a postsecondary school in order to earn a certificate or degree. Capstone work experience (CWE) may be available to eligible students in the junior or senior year. Students are encouraged to take AP courses when they have sufficient prerequisite skills.

Note: Program availability is limited. Magnet schools and programs require an application, usually by late November of the year prior to high school. Each school’s guidance office should be contacted for enrollment, application, and course information.

Below is a sample of how the courses may be offered. Please see your school counselor for specific course numbers for your school and program:

<table>
<thead>
<tr>
<th>Completer Programs</th>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive Service Technology</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Auto Service 1 and 2</td>
<td>Auto Service 3 and 4</td>
<td>Auto Service CWE</td>
</tr>
<tr>
<td>Diesel Truck and Power Systems</td>
<td>Students are encouraged to start in Grade 9</td>
<td>Diesel 1 and 2</td>
<td>Diesel 3, 4, and 5</td>
<td>Diesel CWE</td>
</tr>
</tbody>
</table>

AUTOMOTIVE SERVICE TECHNOLOGY (MM, SPT, WST)  CIP: 47.0645

The automotive service technology program introduces students to the career field of automotive service and repair. Students are required to perform selected manipulative activities as outlined in Automotive Service Excellence (ASE) requirements, using specialized tools and equipment on late-model vehicles. A variety of teaching methods are used to enhance the learning process by reinforcing critical thinking and academic skills which prepare students with electronic diagnosis, troubleshooting, and customer relations skills needed by today’s automotive technicians. Students can learn skills through computerized automotive simulators, shop demonstrations, diagnostic testing, and several hands-on activities performed on shop vehicles. Students who complete the program successfully may earn certification in maintenance and light repair, as well as articulated college credits with CCBC. Fees may be required.

**Automotive Service Tech 1**
Course Number: 62.4410.0
Prerequisite: None
Credit: 1

**Automotive Service Tech 2**
Course Number: 62.4420.0
Prerequisite: Automotive Service Tech 1
Credit: 1

**Automotive Service Tech 3**
Course Number: 62.4430.4 (H)
Prerequisite: Automotive Service Tech 2
Credit: 1

**Automotive Service Tech 4**
Course Number: 62.4440.4 (H)
Prerequisite: Automotive Service Tech 3
Credit: 1
DIESEL TRUCK AND POWER SYSTEMS (SPT) CIP: 47.0655
This program introduces students to the career field of automotive service and repair with a specific focus on diesel engines. Students are required to perform selected manipulative activities as outlined in Automotive Service Excellence (ASE) requirements, using specialized tools and equipment. A variety of teaching methods are used to enhance the learning process by reinforcing critical thinking and academic skills which prepare students with diagnosis, troubleshooting, and customer relations skills needed by today’s diesel engine technicians. Students can learn ASE skills through computerized simulators, shop demonstrations, diagnostic testing, and hands-on activities performed on shop vehicles. Students who complete the program successfully may earn certification in diesel engines, as well as articulated college credits with CCBC. Fees may be required.

Diesel Engine Tech 1
Course Number: 62.4510.0
Prerequisite: None
Credit: 1

Diesel Engine Tech 2
Course Number: 62.4520.0
Prerequisite: Diesel Tech 1
Credit: 1

Diesel Engine Tech 3
Course Number: 62.4530.4 (H)
Prerequisite: Diesel Tech 2
Credit: 1

Diesel Engine Tech 4
Course Number: 62.4540.4 (H)
Prerequisite: Diesel Tech 3
Credit: 1

Diesel Engine Tech 5
Course Number: 62.4550.4 (H)
Prerequisite: Diesel Tech 4
Credit: 1

Diesel Engine Tech CWE
Course Number: 62.4560.4 (H)
Prerequisite: Varies by school program
Credit: 1
Course Number: 62.4570.4 (H)
Credit: 2