High School 2020 2021
School
Program of Study

Anne Arundel County Public Schools

AACPS Graduation Requirements

Students must attend high school for four years unless a pre-approved AACPS alternative is satisfied.

Minimum Credits Required for Graduation—26		
English	**4.0**	1 credit in *English 9* 1 credit in *English 10* 1 credit in *English 11* 1 credit in *English 12*
Social Studies	**3.0**	1 credit in *History of the United States* 1 credit in *United States Government* 1 credit in *World History*
Mathematics Students seeking admission to a University System of Maryland institution should review details of math elective requirements with a school counselor.	**4.0**	1 credit in *Algebra 1* 1 credit in *Geometry* 2 mathematics elective credits (*Algebra 2* for college completers) Students are required to take a rigorous math course each of the four years the student is enrolled. See the *AACPS Possible Math Course Sequence* chart in the *Mathematics* course section
Science	**3.0**	3 science credits (see *Magnet & Signature Program Requirements*, below)
Physical Education	**1.0**	0.5 credit of *Fitness for Life* 0.5 credit Physical Education Elective
Health	**0.5**	0.5 credit in Health Education
Basic Technology	**1.0**	Global Technology Concepts (Complete four 0.25 credit modules) **or** *Foundations of Computer Science* **or** *AP Computer Science Principles* **or** one of the following one credit courses available at Project Lead the Way schools: *Honors Principles of Engineering* **or** *Honors Engineering Design and Development 1*
Fine Arts	**1.0**	Music, Art, Dance, and Theatre Arts courses
Citizenship	**0.5**	0.5 credit in *Global Community Citizenship* (beginning with the class of 2023)
Electives	**8.0**	Any electives that result in the successful completion of a Completer Program Pathway
Completer Program Requirements		

Students must choose and follow course selection for a Completer Program Pathway
(*College Completer, Career Completer, or Dual Completer*)

Magnet & Signature Program Requirements

Magnet and Signature programs may require 3, 4, or 5 credits of Science and World and Classical Language.

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Four Steps to Graduation

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Earn a minimum of
26 Credits

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Complete
**75 hours of
Service Learning**
in grades 5–11

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Choose a
**Completer
Program
Pathway**

4
Pass
**State-mandated
Assessments**
in
*Algebra
English
Government
Science*
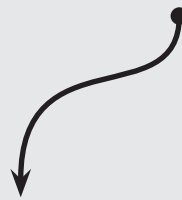
Completer Pathways

College Completer
(post secondary education after high school)

Algebra 2

+

2 credits of the same Language *or* 2 credits of Advanced Technology
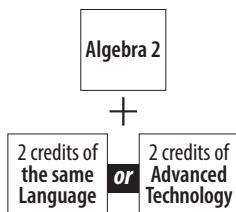
Career Completer
(employment and/or post secondary education after high school)
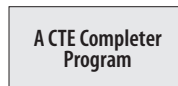
A CTE Completer Program

Dual Completer
(employment and/or post secondary education after high school)

Algebra 2

+

2 credits of the same Language *or* 2 credits of Advanced Technology

and

A CTE Completer Program
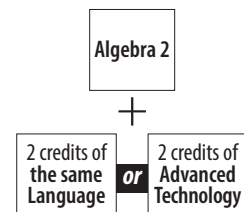
The minimum high school diploma requires two credits of **the same language** or two credits of **Advanced Technology.**

Procedures for Promotion

Promotion from one grade level to the next is based on the number and types of credits earned.

To be promoted to grade:	10	11	12
Completed credits needed	6	13	18
...in academic subjects	*3*	*7*	*10*

To be considered a senior, a student must:
- have completed at least three years in high school,
- have successfully earned 18 appropriate credits, *and*
- be enrolled in a program that allows them to meet all graduation requirements by June of the same academic year.

Get the Most Out of Your Time in High School

This booklet contains a wealth of information related to the robust programs of study available to AACPS students. As you consider course selections for the next school year, *use this guide to determine what you can get out of your high school experience and not just how to get out of high school*. Pursue your interests, take risks and develop new skills that will help you achieve your goals for the future.

Anne Arundel County Public Schools continues to strive to elevate all students and eliminate all gaps. Our focus is to prepare all students for a pathway leading to college, career, and community endeavors. We are committed to preparing our students to become literate, independent, caring, and contributing adults who are able to successfully navigate and positively impact the 21st century global society.

In PreK–12 formal and informal learning settings, we will offer all students important and relevant content, tools, skills, and experiences so every student is able to confidently build and cross their own unique bridge from school to community engagement, workforce participation, and college enrollment.

Before exiting high school, students will...

...uncover and explore their many talents and passions,

...interact with professionals from career fields in which they have interests,

...understand how to put their talents and skills to use in multiple career areas

...participate in professional internships with a community or industry mentors

...plan with college or career counselors,

...meet all Maryland high school graduation requirements.

High School Graduation Requirements

World and Classical Language Requirement

Students may elect to take two credits of a world and classical language rather than two credits of an advanced technology or a career completer program. A student with the required math courses and two credits of a World and Classical Language meets one of the criteria for qualifying for the University System of Maryland completer. It is recommended that students who elect the World and Classical Language option continue in the program beyond the second level. Some specialized programs, as well as many colleges and universities, require additional credits in World and Classical Language. Check with your school counselor for next steps.

Advanced Technology Requirement

Students may elect to take two credits of advanced technology rather than two credits of World and Classical Language or a career completer program. A student with the required math courses and two credits of advanced technology will qualify as a University System of Maryland Completer. The student, however, must verify the admissions requirements for each University System of Maryland institution to determine if the advanced technology courses meet the institution's admission requirements.

Service Learning Requirement

Service Learning provides students with a means to give back to their community in a meaningful way. MSDE requires students to complete 75 hours of Service Learning for graduation. Anne Arundel County Public Schools integrates this requirement into existing subjects or courses starting in grade 5. Students complete service-learning projects and activities from grades 5 through 11 so that each student, upon completion of grade 11, should have met the service learning graduation requirement.

Service Learning Implementation in AACPS

Students in grade 5 will complete service-learning projects through social studies activities for 5 hours.

Students in grades 6 through 8 will complete service-learning projects for 10 hours in each grade level for a total of 30 hours.

Students in grades 9 through 11 will earn the following service learning hours through service-learning projects in the following courses:

- U.S. Government: 10 hours
- Science (grade 10): 10 hours
- English 11: 10 hours
- Health: 10 hours

Seniors are not exempt from completing the service learning graduation requirement and will complete service learning hours based on a prorated schedule.

All students transferring into an Anne Arundel County public high school from a non-Maryland public school must complete 40 hours of service learning to meet the Maryland State Department of Education (MSDE) graduation requirement at the high school level. All students transferring into an Anne Arundel County public school from within the state of Maryland must have documentation for 40 hours of service learning from their previous school(s) or complete the balance for a total of 40 hours on a prorated scale:

- Grade 12 (2nd semester): 5 hours
- Grade 12 (1st semester): 10 hours
- Grade 11: 20 hours
- Grade 10: 30 hours

High School Credit Earned in Middle School

Maryland State Board of Education policy determines the requirements for students earning high school credit for a course taken in middle school. The Code of Maryland Regulations (COMAR 13A.03.02.04) states that credit toward high school graduation may be earned by middle school students if the student has taken a high school level course meeting the local school system curricular objectives.

As a result, middle school students in Anne Arundel County Public Schools must earn a final passing course grade in order to earn high school credit for Algebra 1, Geometry, Algebra 2, and Levels 1 and 2 of American Sign Language, Arabic, Chinese, French, German, Italian, Spanish, or Turkish taken while in middle school.

Additionally, according to AACPS Board Policy and Administrative Regulation 608 II-RA, credit will be awarded upon entering ninth grade. The grade for the course will be calculated in the student's GPA in the same manner as other high school courses, including courses with weighted grades. Failure to pass the course will result in a negative impact on a student's high school GPA. In the event that a student is struggling with the high school course and is not earning at least a C, the student and parent/guardian are encouraged to meet with the principal or designee to discuss appropriate options.

Students transferring into AACPS with high school credit from another district will have their course history evaluated by content coordinators to determine if AACPS will acknowledge/accept the credit.

Parents of students enrolled in the above-mentioned courses are asked to sign and return a letter to indicate their understanding of the above information.

Completer Program Pathways

Students entering 9th grade in 2014 or later are required to take a rigorous math course in each of the four years the student is enrolled in high school (Senate Bill 740) and to be enrolled in Algebra 2 or beyond during senior year for the College Completer.

The Maryland School Performance Program (MSPP) requires that high school students enroll in courses that prepare them for postsecondary education, gainful employment, or both. These courses are offered at the high schools and both Centers of Applied Technology and are approved by the Maryland State Department of Education.

The three program completer pathway options are:

- College completer,
- Career completer, or
- Dual completer.

In addition to accumulating the required number of credits, students must meet the requirements of one of the following completer programs.

College Completer

The student pursues a sequence of courses in preparation for postsecondary education upon high school graduation. Minimum requirements include two years of the same World and Classical Language (UMD accepts American Sign Language) or two credits in advanced technology courses, and 4 high school math credits that must include Algebra 1, Geometry, and Algebra 2.

Each university or college institution has guidelines for evaluating applicants who have not completed all the required courses for admission. In some cases, students who lack a required course are permitted to take it their freshman year in college. In other instances, students are permitted to demonstrate their competency in a given field as an alternative to passing a required high school course. While these represent the minimum high school course requirements for entry into *University System of Maryland* institutions listed in the chart, individual campuses and programs may have additional admission requirements. Students should seek out these requirements by contacting the admissions director at the campus of choice.

Career Completer

The student pursues a sequence of courses to develop skills in preparation for employment and/or post-secondary education upon high school graduation. These courses and programs are offered at both Centers of Applied Technology or at the high schools through Business Education, Family and Consumer Sciences, and Technology Education. These career completer programs are approved by the Maryland State Department of Education and allow students to earn industry certifications and/or college credit while in high school.

The University System of Maryland Required Coursework	
Subject	**Credits Required**
English	4
Social Studies	3
Laboratory Science	3
Mathematics *(Algebra 1, Geometry, Algebra 2, and Math Elective)*	4
The same World and Classical Language or Advanced Technology Credit	2
Academic Electives	6

The University System of Maryland Colleges and Universities

Bowie State University
Coppin State College
Frostburg State University
Salisbury University
Towson University
University of Baltimore

University of Maryland:
- Baltimore
- Baltimore County
- College Park
- Eastern Shore
- University College

Anne Arundel Community College

In addition to the above University System of Maryland institutions, Anne Arundel County Public Schools enjoys an excellent working relationship with Anne Arundel Community College (AACC). AACC is an open door institution which admits those who may benefit from postsecondary education in both transfer and career programs. To help students succeed in college, AACC has established policies and procedures to evaluate and assess their academic abilities.

Please review the chart in the Career Completer Programs section near the end of this booklet for connections between high school coursework and opportunities at Anne Arundel Community College.

Students can select from 40 programs to gain a combination of technical and academic expertise that can be utilized for immediate employment or they can continue their education in colleges, universities, technical schools, or apprenticeship programs.

Dual Completer

The student pursues courses that fulfill both College and Career Completer requirements.

Graduation Certificates

Maryland High School Certificate

This certificate may be awarded to students with disabilities who do not meet the requirements for a diploma but who meet one of the following criteria.

- The student is enrolled in a special education program for at least four years beyond grade 8, or its age equivalent, and is determined by an Individualized Educational Program Team (IEP Team), with agreement of the student's parents/guardians, to have developed appropriate skills for the individual to enter the world of work, act responsibly as a citizen, and enjoy a fulfilling life. The world of work includes but is not limited to gainful employment, supported employment, or sheltered workshops.
- The student has been enrolled in a special education program for four years beyond grade 8, or its age equivalent, and has reached age 21.

Anne Arundel County Public Schools Citation

An Anne Arundel County Public Schools citation for completion of a four-year high school program may be awarded at graduation ceremonies, if approved by the IEP team, to students with specific developmental disabilities who have not completed their individual high school program of studies and will be leaving the high school and entering an alternative AACPS program (i.e. Vocational Citation Program, O-Campus Transition Program). The student will be awarded the Maryland High School Certificate upon completion of the alternative program.

College & Career Planning

AACPS has partnered with Naviance Student (formerly known as Family Connection) to provide all high school students with a variety of online tools to support student achievement through academic planning. Naviance Student affords students the life, college, and career readiness skills that prepare them for post-graduation.

Naviance Student provides students with 6 key competencies: social-emotional learning, career knowledge, college knowledge, interpersonal skills, academic skills, and transition skills as they matriculate through each grade. Each grade level is assigned activities tasks based on developmental level.

Students and families have access to online resources that assist in communicating with school staff and collaborate on college and career readiness activities. Students research careers, colleges, and scholarships in one location, as well as explore career assessments. They can also create career pathway plans that can be linked to college and career readi-

ness. Students have the ability to request transcripts and staff recommendations for college applications. Students can also create goals and track completion of college and career exploration activities. To find out more about Naviance Student, contact your child's School Counseling Office.

To sign into your account, go online to: https://succeed.naviance.com/auth/signin

Taking Advanced Courses

Weighted Grading

Students who earn an A, B, or C in an Honors, Advanced Placement (AP), or International Baccalaureate (IB) course are awarded additional quality points, known as weighted grading, as follows:

- An additional 0.5 quality points for an Honors or Honors IB MYP course.
- An additional 1.0 points for an AP or IB DP course.
- No additional points are awarded for grades of D, or E.

For example, an A received in a regular course is worth 4 points toward a student's GPA. An A received in an Honors or an Honors IB MYP course is worth 4.5 points and in an AP or IB DP course is worth 5 points. These courses may require pre-course assignments as preparation for accelerated classroom learning.

Honors Courses

Honors courses are designed to be challenging while enhancing a student's ability to employ critical thinking and analysis skills. The level of performance in these courses prepare students for college and career readiness. Honors courses are distinguished by a difference in the depth and scope of work required.

Advanced Placement (AP) and International Baccalaureate (IB)

Students may sometimes face a considerable challenge in rigorous AP and IB courses. After an initial period of adjustment, perhaps with additional support from the instructor, they discover they can handle the course requirements successfully. With the intention of giving students time to adjust to these challenges, withdrawal from AP courses will not be considered until the end of the first marking period. Magnet programs such as IB require a full-year commitment. A decision to drop to a lower level or withdraw from the course completely would come after consultation between the student, teacher, parent, counselor and administration.

Advanced Placement Courses (AP)

Advanced Placement courses are demanding and challenging courses intended for students who demonstrate potential for college level work. The College Board sponsors the Advanced Placement Program, and it develops, administers, and grades examinations for each advanced placement course. Many universities and colleges grant advanced standing and/or college credit based on student performance on an AP test. Information regarding advanced placement courses and tests are available from high school counseling offices. Students are not required to take an advanced course in order to be eligible to sit for an advanced placement examination. A student's report card grade for an AP course is determined by the classroom teacher. It is not a reflection of the results of the Advanced Placement test.

IB Middle Years Programme (IB MYP)

IB High School Magnet students in grade 9 IB MYP courses are enrolled in Honors level English, AP or Honors US History, Biology, Algebra 1, Geometry or Algebra 2, French, Italian, Mandarin or Spanish Level 2 or 3, and elective offerings. IB High School Magnet students in IB MYP grade 10 are enrolled in Honors level English, AP or Honors American Government, Chemistry, Geometry, Algebra 2 or Pre-Calculus, French, Italian, Mandarin or Spanish 3 or 4, and elective offerings. Note that not all IB MYP courses receive additional weighting.

International Baccalaureate Diploma Programme (IB DP)

The IB DP is a rigorous and challenging program of studies for students in grades 11 & 12. The IB program and Diploma are recognized by school systems, colleges and universities throughout the world. Many colleges grant advanced standing and/or college credit on the basis of performance in the IB Diploma assessments. IB DP students have the option of earning a bilingual IB Diploma.

Students may apply to the Diploma Programme through the second semester of the sophomore year. Interested applicants should discuss this opportunity with the IB Coordinator at their zoned school.

Other Advanced Courses

Some courses are as challenging and rigorous as AP courses, but are not sanctioned by the College Board. These courses receive the same weighted grading as AP courses.

Programs of Choice

The AACPS Programs of Choice initiative offers a range of specialized fields of study to increase excellence and opportunity for all secondary students. Through the development of strategic partnerships, schools offer students enriching educational opportunities that appeal to their interests and prepare them for college and career. AACPS students have the unique opportunity to pursue their passion for the arts, sciences or humanities while building relationships with teachers and leaders in the community.

Signature Programs

Signature Programs offer students a series of courses designed to connect classroom instruction with real-world situations and workforce skills relevant to each school's local community. Each high school in Anne Arundel County will offer unique Signature-related courses for which students can register during the course selection window. If you are interested in your school's Signature program, visit our website (www.aacps.org/signatures) or call the Advanced Studies and Programs Signature Office at your child's school. 410-570-7495.

Magnet Programs

Magnet Programs offer motivated and academically able students the opportunity to engage in a specialized course of study or emphasis on instruction that differs from the traditional curriculum offered in AACPS. There are currently five High School Magnet Programs available (see below). Admission to all Magnet Programs is by formal application. If you are interested in any of our Magnet Programs, visit our website (www.aacps.org/magnet) or call the Advanced Studies and Programs Magnet Office at 410-222-5391 x1.

Centers for Applied Technology (CAT)

The Centers for Applied Technology, offered at CAT North and CAT South, provide students with technical and academic skills needed for community involvement, continuing education, and career opportunities. CAT students have the chance to apply theory and knowledge towards skills proficiency in the classroom and to develop employable skills through hands-on, real-world experience.

International Baccalaureate Middle Years and Diploma Programme (IB MYP/DP)

The International Baccalaureate Middle Years and Diploma Programme is offered at Annapolis, Meade, and Old Mill High Schools for students interested in taking an active role in their local and global communities and connecting their education with the world around them. Through the internationally recognized IB program, students will learn to prepare for success in post-secondary education and as 21st century visionary leaders. The IB MYP prepares students in grades 9 and 10 for the IB DP in grades 11 and 12.

Performing and Visual Arts (PVA)

The Performing and Visual Arts program is offered at Annapolis and Broadneck High Schools for serious arts students interested in building their artistic skill and gaining real-world experience to prepare for higher education or a career in the arts. Through an arts-intensive curriculum, PVA students have the opportunity to foster their artistic passions both in front of an audience and behind the scenes through premiere arts venues and exhibitions.

Science, Technology, Engineering, & Mathematics (STEM)

The Science, Technology, Engineering, and Mathematics program is offered at North County and South River High Schools for students interested in a relevant and hands-on education focused on the STEM fields of science, technology, engineering, and math. Through partnerships with local colleges, universities, and STEM professionals, students will develop strong research skills, explore STEM careers, and gain real-world experience through internship opportunities.

BioMedical Allied Health (BMAH)

The BioMedical Allied Health program is offered at Glen Burnie High School for students interested in exploring the fields of the health-care industry. Through partnerships with major hospitals and institutions in the Baltimore-Washington Professional Corridor and through partnerships with local colleges and universities, BMAH students will participate in regular job shadows and internship opportunities to gain real-world experience in the biomedical and allied health fields.

Charter Programs

The Maryland Charter School Act of 2003 was established as an alternative means within the existing public school system to provide innovative learning opportunities and creative educational approaches to improve student education. Maryland's law emphasizes a focus on innovation and student achievement and in so doing places a premium on the relationship between the school system and the public charter school applicant.

Public Charter Schools are independent, tuition-free, publicly funded schools that are open to all students on a space available basis. If there are more applicants than seats available a lottery is required by law. Charter schools follow the same laws, policies and regulations as all public schools. However, charter schools provide families with additional educational choices so that parents can choose to send their child to a school that has an instructional approach that fits their child's learning needs or academic interests.

For additional information on the AACPS Charter School Program, call 410-224-8572 or visit www.aacps.org/charterschools.

Chesapeake Science Point Public Charter School

Chesapeake Science Point Public Charter School in partnership with students, parents and the community will attain educational excellence by providing a rigorous and quality education for middle and high school students with a special focus on science, math and technology while preparing them to excel in an increasingly technological and global society. Grades Served: 6–12 (www.mycsp.org)

Scheduling

It is the responsibility of the student to evaluate carefully and select courses with help from appropriate teachers, school counselors, or administrators. Parental approval of course selection is required for all students younger than 18 years of age. Students have the right to participate in any part of the curriculum in accordance with nondiscriminatory practices.

- Academic credits are defined as courses offered in the program areas of English, mathematics, science, social studies, World and Classical Languages, advanced placement, and computer science.
- The prior approval of the principal is required for a student to take more than four non-academic credits during a school year.
- Students are limited to a maximum of two physical activity classes per semester.
- In Anne Arundel County, all students are strongly encouraged to pursue professional career internship opportunities or college courses through our partnership with AACC as a capstone experience. It is not the practice of AACPS for students other than seniors to receive partial schedules. There are a number of reasons for this, including a need to ensure that students have the ability/opportunity to earn sufficient credits and take the required courses in order to graduate. However, the primary reason that partial schedules are not generally approved for underclassmen is that such a schedule would result in students being unlawfully absent from school, as defined by COMAR 13.08.01.03-.05 and AACPS Policy/Regulation JB/JB-RA—Compulsory Attendance.

Prerequisites

To ensure equity of access, fidelity of curriculum, and to align instructional supports across the district, criteria and prerequisites for student placement in courses must be followed. The criteria and prerequisite decisions are determined by the Division of Curriculum and Instruction to ensure that all students have equal access to coursework and other opportunities. Ultimately, any placement of students into classes for which they do not meet specific criteria or prerequisites is the decision of the Division of Curriculum and Instruction, not individual schools.

Schedule Corrections

A student who requests a course transfer for a schedule correction within ten school days of the start of a course will be granted the transfer upon approval of the principal (after referencing the following list) and the parents or legal guardian and if there is space available.

The following reasons may be accepted by the principal to make schedule corrections:

1. Adding courses for seniors who need a specific course to meet graduation requirements.
2. Correcting courses for sequential order.
3. Inserting courses to deal with failures from the previous school year or semester.
4. Deleting courses previously taken and passed.
5. Adding new courses to replace those made up in summer school.
6. Adding academic subjects recommended by colleges or employers (must be certified in writing by the college or employer).
7. Correcting courses for health reasons (must be certified in writing by a physician).
8. Changing courses as a result of a course correction in another subject.
9. Changing courses as a result of teacher recommendation.
10. Other reasons as determined by the principal.

Courses Outside the Home School

Students may participate in curriculum offerings in any county public school provided that the course is not available at the assigned school, that there is space available in the course, and that the students provide their own transportation. Permission to exercise this option must be obtained from the principals or designees of the affected schools and from the parents or legal guardians. Parental approval for taking courses outside of the home school is not required for students 18 years of age or older.

Additional Ways to Earn or Recover Credit

In addition to earning credits during the regular school day and year, credits may be earned, at the discretion of the local school system, through various other programs. No student, however, may earn credit more than once for the same course. Additional ways to earn credit include:

Summer School

The summer school program offers students a number of secondary courses and provides students the opportunity to make up work in which they were unsuccessful, to improve grade averages in sequential subjects, and to earn credits to meet high school graduation requirements.

Evening High School

The Evening High School Program offers students who are currently attending a daytime high school the opportunity to make up credits or take additional courses. For those students 16 years old or older, who have not completed high school, Evening High School offers an opportunity to complete their high school education and earn a high school diploma.

Twilight School

The Twilight Program is an opportunity for ninth grade students to take a class or classes for remedial credit. Coursework is taken after school at the comprehensive high school. Twilight School is offered second semester for those students who did not receive credit for a first semester class.

AACPS Maryland Virtual Learning Opportunities (MLVO) Online Campus

With prior consent of the principal, high school students may enroll in online MVLO courses for high school credit. These online offerings expand the range of learning opportunities offered to students by way of the virtual classroom. Courses are conducted online with the teacher physically separated from the students. Students may be scheduled before, during or after the school day to work independently on course requirements. The local high school assigns an online support teacher who monitors student progress and communicates with the student, parents, and online teacher as needed. For information, contact your school counseling office. Fees may apply.

Credit by Examination

Credit toward high school graduation may be earned in grades 9–12 by passing an examination that assesses student demonstration of locally established curricular objectives. Credit by examination must be approved by the curriculum coordinator on a case-by-case- basis. According to COMAR 13A.03.02.04, students who have completed all requirements for the Maryland High School Diploma except for credit in either English 12 or Algebra 2 may earn credit by exam. To earn credit for English 12, the student must take two tests: SAT and SAT Subject Test in Literature and the writing portion of the SAT with a minimum combined score of 1080 on the SAT Subject Test in Literature with a minimum of 520 on the writing portion of the SAT. To earn graduation credit for Algebra 2 the student must achieve a minimum of 1150 on the American Diploma Project Algebra 2 exam. When selecting this option, please contact interested colleges and universities to review entrance requirements for English 12 and Algebra 2.

Independent Study Programs

Independent Study is an opportunity for the student with strong self-discipline, special talents, and interests to undertake an individual project of exceptional depth, breadth, or pace. Guidelines and procedures have been established by the Anne Arundel County Public Schools Office of Curriculum and Instruction to ensure Independent Study courses comply with system policies. The student and the sponsoring teacher design a syllabus to specify outcomes, content, a work plan, and performances for assessment. The program includes regularly scheduled student-teacher conferences and assessments of progress. All sequential coursework in a particular curriculum discipline must have been successfully completed by the student prior to submitting an application for Independent Study. Credit for Independent Study will be assigned on a semester basis and students shall be awarded an unweighted grade of Satisfactory or Unsatisfactory. An AACPS Independent Study application must be completed at the home school and approved by the Coordinator for the subject of the specific course at least two weeks prior to the first day of the requested semester.

Early College Access Program (ECAP)

Overview

The Early College Access Programs (ECAP), which includes all AACC courses—including Dual Credit and Non-Dual Credit courses, allows authorized high school students the opportunity to explore college level coursework in a variety of academic areas. These college-level courses can complete the academic day for approved high school students who are progressing toward high school graduation or provide opportunities in subject areas that interests the student.

Receiving Credit for ECAP Courses (Dual Credit)

Designated courses may meet the criteria for both college and high school credit. Prior written consent from the school principal or designee, after advisement with the school counselor, is required. For these dual credit courses, students receiving an AACC grade of 'A,' 'B,' 'C,' or 'D' will receive an AACPS grade of 'S.' An AACC grade of 'F,' 'FX,' or 'I' will receive an AACPS grade of 'U.' Students earning an 'S' receive AACPS credit. These courses are not included when calculating a student's GPA.

Courses Eligible for Dual Credit

A list of eligible courses can be found at Courses Eligible for Dual Credit at www.aacps.org/ecap. Dual credit will be awarded only to an AACPS student who has been formally approved at their high school prior to enrolling in an AACC course.

ECAP Enrollment Requirements

High school juniors and seniors* who are approved by their secondary school to participate in ECAP must demonstrate their academic readiness for specific courses by:

- being enrolled in a minimum of two half credit classes each semester at the high school and having good academic standing. Note: only students with senior status may be allowed early release from the regular school day.
- maintaining a minimum weighted 2.0 high school GPA.
- meeting AACC course prerequisites.
- meeting required acceptable performance levels on the College's English/Reading and/or Math Accuplacer assessment or nationally recognized standardized test such as the American College Test (ACT) or Scholastic Assessment Test (SAT).

* Students under the age of 16 may be eligible for enrollment at the college (please contact the AACC Office of Admissions and Enrollment Development (410-777-2246) and your child's school counselor).

Other AACC Requirements

Students attending AACC must:

- provide their own transportation.
- attend a new student orientation program to become familiar with AACC policies and procedures.

Costs

The costs of participating in ECAP (tuition and fees) are the responsibility of the student/parent/guardian. To determine your full costs, see Costs and Financial Assistance at www.aacps.org/ecap. High school students may receive a 50% reduction in the cost of tuition for a maximum of four courses (more than four, if courses are taken at the high school location).

Tuition

- Students receive a 50% discount on the cost of tuition only when presenting a fully completed, school-approved, and signed ECAP application.
- AACPS students eligible for Free and Reduced Meals (FARMs) are eligible to have AACC tuition waived by AACPS for up to four courses.

Fees

- All fees must be paid by the student or family at the time of registration.
- AACC fees include registration, lab, parking, activity, and other miscellaneous fees.

Financial Assistance

Qualified ECAP participants may apply for financial assistance through the AACC Financial Aid Office. To discuss financial options, including scholarships, make an appointment by calling 410-777-2203.

The Early College Access Grant

This grant is available to assist qualifying students and families with the cost of courses and fees. Contact the AACC financial aid office or visit www.aacps.org/ecap for information.

Applying for the program

To be eligible for the discounted tuition, students must:

- Complete the ECAP application at www.aacps.org/ecap, fully and legibly.
- Include all required signatures—student, guardian, school counselor, and principal (or designee).
- Present the completed ECAP application to the college at the time of registration.

AACC Disability Support Services

Students with an IEP and/or 504 Plan may qualify for student supports. Click on the Disability Support Services link at www.aacps.org/ecap or call 410-777-1411.

For More Information

If you have questions, or would like more information, please contact your child's school counselor.

Alternatives to 4-Year Enrollment

In recognition of the fact that 4-year enrollment in a public high school may not serve the best interests of some students, the following alternatives shall be made available.

Early Graduation

Maryland High School diploma requirements (COMAR 13A.03.02.03) state that students must satisfactorily complete four years of approved study beyond the eighth grade unless an alternative program has been approved by the local Superintendent of schools. In Anne Arundel County Public Schools, the school's Regional Assistant Superintendent, acting as the Superintendent's designee, is authorized to review and approve requests for early graduation. Students will retain status as a junior until verification of completion of all course work is complete using the final report card.

If a student intends to graduate at the end of grade 11, a plan to complete all graduation requirements including credits, state assessments, and student service hours should be discussed with the school counselor and submitted to the principal by July 15th of the summer preceding 11th grade. A school-based committee appointed by the principal will review the request and make a recommendation as to whether the exception to the four-year attendance requirement is in the best interest of the student. The school counselor will keep the packet and contact the parents once a decision has been made.

Early Admission to an accredited college or vocational, technical or post-high school

The student chooses to be a full-time student at an accredited college or approved vocational, technical, or other post-high school rather than attend a fourth year of high school. The student must have met all state competency prerequisites, high school assessments, and service-learning requirements prior to the fourth year. The student must develop a curricular plan which assures that the content of the graduation 'specified courses' fulfills the credit requirement and also meets the standards for graduation in the first year of post-secondary study. A written request by the student and parent must be approved by the principal first. Then the student and parent send a letter asking for a waiver of the fourth-year attendance requirement for approval by the superintendent of schools or designee, with the curricular plan, early admission acceptance letter, and principal's approval attached. At the conclusion of a full year of study, students must submit a written request for the high school diploma to the superintendent or designee together with an official transcript or letter from the post-secondary school indicating that the student has successfully completed a full year of post-high school work.

Other Programs

GED: General Educational Development Testing

A Maryland High School Diploma may be awarded for satisfactory performance on approved general educational development tests provided that the student meets those requirements as defined in Education Article §7-205, Annotated Code of Maryland and COMAR 13.03.03.01.

For more information visit https://ged.com/

Maryland Adult External High School Diploma

A Maryland High School Diploma may be awarded for demonstrating competencies in general life skills and individual skills on applied performance tests provided that the student meets those requirements as defined in COMAR 13A.03.03.02.

For more information visit:
www.aacps.org/ExternalDiplomaProgram

NCAA Eligibility (National Collegiate Athletic Association)

NCAA Division I	— 16 Core-Course Rule — Required years of …	NCAA Division II
4	**English**	3
3	**Mathematics (Algebra 1 or higher)**	2
2	**Natural/Physical Science (one year of lab if offered by high school)**	2
1	**Additional English, Mathematics or Natural/Physical Science**	3
2	**Social Science**	2
4	**Additional courses** (from any area above, foreign language or comparative religion/philosophy)	4

Students who intend to participate in interscholastic athletics in a Division 1 or Division 2 college or university must register with the NCAA Initial-Eligibility Clearinghouse to determine whether the student is a "qualifier" and can practice, compete, and receive athletic scholarships as a freshman.

Students are strongly encouraged to see their counselors to receive more complete information on NCAA eligibility requirements.

For more information, visit https://web3.ncaa.org/ecwr3/

What are the NCAA course requirements?

Students enrolling full-time in an NCAA Division 1 or Division 2 college or university must complete 16 core courses (ten before senior year) in the subjects in the table above. Seven of the 10 courses must include a combination of English, mathematics or natural/physical science that meet the division requirements. These 10 courses become 'locked in' at the start of the seventh semester and cannot be retaken for grade improvement. All other students should check with their counselor for course requirements.

What factors determine whether a student can practice, compete, and receive athletic scholarships as a college freshman?

Division 1 schools use a sliding scale to determine a student's eligibility. The required SAT or ACT score is based on a student's GPA (for the 16 required core courses). The higher the student's GPA, the lower the required SAT or ACT score. However, a student must earn a minimum 2.000 GPA average in order to qualify to practice and receive scholarships. In order to be eligible to compete, a student must earn a minimum GPA of 2.300.

Division 2 schools require a student earn a minimum of a 2.000 GPA for the 16 required core courses and earn a specified score on the SAT or ACT in order to be eligible to practice, compete, and receive scholarships.

Which courses qualify?

Courses that are NCAA approved are designated in this list of courses. The approved list of courses changes every spring. Students should work with their school counselor to make sure that the courses they choose are still accepted by the NCAA.

What about ESOL courses?

English as a Second Language (ESOL) courses are not acceptable as NCAA Courses. However, advanced ESOL courses may be used, but must be reviewed on a case-by-case basis. Any student who wishes to have advanced ESOL courses considered when determining his or her initial eligibility must contact the college or university he or she will be attending in order to begin the approval process.

AACC/ECAP Impact on Athletic Eligibility

Students participating in college courses during high school may be subject to limitations on athletic eligibility at the college level. Please check with the NCAA for additional information.

Assessments

Maryland Comprehensive Assessment Program

	English Language Arts/Literacy	Mathematics	Science	Social Studies
General Education	ELA/Literacy 10	• Algebra I • Geometry • Algebra II	HS Maryland Integrated Science Assessment (MISA)	Government
Alternate Assessment	Alt ELA/Literacy 11	Alt Mathematics 11	Alt MISA 11	
English Learners	ACCESS for ELLs 9–11			
Alternate Assessment	Alt ACCESS for ELLs 9–12			

While attending Anne Arundel County Public Schools, your child will participate in state-mandated assessments, assessments required for high school graduation, and assessments related to advanced course work and college admissions.

Your child's academic performance is based on more than assessment scores; however, assessment results are vital to monitor student progress as well as evaluate and improve instruction and curricula to ensure student success.

State- and Federally-Mandated Assessments

The *Maryland Comprehensive Assessment Program (MCAP)* covers state and federally mandated assessments in English Language Arts/Literacy (ELA), Mathematics, Science, Social Studies, English Language Proficiency, and Kindergarten Readiness. MCAP also includes Alternate Assessments for selected students.

A brief description follows for each state-mandated and national assessment. Schools will notify parents with specific testing information as each date approaches. Specific questions about any of the assessments can be directed to the School Testing Coordinator at your child's school.

English Language Arts/Literacy

The ELA assessments are end-of-course exams given to students in grades 3–8 and 10. For the ELA assessments students will read literary and informational passages from published texts as well as engage in multi-media such as video or audio clips. Students will demonstrate their mastery of ELA standards through written responses and computer enhanced items. **The grade 10 ELA assessment is a requirement for graduation.**

Mathematics

The mathematics assessments are given in grades 3–8, and once in high school. Middle school students taking high school credit bearing mathematics courses (Algebra 1) will take the test aligned with that particular course. Students in grade 9 who are enrolled in the Algebra I course will take that assessment. The mathematics assessment requires students to solve multi-step problems that require reasoning and address real-world situations. Students will demonstrate their ability to reason mathematically, make sense of quantities and their relationships in order to solve and show their understanding through real-world problems. **The Algebra I assessment is a requirement for graduation**.

Maryland Integrated Science Assessment (MISA)

The MISA is aligned with the Next Generation Science Standards and will require students in grades 5, 8, and 10 to demonstrate their ability to ask questions and define problems, plan and carry out investigations, construct explanations and design solutions, and obtain, evaluate, and communicate information. The HS MISA is designed to assess standards in Earth and space science, life science, physical science, and engineering, technology and applications science. **The High School (HS) MISA will be given at the end of 10th grade and is a requirement for graduation.**

Social Studies

The Government Assessment is an end-of-course exam that provides students with the opportunity to demonstrate mastery of the Constitutional framework and democratic process that structures the State and National political system. **The Government assessment is a requirement for graduation.**

ACCESS for English Learners

ACCESS for English Learners (ELLs) is the English Language Proficiency Test that is designed to determine a student's proficiency in English when he/she is identified as an English Learner. The test is administered annually to EL students in grades K–12. Students are assessed in four domains: Speaking, Reading, Writing, and Listening. Results are reported to parents annually.

Multi-State Alternate Assessment (MSAA), and the Alternate Maryland Integrated Science Assessment

Students with significant cognitive disabilities who meet eligibility criteria, as determined annually by the student's IEP team, will take the MSAA and the Maryland Alternate Science Assessment. These assessments allow students to demonstrate their reading, math, and science abilities in a format best designed for students with special needs and skills.

Alternate ACCESS for ELs

The Alternate ACCESS for ELs is designed for ELs with significant cognitive disabilities who cannot meaningfully participate in the standard ACCESS for ELs assessment, even with accommodations. In order to participate in the alternate assessment, the EL student must meet certain eligibility criteria. The Alternate ACCESS for ELs is available for the 1–2, 3–5, 6–8, and 9–12 grade clusters.

Bridge Plan Academic Validation

The Bridge Plan for Academic Validation provides an opportunity for students who continually struggle to demonstrate their content knowledge and skills on the Algebra 1, and English 10, and Government assessments to meet their graduation testing requirements. Students who fail to meet the minimum passing score(s) on any of these assessments will work with a teacher to complete a Bridge Project. Bridge Projects allow students to demonstrate their content knowledge and skills through a performance-based task. Successful completion of a Bridge Project will satisfy the Maryland graduation assessment requirements for that particular subject.

College Admissions and Preparation Tests

Note: There may be fees associated with these assessments

Preliminary Scholastic Aptitude Test (PSAT)
National Merit Scholarship Qualifying Test (NMSQT)
Stategic Aptitude Test (SAT)

High school students may opt to take a number of tests offered by the College Board. The Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT) is co-sponsored by the College Board and the National Merit Scholarships Corporation. The PSAT measures critical reading, mathematics, and writing. Only students in the 11th grade may qualify for the National Merit Scholarship.

The SAT is used by many colleges and universities as part of their admissions process. The SAT measures a student's ability to read, analyze, evaluate and comprehend challenging texts, revise and edit grammar and punctuation, use and cite textual evidence as they read and write, demonstrate skill in analyzing data, and to solve real world mathematical problems. There is a fee associated with this test.

The SAT Subject Tests indicate a student's readiness to take college-level courses in specific subject areas. There are 20 SAT Subject Tests in the areas of English, history, science, mathematics, and language. Some colleges use subject tests to place students into appropriate courses and as an additional data point when determining college admissions.

ACCUPLACER

Community Colleges, including Anne Arundel Community College, use the ACCUPLACER to determine student placement in English and Mathematics courses. The ACCUPLACER is required for students who want to take a community college course in high school or who plan on taking some course work after graduation at the community college. Students should see their counselors for more information.

Advanced Placement (AP) and International Baccalaureate Diploma Programme (IB DB) Exams

Students enrolled in AP and IB DP courses sit for the corresponding exams in May. Colleges and universities use the Advanced Placement Exam and International Baccalaureate Exam results to determine college preparedness, student motivation, and placement. Students may have the opportunity to earn credit or advanced standing at many of the nation's colleges and universities. High school students are urged to take the AP Exam in specific subjects such as English, world and classical languages, chemistry, history, calculus, psychology, biology, physics, economics, computer science, environmental sciences, statistics, and fine arts. With the exception of AP Studio Art, which is a portfolio assessment, each AP exam contains a free response section, and a section of multiple-choice questions. The modern language exams also have a speaking component, and the AP Music Theory exam includes an optional sight singing task. Each AP exam is given an overall score of 1, 2, 3, 4, or 5, with 5 indicating a student who is extremely well-qualified to receive college credit and/or advanced placement. A fee is associated with these exams. Pending funding approval, financial assistance may be offered based on student need.

More information on the IB Diploma Programme and the IB Diploma Exams can be found in the Programs of Choice sections of this Program of Study or by contacting your school based IB Diploma Programme Coordinator. Check with the school testing coordinator at your child's school for information on the exams and associated fees.

ACT Exam

The ACT is a highly respected, widely accepted measure of college readiness. The ACT assesses the degree to which students are prepared for college-level work. It has four main sections—English, Reading, Math, and Science—as well as an optional writing component. All four-year universities in the United States accept the ACT, as do more than 225 universities around the world. Anne Arundel Community College also accepts the ACT, making it a valuable measure for students who want to attend almost any school. There is a fee associated with this exam.

To find out more about Career & College Readiness, visit www.aacps.org/ccr.

If you have questions about any of the courses or programs described in this book, see your School Counselor.

Course Descriptions

How to read a course description:

Course ID# | **Title of Course**   Credits

The course description is an overview of the content of the course and may contain additional information, such as student expectations, class assignments, and details about exams and certifications.

Prerequisite(s): *Requirements needed before a student can take this class.*

CTE NCAA DUAL ADVT

This course meets the requirements of specific programs:

CTE—*Career and Technology Eduction Program*

NCAA—*National Collegiate Athletic Association* (see page 11)

DUAL—*Anne Arundel Community College Dual Credit Courses*
   A student can take an equivalent AACC course and earn both college and high school credit (see page 9)

ADVT—*Advanced Technology Course*

Class Length and Possible Credits

0.25sem—A *9-week* course.
A student must take two different 0.25 credit courses in one semester.

0.5sem—A *one semester* course.
A student can earn a maximum of 0.5 credit.

[FY] **0.5/sem**—A *full year* course.
A student takes this course for two semesters and can earn 0.5 credit per semester for a total of 1.0 credit.

0.5/sem—A *multiple semester* course.
A student can earn 0.5 credit for *each* semester the course is taken. Examples:
Guitar 1: up to two semesters (for 1.0 total credit)
Guitar 2–4: up to six semesters (for 3.0 total credits)
Yearbook 1–4: up to eight semesters (for 4.0 total credits)

High Engagement/ Passion Courses

Through the scheduling of and participation in these high engagement courses, students may pursue their passions in a 9-week block of time to explore possibilities, creativity, and interests to meet one's individual needs. These courses may serve as a launch point for further investigation or a survey of possible career paths. Each are designed to provide the student with a 23-day experience affording them the opportunity to grow in their knowledge and skill in a particular area. Coursework may contribute to meeting graduation requirements or as supplemental courses in high interest areas. These inspiring courses have been developed by educators who want to share their passion for this particular content area.

Students must pair two of these courses in one semester.

Finance

H80 | **Your Finances** 0.25qtr

Students will study the importance of personal financial preparedness. Students will be able to make decisions on managing their money, banking, credit and taxes. Students will apply their knowledge and develop a plan for attaining goals while juggling multiple roles as a young adult.
Recommended: *Grades 10–12*

Global Business Connections

Students learn of the latest methods and technological advances in the business environment. Students will explore the psychology of marketing and research a company's role in sustainable business practices and conscious capitalism in the interdependent global marketplace. These projects and problems will task students to think like business leaders, challenge them to think big, and help illustrate how intricately business practices affects our society.

Q84041/2/3/4 | **Consumer Insights** 0.25qtr

The Consumer Behavior module will offer the opportunity to study individuals, groups, and organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts these processes have on the consumer and society. This module will increase students' knowledge of marketing research methods, the psychology of marketing, and consumer influence and behavior.

Q84341/2/3/4 | **Conscious Capitalism (Ethics)** 0.25qtr

The Conscious Capitalism (Ethics) module will focus on the four pillars of Conscious Capitalism—conscious leadership, conscious culture, higher purpose, and stakeholder orientation. Conscious Capitalism builds on the foundations of Capitalism—voluntary exchange, entrepreneurship, competition, and free trade—but also includes the critical elements of trust, compassion, and collaboration. Students will be challenged to think like business leaders and consider why organizations exist and to acknowledge a company's role in the interdependent global marketplace.

Global IT Applications

Students will be engaged and motivated while learning the latest computer science and information technology standards. These modules are designed around innovative and cutting-edge technologies currently being used in the global IT arena. Students will complete all coursework through the lens of an investigator assigned to solve a 'real-world' problem through Project-Based Learning (PBL) scenarios and strategies.

R84041/2/3/4 | **Sensors & Microcontrollers** 0.25qtr

This course will introduce student to the world of microcontrollers, network connectivity, and the concept of the internet of things in order to detect and solve community problems. Students will learn the basics of Arduino microcontrollers in order to build remote sensors which record community data. This data will be analyzed in order to better understand and offer solutions for specific community problems.

R84141/2/3/4 | **Data Mining I**   0.25qtr

This course will introduce students to the tools and resources needed to extract useful information from large sets of data. Every aspect of life is generating large amounts of data daily. Students will use Problem Based Learning to drive the discovery of possible solutions to 'real-world' scenarios utilizing this data. Students will practice methods of research while perfecting the use of tools, such as Excel, to analyze, discover patterns, make predictions and propose potential solutions to problems.

R84241/2/3/4 | **Python I**   0.25qtr

This course will introduce students to computer programming in a fun and easy coding language. Python is a dynamic and flexible language great for first time learners. It supports object-oriented, procedural, and functional programming styles. Python is one of the most widely used high-level programming languages today. Students will learn through PBL scenarios designed to support the Signature theme at each high school.

R84341/2/3/4 | **Scratch**   0.25qtr

This course uses a visual programming language, which allows users to create interactive stories and games. This course gives the beginner programmer a fun and exciting way to learn fundamental programming concepts. This project-based course allows students to create games from 'Scratch'. Each game challenge will provide students an opportunity to expand and build upon previously mastered programming concepts, which include; output-dialog, animation, variables, If statements, loops, and event driven programming.

R84441/2/3/4 | **Cybersecurity: Linux**   0.25qtr

This course will provide students with a basic introduction to the process and function of Linux as an operating system. This challenge-based course will inspire students to master the functionality by gradually completing more complex cybersecurity challenges. Students will build skill sets to address needs in both the offensive and defensive sides of the cybersecurity arena.

Note: *This course is only available online.*

R84541/2/3/4 | **Intro to Web Development**   0.25qtr

Students will learn how to use HTML and CSS to develop webpages. Through a variety of projects students will use HTML to tell browsers about headings, lists, tables, etc. Students will use CSS as the stylesheet language to tell browsers to change the color, font, layout, and more. This course provides a variety of opportunities for students to master basic web development concepts while practicing the importance of art and creativity in the design.

R84641/2/3/4 | **Discrete Mathematics for Computer Science**   0.25qtr

The goal of this course is to introduce students to ideas and techniques from discrete mathematics that are widely used in Computer Science. Topics include; logic, quantifiers, induction, algorithms, probability, variables, and linearity expectation. The course aims to present these ideas "in action"; each one will be geared towards a specific significant application. Thus, students will see the purpose of the techniques at the same time as learning about them.

Prerequisite(s): *Successful completion of Algebra 2. Concurrent enrollment in Pre-Calculus is recommended.*

Global Technology Concepts

Students will be engaged and motivated while learning the latest technology standards.

M84041/2/3/4 | **Engineering Design**   0.25qtr

This course introduces students to Problem Solving and the Engineering Design Process. This project-based approach will focus on solving engineering challenges. Areas of emphasis include lab safety, the Engineering Design Process, structures and forces, Universal Design, and hydraulics.

M84141/2/3/4 | **Designing & Prototyping**   0.25qtr

In this course students explore the function of design. Students will learn sketching and modeling techniques engineers and designers use to communicate their ideas. They will then use a photo editing software to explore design elements. Students will use their knowledge to design and create a prototype of a product that can be packaged and advertised.

M84241/2/3/4 | **Design for Manufacturing**   0.25qtr

How many items do you own that went through the manufacturing process? Who selected the materials, and who determined the cost? Who designed and tested the product? This course will allow students to explore the important components of manufacturing and challenge students to use this knowledge to re-design a current product to be stronger, less expensive, and/or more sustainable.

M84341/2/3/4 | **Flight in Action**   0.25qtr

Join the exciting world of flight! If you would like to learn more about how aircraft use air to sustain flight, or how that flight is controlled, this class is for you! Student will gain an understanding of the major concepts of aeronautics and in-atmosphere flight. Students will design and build aircraft parts to test various principles.

M84441/2/3/4 | **Practical Programming**   0.25qtr

Have you ever wished a robot could clean your room? This course will introduce you to the first steps in making that a reality! Students will use Hummingbird Duo programmable circuit boards with 'drag and drop' programming software to design, build and test working models of a real-world challenges.

M84541/2/3/4 | **Mobile Application Development**   0.25qt
                        (What's App-enin?)

Have you ever considered how many problems could be solved with the creation of an App? This course will show you how easy it is to create an App. Students will learn to apply basic computer science principles by creating puzzles and games at first, but will quickly progress through the steps of designing, developing, testing and debugging their own App creation.

Internship Preparation

S341/2/3/4 | **Acing the Internship**   0.25qtr

This course will prepare students for the internship experience. Students interested in expanding knowledge of themselves and gaining insight into careers of interest will learn what it takes to secure and internship that best fits their interest, skills, and personality preferences. Experiences include resume preparation, cover letter design, essential interview skills, and networking

Making a Difference

X24041/2/3/4 | **Exploring the Possibilities**   0.25qtr

All students are also community members who should have a vested interest in solving local problems. This course will empower students to make a difference in current local issues. It will afford students with the opportunity to better understand problems in their communities, analyze data related to those problems, collaborate to brainstorm solutions, hear from community members and leaders who manage issues related to the problem, and develop presentations to share their learning and recommendations. The course is designed for any student who has a passion to be a change-maker. Students will use EXCEL to organize and analyze data. They will use software like Piktochart to develop presentations that summarize their experiences in their research.

Math All Around Us

tudents develop the skills and strategies necessary to be mathematicians in modern society. Students will explore mathematics as it relates to the real world and make connections to theoretical mathematics learned in previous and subsequent courses. These projects and problems will task students to think like a mathematician, challenge them to think big, and use logic and sense-making to help illustrate how the world works.

D32141/2/3/4 | **Function Focus: The World Around Us**   0.25qtr

This course will expose students to functions as they relate to applications of mathematics as they relate to the environment and physical world. Students will build on previously generalized knowledge about solving and graphing functions. These concepts are imbedded in a variety of real-life situations.
Prerequisite(s): *Algebra 1 & Geometry*

D32041/2/3/4 | **Function Focus: Man-made Mathematics**   0.25qtr

This course will expose students to functions as they relate to applications of mathematics as they relate to the mechanical and scientific world. Students will build on previously generalized knowledge about solving and graphing functions. These concepts are imbedded in a variety of real-life situations.
Prerequisite(s): *Algebra 1 & Geometry*

D84041/2/3/4 | **Introduction to Logic: Networks and Algorithms**
0.25qtr

Students will investigate topics of logistic to develop deeper thinking and reasoning skills. Students will study introductory Encryption Algorithms, Cryptography and Conversion of Bases as well as explore logic puzzles and games.
Prerequisite(s): *Algebra 1 & Geometry*

D84141/2/3/4 | **Introduction to Logic: Game Theory and Boolean**
0.25qtr

Students will investigate topics of logistic to develop deeper thinking and reasoning skills. Students will study introductory Boolean Logic and Graph Theory as well as explore logic puzzles and games.
Prerequisite(s): *Algebra 1 & Geometry*

Plant Potential

C28 | **Growing Organically: A Little Dirt Never Hurt**   0.25/qtr

Our planet is faced with a growing world population dependent on finite food and water sources that are continually impacted by climate change. Communities need to increase crop yields with diminishing land and available resources. Organic gardening is the practice of creating nutrient dense food grown with sustainable practices. The organic gardener will design and plan a plot that incorporates sustainable water use, the local environment, and supports the health of the whole system. The class will test soil samples along with creating a nutrient management plan to fertilize and sustain their site. Environmentally friendly crops will be selected according to their disease immunities, yield, and impact on the soil.

C29 | **Cleaner Energy through Plants for a Cleaner World**   0.25/qtr

Students explore technology and innovation to address their community's growing energy needs through clean renewable sources. In a laboratory and greenhouse settings, students explore how plant waste may be turned into clean energy, how cooking oil can be refined as a biofuel and how something as small as algae can be turned into clean burning ethanol. The course will explore the cutting edge of these technologies along with potential barriers and costs to their implementation.

Preparing for Home Ownership

TBD | **Renovation DIY—Carpentry**   0.25/qtr

Students have the opportunity to learn how stud walls, flooring, and roofs are constructed in a hands-on environment. Students will use tools and machines to construct a scale model that utilizes the rough carpentry components required for understanding home construction and repair. Students will enhance their understanding of how these skills can contribute to future home ownership.
Pending BOE Approval.

TBD | **Renovation DIY—Plumbing and Electricity**   0.25/qtr

Students will learn how basic plumbing and electricity are integrated into the construction of a home in a hands-on environment. Students will use tools and machines to make minor repairs to "everyday" components of a home such as replacing an electrical outlet or fixing the trap under a sink. Students will enhance their understanding of how these skills can contribute to future home ownership.
Pending BOE Approval.

Storytelling Through the Arts

Storytelling courses are designed to provide students with the opportunity to tell their story through the lenses of visual art, music, dance and theatre. These modules may be used to satisfy the Fine Arts requirement for graduation.

A84041/2/3/4 | **Telling Stories in One Act**   0.25qtr

The Telling Stories in One Act course allows students to explore storytelling through the elements of theatre and drama. Students will have the opportunity to work independently or in groups to share aspects of their personal story or retell and/or perform elements of existing narratives. The course will allow students to research existing plays about a specific topic or theme which tells someone's story and perform that story for an audience. Students may also write a one-act play about a chapter of their own life. Other elements of theatre that students will explore include basic acting skills, characterization, movement, scene study, staging, and improvisation.

G84041/2/3/4 | **Writing on the Wall—**
               Telling My Story Through Street Art   0.25qtr

This course is designed to explore personal expression through the lens of street art. Students will examine the origins and historical evolution of this vibrant and contemporary art movement. Students will engage in the creation of a personal expressive art reflective of telling their story. It will pose questions on art vs. vandalism, ethics, copyright, and show the power of self-expression.

F84041/2/3/4 | **Modern Beats – Tell Your Story**   0.25qtr

In this course, students will experience the process of song writing by producing their own lyrics, beats, and music. Using music production software, students will be guided to write lyrics, produce beats, and select music which thoughtfully communicates their own message. Throughout the course students will focus on the artistic creative process of music writing while learning how to produce their own music which has specific and personal meaning to them. The course will end with students having produced, recorded and released their own complete song.

L84041/2/3/4 | **Instadance—Telling Stories through Movement**
                                                            0.25qtr

The Instadance course will allow students to explore storytelling through the creative movement process. Students will have the opportunity to work independently or in groups to tell their stories through performance while documenting the process with video technology applications. The course will allow students to research a topic or theme and, through the creative process, students will choreograph their story. With the use of video technology applications, students will record their work for public exhibition.

Art (Visual Arts)

The Anne Arundel County High School visual arts program is designed to offer all students personal enrichment as well as provide a high quality, sequential program of studies for students who are planning an art or art-related career. Art courses offer opportunities to learn, explore, and concentrate on the visual art concepts while including activities in all major areas of art. The inquiry-based curriculum fosters the creative potential in each student. Critical thinking and expression of ideas in art forms will help students to appreciate the value of art in meeting 21st Century challenges, relate art to life, social and community issues. All art courses are offered on an elective basis.

Design elements and principles will be stressed along with two- and three-dimensional activities — painting, drawing, printmaking, sculpture, photography, and mixed media — at all levels. Many materials, tools and processes are used to make art so that students will: develop a knowledge of design as the basis for art work; identify design qualities in natural and man-made forms; apply skills while making art objects; judge art qualities; develop a knowledge of how to use materials, tools and techniques; and become familiar with the important role of art in the history of humankind.

Fine Arts Graduation Requirement — 1 Credit

Courses that meet the Fine Arts requirement can be found in the Art, Dance, English and Music program sections.

Foundations of Studio Art Exemption

Students who demonstrate mastery of standards found in the Foundation of Studio Art course, through a portfolio review and assessment conducted by the Visual Arts department chairperson, may be exempted from the Foundation of Studio Art prerequisite and become eligible to enroll directly into a level 1 visual arts course.

High Engagement/Passion Courses

Storytelling through the Arts

G84041/2/3/4 | **Writing on the Wall**   0.25qt
                  Telling My Story Through Street Art

This course is designed to explore personal expression through the lens of street art. Students will examine the origins and historical evolution of this vibrant and contemporary art movement. Students will engage in the creation of a personal expressive art reflective of telling their story. It will pose questions on art vs. vandalism, ethics, copyright, and show the power of self-expression.

G19 | **Foundations of Studio Art**   0.5sem

This course provides the foundation for the visual arts high school program of study. Students will experience a variety of media and processes while exploring two- and three-dimensional art problems in drawing, painting, printmaking, sculpture and mixed media. Critical and creative thinking skills will be integrated into all studio experiences.

G30 | **Drawing for Fashion 1**   0.5sem

The course will prepare students for further study in the area of fashion design, fashion illustration, textile design, and marketing while developing an understanding of the connection between design and drawing. Students will produce individual sketchbooks/breadth of their media experience, design concepts related to fashion design, and their growth in the drawing of the human figure. Students will be exposed to varied aspects of the fashion industry, including fashion design and related career opportunities.

Recommended: *Foundations of Studio Art*

G31 | **Drawing for Fashion 2**   0.5sem

The student will explore more advanced aspects of fashion illustration, fashion design, textile design, and marketing using visual arts media. Students will expand development of sketchbooks and portfolios related to fashion design and the drawing of the human figure. The resulting portfolio will show evidence of personal development through studio work, outside experiences, and sketchbook/journals. Students will be encouraged to make artistic choices that have been influenced by outstanding fashion designers leading to an individual style based on personal aesthetic criteria.

Prerequisite(s): *Drawing for Fashion 1*

G35 | **Photo & Digital Processes 1**   0.5sem

Photography and Digital Processes 1 is the introductory class for the study of photographic processes. Use of the digital camera/device and/or analog camera and the manipulation of student generated images on the computer will serve as a basis for exploring various media. The class is structured around creating photographic or digital imaging emphasizing visual arts principles. It will introduce the student to the principles of contemporary media as a verbal and visual means of communication in today's society. Students will be challenged to solve art problems by studying the work of master photographers and digital artists. A sketchbook/journal will serve as a resource for technical information, processes, idea generation, and written commentary.

Prerequisite(s): *Foundations of Studio Art*

DUAL

G36 | Photo & Digital Processes 2   0.5/sem

Photography and Digital Processes 2 courses builds upon skills, concepts and techniques developed in Photography and Digital Processes 1. Through experimentation, observation, and teacher direction, students will be challenged to create expressive works influenced by master contemporary photographers, digital artists, and other career connections. Students will expand their repertoire of software, styles, and techniques. Student's original photographs serve as a source of ideas. All digital imaging should come from student generated artwork/photography or family archival photographs. Further exploration of the Adobe Creative Cloud is part of the photographic process of the course. The curriculum is aligned with the MD State Dept. of Education Visual Arts Standards while embedding 21st century skills.

Prerequisite(s): *Photo & Digital Processes 1*

G37 | Honors Photo & Digital Processes 3   0.5/sem

Photography and Digital Processes 3 builds upon skills, concepts, and techniques developed in Photography and Digital Processes 2. Students will solve different kinds of non-familiar problems in both conventional and innovative ways. Students will maintain a portfolio to include a concentration, and depth and breadth sections. Emphasis is placed on developing a personal vision and voice in their work. Students will continue to expand their repertoire of software, styles, and techniques as well as exploring other digital imaging devices. The curriculum is directly aligned with the MD State Dept. of Education Visual Arts Standards while embedding 21st century skills. Students will develop and demonstrate knowledge of content specific, academically based, and cross-curricular vocabulary and themes.

Prerequisite(s): *Photo & Digital Processes 2*

G45 | Studio 1: 2D Art   0.5sem

This course is the introductory course to two-dimensional art processes: drawing, painting, printmaking, crafts and mixed media. Students will be challenged to develop a personal style by creating expressive works of art based on a variety of artists, art movements, and techniques. A process portfolio and sketchbooks/journals will reflect personal aesthetic choices in the development of a body of work.

Prerequisite(s): *Foundations of Studio Art*

`DUAL`

G46 | Studio 2: 2D Art   0.5sem

In this course students will solve problems that focus on ways to approach two-dimensional design. Activities will include painting and drawing from life, ways to represent the human figure from observation, portraiture, printmaking on and off the press and contemporary crafts. Emphasis is placed on creative problem solving, use of the sketchbook/journal and the influence of master artists and cultural exemplars.

Prerequisite(s): *Studio 1: 2D Art*

G47 | Honors Studio 3: 2D Art   0.5/sem

The emphasis of this course is on developing a body of related two-dimensional works (drawing, painting, printmaking, crafts, mixed media), based on a personal idea or theme. The resulting portfolio will show evidence of artistic development through studio work, influences by master artists, outside experiences and sketchbook/journals.

Prerequisite(s): *Studio 2: 2D Art*

G48 | AP Studio Art 2D Design   [FY] 0.5/sem

Students in this course develop their 2-D Design Portfolio according to the requirements of the College Board's Advanced Placement Program. Portfolios will be developed that demonstrate a concentration, breadth and quality. Students will be encouraged to submit a portfolio for Advanced Placement credit.

G55 | Studio 1: 3D Art   0.5sem

This course is the introductory course to three-dimensional art processes: ceramics, sculpture, crafts and mixed media. Through experimentation, observation and teacher direction, the student will be challenged to develop a personal style by creating expressive works of art based on a variety of artists, art movements and techniques. A process portfolio and sketchbooks/journals will reflect personal aesthetic choices in the development of a body of work.

Prerequisite(s): *Foundations of Studio Art*

`DUAL`

G56 | Studio 2: 3D Art   0.5sem

In this course students will solve problems and focus on three-dimensional art forms. Design solutions are explored in sculpture, contemporary crafts and ceramics in traditional and non-traditional ways. The sketchbook/journal issued for recording ideas, influences from master artists and cultural exemplars, working out solutions to problems, and reflecting on results.

Prerequisite(s): *Studio 1: 3D Art*

`DUAL`

G57 | Honors Studio 3: 3D Art   0.5/sem

The emphasis of this course is on developing a body of related three-dimensional works (ceramics, sculpture, crafts, mixed media) based on a personal idea or theme. The resulting portfolio will show evidence of personal development through studio work, outside experiences and sketchbook/journals. Students will be encouraged to make artistic choices that have been influenced by master artists leading to an individual style based on personal aesthetic criteria.

Prerequisite(s): *Studio 2: 3D Art*

`DUAL`

G637 | Honors Art Portfolio Development & Studio Practices 0.5/sem

This course is designed for students who have received continuous instruction in visual arts. This course offers a creative environment which is structured to facilitate students as they continue working in the arts and are preparing to enter colleges and art schools. Through the assembly of a portfolio, students examine a body of work created through creative problem solving that includes personal aesthetic choices and variety of media. Students' analysis skills are developed through critiques, as they articulate the aesthetic characteristics and meaning of personal, peer, and master artworks.

Prerequisite(s): *Foundations of Studio Art*

G58 | AP Studio Art 3D Design   [FY] 0.5/sem

Students in this course develop their 3-D Design Portfolio according to the requirements of the College Board's Advanced Placement Program. Portfolios will be developed that demonstrate a concentration, breadth and quality. Students will be encouraged to submit a portfolio for Advanced Placement credit.

G61 | **AP Studio Art Drawing**   [FY] 0.5/sem

The AP Studio Art Program is designed for highly motivated students who are seriously interested in the study of art. Portfolios will be developed that demonstrate a concentration, breadth and quality. Students will be encouraged to submit a portfolio for Advanced Placement credit.

G62 | **AP Art History**   [FY] 0.5/sem

This college level course involves the study of art history from prehistoric times to the present day. The content of the course will allow students to be able to analyze elements of artwork, become familiar with media and techniques or art production and the ability to recognize and identify periods and styles. Additionally, analytical comparative essays will explore themes, styles and purposes of art. This course culminates in the Advanced Placement Art History test to earn college credit.

G626 | **Seminar: AP Art History**   [FY] 0.5 elective credit/sem

Seminar: AP Art History provides students with the assistance they need to successfully complete their coursework.

Prerequisite(s): *Concurrent enrollment in AP Art History*

G87 | **Department Aide—Art**   No credit

Fine and Performing Arts Aide courses offer students the opportunity to assist instructors in preparing and organizing course curricula. Students may provide tutorial or instructional assistance to other students.

G01 | **Unified Visual Arts & Leadership**

Affords students with disabilities the opportunity to focus on creativity as a means of expression through a variety of techniques as exemplified and demonstrated by the masters. All mediums, both 2D and 3D, will be explored through the elements of art and principles of design. This collaborative and cooperative environment will allow students to work at their own pace and skill level, with peer leaders assisting as needed. Peer leaders will be selected by the Art instructor. The peer leaders will explore leadership traits such as communication, listening, group work, and critical thinking in order to best support in an inclusive environment.

Career & Technical Education

Career and Technical Education courses are designed to provide challenging opportunities for students to develop knowledge and skills in a career field. Students may use this acquired knowledge for entry-level employment and/or further education at a college, technical or business school, or an apprenticeship program. Courses are offered at the high schools and at the Centers of Applied Technology. For additional information, see the *Programs of Choice* section or *Career Completer* section.

Business

Business today is integrated. What does that really mean? It means that with all the technical advances and increasing globalization, new challenges and unanticipated questions arise. Business professionals need to understand the big picture of business and finance to anticipate and address these types of new challenges. A business executive needs to understand marketing, legal and management, finances, as well as possess technical literacy. Business education courses prepare students to continue their education at a postsecondary institution or begin employment immediately after high school.

High Engagement/Passion Courses

Global Business Connections

Q84041/2/3/4 | **Consumer Insights**   0.25qtr

The Consumer Behavior module will offer the opportunity to study individuals, groups, and organizations and the processes they use to select, secure, use, and dispose of products, services, experiences, or ideas to satisfy needs and the impacts these processes have on the consumer and society. This module will increase students' knowledge of marketing research methods, the psychology of marketing, and consumer influence and behavior.

Q84341/2/3/4 | **Conscious Capitalism (Ethics)**   0.25qtr

The Conscious Capitalism (Ethics) module will focus on the four pillars of Conscious Capitalism—conscious leadership, conscious culture, higher purpose, and stakeholder orientation. Conscious Capitalism builds on the foundations of Capitalism—voluntary exchange, entrepreneurship, competition, and free trade—but also includes the critical elements of trust, compassion, and collaboration. Students will be challenged to think like business leaders and consider why organizations exist and to acknowledge a company's role in the interdependent global marketplace.

Internship Preparation

S341/2/3/4 | **Acing the Internship**   0.25qtr

This course will prepare students for the internship experience. Students interested in expanding knowledge of themselves and gaining insight into careers of interest will learn what it takes to secure and internship that best fits their interest, skills, and personality preferences. Experiences include resume preparation, cover letter design, essential interview skills, and networking

Q01 | **Principles of Accounting and Finance**   [FY] 0.5/sem

Students are introduced to accounting through manual and computer processes in the basic accounting cycle, including accounting for payroll, merchandising, special procedures, and partnerships. Excel spreadsheets, internet connection activities, and/or accounting software with QuickBooks are used to reinforce learned concepts.

`CTE` `DUAL`

Q02 | **Honors Accounting 2**   [FY] 0.5/sem

Students apply accounting methods to partnerships and corporations. QuickBooks software and simulations are included for students to apply accounting principles and procedures. Students taking this course are eligible to participate in a paid or unpaid internship.

Prerequisite(s): *Principles of Accounting and Finance*

`CTE`

Q03 | **Honors Accounting 3**   [FY] 0.5/sem

This is an advanced course using a college textbook. This course builds on skills acquired in Accounting 2. Students use manual and computerized (QuickBooks) accounting methods to practice and apply accounting skills and competencies to business activities.

Prerequisite(s): *Accounting 2*

`CTE`

Q12 | **Business Law**   0.5sem

This course provides coverage of legal topics including the sources of law, the judicial system, criminal law, civil (tort) law, the formation and performance of contracts, the Uniform Commercial Code (sales transactions), competing interests of buyers and sellers (consumer law), and the ownership and transfer of personal property. Current issues such as ethics, workplace issues, and computer crime are discussed.

`DUAL`

Q20 | **Principles of Business Management & Entrepreneurship**
                                                  [FY] 0.5/sem

This course provides a foundational understanding of the role of business in a global society. Students will learn to analyze the functions of business, forms of business ownership, management concepts, marketing, production and distribution, and accounting and finance. Students will explore entrepreneurial concepts to generate business ideas as well as the ability to plan and manage projects in order to achieve objectives. Students will learn Microsoft Office skills to generate business communications and forms. This course includes development of communication skills necessary for success in the workplace and college.

`CTE` `DUAL`

Q22 | **Career Connections**   [FY] 0.5/sem

Learning about careers and gaining real-world job experience provides great preparation to high school students as they plan their futures. Students in this course will learn how to effectively plan for their future incorporating both employment, education and training goals, build financial literacy skills, and integrate Maryland's Skills for Success as they begin to manage their career and educational choices. A variety of career and interest assessments, as well as portfolio development, and workplace readiness skills prepare students for the work-based learning/internship experience.

`CTE` `DUAL`

Q83 | **Career Transitions**   [FY] 0.5/sem

Students in this course will apply the knowledge gained in **Career Connections** to the practical experience of their Internship/ work-based learning placement. Students will continue to research and refine their career options through the process of self-awareness, career awareness, exploration, and preparation. In addition, students will learn how to meet employer's expectations, use skills on the job, communicate effectively in the workplace, and learn to manage their personal finances. They will learn the components of the financial planning process as well as apply financial literacy skills towards managing personal finances.

Prerequisite(s): *Q22 Career Connections. Concurrent enrollment in S249 Workplace Immersion (Student must intern 270 hours at an approved site).*

`CTE`

Q70 | **Professional Career Experience**   [FY] 1.0/sem

Experiences in careers are an important element of the development process. This course is not the same as a short-term job; it has structured learning goals, provided supervision and offers an experiential learning component that can strengthen a resume. Career Experiences can expand knowledge of oneself and provide students with insight to the career fields that interest them. Students will also gain marketable skills related to the field and make important contacts. This course allows students to apply classroom knowledge in the workplace. A minimum of 135 hours required.

Prerequisite(s): *Teacher recommendation and approval from Internship Supervisor. Student must provide their own transportation.*

Q30 | **Honors Marketing 1**   [FY] 0.5/sem

Students will develop marketing plans by analyzing customer needs and the market environment. They will learn advertising and promotion planning; as well as how to distribute products and conduct marketing research. Managerial skills will be acquired and implemented, in many cases through the operation of a school store. Marketing students will also acquire valuable leadership skills through their participation in DECA.

`CTE` `DUAL`

Q31 | **Honors Marketing 2**   [FY] 0.5/sem

Advertising, display, sales promotions, marketing, and operations are emphasized in this course. The economics of distribution, market research, and data processing in marketing and management occupations are included. Seniors may also participate in a paid or unpaid internship.

Prerequisite(s): *Honors Marketing 1*

`CTE` `DUAL`

Q34 | **Honors Entrepreneurship**   0.5sem

Entrepreneurship focuses on recognizing a business opportunity, starting a business based on the recognized opportunity, and operating and maintaining that business. Students will benefit from developing an appreciation for and understanding of entrepreneurship in our economy. The entrepreneurship course integrates the functional areas of business—accounting, finance, marketing, and management—and the legal and economic environments in which any new venture operates. Entrepreneurship begins with developing an appreciation for the "entrepreneurial mindset" and for the fundamentals of beginning a new business venture.

`CTE` `DUAL`

Q40 | **Honors Business Administration Services**
                                                  [FY] 0.5/sem

This course provides students with the study of information systems. Students develop managerial and technical skills for business support operations while incorporating problem solving techniques. Students will develop interpersonal teamwork and leadership skill through business simulations to develop a high-level work ethic. Students can elect to test for the Microsoft® Certified Application Specialist (MCAS) exams for certification. Seniors taking this course are eligible to participate in an internship learning experience.

Prerequisite(s): *Introduction to Microsoft® Office, Microsoft® Office Applications (xls/dbf), Microsoft® Office Applications (doc/ppt)*

`CTE` `DUAL`

Q50 | **Introduction to Microsoft® Office**   0.5sem

Students will explore the concepts of word processing, databases, spreadsheets, introductory presentations and the common features of all applications. The course provides students with the basic skills needed to format academic papers and presentations. The information and skills that students learn in this introductory course prepares them for their future studies in Microsoft® Office Applications (doc/ppt) and Microsoft® Office Applications (xls/dbf).

`CTE` `DUAL`

Q61 | **Honors Business Management**   0.5sem

This course includes a broad view of business objectives. It specifically emphasizes phases of organizing, financing, establishing, operating and managing a business. Management simulations and internet research activities are incorporated into this class.

`CTE` `DUAL`

Q63 | **Business and Personal Finance**   0.5sem

This course covers the fundamentals of business finance, from business ownership and financial planning to the basics of financial accounting. Students will also learn important consumer topics including budgeting and money management, banking and credit, saving and investing, and strategies for protecting financial resources.

`CTE`

Q64 | **Microsoft® Office Applications (xls/dbf)**   0.5sem

In this course students will develop advanced skills using spreadsheets and database software. Using Microsoft® Office Excel and Access, students will acquire skills that will prepare them for future academic and workforce opportunities. The course will provide Microsoft® Office Specialist (MOS) certification opportunities which provide industry-leading assessments of skills and knowledge.
Prerequisite(s): *Introduction to Microsoft® Office*

`CTE` `DUAL`

Q71 | **Microsoft® Office Applications (doc/ppt)**   0.5sem

In this course students will develop advanced document, word processing and presentation skills. Using Microsoft® Office Word and PowerPoint, students will acquire skills that will prepare them for future academic and workforce opportunities. The course will provide Microsoft® Office Specialist (MOS) certification opportunities which provide industry-leading assessments of skills and knowledge.
Prerequisite(s): *Introduction to Microsoft® Office*

`CTE`

Q87 | **Department Aide—Business**   No credit

Business Aide courses offer students the opportunity to assist instructors in preparing and organizing course curricula. Students may provide tutorial or instructional assistance to other students.

Computer Science

Students interested in careers in computer science, the sciences and engineering, or interested in studying programming languages, should consider enrolling in one or more of the computer science programming courses.

High Engagement/Passion Courses

Global IT Applications

R84041/2/3/4 | **Sensors & Microcontrollers**   0.25qtr

This course will introduce student to the world of microcontrollers, network connectivity, and the concept of the internet of things in order to detect and solve community problems. Students will learn the basics of Arduino microcontrollers in order to build remote sensors which record community data. This data will be analyzed in order to better understand and offer solutions for specific community problems.

R84141/2/3/4 | **Data Mining I**   0.25qtr

This course will introduce students to the tools and resources needed to extract useful information from large sets of data. Every aspect of life is generating large amounts of data daily. Students will use Problem Based Learning to drive the discovery of possible solutions to 'real-world' scenarios utilizing this data. Students will practice methods of research while perfecting the use of tools, such as Excel, to analyze, discover patterns, make predictions and propose potential solutions to problems.

R84241/2/3/4 | **Python I**   0.25qtr

This course will introduce students to computer programming in a fun and easy coding language. Python is a dynamic and flexible language great for first time learners. It supports object-oriented, procedural, and functional programming styles. Python is one of the most widely used high-level programming languages today. Students will learn through PBL scenarios designed to support the Signature theme at each high school.

R84341/2/3/4 | **Scratch**   0.25qtr

This course uses a visual programming language, which allows users to create interactive stories and games. This course gives the beginner programmer a fun and exciting way to learn fundamental programming concepts. This project-based course allows students to create games from 'Scratch'. Each game challenge will provide students an opportunity to expand and build upon previously mastered programming concepts, which include; output-dialog, animation, variables, If statements, loops, and event driven programming.

R84441/2/3/4 | **Cybersecurity: Linux**   0.25qtr

This course will provide students with a basic introduction to the subject of cybersecurity through exploration in topics including data & information, cryptography, cyber-attacks, geopolitics, computer hardware & networking etc. Students will explore the technical aspects of cybersecurity through the use of the Linux operating system. This challenge-based course will inspire students to seek opportunities in a flourishing, high-demand field.

R84541/2/3/4 | **Intro to Web Development** 0.25qtr

Students will learn how to use the basics of the HTML and CSS web design languages to develop webpages and basic web applications. Through a variety of projects students will use HTML to design headings, lists, tables, forms, etc. with specific real-world goals in mind. This course provides a variety of opportunities for students to master basic web development concepts while practicing the importance of art and creativity in the design.

R84641/2/3/4 | **Discrete Mathematics for Computer Science** 0.25qtr

The goal of this course is to introduce students to the basic logic concepts from discrete mathematics that are widely used in Computer Science. The topics covered serve as a historical view of computer science, beginning with the topic of binary code (machine language), number systems, and Boolean algebra, then easing into the different mathematical concepts that stem from these intro topics. Topics include; logic, algorithms, probability, graph theory, data structures & recursion.

R10 | **Honors Database Design/Programming (SQL)** [FY] 0.5/sem

This course lays the foundation for students understanding relational databases and designs. Students become proficient business analysts and experts in structured query language (SQL). This course prepares students for the Introduction to Oracle 9i-SQL Certification Exam.

`CTE`

R11 | **Honors Database App. Development (PL/SQL)** [FY] 0.5/sem

Students create PL/SQL blocks of application code that can be shared by multiple forms, reports, and data management applications. Students develop online database applications using an online development environment (HTML-DB). Students who successfully pass this and the previous (SQL) certification exams achieve Oracle Certified Associate (OCA) status.

Prerequisite(s): *Honors Database Design/Programming (SQL)*

`CTE`

R18 | **Honors Computer Science Programming—Java** 0.5sem

This rigorous programming course is an introduction to the object-oriented computer language Java. Algorithm analysis and steps in designing, implementing, testing and maintaining a program will be emphasized. It is highly recommended this course be taken before taking an AP Computer Science A and preferably taken in the spring semester just preceding the AP Computer Science Programming course.

Prerequisite(s): *Algebra 1 and Geometry (C or better in both)*

`CTE` `DUAL`

R06 | **Foundations of Computer Science** [FY] 0.5/sem

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 includes a broad range of topics in computing, including robotics; programming in several languages such as Processing and Java; and cyber security. This course meets the basic technology graduation requirement.

`CTE`

R04 | **AP Computer Science Principles** [FY] 0.5/sem

AP Computer Science Principles offers a multidisciplinary approach to teaching the underlying principles of computation. The course will introduce students to creative aspects of programming, using abstractions and algorithms, working with large data sets, understandings of the Internet and issues of cybersecurity, and impacts of computing that affect different populations. AP Computer Science Principles will give students the opportunity to use current technologies to solve problems and create meaningful computational artifacts. Together, these aspects of the course make up a rigorous and rich curriculum that aims to broaden participation in computer science. This course meets the basic technology graduation requirement.

`CTE`

R20 | **AP Computer Science A** [FY] 0.5/sem

This course involves the study of a computer language (Java) and programming practices and procedures. Topics to be covered will include fundamentals of the Java programming language, input and output, flow of control features, data structures and searching and sorting algorithms. Program design and analysis will be emphasized. The course is intended to prepare students for the A Level AP Computer Science Exam for college credit.

Prerequisite(s): *Algebra 2 (B or better) or concurrent enrollment in Algebra 2*

Recommended: *Honors Computer Science Programming — Java*
AP Computer Science Principals

`CTE`

R22 | **C++ with Gaming** [FY] 0.5/sem

This is an advanced computer programming class which will introduce students to the similarities and differences between C++ and Java. Students will get hands on experience in using the language to develop games. Student will also become familiar with the software design and development standards.

Prerequisite(s): *AP Computer Science A*

Q77 | **Web Page Design** 0.5sem

Students will create and edit a web page, create a web site with links, tables, image maps, frames, and forms. Programming will be taught using Web-based tools such as HTML, and JavaScript.

Recommended: *Introduction to Microsoft® Office*

`DUAL`

Q78 | **Advanced Web Page Design 1** 0.5sem

Students will work with programs such as Adobe Design Premium CS4, which includes DreamWeaver, Flash, Fireworks and Illustrator, to develop more complex web pages and web sites.

Prerequisite(s): *Web Page Design or Intro to Web Development*

`CTE` `DUAL`

Q79 | **Honors Advanced Web Page Design 2** 0.5sem

Students will continue web design development concentrating on Flash and topics such as Javascripting and web site management.

Prerequisite(s): *Advanced Web Page Design 1*

`CTE`

Family & Consumer Sciences

Family and Consumer Sciences courses prepare students for the work required in family life and careers based on family and consumer sciences skills. All courses are part of the elective offerings and are open to all students.

Courses that prepare students for careers fall into one of the following categories:

1. *Required courses that are part of a prescribed sequence for a career completer program*

2. *Elective courses that are highly recommended as part of various career completer programs*

H20 | **Child Development 1** [FY] 0.5/sem

Learn about children ages three to six and work with preschoolers in the lab. Study the stages of growth and development, the role of play in children's learning, and positive guidance practices and techniques.

`CTE` `DUAL`

H21 | **Child Development 2** [FY] 0.5/sem

Study preschoolers in greater depth and learn the developmental milestones for school age children from ages five to six. Learn how to implement learning activities by planning lessons and teaching in the lab.

Prerequisite(s): *Child Development 1 (C or better)*

`CTE` `DUAL`

H22 | **Honors Child Development 3** [FY] 0.5/sem

Learn about the growth and development of children from birth to age six. This course is designed for students who wish to pursue a career in the early childhood professions. While continuing to teach in the preschool, the student will learn about the administrative responsibilities of operating a childcare center.

Prerequisite(s): *Child Development 2 (C or better)*

H40 | **Child Growth and Development** [FY] 0.5/sem

This course focuses on child development birth through adolescence. Emphasis on theories of development, the role of caregivers, family, health, safety and contemporary issues. Students will explore special challenges to growth and development and will have opportunities for guided observation of children in a variety of settings. Students will begin to compile artifacts and written competency statements that are aligned with the required Child Development Associate (CDA) portfolio guidelines for infant and toddler care. Explore career pathways in Early Childhood Education and Child Care.

`CTE`

H81 | **Introduction to Teaching Profession** [FY] 0.5/sem

This career course is designed to introduce students to the Teaching Profession. Students will be introduced to teaching strategies, human growth and development and technology in the classroom. Students will have a variety of internship opportunities at different grade levels.

`CTE` `DUAL`

High Engagement/Passion Courses

Finance

H80 | **Your Finances** 0.25qtr

Students will study the importance of personal financial preparedness. Students will be able to make decisions on managing their money, banking, credit and taxes. Students will apply their knowledge and develop a plan for attaining goals while juggling multiple roles as a young adult.

Recommended: *Grades 10–12*

H26 | **Child Development Internship** 1.0sem

Seniors who desire an experience to fulfill the requirements of the Early Childhood completer program may apply for an internship to prepare for post-secondary education, gainful employment, or both in a setting outside the school. Students seeking an Early Childhood Career Internship must have excellent attendance and the child development teacher's recommendation.

Prerequisite(s): *Honors Child Development 3 (C or better), Approved curricular goals and outcomes Students must provide transportation and meet the requirements of the internship program.*

`CTE`

H25 | **Decisions for Responsible Parenting** 0.5sem

Learn about one of the most important jobs you will ever have — being a parent. Learn about parenting from the prenatal stage through adolescence.

Recommended: *Grades 10–12 only.*

H30 | **Fashion Design 1** 0.5sem

This course introduces students to designing and making garments and accessories. Individualized projects will be used to further develop the student's skills. Lab fee charged.

H31 | **Fashion Design 2** 0.5sem

This course introduces students to the intermediate techniques associated with fashion design and the principles of clothing construction and accessories. Individualized projects will be used to further develop the student's skills. Lab fee charged. Articulation with Stevenson University is available.

Prerequisite(s): *Fashion Design 1*

H61 | **Business of Fashion A** 0.5sem

Explore the history and scope of the fashion industry, including buying and selling, fashion cycles and fashion coordination. Students will also have the opportunity to form a fashion company.

H62 | **Business of Fashion B** 0.5sem

The Business of Fashion B builds on the information and skills introduced in Business of Fashion A. Students will have the opportunity to learn how to start an online fashion business.

Prerequisite(s): *Business of Fashion A*

H15 | **Creative Fashion Technology A/B**   [FY] 0.5/sem

Creative Fashion Technology A/B is designed for students to develop their own personal creativity using digital and graphic resources. Students will learn the skills and techniques in fashion design technology while extending their creativity. Students will understand the role of technology in the fashion design industry along with the technological skills required to compete in the design room and in the marketplace. Students will learn and utilize the software application, Adobe Photoshop as it functions in the fashion design industry.

H10 | **Honors Nutrition—A**   0.5sem

Students will study the science of nutrition as it relates to individual food choices that maximize healthy behaviors for a lifetime. Topics include food safety and sanitation, the digestion process, the macro nutrients and MyPlate. Students will understand the concepts they are learning in their classroom lessons while perfecting skills in the art of producing nutritious, appealing recipes. Practical lessons will involve lab work. Students who successfully complete Honors Nutrition A & B and pass the final exam with at least a C may earn articulated credit in the Dietetics Program while enrolled at the University of Maryland Eastern Shore. Lab fee charged.

H11 | **Honors Nutrition—B**   0.5sem

Students continue to build on the skills and healthy food preparation techniques developed in Honors Nutrition A. Topics include the remaining micronutrient components of food along with obesity, eating disorders, wellness throughout the life cycle and prevention of chronic diseases. Issues facing society will include food safety, technology, use of supplements and botanicals. Emphasis is placed on dispelling common nutrition myths and on questioning nutrition information presented in the media. Students will understand the concepts they are learning in their classroom lessons while perfecting skills in the art of producing delicious, nutritious recipes. Students who successfully complete Honors Nutrition A & B and pass the final exam with at least a 'C' may earn articulated credit in the Dietetics Program while enrolled at the University of Maryland Eastern Shore. Lab Fee charged.

Prerequisite(s): *Honors Nutrition A*

H73 | **Nutrition Science**   0.5sem

Students learn the science of nutrition and the relationship of nutrition to health and disease. Students apply the principles of biology and chemistry to their learning. Lab fee charged.

Prerequisite(s): *Biology*

DUAL

H77 | **Honors Culinary Skills and Hospitality Management 1**
          [FY] 0.5/sem

During the first semester of this course, students will be introduced to professional food preparation, food safety/sanitation, customer service relations and kitchen essentials. In the second semester students will learn the fundamentals of soups, stocks and sauces, potatoes/grains and fruits/vegetables. The year will conclude with customer service, management essentials and foodservice careers. All students are expected to take the Level 1 exam towards the ProStart National Certificate of Achievement and the ServSafe certification exam. Lab fee charged.

Prerequisite(s): *Honors Nutrition A (C or better)*

CTE **DUAL**

H78 | **Honors Culinary Skills and Hospitality Management 2**
          [FY] 0.5/sem

Students will continue to explore a variety of food topics such as breakfast foods, sandwiches, salads, garnishes, meat/poultry/seafood and desserts, and global cuisines. They will also learn to apply topics such as purchasing/inventory, marketing, cost control, and sustainability to their lab experiences. Students are expected to take the Level 2 exam. Successful completion of the Level 1 and 2 exams in conjunction with the ProStart work experience will enable the student to earn the ProStart National Certificate of Achievement. Lab fee charged.

Prerequisite(s): *Honors Culinary, Hospitality Management 1 (C or better)*

CTE **DUAL**

H78 | **Honors Culinary Skills and Hospitality Management 3**
          [FY] 0.5/sem

This course will focus on hands-on, industry application of the skills students acquired in CSHM 1 & 2. Students will have teacher-guided freedom to develop and cost menus, market their ideas and prepare/deliver a variety of weekly items. Students may also be afforded the opportunity to cater for in-house events. This course will allow students to apply the skills they acquired ad take them to the next level by incorporating them for start to finish in this class.

Prerequisite(s): *Honors Culinary Skills and Hospitality Management 2*
          (C or better)

CTE **DUAL**

H74 | **Prostart WBL**   [FY] 1.0/sem

Seniors who have completed the required courses Honors Culinary Skills & Hospitality Management 1 and 2 must complete one of the following:

- 70 hours work-based learning for AACPS completer, or

- 400 hours internship for ProStart Certification.

Students seeking an internship experience must have excellent attendance and the recommendation of the ProStart teacher.

Prerequisite(s): *Culinary Skills & Hospitality Management 1 & 2*
          ProStart Completer. Students must provide transportation
          and meet the requirements of the internship program.

CTE

H87 | **Department Aide—FACS**   No credit

Family and Consumer Science Aide courses offer students the opportunity to assist instructors in preparing and organizing course curricula. Students may provide tutorial or instructional assistance to other students.

Technology Education

Technology education is an applied education program that relies on project-based learning to prepare students to be technologically literate. Through participation in "hands-on" experiences in various technical environments students will see the connection that exists between technology, math, science, and engineering concepts. They will also utilize the design process to effectively solve "real-world" problems. Technology education courses are both required and elective. **One basic technology education credit is required for graduation.** *The program is composed of introductory courses and advanced courses. Some courses are only offered at specific high schools. Students can become eligible to receive college credits upon successful completion of required coursework in the Technology Education program.*

The following course can be taken for Advanced Technology credit:

Advanced Technology Courses

M10 | **Digital Design**

M11 | **Video Production**

M13 | **Technological Design 1**

M14 | **Technological Design 2**

M16 | **Introduction to Robotics**

M18 | **Energy/Power/Transportation**

M20 | **Engineering Design/CAD 1**

M21 | **Engineering Design/CAD 2**

M22 | **Architect Design/Development 1**

M23 | **Architect Design/Development 2**

M32 | **Technology of Flight**

M42 | **Manufacturing & Construction Technology**

M52 | **Marine Technology**

High Engagement/Passion Courses

Global Technology Concepts

M84041/2/3/4 | **Engineering Design**   0.25qtr

This course introduces students to Problem Solving and the Engineering Design Process. This project-based approach will focus on solving engineering challenges. Areas of emphasis include lab safety, the Engineering Design Process, structures and forces, Universal Design, and hydraulics.

M84141/2/3/4 | **Designing & Prototyping**   0.25qtr

In this course students explore the function of design. First students will learn sketching and modeling techniques engineers and designers use to communicate their ideas. They will then use a photo editing software to explore design elements. Students will use their knowledge to design and create a prototype of a product that they be packaged and advertised.

M84241/2/3/4 | **Design for Manufacturing**   0.25qtr

This course introduces students to the fundamentals of manufacturing. Students learn basic manufacturing techniques. This hands-on approach to learning includes product design, fabrication and real-world business applications.

M84341/2/3/4 | **Flight in Action**   0.25qtr

In this course, students will gain an understanding of the principles and of flight through project-based learning. Students will learn to design and build aircraft, and how to test their designs by controlling flight. Societal impacts and career connections will also be explored.

M84441/2/3/4 | **Practical Programming**   0.25qtr

This course introduces students to programming through robotic controllers and application. Students will be presented a problem that must be solved by designing, building and programming working models of a solution.

M84541/2/3/4 | **What's App-enin? (Mobile Apps)**   0.25qtr

This course will use the Engineering Design Process to build mobile apps. They will experience introductory computer science principles through a variety of puzzles and projects. There will be a final app challenge of their choosing that will showcase their knowledge and skills.

Preparing for Home Ownership
(Pending BOE Approval)

TBD | **Renovation DIY—Carpentry**   0.25/qtr

Students have the opportunity to learn how stud walls, flooring, and roofs are constructed in a hands-on environment. Students will use tools and machines to construct a scale model that utilizes the rough carpentry components required for understanding home construction and repair. Students will enhance their understanding of how these skills can contribute to future home ownership.

TBD | **Renovation DIY—Plumbing and Electricity**   0.25/qtr

Students will learn how basic plumbing and electricity are integrated into the construction of a home in a hands-on environment. Students will use tools and machines to make minor repairs to "everyday" components of a home such as replacing an electrical outlet or fixing the trap under a sink. Students will enhance their understanding of how these skills can contribute to future home ownership.

M10 | **Digital Design**   0.5sem

This course develops skills and knowledge in the use of information and communication technology. Course topics include: graphic arts design, screen printing, digital photography, corporate & desktop publishing, media production, computer graphics & imaging.

`ADVT`

M11 | **Video Production**   0.5sem

This course focuses on more advanced communication technology by building upon what was learned in Digital Design to refine and enhance a variety of technical communication skills. Skills and understandings developed in Digital Design will be expanded to incorporate still/video camera equipment as well as systems, processes and other devices used in the telecommunications industry.

`ADVT`

M13 | **Technological Design 1**   0.5sem

Students experience exciting activities in the areas of entertainment, recreation and information technologies. Students work in engineering teams to apply technology, science, and mathematics concepts and skills to solve design problems and create innovative solutions. Students will use criteria such as design effectiveness, public safety, and ethics to evaluate their designs.

`ADVT`

M14 | **Technological Design 2**   0.5sem

This course provides the student with the opportunity to use the engineering design process to solve complex issues in the areas of medical and biotechnology fields. Working in teams, students will identify the problem, engineer a solution and report findings. The activities allow students to choose their place on an engineering team and contribute their talents to accomplish the ultimate goal.

Prerequisite(s): *Technological Design 1*

`ADVT`

M16 | **Introduction to Robotics**   0.5sem

The objective of this course is to use a hands-on approach to introduce the basic concepts in robotics, focusing on robots and illustrations of current state of the art research and applications. Course information will be tied to lab experiments; students will work in teams to build and test increasingly more complex VEX-based robots, culminating in an end of semester robot contest. This course introduces fundamental concepts in robotics. In this course, basic concepts will be discussed, including sensors, path planning, kinematics, feedback, stressing the importance of integrating sensors, effectors, and control.

`ADVT`

M18 | **Energy/Power/Transportation**   0.5sem

This course develops a depth of understanding about a wide array of energy sources and controls by engaging students in hands-on, project-based activities in mechanical power, fluid power, and electrical power. Students will construct and test a variety of transportation systems, participate in reverse engineering activities, and developing skill working with the tools, equipment, and measurement devices used by engineers and technologists.

`ADVT`

M20 | **Engineering Design/CAD 1**   0.5sem

In this course, students will learn how technical drawing techniques & symbolism are used to convey ideas in the language of engineering. Students will create drawings by both traditional board drawing and computer aided design software. Instrument usage, measurement & computational accuracy, visualization & perception, problem solving, and technical communication skills will be developed.

`CTE` `ADVT`

M21 | **Engineering Design/CAD 2**   0.5sem

This course is intended to continue the development of the student's competencies in the language of engineering but with an increased emphasis on developing an in-depth understanding of specialty topics such auxiliary representation, intersections & development, threads & fasteners, assembly drawing, charts, graphs & diagrams. Although instrument drawing will continue, increased understanding of CAD operations & techniques will be developed.

Prerequisite(s): *Engineering Drawing/CAD 1*

`CTE` `ADVT`

M22 | **Architect Design/Development 1**   0.5sem

This course provides students with an opportunity to develop skill in the preparation of architectural drawings using traditional technical drawing equipment as well as computer aided design (CAD) applications such as ArchiCad and Google Sketchup. This course is an advanced level course for those students that are interested in a technology-based career path such as civil engineering, architecture, construction, construction supervision, and technical design.

Recommended: *Engineering Drawing/CAD 1*

`DUAL` `ADVT`

M23 | **Architect Design/Development 2**   0.5sem

This course is intended to continue the development of competencies learned in level 1 while refining and enhancing their drawing skills through continued practice and more rigorous experiences with CAD software and content specific to detail drawing, pictorial rendering, and model building. Students that complete Engineering Drawing/CAD & Design 1 & 2 and complete Architect Design/Development 1 & 2 with at least a B average may qualify to receive Anne Arundel Community College credit.

Prerequisite(s): *Architect Design/Development 1*

`DUAL` `ADVT`

M25 | **Honors Principles of Engineering**   [FY] 0.5/sem

This course provides an overview of engineering and engineering technology and includes the development of problem-solving skills used to solve real-world engineering problems. The course of study includes: Overview & Perspective of Engineering, Design Process, Communication & Documentation, Engineering Systems & Manufacturing Processes, Materials & Materials Testing, Thermodynamics, Engineering for Quality & Reliability, and Dynamics. Available at Chesapeake Science Point, Crofton, Glen Burnie, Meade, Severna Park and South River High Schools only.

`CTE`

M26 | Honors Engineering Design (IED) [FY] 0.5/sem

This course is part of the PLTW pre-engineering program of study and is a course that develops student's problem-solving skills, with emphasis on visualization and communication skills using AutoCAD Inventor 3-D solid modeling software. Units of study include: Introduction to Design, Student Portfolio Development, Sketching & Visualization, Geometric Relationships, Modeling, Assembly Modeling, Model Analysis & Verification, Model Documentation, Presentation, Production, and Marketing. Available at Crofton, Glen Burnie, Meade, Severna Park and South River High Schools only.

CTE

M27 | Honors Digital Electronics [FY] 0.5/sem

This course is the third course of a pre-engineering completer program known as Project Lead the Way. In this course, students investigate topics in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices. Available at Glen Burnie, Meade, Severna Park and South River High Schools only.

Prerequisite(s): *Honors Principles of Engineering and Honors Engineering Design*

CTE

M28 | Honors Computer Integrated Manufacturing [FY] 0.5/sem

This is a Project Lead the Way (PLTW) course that applies principles of robotics and automation. The course builds on computer solid modeling skills developed in Honors Engineering Design. Students use CNC equipment to produce actual models for their three-dimensional designs. Available at Meade High School only.

Prerequisite(s): *Honors Principles of Engineering, Honors Engineering Design, and Honors Digital Electronics*

CTE

M29 | Honors Environmental Sustainability [FY] 0.5/sem

Students in this course investigate and design solutions in response to real-world challenges related to clean and abundant drinking water, food supply issues, and renewable energy. Applying their knowledge through hands-on activities and simulations, students research and design potential solutions to these true-to-life challenges.

Prerequisite(s): *Honors Principles of Engineering and Honors Engineering Design*

CTE

M30 | Honors Aerospace Engineering [FY] 0.5/sem

This is a Project Lead the Way (PLTW) course that will introduce students to the world of aeronautics, flight, and engineering. Students will apply scientific and engineering concepts to design materials and process that directly measure, repair, improve, and extend systems in different environments. The curriculum sequence includes experiences from the diverse fields of Aeronautics, Aerospace Engineering and related areas of study such as aerospace information systems, star sailing or astronautics rocketry, propulsion, and the physics of space science, space life sciences (BioSpace), principles of aeronautics, structures and materials, and systems engineering. Available at Meade, Severna Park, and South River High Schools only.

Prerequisite(s): *Honors Principles of Engineering and Honors Engineering Design*
Recommended: *Algebra 2*

CTE

M32 | Technology of Flight 0.5sem

This course provides the student with a study of the core technologies used in the aviation and aerospace enterprise. Students will follow the engineering design process to design, build, and test a number of aircraft and rockets.

ADVT

M42 | Manufacturing & Construction Technology 0.5sem

This course focuses on hands-on, problem-based activities to introduce manufacturing and construction concepts related to the Standards for Technological Literacy. During each Learning Unit, students are asked to use a four-phase learning cycle to develop plausible solutions to related Primary Challenges. Designing a Custom Family Home for a Client is one example of a Primary Challenge experienced in this course.

ADVT

M44 | Honors Engineering Design & Development (EDD)
[FY] 0.5/sem

Students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by a community mentor. They must present progress reports, submit a final written report and defend their solutions to a panel of outside reviewers at the end of the school year. Available at Glen Burnie, Meade, Severna Park and South River High Schools only.

Prerequisite(s): *Honors Principles of Engineering, Honors Engineering Design, and Honors Digital Electronics*

CTE

M49 | Honors Civil Engineering & Architecture [FY] 0.5/sem

Students apply what they learn about various aspects of civil engineering and architecture to the design and development of a property. Working in teams, students explore hands-on activities and projects to learn the characteristics of civil engineering and architecture. In addition, students use 3D design software to help them design solutions to solve major course projects. Students learn about documenting their project, solving problems and communicating their solutions to their peers and members of the professional community of civil engineering and architecture. This course is designed for 11th or 12th grade students.

Prerequisite(s): *Honors Principles of Engineering and Honors Engineering Design*

CTE

M52 | Marine Technology 0.5sem

This course provides the student with an in-depth study of the core technologies while investigating topics that include: Historical Perspective, Design, Hydrodynamics, Hydrostatics, Propulsion Systems, Materials, Electronics, Navigation Systems, and Careers. Students will experience the engineering design process as they design, construct, test, and analyze a propeller driven watercraft. Both computer simulations and hands-on experiences are an integral part of this course.

ADVT

M35 | Honors Principles of Biomedical Science [FY] 0.5/sem

This course introduces the biomedical sciences through exciting hands-on projects and problems. Student work involves the study of human medicine, research processes and an introduction to bioinformatics. Key biological concepts including homeostasis, metabolism, inheritance of traits, feedback systems, and defense against disease are embedded in the curriculum. Engineering principles including: the design process,

feedback loops, fluid dynamics, and the relationship of structure to function are incorporated in the curriculum where appropriate. Available at Glen Burnie and Northeast High School only.

Prerequisite(s): *Honors Principles of Engineering*

CTE

M36 | **Honors Human Body Systems**   0.5sem

This course will engage students in the study of basic human physiology, especially in relationship to human health. Students will use a variety of monitors to examine body systems (respiratory, circulatory, and nervous) at rest and under stress, and observe the interactions between the various body systems. Available at Glen Burnie and Northeast High School only.

Prerequisite(s): *Honors Principles of Biomedical Sciences*

CTE

M37 | **Honors Medical Interventions**   [FY] 0.5/sem

This course will engage students in the study of basic human physiology, especially in relationship to human health. Students will use a variety of monitors to examine body systems (respiratory, circulatory, and nervous) at rest and under stress, and observe the interactions between the various body systems. Available at Glen Burnie and Northeast High School only.

Prerequisite(s): *Honors Principles of Biomedical Sciences*

CTE

M77 | **Introduction to Construction Design and Management** 1.0sem

This course provides an overview of the design and construction process as well as an introduction to the many career options within the field of construction. Students will be introduced to core concepts in design and construction including construction methods and materials; fundamental elements of design; and innovative technologies including Green Construction and Design. Students will be introduced to design software as they complete basic design projects, such as a bridge design, floor plans and elevation plans. This course also includes career exploration activities and research regarding the construction industry. Available at Arundel High School only.

CTE

M78 | **Principles of Construction Design**   1.0sem

This course provides students with an in-depth understanding of the construction design process. Students will complete a series of increasingly complex construction design projects in which they incorporate all aspects of the construction process, including zoning and regulation requirements; construction methods and materials, energy conservation; surveying; and project planning. Students will use design software to generate site plans (topography) as well as detailed building plans. Portfolios are used to show the developmental stages of a design project. Students will work in teams to develop each aspect of a construction project including developing a proposal, site plans, and construction management documents. Available at Arundel High School only.

CTE

M79 | **Honors Advanced Design and 3-D Modeling**   [FY] 0.5/sem

Students will work in teams to fully develop designs and a construction management plan for a pre-determined site. In this year-long project, students begin with the legal description and topography of the site and create a proposal for development. The construction design project must meet the client's needs, budget, and the site characteristics. Students will generate a series of plans to be included with the proposal for submission to an industry review panel for approval. Upon

completion of the course, students will demonstrate advanced design/drafting skills and be prepared for the AutoCAD certification exam. Available at Arundel High School only.

CTE

M80 | **Honors Advanced Construction Management**   [FY] 0.5/sem

This course builds on an understanding of the construction design process to advanced knowledge and skill in construction management. In this course, students will be required to work in teams to complete a project from existing plans. The year-long project will focus on building codes and standards, coordination of the construction process, estimating, planning and scheduling; and site management. Students will complete a portfolio of their design and construction management projects for review by an industry panel. Available at Arundel High School only.

CTE

M53 | **Introduction to Agriculture, Food & Natural Resources**
[FY] 0.5/sem

This course will introduce students to Agriculture, Food, and Natural Resources with "hands-on" activities and projects. Students' experiences will involve the study of communication, sciences of agriculture, plants, animals, natural resources, and agricultural mechanics. While surveying the opportunities available in agriculture and natural resources, students will learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions, and learning. Students will also explore career and post-secondary opportunities in each area of the course. This course is part of the Curriculum for Agricultural Science Education (CASE). Available at Southern High School and Phoenix Academy only.

CTE

M54 | **Honors Principles of Agricultural Sciences/Plants**   [FY] 0.5/sem

This course will introduce students to the principles of Agricultural Science and plants. Students' experiences will involve the study of plant anatomy and physiology, classification, and the fundamentals of production and harvesting. Students will research the value of plant production and its impact on the individual, the local, and the global economy. This course is part of the Curriculum for Agricultural Science Education (CASE). Available at Southern High School and Phoenix Academy only.

Prerequisite(s): *Introduction to Agriculture, Food and Natural Resources*

CTE

M55 | **Honors Principles of Agricultural Sciences/Animal** [FY] 0.5/sem

This course will introduce students to various experiences in animal science concepts with "hands-on" activities, projects, and problems. Students' experiences will involve the study of animal anatomy, physiology, behavior, nutrition, reproduction, health, and marketing. Students will acquire skills in meeting the nutritional needs of animals while developing balanced, economical rations, as well as select animal facilities and equipment that provide for the safe and efficient production, housing, and handling of animals. This course is part of the Curriculum for Agricultural Science Education (CASE). Available at Southern High School and Phoenix Academy only.

Prerequisite(s): *Introduction to Agriculture, Food and Natural Resources*

CTE

M56 | **Honors Animal & Plant Biotechnology**   [FY] 0.5/sem

This is a specialization course in the CASE Program of Study. It provides students with experiences in industry appropriate applications of biotechnology related to plant and animal agriculture. Students will complete hands-on activities, projects, and problems designed to build content knowledge and technical skills in the field of biotechnology. Available at Southern High School and Phoenix Academy only.

Prerequisite(s): *Introduction to Agriculture, Food and Natural Resources followed by either Principles of Agricultural Sciences/ Animal or Principles of Agricultural Sciences/Plant*

`CTE`

M58 | **Honors Agricultural Business Research & Development**
[FY] 0.5/sem

This course is the capstone course designed to culminate students' experiences in agriculture, based on the pathway of study they pursued. This class is taken as the fourth credit for the completer program. Students need to have credits in M53, M56 and either M54 or M55 to be eligible for the capstone course. Research and Development could be taken in tandem with Biotechnology as a senior completing the program in three years. Available at Southern High School and Phoenix Academy only.

`CTE`

M87 | **Department Aide—Technology Education**   No credit

Technology Education Aide courses offer students the opportunity to assist instructors in preparing and organizing course curricula. Students may provide tutorial or instructional assistance to other students.

Dance

In Anne Arundel County, all Dance courses are offered on an elective basis for Fine Arts credit, Physical Education elective credit, or General Elective credit, based on the student's academic needs. Dance courses include studies in the major areas of dance — technique, history, creating original dance movement, the choreographic process, aesthetic criticism, and performance. The National Core Arts Standards and the Maryland State Dance Standards are the basis for the high school dance curriculum that includes creative thinking, expression through movement, and appreciation for the art form as integral parts of the program.

All Dance students perform in semester dance concerts. Students learn to appreciate dance as an art and as a valuable aspect of life, become a knowledgeable arts audience, and have opportunities to work cooperatively to create and produce dance.

There are three dance pathways:

Foundations of Dance and Dance 2–4 classes

- for students, beginners through advanced, who are interested in dance. No audition is required however teacher approval is required to bypass Foundations of Dance.

Foundations of Dance for Athletes and Dance for Athletes 2-4 classes

- for those students wishing to use dance training techniques to enhance athletic performance. No audition is required. Prerequisite or Teacher approval is needed to bypass Foundations of Dance for Athletes.

Honors Dance Company 1–4 classes

- for serious dance students who are selected by audition. Dance Company is co-curricular. Students have both an academic class and an after-school rehearsal and performance obligation in order to receive honors credit.

Fine Arts Graduation Requirement — 1 Credit

Courses that meet the Fine Arts requirement can be found in the Art, Dance, English, and Music program sections.

High Engagement/Passion Courses

Storytelling through the Arts

L84041/2/3/4 | Instadance—Telling Stories through Movement
0.25qtr

The Instadance course will allow students to explore storytelling through the creative movement process. Students will have the opportunity to work independently or in groups to tell their stories through performance while documenting the process with video technology applications. The course will allow students to research a topic or theme and, through the creative process, students will choreograph their story. With the use of video technology applications, students will record their work for public exhibition.

L02 | Foundations of Dance 0.5/sem

Foundations of Dance focuses on beginning levels of dance technique for a variety of dance styles alignment, dance history, physiology, theory, dancer health, dance careers, choreography, production, performance, and aesthetic criticism.

DUAL

L03 | Dance 2–4 0.5/sem

Dance 2, 3, & 4 emphasizes increased technical proficiency in dance styles progressing toward focus on dance as a performing art and means of communication. Students continue to increase knowledge of dance history, theory, choreography, physiology, dancer health, production, performance and aesthetic criticism.

Prerequisite(s): *Foundations of Dance or prior permission from the teacher.*

L11 | Foundations of Dance for Athletes 0.5/sem

Foundations of Dance for Athletes focuses on enhancing and refining athletic performance through dance techniques, conditioning, and training in the art of dance. Students will increase knowledge of physiology, dancer health and aesthetic criticism, as well as participate in a dance concert.

L12 | Dance for Athletes 2–4 0.5/sem

Dance for Athletes 2, 3, 4 emphasizes continued skill development and refinement through a variety of higher-level movement patterns and dance techniques. Students continue to focus on physiology, dancer heath and aesthetic criticism. Student-originated performance projects and concert performance occur at these levels.

Prerequisite(s): *Foundations of Dance for Athletes or prior permission from the teacher.*

L18 | Honors Dance Company 1–4 0.5/sem

Dance Company classes are performance emphasis and goal-based with students involved in research, choreography, and every aspect of dance production. Technical proficiency, academic knowledge, portfolio building, continued improvement and growth in dance, and public dance performances are expected. For students to receive honors credit, they must participate in the after school component of this course.

Prerequisite(s): *Audition*

L10 | Unified Dance and Leadership 1–4 0.5/sem

This course will allow students with and without disabilities to focus on beginning levels of dance technique and creative movement in a collaborative and cooperative environment. Students will explore leadership characteristics, communication and listening skills, group work, and critical thinking skills in order to provide support in an inclusive environment.

English

Strong literacy skills in reading, writing, listening, and speaking are critical to career and college success in the 21st century. The program of studies in English is designed to cultivate in each of our students' proficiency in and appreciation of language and literature. Texts selected for study reflect a variety of genres, cultures, and time periods. Texts are selected based on complexity and literary merit.

Students must earn a minimum of four credits in English in order to graduate. The English program further provides a rich array of electives such as theatre, journalism, media, and all aspects of publication. Students are encouraged to participate in a rigorous program of required English courses and English electives.

English Graduation Requirements — 4 Credits

- English 9
- English 10
- English 11 (or an AP English)
- English 12 (or an AP English)

Required Assessments

All students must take and pass the Maryland Comprehensive Assessment Program (MCAP) in English 10.

High Engagement/Passion Courses

Storytelling through the Arts

A84041/2/3/4 | **Telling Stories in One Act**   0.25qtr

The Telling Stories in One Act course allows students to explore storytelling through the elements of theatre and drama. Students will have the opportunity to work independently or in groups to share aspects of their personal story or retell and/or perform elements of existing narratives. The course will allow students to research existing plays about a specific topic or theme which tells someone's story and perform that story for an audience. Students may also write a one-act play about a chapter of their own life. Other elements of theatre that students will explore include basic acting skills, characterization, movement, scene study, staging, and improvisation.

A99 | **Daily English 9 w/Reading** [FY] 0.5 English & 0.5 Elective/sem

This daily course (meeting on both A and B days) is designed for students who need additional reading support. The course builds upon students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and includes the four aspects of language use (reading, writing, speaking, and listening) enhanced with research-based reading strategies for comprehension and fluency practice.

NCAA

A090 | **English 9**   [FY] 0.5/sem

English 9 builds upon students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and includes the four aspects of language use: reading, writing, speaking, and listening. This course introduces and defines various genres of literature, including world literature, from a spectrum of time periods with writing expectations aligned to reading selections.

NCAA

A097 | **Honors English 9**   [FY] 0.5/sem

Honors English 9 builds upon students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and includes the four aspects of language use: reading, writing, speaking, and listening. This course introduces and defines various genres of literature, including world literature, from a spectrum of time periods with writing expectations aligned to reading selections. Honors English 9 challenges students to apply analytic and critical skills to complex texts and to complete rigorous assignments. Students may be assigned reading over the preceding summer.

NCAA

W80410 | **Accessing English 9**   1.0sem

Taken during the first semester of the freshman year, access to English 9 is a highly differentiated reading intervention that accelerates instruction and allows struggling readers to experience success. The program directly addresses individual needs through adaptive and instructional software, high-interest literature, and direct instruction in reading, writing, and vocabulary skills. This reading intervention is provided for students who have been identified as needing focused and intensive reading instruction in order to access the English 9 curriculum. Students are placed in this program only after testing or evaluation.

A09031 | **Daily English 9**   1.0sem

Daily English 9 builds upon the Access to English 9 course as well as students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing. Daily English 9 includes the four aspects of language use: reading, writing, speaking, and listening. This course introduces and defines various genres of literature, including world literature, from a spectrum of time periods with writing expectations aligned to reading selections.

Prerequisite(s): *Accessing English 9*

NCAA

A109 | **Daily English 10 w/Reading** [FY] 0.5 English & 0.5 Elective/sem

This daily course (meeting on both A and B days) is designed for students who need additional reading support. Students learn about the different purposes and audiences of written compositions by writing argumentative, critical, and creative multi-paragraph essays and compositions. Through the study of various genres of literature, including world literature, from a spectrum of time periods, students can improve their reading comprehension and develop the skills to determine the author's intent and theme and to recognize the techniques used by the author to express his or her message. Students receive additional support for reading that includes research-based reading strategies and comprehension and fluency practice.

NCAA

A10 | **English 10**   [FY] 0.5/sem

English 10 offers a balanced focus on composition and literature. Students learn about the different purposes and audiences of written compositions by writing argumentative, critical, and creative multi-paragraph essays and compositions. Through the study of various genres of literature, including world literature, from a spectrum of time periods, students can improve their reading comprehension and develop the skills to determine the author's intent and theme and to recognize the techniques used by the author to communicate his or her message.

NCAA

A107 | **Honors English 10**   [FY] 0.5/sem

In Honors English 10 students apply critical theories and rhetorical analysis to literature and composition using challenging texts to practice critical reading; analyze themes, structures and details; apply grammar; and use research for oral and written compositions. Texts represent a variety of genres of literature, including world literature, from a spectrum of time periods. Students may be assigned reading over the preceding summer.

NCAA

A110 | **English 11**   [FY] 0.5/sem

In English 11 students continue to develop reading and writing skills. Students read a variety of genres of literature, primarily American, from a spectrum of time periods. Emphasis is placed on literary conventions and stylistic devices. Through frequent writing and research assignments based upon readings, students strengthen skills in logical writing patterns, word choice, usage, and techniques of using evidence from research.

NCAA

A117 | **Honors English 11**   [FY] 0.5/sem

In Honors English 11 students read and analyze challenging texts representing a variety of genres of literature, primarily American, from a spectrum of time periods. Emphasis is placed on literary conventions, stylistic devices, and critical analysis. Through frequent writing and research assignments based upon readings, students strengthen skills in logical writing patterns, word choice, usage, and techniques of using evidence from research. Students receive preparation for AP English courses, including timed writing opportunities with authentic AP questions. Students may be assigned reading over the preceding summer.

NCAA

A120 | **English 12**   [FY] 0.5/sem

English 12 blends composition and literature into a cohesive whole as students write multi-paragraph critical and comparative analyses of selected literature, including contemporary works, continuing to develop their writing and language skills. Students demonstrate increasing independence in reading, writing, research, speaking, and listening.

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A127 | **Honors English 12**   [FY] 0.5/sem

Honors English 12 blends composition and literature into a cohesive whole and continues to develop students' skills in writing, research, language, speaking, and listening. Students demonstrate increasing independence in critical and comparative analyses of selected challenging literature, including contemporary works, and in applying writing and language skills to develop multi-paragraph essays and presentations based on their reading and research. Students may be assigned reading over the preceding summer.

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A19 | **American Film Studies**   0.5sem

This course is a survey of American Film's history ranging from the late 19th Century to today, as well as a study of the technique, fine art, narrative form, mode, craft, and influence of American cinema. The course will include screenings, lectures, discussion, exploration, investigation, analysis, and creation of film.

Prerequisite(s): *English 9 (C or better)*

A18 | **Honors Film & Writing**   0.5sem

Film and Writing is a course to help students gain a deeper understanding of difficult concepts. This course is designed to use film as a springboard for high-level discussion, reading and writing. The course allows students to become familiar with the interpretive language of film, to cultivate the reading of film as text, and to create writing artifacts that critically analyze film.

Prerequisite(s): *English 10 (C or better)*

A138 | **AP English Literature & Composition**   [FY] 0.5/sem

In this culminating, college-level English course, students apply critical and analytical skills to classical and contemporary works of romance, comedy, tragedy, and satire/irony. Students learn through close reading, explication, comparative analysis, seminar, and extensive writing about literature. Students are required to complete outside reading during the preceding summer. AP English Literature and Composition prepares students for success on the AP exam and for effective reading and writing in college and beyond.

Prerequisite(s): *English 10 (Successful passage of MCAP)*

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A136 | Seminar: AP English Literature & Composition
[FY] 0.5 elective credit/sem

This course prepares those students who require additional practice, guidance, and experiences beyond those available in their AP English Literature and Composition course, preparing them for success on the AP English Literature and Composition exam and for effective reading and writing in college and beyond. Students receive intensive assistance in the concepts and skills tested by the AP English Literature and Composition exam.

Concurrent enrollment: *AP Literature & Composition*

A208 | AP English Language & Composition [FY] 0.5/sem

Students take this course in junior or senior year to study rhetoric, composition, and grammar at the university level. Students analyze authors' language, detail, style, audience, and patterns of rhetoric. Students complete required reading during the preceding summer. The reading and writing skills honed in this course complement the skills required in AP English Literature and Composition. This course prepares students for the AP exam and for effective reading and writing in college and beyond.

Prerequisite(s): *English 10 (Successful passage of MCAP strongly recommended)*

`NCAA`

A206 | Seminar: AP English Language & Composition
[FY] 0.5 elective credit/sem

This course prepares students who require additional practice, guidance, and experiences beyond those available in their standard AP English Language and Composition course. Students receive assistance in analysis and interpretation of rhetoric, composition, and research, for mastery of language and grammar skills, and for self-evaluation of their reading and writing. Students also receive additional preparation for the AP exam.

Concurrent enrollment: *AP English Language & Composition*

A14 | Journalism 0.5sem

Students explore the role of journalists in a free society in terms of journalistic philosophy, ethics, law, and history. They participate and reflect upon all the components of journalism such as design and opinion. This is the foundation course for Newspaper 1 and Yearbook 1.

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A17 | Creative Writing 0.5sem

Creative Writing offers students the opportunity to develop and improve their technique and individual style in poetry, short story, drama, essays, and other forms of prose. Students study exemplary writing from various genres to obtain a fuller appreciation of the form and craft. Using reading and journal keeping as sources of ideas, students pursue individual interests and develop their skills.

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A21 | Academic Writing 0.5sem

Students learn and practice modes of writing most common to AP and college courses: exposition, argument, on demand, and documented writing. Through frequent practice and guided revision, students improve the unity, coherence, and emphasis in their writing while continuing to develop their mastery of word choice, sentence fluency, and conventions. This course is intended as a preparation or companion course for any AP course.

A06 | Theatre Arts 1 0.5/sem

This course is a one or two semester elective introduction to theatre as a collaboration among actors, directors, producers, and technicians. It focuses on the process of theatrical production both on and backstage. Students develop body movement, voice, and character; direction; set, costume, light and sound design; and other theatrical skills and knowledge. By applying creative dramatics, using multi-media, performing, and creating a design portfolio, students demonstrate and extend their theatrical skills.

`DUAL`

A07 | Theatre Arts 2 0.5/sem

Students specialize in areas of interest and apply this specialty working on production teams to design and perform excerpts from Lapine and Sondheim's Into the Woods. Students form theatre companies within the class to apply their skills to a complete, student-selected, musical script within the class, and to participate in a full production at their school. Theatre Arts 2 meets and exceeds the State of Maryland Essential Learner Outcomes for Theatre.

Prerequisite(s): *Theatre Arts 1*

A08 | Theatre Arts 3 0.5/sem

Theatre Arts 3 allows students to expand their understanding of theatre beyond improvisation and script reading, which are the focuses of Theatre Arts 1 and Theatre Arts 2. In this class students explore the historical aspects of theatre, examine the business side of theatrical production, build portfolios, and prepare for auditions. This class prepares students for the world of theatre beyond acting.

Prerequisite(s): *Theatre Arts 2*

A29 | Media Production 1 0.5sem

Media Production 1 surveys the field of television and introduces students to basic studio operations. Students participate in both the business and creative sides of television production: soliciting projects and funding, acting, directing, producing, and applying audio and video techniques.

A30 | Media Production 2 0.5sem

Media Production 2 extends and applies knowledge gained in Media Production 1, especially in extending the course beyond television where possible, focusing on media projects, film study, and career exploration.

Prerequisite(s): *Media Production 1*

A35 | Newspaper 1–4 0.5/sem

Students design a school newspaper by collaboratively learning and applying the following aspects of production: national criteria, codes of ethics, coverage, writing and editing, graphics, design, publishing software, organization of staff and resources, business operations, and budgeting. Students who elect to take the course more than once refine and expand their knowledge and skills, accept increasing responsibility for production, and assume leadership roles.

Prerequisite(s): *Journalism*

`DUAL`

A40 | **Yearbook 1–4** 0.5/sem

Students publish a yearbook by collaboratively learning and applying the following aspects of production: technology, theme, design, layout, graphics, writing and editing, photography, organization of staff and resources, business operations, and budgeting. They analyze publications using national criteria and develop a code of ethics. Students who elect to take the course more than once refine and expand their knowledge and skills, accept increasing responsibility for production, and assume leadership roles.

Prerequisite(s): *Journalism*

A45 | **Literary Magazine 1–4** 0.5/sem

Students study/apply design fundamentals and advanced publishing techniques to contribute to a literary publication with a thematic concept. They evaluate a variety of professional and student media, develop and apply a code of ethics, and create plans to ensure diversity and wide participation. Students who elect to take the course more than once refine and expand their knowledge and skills, accept increasing responsibility for production, and assume leadership roles.

Recommended: *Journalism*

A51 | **Speech & Debate 1–2** 0.5/sem

Students perform informative and persuasive speaking, practice extemporaneous and oral interpretation skills, collect evidence from authoritative sources, and analyze arguments and strategies as preparation for interscholastic competition culminating in debate. Students develop leadership skills and initiative in competitive speaking. Speech and Debate provides strong background for careers in public relations, law, politics, or communications. Students who elect to take the course for a second semester enhance and deepen their skills in expressive and persuasive speaking.

NCAA

A747 | **Honors Contemporary Voices** 0.5sem

College-bound juniors and seniors analyze issues, perspectives, and author's craft in a range of multicultural works through guided and independent study, seminar and writing. While the subjects may be historical, the voice of each author is decidedly contemporary in that it gives full expression to a frank examination of human sexuality, of violence, and of social and economic status; therefore, parents must give written permission to register a student in this course.

Prerequisite(s): *Written parent permission required. Successful completion of MCAP, and a 'C' or better in English 10 strongly recommended.*

NCAA DUAL

W800 | **Read 180 A** [FY] 0.5/sem

Read 180 is a highly differentiated reading intervention that accelerates instruction and allows struggling readers to experience success. The program directly addresses individual needs through adaptive and instructional software, high-interest literature, and direct instruction in reading, writing, and vocabulary skills. This reading intervention is provided for students who have been identified as needing focused and intensive reading instruction in addition to their regular English class. Students are placed in this program only after testing or evaluation.

W82 | **Read 180 B** [FY] 0.5/sem

In this course, students continue their work in the Read 180 program, a highly differentiated reading intervention that directly addresses individual needs through adaptive and instructional software, high-interest literature, and direct instruction in reading, writing, and vocabulary skills. This reading intervention is provided for students who have been identified as needing focused and intensive reading instruction in addition to their regular English class. Students are placed in this program only after testing or evaluation.

W99 | **Strategic Reading Supports** [FY] 0.5/sem

Approved alternate intervention programs are available for individual students with unique learning needs requiring a reading intervention in addition to receiving services for special education. Enrollment in an alternative reading intervention program requires approval from resource staff from the Division of Curriculum and Instruction on an individual student, case-by-case basis. An alternative program may be necessary when a student's needs in reading require an intervention that is not one of the Tier 2 or Tier 3 interventions listed on the AACPS Reading Continuum (credit bearing coursework).

W78 | **Steps for Striving Readers** 0.5 elective credit/sem

This course is designed to provide the necessary reading supports for students requiring specific decoding strategies and skills as they grow to become proficient readers.

A87 | **Department Aide—English** No credit

English Aide courses offer students the opportunity to assist instructors in preparing and organizing course curricula. While serving in this capacity, students may provide tutorial or instructional assistance to other students.

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ESOL

In order to support the development of linguistically diverse students as bi-literate participants in global society, the English Language Acquisition Program offers English for Speakers of Other Languages (ESOL) courses.

Through an asset-based approach to language, ESOL courses foster the development of academic literacy, mathematical competence and social growth among English learners. Instruction in listening, speaking, reading and writing skills supports English learners in obtaining equitable access to grade-level academic curriculum.

Initial placement in ESOL courses is determined by English proficiency scores as measured by the WIDA ACCESS for ELLs Assessment. Subsequent course placement is determined by ELA teacher and counselor recommendation, based on credit accumulation and English proficiency testing. Internationally registering students who earn a 3.5 or above on the WIDA Screener placement test may be awarded English credit for international study of English.

The ESOL I, II, III, IV, and V courses may be applied toward high school graduation credit as either *English* or *World Classical Language* credit. AACPS allows for a total of two ESOL credits to be applied as English credit. English Learners must take English 10 and at least one other English course (English 9, 11, or 12) in order to meet graduation requirements. ESOL credits not used toward English credit may be applied for World Classical Languages credit. It is still recommended that English learners participate in advanced WCL courses in order to strengthen literacy in the native language.

E94 | **ESOL Newcomer**   [FY] 0.5/sem

English Learners in the "entering phase" are introduced to essential aspects of the English language. The ESOL Newcomer course develops students' foundational literacy skills and introduces students to the academic expectations of U.S. high schools. Biliteracy supports are available to English Learners. The ESOL Newcomer course should be offered concurrently with ESOL I only for English Learners who have experienced prolonged educational interruptions or who are pre-literate in their native language.

E90 | **ESOL I**   [FY] 1.0/sem

English Learners in the "entering phase" are introduced to essential aspects of the English language. The ESOL I course develops students' academic language ability with intensive support. Instruction in social and academic language is based on the five WIDA Standards. Students begin to express academic ideas in English using phrases and short sentences. Students to begin to read and understand multiple related simple sentences, grammatical structures and general content expressions in English. Biliteracy supports are available to English Learners. The course provides students with cultural knowledge to support their transition to the U.S. educational system.

Prerequisite(s): *ESOL I is an appropriate initial placement for students whose English proficiency level is 2.0 or below as measured on the WIDA ACCESS for ELLs assessment.*

E91 | **ESOL II**   [FY] 1.0/sem

English Learners in the "emerging phase" begin to communicate using essential aspects of the English language. The ESOL II course develops students' ability to access grade-level content material with substantial linguistic support. Instruction in social and academic language is based on the five WIDA Standards. Students produce grammatically complex sentences that express multiple related ideas. Students employ repetitive structures and sentence patterns and appropriately use language conventions. Students read and understand language across content areas. Students comprehend and produce common forms and expressions in English. Biliteracy supports are available to English Learners.

Prerequisite(s): *ESOL II is an appropriate initial placement for students whose English proficiency level is 2.1 - 2.6 as measured on the WIDA ACCESS for ELLs assessment, or for students who have completed ESOL 1.*

E92 | **ESOL III**   [FY] 0.5/sem

English learners in the "developing phase" consistently integrate aspects of English into their communication. The ESOL III course develops students' ability to access grade-level content material with some linguistic support. Instruction in social and academic language is based on the five WIDA Standards. Students produce simple and compound grammatical structures with occasional variation. Students refine their ability to employ repetitive structures and sentence patterns and to appropriately use language conventions. Students read and understand specific content language, including cognates and expressions with multiple meaning across content areas. Biliteracy supports are available to English Learners.

Prerequisite(s): *ESOL III is an appropriate initial placement for students whose English proficiency level is 2.8 - 3.4 as measured on the WIDA ACCESS for ELLs assessment, or for students who have completed ESOL 2.*

English Language Acquisition: Considerations of Proficiency and Course Placement

Course placements for English Learners should be decided based on a dynamic evaluation of the student's English proficiency and grade level. The counselor must balance the readiness of the English learner to participate in core content courses with the grade-appropriate graduation requirements. English Learners enter high school at various proficiency levels, often with international credit, therefore the developmental course sequence will vary according to student need. Elective courses with reduced linguistic demands and greater context embedded learning opportunities shall be considered for English learners in the Entering and Emerging phases. World Classical Language courses in the student's native language shall be offered at the appropriately advanced level. As students progress toward higher proficiency in English, they should be placed in courses more closely approximating the standard grade level sequence of courses taken by their non-English Learner peers.

Suggested Course Placement by English Proficiency

	Grade Level	ESOL	ESOL/English	Social Studies	Mathematics	Elective	Science	Elective	Elective	Elective
Entering English Proficiency	9th	ESOL I	ESOL I	ESOL Social Studies 1	HS Transitional Math 1	Elective 1 WCL	Science Research/ ESOL Science	Fine Arts	Fine Arts PE	Elective 3 FACS
Emerging English Proficiency	9th/10th	ESOL II	ESOL II	ESOL Social Studies 1 or Elective	HS Transitional Math 2	Elective 1 WCL	Science Research/ ESOL Science	Elective 2	Elective 2 Fine Arts	Elective 3 Health
Developing English Proficiency	9th/10th/11th	ESOL III	English 9	History of the United States	Algebra 1*	Algebra 1*	Environmental Science	Elective 1	Elective 1 WCL	Elective 2 Technology
Expanding English Proficiency	9th/10th/11th	ESOL IV	English 9, 10, or 11*	US Government*	Geometry	Elective 1 WCL	Biology*	Elective 2	Elective 2	Elective 3
Bridging English Proficiency	9th/10th/11th/12th	ESOL V	English 9, 10, 11 or 12	World History	Algebra 2 or Bridge to Algebra 2	Elective 1	Chemistry or Science Elective	Elective 2	Elective 2	Elective 3

*State Assessed Courses required for graduation (English 10, Algebra I, US Government, MISA Pathway Science Courses) must be completed by the end of Grade 11.

Notes: 1. ESOL I, II, III, IV or V may be counted for up to two English credits toward graduation, in combination with English 10 and another English course (9, 11, or 12).

2. Transitional Math at the high school level must be taught by a certified Math teacher. Transitional Math can count for up to 2 mathematics credits.

3. ESOL I, II, III, IV or V course credits not applied as English credit may be applied as World Classical Languages credit. English Learners may still enroll in advanced WCL courses to support native language literacy development. English Learners may also choose to pursue WCL study of a third language.

E93 | **ESOL IV**   [FY] 0.5/sem

English learners in the "expanding phase" appropriately apply aspects of English in their communication. The ESOL IV course develops students' ability to participate in grade-level content tasks with minimal linguistic support. Instruction in social and academic language is based on the five WIDA Standards. Students speak and write with an advanced fluency, producing multiple, grammatically complex sentences. Students produce and refine comprehension of technical and abstract content-area language. Students process discourse with complex sentence structures. Students approach native-like fluency in English. Biliteracy supports are available to English Learners.

Prerequisite(s): *ESOL IV is an appropriate initial placement for students whose English proficiency level is 3.5 – 3.9 as measured on the WIDA ACCESS for ELLs assessment, or for students who have completed ESOL 3.*

E94 | **ESOL V**   [FY] 0.5/sem

English learners in the "bridging phase" masterfully use English in their communication. The ESOL V course refines skills in listening, speaking, reading and writing. Instruction in social and academic language is based on the five WIDA Standards. This course enhances literacy skills necessary for success in the content areas. Instruction focuses on non-fiction reading comprehension, academic writing, application of research and study skills including the use of technology to present research projects. Biliteracy supports are available to English Learners.

Prerequisite(s): *ESOL V is an appropriate initial placement for students whose English proficiency level is 4.0 or above as measured on the WIDA ACCESS for ELLs assessment, or for students who have completed ESOL 4.*

E96 | **ESOL Social Studies 1 (HS)**   [FY] 0.5/sem

ESOL Social Studies 1 is a content-based language development course for students new to the United States. Students will become familiar with the geography, history, culture and government of the United States. English learners will develop the background knowledge essential for their equitable participation in U.S. History and Government courses. This course provides an opportunity to build the capacity of immigrant students to draw on their unique international experiences in order to foster civic participation their new country. This course is most appropriate for students also enrolled in the ESOL I course.

C62 | **ESOL Science (Newcomers Only)**   [FY] 0.5/sem

This redeveloped course is for Newcomer English Learners that have been identified through the WIDA ACCESS Screener as being in the "entering" phase of English language development. The goal of this specially designed course is to provide the pre-requisite background knowledge, skills and vocabulary that English Learners need to be successful in Environmental Science and MISA. The course should be offered concurrently with ESOL I only for English Learners who have experienced prolonged educational interruptions. It is recommended that it be coupled with a semester of Science Research.

D80 | **Transition Math 9–12**   0.5/sem

High School Transitional Math is a math course to address the gaps in mathematics background for students with interrupted or limited formal education. Key mathematic concepts from grades 2 through Algebra including numbers, operations, decimals, fractions, ratios, percentages, number theory, integers, statistics, graphs, tables, and algebraic thinking are embedded with math language development and discourse instruction. Only ESOL students scoring below Algebra readiness on the International Math Assessment are to be scheduled for this course. Students may take this course repeatedly during high school, but only the first two instances of passing this course will count toward math graduation requirements.

E86 | **Career Literacy**   [FY] 0.5/sem

Career Literacy offers English Learners who are also participating in Career and Technology Education programs the opportunity to develop linguistic competency in using English for specific purposes, with attention to the technical vocabulary and terminology of the trades. Students will build the language and literacy skills needed for career readiness and professional success. Students will develop literacy skills required to successfully complete certification and licensing exams. This course is most appropriate for English Learners also in enrolled in ESOL and a CTE course.

Health

Health Education courses in Anne Arundel County are focused on building health-literate students. Health literacy refers to the ability to obtain, interpret, and understand basic health information and services. These comprehensive skills-based Health Education courses prepare students to become health-literate 21st Century learners as responsible members of society; self-directed learners, effective communicators, critical thinkers, and problem solvers.

Core health concepts include mental and emotional health, substance abuse, personal and consumer health, family life and human sexuality*, safety and injury prevention, healthy eating, and disease prevention and control. Skills Based Health Education supports and promotes health enhancing behaviors for all students. The health skills embedded in the units include analyzing influences, accessing information, interpersonal communication, decision making, goal setting, self-management, and advocacy.

*The Family Life and Human Sexuality unit was developed in accordance with the standards and procedures established in Maryland State Regulation 13A.04.18.01. Students may be excused from this unit of the program upon written request from their parent or guardian. Appropriate alternate instruction will be provided.

Health Graduation Requirement — 0.5 Credit

L70 | **Health**   0.5sem

This course is designed for students to learn and demonstrate health skills necessary to promote personal, family and community health and wellness. These health skills include analyzing influences on health behaviors, accessing valid information, interpersonal communication, decision making, goal setting and practicing health enhancing behaviors. Through these health skills, students acquire functional knowledge about the following core health concepts: substance abuse, personal and consumer health, family life and human sexuality*, safety and injury prevention, healthy eating, and disease prevention and control

L67 | **Introduction to Health Professions**   0.5sem

This course introduces students to professional health careers, medical terminology, and technology. Education and certification requirements for professional health careers are explored. Guest speakers provide work-based learning experiences.
Prerequisite(s): *Health*

L75 | **Human Sexuality**   0.5sem

This is an advanced level course with an emphasis on promoting life enhancing health behaviors relating to one's sexuality. Content focus is on sexuality, decision making, relationships, protecting one's own health, human reproduction, and social issues.
Prerequisite(s): *Health and Parental/Guardian Permission Form to be obtained from School Counseling*

L95 | **Drugs in Society**   0.5sem

This elective course will examine the issues related to use, misuse and abuse of tobacco, alcohol and other drugs. Students will take an in-depth look at specific substances of abuse and explore methods of prevention, intervention and treatment for addiction. An emphasis is placed on the skills needed to identify the impact of family, peers, culture, media and technology on drug use behaviors; knowing how to access valid drug prevention information, use interpersonal communication, decision-making, goal setting, and advocacy skills to apply personal health enhancing practices.
Prerequisite(s): *Health*

Mathematics

After completing the required courses of Algebra 1 and Geometry, students may choose from a set of rigorous courses such as Function Focus, Algebra 2, Foundations of College Algebra, Pre-Calculus, Statistical Analysis, Advanced Placement Statistics, Advanced Placement Calculus and/or Linear Algebra. The selection of the appropriate mathematics course for each student should be based on individual needs and educational goals. Students with an interest in mathematics should also consider new courses available in Global IT Applications and Global Technology Concepts.

Mathematics Graduation Requirements — 4 Credits

- Algebra 1
- Geometry
- 2 additional Mathematics courses

Note: A student must be enrolled in a mathematics class each of their high school years (see page 2).

Required Assessments

All students must take and pass the state high school assessment in Algebra 1.

Please check with your school counselor for the different opportunities to meet the high school assessment requirement.

High Engagement/Passion Courses

Math in the World Around Us

D32141/2/3/4 | **Function Focus: The World Around Us**   0.25qtr

This course will expose students to functions as they relate to applications of mathematics as they relate to the environment and physical world. Students will build on previously generalized knowledge about solving and graphing functions. These concepts are imbedded in a variety of real-life situations.
Prerequisite(s): *Algebra 1 & Geometry*

D32041/2/3/4 | **Function Focus: Man-made Mathematics**   0.25qtr

This course will expose students to functions as they relate to applications of mathematics as they relate to the mechanical and scientific world. Students will build on previously generalized knowledge about solving and graphing functions. These concepts are imbedded in a variety of real-life situations.
Prerequisite(s): *Algebra 1 & Geometry*

D84041/2/3/4 | **Introduction to Logic: Networks & Algorithms** 0.25qtr

Students will investigate topics of logistic to develop deeper thinking and reasoning skills. Students will study introductory Encryption Algorithms, Cryptography and Conversion of Bases as well as explore logic puzzles and games.
Prerequisite(s): *Algebra 1 & Geometry*

D84141/2/3/4 | **Introduction to Logic: Game Theory and Boolean**
0.25qtr

Students will investigate topics of logistic to develop deeper thinking and reasoning skills. Students will study introductory Boolean Logic and Graph Theory as well as explore logic puzzles and games.
Prerequisite(s): *Algebra 1 & Geometry*

D18 | **Daily Algebra 1**   [FY] 0.5 Math & 0.5 Elective/sem

This high school graduation requirement course serves as the gateway for advanced mathematical courses by providing a complete foundation of the topics in exponential equations, data analysis and modeling, quadratic functions and equations, and critical analysis and understanding of functions in comparison to linear functions. Instructional emphasis is placed on connecting the multiple representations of functions and interpreting the representations through applications. Graphing calculator is required. Students will actively engage in rigorous mathematical activities to attain mastery of course standards. This course serves as the traditional 9th grade daily Algebra 1 course.

NCAA

D27 | **Algebra 1**   [FY] 0.5/sem

This high school graduation requirement course serves as the gateway for advanced mathematical courses by providing a complete foundation of the topics in exponential equations, data analysis and modeling, quadratic functions and equations, and critical analysis and understanding of functions in comparison to linear functions. Instructional emphasis is placed on connecting the multiple representations of functions and interpreting the representations through applications. Graphing calculator is required. Students will actively engage in rigorous mathematical activities to attain mastery of course standards. This course, where offered, is delivered in every other day compressed format.

NCAA

D28 | **Geometry**   [FY] 0.5/sem

This course serves as the second course in the mathematical sequence. Students will formalize their geometry experiences from elementary and middle school, using more precise definitions and developing careful proofs; represent problem situations with geometric models; classify figures in terms of congruence and similarity; deduce properties of and relationships between figures from given assumptions; and translate geometric figures to an algebraic coordinate representation and algebraic models; apply right triangles and trigonometry. Through the use of dynamic software, students will gain an understanding of the relationships among mathematical figures and become active participants in the inductive and deductive processes of thinking. Students will actively engage in rigorous mathematical activities to attain mastery of course standards. Graphing calculator is required.

NCAA

D287 | **Honors Geometry**   [FY] 0.5/sem

This course serves as the second course in the advanced mathematical sequence. Students will formalize their geometry experiences from elementary and middle school, using more precise definitions and developing careful proofs; represent problem situations with geometric models; classify figures in terms of congruence and similarity; deduce properties of and relationships between figures from given assumptions; and translate geometric figures to an algebraic coordinate representation and algebraic models; apply right triangles and trigonometry. Through the use of dynamic software, students will gain

AACPS Possible Math Course Pathways (Other sequences are possible based on student needs)
Other mathematics elective courses are available.

	6th	7th	8th	9th	10th	11th	12th
College & Career Pathways	Mathematics 6	Mathematics 7	Mathematics 8	Algebra 1	Geometry	Bridge to Algebra 2 / Function Focus *(semester courses)*	Algebra 2
	Mathematics 6	Mathematics 7	Mathematics 8	Algebra 1	Geometry	Algebra 2	Foundations of College Algebra / Pre-Calculus / AP Statistics *(student choice)*
	Mathematics 6	Mathematics 7	Mathematics 8	Algebra 1	Geometry / Algebra 2 *(concurrently)*	Pre-Calculus	AP Calculus AB/BC
Accelerated Pathway Option 1	Mathematics 6/7	Mathematics 7/8 *(Summer Bridge Course)*	Algebra 1 *(Summer Bridge Course)*	Geometry	Algebra 2	Pre-Calculus / AP Statistics *(concurrently)*	AP Calculus AB/BC
Accelerated Pathway Option 2	Mathematics 6/7	Mathematics 7/8	Algebra 1	Geometry / Algebra 2 *(concurrently)*	Pre-Calculus	AP Calculus AB/BC	Calculus 3

an understanding of the relationships among mathematical figures and become active participants in the inductive and deductive processes of thinking. Students will actively engage in rigorous mathematical activities to attain mastery of course standards. Honors students will be introduced to advanced topics. Graphing calculator is required.
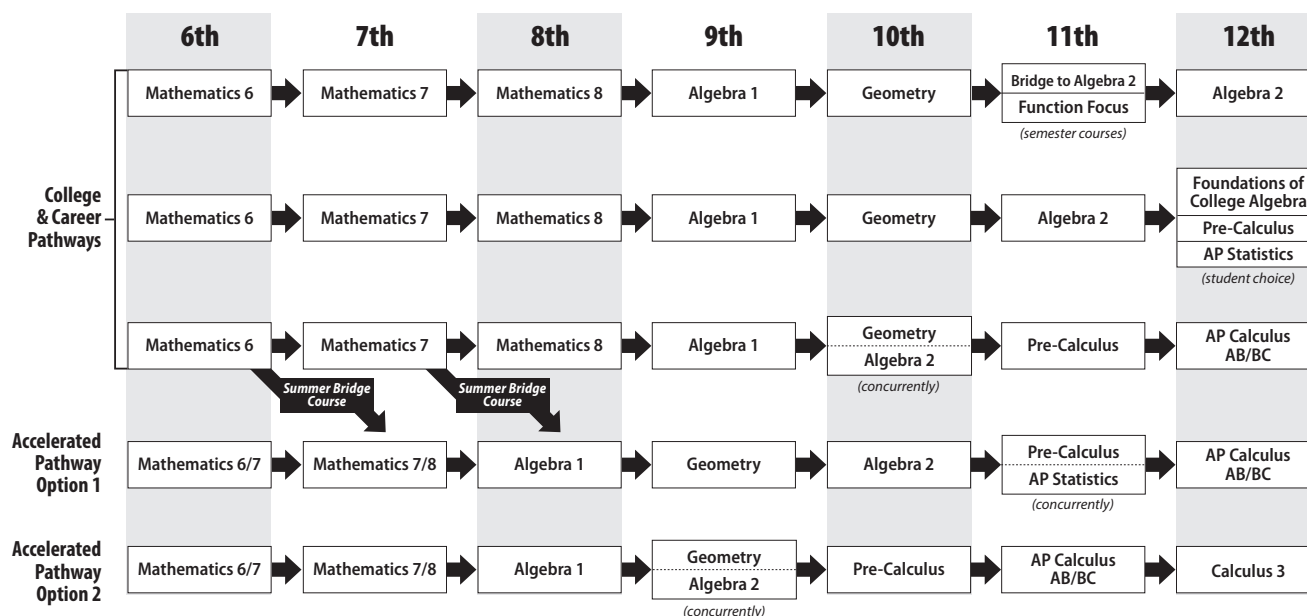
NCAA

D290 | **Algebra 2**   [FY] 0.5/sem

This course will expand students' knowledge of functions to include polynomial, rational and radical functions. Students will work with expanding features of the functions and draw connections with the experiences of linear, quadratic, and exponential functions. Students will model situations to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Students will build on their experiences to work with trigonometric ratios and functions. This course also has a focus on data and probability distributions. Graphing calculator is required. Students will actively engage in rigorous mathematical activities to attain mastery of course standards.

Recommended: *Algebra 1 and Geometry credit or concurrent enrollment in Geometry.*

NCAA

D296 | **Seminar: Algebra 2**   [FY] 0.5 elective credit/sem

Students receive intensive assistance in the concepts and skills learned currently in the Algebra 2 course. This course is recommended for students who require additional practice, guidance, and experience beyond those available in the standard Algebra 2 course.

Prerequisite(s): *Concurrent enrollment in Algebra 2.*

D297 | **Honors Algebra 2**   [FY] 0.5/sem

This course will expand students' knowledge of functions to include polynomial, rational and radical functions. Students will work with expanding features of the functions and draw connections with the experiences of linear, quadratic, and exponential functions. Students

will model situations to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Students will build on their experiences to work with trigonometric ratios and functions. This course also has a focus on data and probability distributions. Honors students will be introduced to advanced topics. Graphing calculator is required. Students will actively engage in rigorous mathematical activities to attain mastery of course standards.

Recommended: *Algebra 1 (C or better) and Geometry credit or concurrent enrollment in Geometry.*

NCAA

D30 | **Bridge to Algebra 2**   0.5sem

This course will review algebra topics such as solving and graphing exponential functions, manipulation, graphing, and solving systems of algebraic functions (linear, quadratic and exponential). These concepts are imbedded in instructional experiences such that students are applying theoretical mathematics with real world connections. This course is designed to support students whose algebra skills are emerging and require additional experiences to master concepts and skills necessary for success in Algebra II.

Prerequisite(s): *Algebra*   *1*

D41 | **Foundations of College Algebra**   [FY] 0.5/sem

This course reviews and extends intermediate and advanced algebra topics through rigorous manipulation of mathematical concepts. Concepts include systems of equations, polynomial, rational, exponential and logarithmic functions. This course is designed to prepare students for success in the first credit bearing mathematics course in post-secondary educational settings. Graphing calculator is required.

Prerequisites: Algebra 2

NCAA **DUAL**

D510 | **Pre-Calculus**   [FY] 0.5/sem

This course integrates the study of trigonometry, analytic geometry, and advanced algebra topics into a logical approach to the solution of real-world problems. This course is a prerequisite for Advanced Placement Calculus. Graphing calculator required.

Prerequisite(s): *Algebra 2*

`NCAA` `DUAL`

D517 | **Honors Pre-Calculus**   [FY] 0.5/sem

This course integrates the study of trigonometry, analytic geometry, and advanced algebraic topics into a logical approach to the solution of real-world problems. This course is a prerequisite for Advanced Placement Calculus. Graphing calculator required. Honors students will be introduced to advanced topics.

Prerequisite(s): *Algebra 2*

`NCAA`

D516 | **Seminar: Honors Pre-Calculus**   [FY] 0.5 elective credit/sem

Students will develop their ability to function as independent learners in the Honors Pre-Calculus course. This course is recommended for students who require additional practice, guidance, and experiences beyond those available in the Honors Pre-Calculus course.

Prerequisite(s): *Concurrent enrollment in Honors Pre-Calculus.*

D588 | **AP Calculus AB**   [FY] 0.5/sem

This college level course is the study of differential and integral calculus based on further development of properties and graphs of relations and functions. Students who successfully complete this course will be prepared for the AP Calculus AB test and may be awarded up to one semester of college credit with a successful score. Graphing Calculator required.

Prerequisite(s): *Pre-Calculus*

`NCAA`

D586 | **Seminar: AP Calculus AB**   [FY] 0.5 elective credit/sem

Students will develop their ability to function as independent learners in the AP Calculus AB course. This course is recommended for students who require additional practice, guidance and experiences beyond those available in the standard AP Calculus AB course.

Prerequisite(s): *Concurrent enrollment in AP Calculus AB*

D598 | **AP Calculus BC**   [FY] 0.5/sem

This college level course is the study of differentiation and techniques, sequences and series, and vector calculus. Students who successfully complete this course will be prepared to take the AP Calculus BC test and may be awarded up to two semesters of college credit with a successful score. Graphing calculator required.

Prerequisite(s): *AP Calculus AB*

`NCAA`

D608 | **AP Calculus AB and BC Combined**   [FY] 1.0/sem

AP Calculus AB is a college level course studying differential and integral calculus based on further development of properties and graphs of relations and functions. Through inquiry-based learning, students will develop mathematical critical thinking and reasoning skills. AP Calculus BC is a college level course studying differentiation and techniques, sequences, and series, and vector calculus. Through inquiry-based learning, students will develop mathematical critical thinking and reasoning skills.

Recommended: *Honors Pre-Calculus (C or better)*

`NCAA`

D315 | **Linear Algebra**   [FY] 0.5/sem

This course is the study of finite dimensional vector spaces. Topics include: the solution of systems of linear equations, matrices (inverses, equivalence, rank of symmetric, diagonal and orthogonal), determinants, introduction to vector spaces, linear independence, linear transformations, change of basis, eigenvalues and eigenvectors.

Prerequisite(s): *Calculus 3*

`NCAA` `DUAL`

D628 | **AP Statistics**   [FY] 0.5/sem

This college level course is a study of the major concepts and tools for collecting, analyzing, and interpreting data. Students who successfully complete this course will be prepared to take the AP Statistics test and may be awarded at least one semester of college credit with a successful score. Graphing calculator required. For STEM students, this course may be offered as a hybrid.

Recommended: *Successful completion of Algebra 2*

`NCAA`

D626 | **Seminar: AP Statistics**   [FY] 0.5 elective credit/sem

Students will develop their ability to function as independent learners in the AP Statistics course. This course is recommended for students who require additional practice, guidance and experiences beyond those available in the standard AP Statistics course.

Prerequisite(s): *Concurrent enrollment in AP Statistics.*

D63 | **Calculus 3**   [FY] 0.5/sem

Multivariable Calculus presents the main concepts and computational tools of higher dimensional calculus. It is equivalent to a third semester calculus course. The topics include vectors in Euclidean space, vector analysis, analytic geometry of three dimensions, curves in space, partial derivatives, optimization techniques, multiple integrals, vector fields, Green's theorem, Divergence theorem, and Stokes' theorem.

Prerequisite(s): *AP Calculus AB/BC credit with a 3 or higher on the AP Calculus BC exam. This course is through Broadcast online learning.*

`NCAA` `DUAL`

D77 | **Statistical Analysis**   [FY] 0.5/sem

This project-based course will provide students with real-life experiences with data. Topics include basic probability models, statistical estimation and testing, descriptive statistics, methods of sampling, sampling distributions, and misleading statistics.

`NCAA`

D87 | **Department Aide—Math**   No credit

Mathematics Aide courses offer students the opportunity to assist instructors in preparing and/or organizing. Students may provide tutorial or instructional assistance to other students.

Music

The Anne Arundel County high school music program is comprehensive in scope and breadth and is offered for all student levels and interests. In a world where much importance is being attached to 21st century skills, high school music courses are ideal settings for the development and broadening of those skills. Music classes are both rigorous and stimulating and offer students many opportunities for creative, innovative thinking that encourages problem solving and collaboration.

Students are required to earn at least one full credit in Fine Arts by the end of their senior year. Most students begin their high school music study with a performance-based course, such as band, orchestra, chorus, vocal ensemble, musical theater, jazz band, guitar, or piano. These performance courses are then offered in subsequent years, with increased rigor and performance opportunities for each level and with an honors option in the second through fourth year. Music for Life is a broad-based course, designed to focus on the function and value of music in people's lives across cultures. Students will also find the opportunity to explore the science of music and music's unique contribution to history and civilization in Music Theory, Music History and Literature, and Advanced Placement Music Theory. Students may also choose from elective courses like Music Technology and Vocal Technique; classes which extend and reinforce core learning in music.

Students enrolled in their appropriate school performance ensemble have the opportunity to participate in organizations such as All County Ensembles, All State music experiences, solo and ensemble festivals, and other enrichment musical activities.

Fine Arts Graduation Requirement — 1 Credit

Courses that meet the Fine Arts requirement can be found in the Art, Dance, English, and Music program sections.

High Engagement/Passion Courses

Storytelling through the Arts

F84041/2/3/4 | Modern Beats—Tell Your Story   0.25qtr

In this course, students will experience the process of song writing by producing their own lyrics, beats, and music. Using music production software, students will be guided to write lyrics, produce beats, and select music which thoughtfully communicates their own message. Throughout the course students will focus on the artistic creative process of music writing while learning how to produce their own music which has specific and personal meaning to them. The course will end with students having produced, recorded and released their own complete song.

F09 | Guitar 1   0.5/sem

This is a performance emphasis course with acoustic guitar as the primary medium. Comprehensive activities in reading, creating and listening to music are included. Students will perform a variety of music literature and styles in ensemble and solo performance. The course title indicates year enrolled. Students will be expected to advance to the next appropriate level of ability in Guitar 2–4.

DUAL

F10 | Guitar 2–4   0.5/sem

This course builds on skills learned in Guitar 1 and is a performance emphasis course with acoustic guitar as the primary medium. Comprehensive activities in reading, creating and listening to music are included. Students will perform a variety of music literature and styles in ensemble and solo performance.

DUAL

F13 | Piano & Keyboard 1   0.5/sem

This is a performance emphasis course that includes additional comprehensive activities in reading, creating, and listening to music as well as developing an understanding of history, vocabulary, structure and symbols. Students will play a wide repertoire of keyboard music literature alone and in ensembles. Opportunities for public solo or group performance will be available. The course title indicates year enrolled. Students will be expected to advance to the next appropriate level of ability in Piano and Keyboards 2–4.

DUAL

F14 | Piano & Keyboard 2–4   0.5/sem

This course builds on skills learned in Piano 1 and is a performance emphasis course that includes additional comprehensive activities in reading, creating, and listening to music as well as developing an understanding of history, vocabulary, structure and symbols. Students will play a wide repertoire of keyboard music literature alone and in ensembles. Opportunities for public solo or group performance will be available.

DUAL

F20 | Chorus Mixed 1   0.5/sem

This course will include individual concepts of vocal production as well as choral techniques appropriate for a large ensemble. A wide repertoire of choral music and experiences will be used for the development of comprehensive musicianship. The course designation indicates year enrolled. Students will be expected to advance to the next appropriate level of ability in Chorus and Vocal Instruction. After school activities

and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

DUAL

F21 | **Honors Chorus Mixed 2–4**　　　　　0.5/sem

This course continues to build on skills learned in Chorus Mixed 1 and will include individual concepts of vocal production as well as choral techniques appropriate for a large ensemble. A wide repertoire of choral music and experiences will be used for the development of comprehensive musicianship. The course designation indicates year enrolled. Students will be expected to advance to the next appropriate level of ability in Chorus and Vocal Instruction. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F24 | **Honors Vocal Ensemble 1–4**　　　　0.5/sem

This course emphasizes correct vocal production and the choral techniques of ensemble singing. Comprehensive musicianship will be emphasized through a varied vocal repertoire. Students will be expected to master at least one appropriate level in Chorus and Vocal Instruction. Public musical performances will be expected. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F25 | **Honors Vocal Instruction 1–4**　　　0.5/sem

This course will stress correct vocal production and techniques of solo singing. It will include sight-singing, the basic fundamentals of music and a wide repertoire of vocal music emphasizing comprehensive musicianship. Students will be expected to master at least one appropriate level in Chorus and Vocal Instruction. Opportunities for performance will be available based on the student's ability. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F26 | **Chorus—Treble 1**　　　　　　　　0.5/sem

This course will stress correct vocal production and techniques involving the treble voice. Comprehensive musicianship will be emphasized through a study of varied repertoire appropriate to treble voice ranges. Students will be expected to master at least one appropriate level in Chorus and Vocal Instruction. Public musical performances will be expected. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F27 | **Chorus—Tenor/Bass 1**　　　　　　0.5/sem

This course will stress correct vocal production and techniques involving the tenor/bass voice. Comprehensive musicianship will be emphasized through a study of varied repertoire appropriate to tenor/bass voice ranges. Students will be expected to master at least one appropriate level in Chorus and Vocal Instruction. Public musical performances will be expected. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F28 | **Honors Chorus—Treble 2–4**　　　　0.5/sem

This course continues to build on skills learned in Chorus - Treble 1 focusing on the correct vocal production and techniques involving the treble voice. Comprehensive musicianship will be emphasized through a study of varied repertoire appropriate to treble voice ranges. Students will

be expected to master at least one appropriate level in Chorus and Vocal Instruction. Public musical performances will be expected. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F29 | **Honors Chorus—Tenor/Bass 2–4**　　0.5/sem

This course continues to build on skills learned in Chorus - Tenor/Bass 1 focusing on the correct vocal production and techniques involving the treble voice. Comprehensive musicianship will be emphasized through a study of varied repertoire appropriate to treble voice ranges. Students will be expected to master at least one appropriate level in Chorus and Vocal Instruction. Public musical performances will be expected. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F50 | **Instrumental Instruction: Strings 1–4**　0.5/sem

Small group instruction is provided for students desiring to acquire skill in playing string instruments. Good tone production, instrumental techniques, sight-reading, and basic fundamentals of music are emphasized. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F51 | **Instrumental Instruction: Woodwind 1–4**　0.5/sem

Small group instruction is provided for students desiring to acquire skill in playing woodwind instruments. Good tone production, instrumental techniques, sight-reading, and basic fundamentals of music are emphasized. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F52 | **Instrumental Instruction: Brass 1–4**　　0.5/sem

Small group instruction is provided for students desiring to acquire skill in playing brass instruments. Good tone production, instrumental techniques, sight-reading, and basic fundamentals of music are emphasized. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F53 | **Instrumental Instruction: Percussion 1–4**　0.5/sem

Small group instruction is provided for students desiring to acquire skill in playing percussion instruments. Good tone production, instrumental techniques, sight-reading, and basic fundamentals of music are emphasized. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F54 | **Instrumental Instruction: Mixed 1–4**　　0.5/sem

Small group instruction is provided for students desiring to acquire skill in playing string, woodwind, brass, and percussion instruments. Good tone production, instrumental techniques, sight-reading, and basic fundamentals of music are emphasized. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F60 | Instrumental Ensemble: Strings 1–4   0.5/sem

This course emphasizes good tone production, balance, and interpretation of music within a small group. Comprehensive musicianship is emphasized through a study of varied instrumental repertoire. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F61 | Instrumental Ensemble: Woodwind 1–4   0.5/sem

This course emphasizes good tone production, balance, and interpretation of music within a small group. Comprehensive musicianship is emphasized through a study of varied instrumental repertoire. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F62 | Instrumental Ensemble: Brass 1–4   0.5/sem

This course emphasizes good tone production, balance, and interpretation of music within a small group. Comprehensive musicianship is emphasized through a study of varied instrumental repertoire. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F63 | Instrumental Ensemble: Percussion 1–4   0.5/sem

This course emphasizes good tone production, balance, and interpretation of music within a small group. Comprehensive musicianship is emphasized through a study of varied instrumental repertoire. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F64 | Instrumental Ensemble: Mixed 1–4   0.5/sem

This course emphasizes good tone production, balance, and interpretation of music within a small group. Comprehensive musicianship is emphasized through a study of varied instrumental repertoire. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F65 | Music for Life   0.5/sem

This course focuses upon the use and value of music in people's lives. It encourages students to view music in a social context rather than as abstract Information to be learned for its own sake. It presents music as a natural and essential ingredient of one's own life and of human life in all cultures. The course surveys music from diverse cultures around the world and shows how people express themselves through music. Finally, Music for Life exemplifies how music is a common denominator for the human experience across the globe.

F70 | Band 1   0.5/sem

This course provides an opportunity for students who have reached the necessary degree of maturity in playing a wind or percussion instrument to perform in a group and as a soloist. Development of comprehensive musicianship will be emphasized through a wide repertoire of original band literature, transcriptions, and arrangements. The course title indicates the year enrolled. Students will be expected to advance to the next appropriate level of ability in Performance Competencies for Instrumental Music. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F71 | Honors Band 2-4   0.5/sem

This course provides an opportunity for students who have reached the necessary degree of maturity in playing a wind or percussion instrument to perform in a group and as a soloist. Development of comprehensive musicianship will be emphasized through a wide repertoire of original band literature, transcriptions, and arrangements. The course title indicates the year enrolled. Students will be expected to advance to the next appropriate level of ability in Performance Competencies for Instrumental Music. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F74 | Jazz Ensemble 1–4   0.5/sem

This course provides an opportunity for students who have reached the necessary degree of maturity in playing an instrument to perform different styles of jazz from the big band era as well as dance music, rock, and popular music of the present day. Improvisation and stylistic playing will be emphasized to develop comprehensive musicianship. Public musical performances will be expected. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F75 | Orchestra 1   0.5/sem

This course provides an opportunity for students who have reached the necessary degree of maturity in playing an orchestral, string, wind, or percussion instrument to perform in a group. Development of comprehensive musicianship will be emphasized through a wide repertoire of original string and orchestra literature, transcriptions, and arrangements. The course title indicates the year enrolled. Students will be expected to advance to the next appropriate level of ability in Performance Competencies for Instrumental Music: Strings. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F76 | Honors Orchestra 2-4   0.5/sem

This course provides an opportunity for students who have reached the necessary degree of maturity in playing an orchestral, string, wind, or percussion instrument to perform in a group. Development of comprehensive musicianship will be emphasized through a wide repertoire of original string and orchestra literature, transcriptions, and arrangements. The course title indicates the year enrolled. Students will be expected to advance to the next appropriate level of ability in Performance Competencies for Instrumental Music: Strings. After school activities and rehearsals are integral to the course, and grades may reflect such participation. The number of required non-school hour performances and practices during a school year varies by school.

F80 | Honors Music Theory   0.5/sem

This course is designed to familiarize the student with the building blocks of music. Rhythm, melody, harmony, form, and analysis are the key components of this course. Students will use standard music notation to read, write, and understand the structure of music. Sight singing, ear-training and creating through composing and arranging are important components of this course. The course is a pre-requisite to AP Music Theory.

F81 | **Honors Music History & Literature** 0.5/sem

This course will provide students with an introduction to style periods of music history, prominent composers, and exemplary music literature. Students will become familiar with the most important instrumental and vocal genres by carefully listening to, describing and analyzing representative compositions.

F83 | **Music Technology** 0.5/sem

This course will provide students with an introduction to basic music technology applications. Students will be introduced to the creative use of music technology and the fundamentals of music using synthesizers, computers, Musical Instrumental Digital Interface (MIDI) keyboards, sequencers, and appropriate software. The course will be taught within a hands-on framework and will allow students to create their own compositions. Students will also develop skills with sequencing, recording, and notating music.

F84 | **AP Music Theory** [FY] 0.5/sem

This high school course is offered to students who wish to pursue the study of music theory in a course equivalent to a college introductory course in music theory. This is a college level course designed to earn college level credit for those students scoring at an acceptable level on the College Board Examination. Students will study all interval, scale, and triad forms, notation, simple acoustics, tuning and temperament, and structures of music. Students will study part-writing and harmonic progressions in tonal music with a strong emphasis given to listening skills, particularly those involving recognition and comprehension of compositional techniques. Sight singing, ear training, and creating through composing and arranging are also components of the course.

Prerequisite(s): *Honors Music Theory*

F82 | **Musical Theater** 0.5/sem

This course will survey the development of musical theater in Europe and America. Comprehensive training in the skills and techniques necessary for the staging of a musical production will be emphasized. The culminating activity may be the staging of a musical production for public performance.

F87 | **Department Aide—Music** No credit

Fine and Performing Arts Aide courses offer students the opportunity to assist instructors in preparing and/or organizing. Students may provide tutorial or instructional assistance to other students.

Physical Education

Physical education classes provide opportunities for students to improve lifelong health, fitness, and activity related skills. Physical Education presents information that challenges students to improve personal fitness levels and to participate in individual and team activities. All courses focus on the development and maintenance of a healthy and actively fit individual which can be measured by the Healthy Fitness Zone component of FitnessGram. Physical education is an essential component in the education of the whole child by linking cognitive knowledge to physical activity and social interaction.

Students are required to earn at least one full credit of physical education by the end of their senior year. Fitness for Life, the required high school physical education class, is the foundation of individual lifetime fitness information. Additional courses are offered to support and extend individual fitness goals and interests. Personal fitness elective courses include personal fitness, strength and conditioning, and walking. Sport oriented elective courses are offered in lifetime and team sports. A variety of dance courses also satisfy the physical education requirements for graduation (see Dance).

All students are expected to wear appropriate uniform attire during physical education classes for the purpose of ensuring the safety and hygiene of each participant.

Physical Education Graduation Requirements — 1 Credit

- Fitness for Life (0.5 credit)
- Physical Education or Dance Elective (0.5 credit)

L82 | **Fitness for Life** 0.5sem
Students beginning their high school Physical Education experience will be introduced to the components of fitness and shown the relationship of physical fitness to total well-being. Fitness components are embedded throughout all instruction along with activities which address each of the Physical Education content standards. Students' physical fitness will be assessed through the administration of FitnessGram, a battery of standardized tests used to determine levels of fitness. Reports of these assessments will be analyzed to help students develop a personal wellness plan. Students will be afforded the opportunity to participate in a variety of activities which can be pursued during high school and throughout their lifetime.

L04 | **Stretch Your Wellness** 0.5sem
This course serves as an introduction to the wellness activity of yoga and mindfulness. It will introduce a brief history of yoga, the anatomical benefits and the physical practice of yoga as it pertains to relaxation techniques, breathing exercises, specific postures, healthy diet, and positive thinking. Through the exploration of the four components of mindfulness, students will learn healthy ways to relieve stress and promote a lifetime of wellness. Students will be maintaining a portfolio throughout the course which consists of weekly logs, lesson activities, class notes, and journal responses. Students will be assessed through quizzes, reflections, and project-based assessments.

L09 | **Unified Physical Education and Leadership 1–4** 0.5/sem
This course will allow students with and without disabilities to gain knowledge, experience, and skills in recreation sports, leisure activities, team/individual sports, fitness, and dance in a collaborative and cooperative environment. All students will explore leadership characteristics, communication and listening skills, group work, and critical thinking skills in order to provide support in an inclusive environment.

L14 | **Foundations of Lifetime Sports** 0.5/sem
Recreation sports courses provide students with knowledge, experience, and an opportunity to develop skills in more than one recreational sport or outdoor pursuit (such as adventure activities, croquet, Frisbee, wall climbing, bocce ball, fishing, hiking, cycling, etc.).

L15 | **Lifetime Sports 2–4** 0.5/sem
Lifetime Sports 2, 3, & 4 extends students' experiences in leisure activities they can pursue throughout life and allows for skill refinement in multiple sport offerings. Students increase knowledge and proficiency in all sport and leisure activities.

L37 | **Foundations of Team Sports** 0.5/sem
Students will learn rules, terms, historical background and basic skills for a variety of sports. The student will be able to understand team strategy in a competitive situation.

L37--1 | **Foundations of Team Sports Baseball** 0.5sem
Students will learn rules, terms, historical background and basic skills of baseball. The student will be able to understand team strategy in a competitive situation.

L37--2 | **Foundations of Team Sports Basketball** 0.5sem
Students will learn rules, terms, historical background and basic skills of basketball. The student will be able to understand team strategy in a competitive situation.

L37--3 | **Foundations of Team Sports Football** 0.5sem
Students will learn rules, terms, historical background and basic skills of football. The student will be able to understand team strategy in a competitive situation.

L37--4 | **Foundations of Team Sports Lacrosse** 0.5sem
Students will learn rules, terms, historical background and basic skills of lacrosse. The student will be able to understand team strategy in a competitive situation.

L37--5 | **Foundations of Team Sports Soccer**   0.5sem

Students will learn rules, terms, historical background and basic skills of soccer. The student will be able to understand team strategy in a competitive situation.

DUAL

L37--6 | **Foundations of Team Sports Volleyball**   0.5sem

Students will learn rules, terms, historical background and basic skills of volleyball. The student will be able to understand team strategy in a competitive situation.

L38 | **Team Sports 2–4**   0.5/sem

Students will improve their knowledge of game rules and basic skills through the refinement of participation and increased depth of knowledge in team strategies. Students will increase their experience in teamwork through competitive situations in addition to experiencing coaching and officiating opportunities.

L38--1 | **Team Sports Baseball 2–4**   0.5/sem

Students will improve their knowledge of game rules and basic skills of baseball through the refinement of participation and increased depth of knowledge in team strategies. Students will increase their experience in teamwork through competitive situations in addition to experiencing coaching and officiating opportunities.

L38--2 | **Team Sports Basketball 2–4**   0.5/sem

Students will improve their knowledge of game rules and basic skills of basketball through the refinement of participation and increased depth of knowledge in team strategies. Students will increase their experience in teamwork through competitive situations in addition to experiencing coaching and officiating opportunities.

L38--3 | **Team Sports Football 2–4**   0.5/sem

Students will improve their knowledge of game rules and basic skills of football through the refinement of participation and increased depth of knowledge in team strategies. Students will increase their experience in teamwork through competitive situations in addition to experiencing coaching and officiating opportunities.

L38--4 | **Team Sports Lacrosse 2–4**   0.5/sem

Students will improve their knowledge of game rules and basic skills of lacrosse through the refinement of participation and increased depth of knowledge in team strategies. Students will increase their experience in teamwork through competitive situations in addition to experiencing coaching and officiating opportunities.

L38--5 | **Team Sports Soccer 2–4**   0.5/sem

Students will improve their knowledge of game rules and basic skills of soccer through the refinement of participation and increased depth of knowledge in team strategies. Students will increase their experience in teamwork through competitive situations in addition to experiencing coaching and officiating opportunities.

L38--6 | **Team Sports Volleyball 2–4**   0.5/sem

Students will improve their knowledge of game rules and basic skills of volleyball through the refinement of participation and increased depth of knowledge in team strategies. Students will increase their experience in teamwork through competitive situations in addition to experiencing coaching and officiating opportunities.

L51 | **Foundations of Walking Wellness**   0.5sem

This course is an introduction to the lifetime wellness activity of walking. Students are provided with an understanding of the importance that nutrition and exercise has on the pursuit of healthy living, while logging their effort. Various activities are embedded throughout the course which engage the learner and increase participation.

L52 | **Walking Wellness 2–4**   0.5/sem

This course extends the students' opportunity for participating in the lifetime wellness activity of walking. It increases the distances required to satisfy the curriculum, provides students with nutritional information consistent with healthy living and goals that require a commitment to physical fitness in pursuit of a healthy lifestyle.

L56 | **Foundations of Personal Fitness**   0.5sem

Health and Fitness courses combine the topics of Health Education courses (nutrition, stress management, substance abuse prevention, disease prevention, first aid, and so on) with an active fitness component (typically including aerobic activity and fitness circuits) with the intention of conveying the importance of life-long wellness habits.

DUAL

L57 | **Personal Fitness 2–4**   0.5/sem

This course provides students with opportunities to develop optimal levels of physical fitness and to acquire knowledge of physical fitness components.

L58 | **Foundations of Strength & Conditioning**   0.5/sem

Students are engaged in an individualized program designed to incorporate physical fitness components and improve physical condition. Weight room procedures and safety precautions are stressed in this beginning level course. Students will focus on technique rather than the amount of weight lifted.

DUAL

L59 | **Strength & Conditioning 2–4**   0.5/sem

Students will continue a systematic training program to refine techniques for strength and conditioning. Students will have an opportunity to develop greater strength and to design, with instructor assistance, an individualized strength and conditioning program.

L72 | **Sports Medicine**   0.5sem

The course is designed for students interested in fields such as athletic training, physical therapy, medicine, fitness, exercise physiology, kinesiology, nutrition, and other sports-medicine related fields. This class includes classroom work as well as hands-on application in order to provide students with an avenue to explore these fields. Through these connections, students will understand the importance that exercise, nutrition, treatment modalities, and rehabilitation play in athletic health. Students will study basic anatomy and the psychological impact of athletic injuries, along with assessment and treatment techniques as they apply to athletic injuries.

L87 | **Department Aide—HPED**   No credit

The Health, Physical Education and Dance Aide course offers students the opportunity to assist instructors in preparing and organizing course curricula. Students may provide tutorial or instructional assistance to other students.

Science

Scientific literacy has become a necessity. Everyone needs to use scientific information to make choices that arise in everyday life. In the workplace, jobs demand advanced skills, requiring people to learn, reason, think critically, make decisions, and solve problems. Understanding science and the processes of science contributes to students learning these skills in an essential way (National Research Council, 1996).

Students who have successfully completed Algebra 1 or who have reached a combined score of 7 on the ELA/Math PARCC assessments may enroll in Honors Biology in grade 9. All other students should enroll in Environmental Science in grade 9 followed by enrollment in Standard or Honors Biology in 10th grade.

In 10th grade, students who have completed honors biology will take honors chemistry or environmental science. Students who have completed environmental science will take honors/standard biology. Both pathways lead to the high school Maryland Integrated Science Assessments (MISA) at the end of 10th grade.

In 11th grade, students should enroll in the core lab-based courses (Chemistry, Earth/Space Science, and Physics). Students may also choose from elective courses, which have a particular science focus and extend and reinforce core learning.

Dissection is one of the many instructional methods that may be used in high school science. Students may request one of the alternatives to dissection in these classes. Alternatives may include such materials as videotapes, charts, diagrams, and textbook overlays.

Science Graduation Requirements — 3 Credits

- Three credits of laboratory science engaging in the application of the science and engineering practices, the crosscutting concepts and the disciplinary cores ideas including life science, earth/space science, physical sciences, engineering and technology.

Required Assessments

All students must take a state High School Assessment in Science to meet state graduation requirements.

Please check with your school counselor for the different opportunities to meet the High School Assessment requirement.

High Engagement/Passion Courses

Plant Potential

TBD | Cleaner Energy through Plants for a Cleaner World

Students explore technology and innovation to address their community's growing energy needs through clean renewable sources. In a laboratory and greenhouse settings, students explore how plant waste may be turned into clean energy, how cooking oil can be refined as a biofuel and how something as small as algae can be turned into clean burning ethanol. The course will explore the cutting edge of these technologies along with potential barriers and costs to their implementation.

TBD | Growing Organically: A Little Dirt Never Hurt

Our planet is faced with a growing world population dependent on finite food and water sources that are continually impacted by climate change. Communities need to increase crop yields with diminishing land and available resources. Organic gardening is the practice of creating nutrient dense food grown with sustainable practices. The organic gardener will design and plan a plot that incorporates sustainable water use, the local environment, and supports the health of the whole system. The class will test soil samples along with creating a nutrient management plan to fertilize and sustain their site. Environmentally friendly crops will be selected according to their disease immunities, yield, and impact on the soil.

C65 | Environmental Science   [FY] 0.5/sem

Environmental Science is rigorous interdisciplinary study of the world around us. In this course, students explore the interrelationships among the biological, physical, and chemical components of the environment and examine the interactions between and among the components. The units are project-based, enabling students to apply their learning to real-world environmental issues.

NCAA

C260 | Biology   [FY] 0.5/sem

Biology courses are designed to provide information regarding the fundamental concepts of life and life processes. Project-based learning allows students to connect learning to the real world.

Prerequisite(s): *Environmental Science*

NCAA

C267 | Honors Biology   [FY] 0.5/sem

Biology courses are designed to provide information regarding the fundamental concepts of life and life processes. Project-based learning allows students to connect learning to the real world. The Honors Biology curriculum incorporates the Essential Knowledge and Performance Expectations described by the College Board to prepare students for success in Advanced Placement Biology.

Prerequisite(s): *Students who have successfully completed Algebra 1 or who have reached a combined score of 7 on the ELA/Math PARCC assessments may enroll in Environmental Science in grade 9 followed by enrollment in Standard or Honors Biology in 10th grade.*

C450 | Chemistry   [FY] 0.5/sem

Chemistry courses involve studying the composition, properties, and reactions of substances. Students learn how atoms combine to create all matter in the Universe. Students learn about states of matter and

AACPS Recommended Science Course Pathways (After grade 10, courses are chosen based on student needs and interests.)

8th	9th	10th	11th (Suggested)	12th (Suggested)

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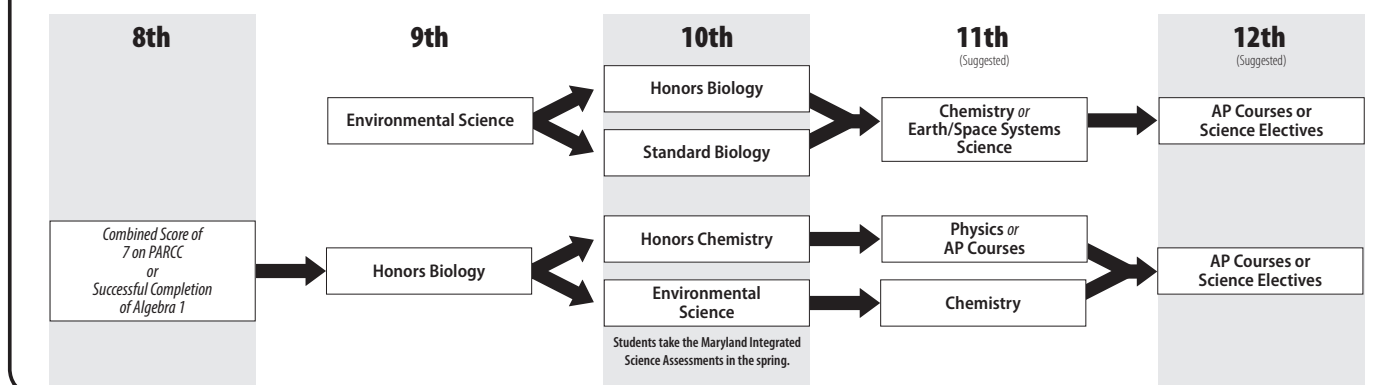
the structure of the atom. Each Chemistry unit ends with a project to allow students to apply their learning to how chemistry is used in the real world. Students use mathematics practices and computation to analyze chemical processes.

Prerequisite(s): *Algebra 1 and Participation in HS MISA*

NCAA

C457 | **Honors Chemistry**   [FY] 0.5/sem

Chemistry courses involve studying the composition, properties, and reactions of substances. Students learn how atoms combine to create all matter in the Universe. Students learn about states of matter and the structure of the atom. Honors Chemistry uses Essential Knowledge and Performance Expectations from the College Board Standards to prepare students for Advanced Placement Chemistry. Each Chemistry unit ends with a project to allow students to apply their learning to how chemistry is used in the real world. Students use mathematics practices and computation to analyze chemical processes. Students enrolled in Honors Chemistry complete an independent or team research project based on science or engineering practices and the cross-cutting concepts that apply across all science disciplines.

Prerequisite(s): *Algebra 1 and Biology or Honors Biology*

NCAA

C30 | **Earth/Space Systems Science**   [FY] 0.5/sem

Earth and Space Science courses introduce students to the study of the earth from a local and global perspective. Earth/Space Systems Science is a study of Earth- a complex and dynamic 4.6-billion-year-old system of rock, water, air, and life. A partnership with the NASA Goddard adds richness to the learning activities.

Prerequisite(s): *Participation in HS MISA*

NCAA

C550 | **Physics**   [FY] 0.5/sem

Physics courses involve the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between matter and energy. Students use the instruments of science and principles of mathematics to learn how matter and energy behave. Topics include forces, electricity and magnetism, heat, waves, and theories of modern physics. Each unit concludes with a real-world project to help students make connections between what they study and how physics applies in the real world.

Prerequisite(s): *Algebra 1 and Participation in HS MISA*

NCAA

C557 | **Honors Physics**   [FY] 0.5/sem

Physics courses involve the study of the forces and laws of nature affecting matter, such as equilibrium, motion, momentum, and the relationships between matter and energy. Students use the instruments of science and principles of mathematics to learn how matter and energy behave. Topics include forces, electricity and magnetism, heat, waves, and theories of modern physics. Honors Physics incorporates Essential Knowledge and Performance Expectations described by the College Board to prepare students for success in AP Physics 1, 2 or C. Each unit concludes with a real-world project to help students make connections between what they study and how physics applies in the real world.

Prerequisite(s): *Algebra 1 and Participation in HS MISA*

NCAA

C428 | **AP Biology**   [FY] 0.5/sem

In AP Biology students develop a framework for biology and study biology by using the processes of science. This course focuses on broad concepts of biology and lab Investigation. It is the equivalent of an introductory college biology course and prepares students for the Advanced Placement Test in Biology and the opportunity to earn college credit.

Prerequisite(s): *Biology (Honors Biology Highly Recommended) and Chemistry*

NCAA

C426 | **Seminar: AP Biology**   [FY] 0.5 elective credit/sem

Students focus on enhancing the science skills and concepts that will support success in AP Biology. This course is for students who need additional practice in the methods of scientific inquiry and mathematics to analyze core science concepts or for students taking an AP Science course for the first time. Students take the seminar course that corresponds to their specific AP course.

Prerequisite(s): *Concurrent enrollment in the related AP science course*

C498 | **AP Chemistry**   [FY] 0.5/sem

AP Chemistry is the equivalent of a general chemistry course taken the first year of college. Students learn chemical principles and use mathematics to solve chemistry problems. AP Chemistry prepares students for the Advanced Placement Test in chemistry and the opportunity to earn college credit. Successful completion of Honors Chemistry is highly recommended prior to enrolling in AP Chemistry but is not required.

Prerequisite(s): *Successful completion of Algebra 2*

NCAA

C496 | **Seminar: AP Chemistry**   [FY] 0.5 elective credit/sem

Students focus on enhancing the science skills and concepts that will support success in AP Chemistry. This course is for students who need additional practice in the methods of scientific inquiry and mathematics to analyze core science concepts or for students taking an AP Science course for the first time. Students take the seminar course that corresponds to their specific AP course.
Prerequisite(s): *Concurrent enrollment in the related AP science course*

C668 | **AP Environmental Science**   [FY] 0.5/sem

In this course students evaluate environmental issues,and examine alternative solutions for resolving and/or preventing them. This course prepares students for the Advanced Placement Test in Environmental Science and the opportunity to earn college credit.
Prerequisite(s): *Biology and Chemistry. Chemistry may be taken concurrently.*

NCAA

C568 | **AP Physics 1**   [FY] 0.5/sem

Students learn the principles of physics equivalent to a first-semester algebra-based college physics course. Topics include Newtonian mechanics (including rotational dynamics and angular momentum); work, energy, and power; mechanical waves and sound. Electric circuits will also be introduced. This course prepares students for the Advanced Placement Test in AP Physics 1 and the opportunity to earn college credit. Students do not need an introductory physics course to enroll in AP Physics 1. Students may go directly to AP Physics 1 as their first physics course in high school if the math requirements have been satisfied.
Prerequisite(s): *Geometry and concurrent enrollment in Algebra 2*

NCAA

C566 | **Seminar: AP Physics 1**   [FY] 0.5 elective credit/sem

Students focus on enhancing the science skills and concepts that will support success in AP Physics. This course is for students who need additional practice in the methods of scientific inquiry and mathematics to analyze core science concepts or for students taking an AP Science course for the first time. Students take the seminar course that corresponds to their specific AP course.
Prerequisite(s): *Concurrent enrollment in the related AP science course*

C578 | **AP Physics 2**   [FY] 0.5/sem

Students learn the principles of physics equivalent to a second-semester college course in algebra-based physics. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics; atomic and nuclear physic. This course prepares students for the Advanced Placement Test in AP Physics 2 and the opportunity to earn college credit.
Prerequisite(s): *AP Physics 1, Algebra 2, Pre-Calculus or concurrent enrollment in Pre-Calculus*

NCAA

C576 | **Seminar: AP Physics 2**   [FY] 0.5 elective credit/sem

Students focus on enhancing the science skills and concepts that will support success in AP Biology, AP Chemistry, or AP Physics. This course is for students who need additional practice in the methods of scientific inquiry and mathematics to analyze core science concepts or for students taking an AP Science course for the first time. Students take the seminar course that corresponds to their specific AP course.
Prerequisite(s): *Concurrent enrollment in the related AP science course*

C70 | **AP Physics 1 and 2 Combined**   [FY] 1.0/sem

AP Physics 1 is an algebra-based, introductory college-level physics course that explores topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. AP Physics 2 is an algebra-based, introductory college-level physics course that explores topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills.
Prerequisite(s): *Successful completion of or concurrent enrollment in Pre-Calculus.*

NCAA

C598 | **AP Physics C**   [FY] 0.5/sem

Students learn the principles of physics equivalent to a second-semester college course in calculus-based physics. The course covers fluid mechanics; thermodynamics; electricity and magnetism; optics; atomic and nuclear physic. This course prepares students for the Advanced Placement Tests in AP Physics C and the opportunity to earn college credit.
Prerequisite(s): *Calculus or concurrent enrollment in Calculus*

NCAA

C596 | **Seminar: AP Physics C**   [FY] 0.5 elective credit/sem

Students focus on enhancing the science skills and concepts that will support success in AP Physics. This course is for students who need additional practice in the methods of scientific inquiry and mathematics to analyze core science concepts or for students taking an AP Science course for the first time. Students take the seminar course that corresponds to their specific AP course.
Prerequisite(s): *Concurrent enrollment in the related AP science course*

C80 | **Astronomy**   0.5sem

Astronomy courses offer students the opportunity to study the solar system, stars, galaxies, and interstellar bodies. Students learn about the large-scale structure of the universe, the history of the universe, and what scientists think will be the fate of the universe.
Prerequisite(s): *Participation in HS MISA*

NCAA

C25 | **Exercise Science**   0.5sem

Exercise Science is an upper-level course designed to be taken following the introductory course known as Anatomy and Physiology. This course is a single semester class that will fulfill an elective credit. Through kinesthetic and exercise testing mechanisms, students will monitor and evaluate and apply cause and effect relationships between physical activity, body systems, nutrition, biomechanic, social physiological, and motor learning principals. Students will assess the advantages and disadvantages of physical activity on the body's development and performance. Students will partake in a variety of hands-on and self-exploratory tests to apply their understanding of the scientific principles involved in the design and implementation of physical activity programs. Strategies integral to this course include the opportunity to discuss and apply real world exercise related experiences and issues that plague individuals across age spectrums in our society, working collaboratively in groups in participating in multidisciplinary project based learning, and providing connections across contents (physical education, health and science).

C33 | **Forensic Science: CSI** 0.5sem

Students use the principles of science, technology, and mathematics to investigate crime scenes. Students collect and analyze physical evidence. This course builds on a basic knowledge of biology, physical science, and computer technology. Because of the mature nature of crime scene subject matter, this course is recommended for upperclassmen.
Prerequisite(s): *Participation in HS MISA*

C40 | **Human Anatomy & Physiology** 0.5sem

This course presents an in-depth study of the human body and examines all major systems, tissues, and muscle groups in the human body to help students understand how these systems interact and their role in maintaining homeostasis. In this rigorous course, students build on prior knowledge of the human body to investigate the role of systems from a chemical and physical perspective. Activities may involve animal dissection.
Prerequisite(s): *Participation in HS MISA*

`NCAA` `DUAL`

C81 | **Marine Biology** 0.5sem

Students use scientific skills and processes to study the marine world. Students analyze marine organisms and their environment, including the Chesapeake Bay and its tributaries.
Prerequisite(s): *Participation in HS MISA*

C75 | **Oceanography** 0.5sem

In this course students use the principles of chemistry and physics to study the oceans. Students investigate the materials and physical processes that have shaped oceans.
Prerequisite(s): *Participation in HS MISA*

`NCAA`

C50 | **Science Research 1** [FY] 0.5/sem

Students use the scientific method to solve problems. Students develop skills in designing experiments, collecting, and analyzing data. Students work individually or as part of a team to complete a research project and enter the project in a science competition.

C52 | **Honors Science Research 2: Design** 0.5sem

This course continues independent research in Science with a focus on Engineering. Students will work in a small group to design a new or technology according to the ExploraVision competition.
Prerequisite(s): *Science Research 1*

`NCAA`

C53 | **Honors Science Research 3: Project** 0.5sem

Students complete an off-campus research project in an academic, government, or corporate laboratory during the spring of the junior year or the summer between the junior and senior year. Students will do research in a lab working on their project during spring and summer. Each student will seek a mentor to guide his or her research project. The mentorship will be in a STEM area. Students should take this course in the fall of their junior year.
Prerequisite(s): *Science Research 2*

`NCAA`

C54 | **Honors Science Research 4: Senior Seminar** 0.5sem

Students return to school as seniors prepared to write a scientific paper based on the work completed in the laboratory mentorship. Students will enter one or more available STEM competitions to share their research with peers and community members.
Prerequisite(s): *Science Research 3*

`NCAA`

C41 | **Honors Zoology** [FY] 0.5/sem

Zoology courses provide students with an understanding of animals, the niche they occupy in their environment or habitat, their life cycles, and their evolutionary relationships to other organisms. In this course, students study the organisms of the animal kingdom. Students study animal systems through dissection and comparative analysis. Students who are opposed to laboratory dissection should consider choosing an alternate science course.
Prerequisite(s): *Participation in HS MISA*

`NCAA`

C87 | **Department Aide—Science** No Credit

Science Aide courses offer students the opportunity to assist instructors in preparing and/or organizing. Students may provide tutorial or instructional assistance to other students.

Social Studies

Social Studies courses draw upon the wealth of information and insight to be found in anthropology, history, psychology, economics, geography, political science, and sociology. The curriculum encourages students to apply the lessons of the past to the problems of the present. Students learn to utilize inquiry and problem-solving techniques to become vital participants in shaping and directing the future of our local, national and world communities.

Social Studies Graduation Requirements —3 Credits

- History of the United States or AP United States History
- World History or AP World History: Modern
- U.S. Government or AP U.S. Government and Politics

Required Assessments

All students, upon completion of U.S. Government or AP U.S. Government and Politics must take the HSA in Government.

High Engagement/Passion Courses

Making a Difference

X24 | **Exploring the Possibilities**   0.25qtr

All students are also community members who should have a vested interest in solving local problems. This course will empower students to make a difference in current local issues. It will afford students with the opportunity to better understand problems in their communities, analyze data related to those problems, collaborate to brainstorm solutions, hear from community members and leaders who manage issues related to the problem, and develop presentations to share their learning and recommendations. The course is designed for any student who has a passion to be a change-maker. Students will use EXCEL to organize and analyze data. They will use software like Piktochart to develop presentations that summarize their experiences in their research.

B01 | **Maryland History**   0.5sem

Students will examine political, economic and social events of Maryland from the colonial period to the present. This course is recommended for students interested in exploring American studies in detail.

`NCAA`

B46 | **Inquiry into Community Problems**   0.5sem

Students will study the structure and functioning of government at the local level. They will have the opportunity to explore the importance of involvement and civic responsibility at the local level. This course is recommended for students interested in exploring government, law, and leadership in detail and for any students that have not yet passed the Government HSA.

B11 | **Honors Humanities**   0.5sem

Students will study art, literature, music and philosophy from Ancient Times through the Modern Era. Students will examine major works from the performing arts, fine arts, literature and philosophy and consider how these works were influenced by their historical, political and economic settings. This course is recommended for students interested in exploring global studies in detail.

`NCAA`

B201 | **History of the US**   [FY] 0.5/sem

Students will concentrate on the historical period from the Progressive Era to the present. Students will engage in inquiry, problem solving and critical thinking skills to identify major issues of each time period and analyze their importance to the United States today. Topics of special interest will include the social, political and economic shifts that have occurred for groups including women, African Americans, Asian Americans, Hispanic Americans, religious minorities, LGBTQ+ individuals and Americans with disabilities. Students will investigate these shifts through the World Wars, the Depression, Civil Rights Movements, the Cold War and in Post-9/11 America. In this course, students will be expected to read and analyze primary source documents.

`NCAA`

B207 | **Honors History of the US**　　　　　[FY] 0.5/sem

Students will concentrate on the historical period from the Progressive Era to the present. Students will engage in inquiry, problem solving and critical thinking skills to identify major issues of each time period and analyze their importance to the United States today. Topics of special interest will include the social, political and economic shifts that have occurred for groups including women, African Americans, Asian Americans, Hispanic Americans, religious minorities, LGBTQ+ individuals and Americans with disabilities. Students will investigate these shifts through the World Wars, the Depression, Civil Rights Movements, the Cold War and in Post-9/11 America. In this course, students will be expected to read and analyze primary source documents. For BMAH and STEM students, this course may be offered as a hybrid.

NCAA

B290 | **World History**　　　　　　　　[FY] 0.5/sem

Students will explore significant historical events and cultures in world history with an emphasis on understanding themes and analyzing historical evidence found among and between world civilizations. In order to understand the dynamics of modern world history and current global events, students will develop an understanding of how people have historically interacted economically, politically, culturally and militarily. Students will be expected to read and analyze primary source documents including works of art, literature and music in this course.

NCAA

B297 | **Honors World History**　　　　　[FY] 0.5/sem

Students will explore significant historical events and cultures in world history with an emphasis on understanding themes and analyzing historical evidence found among and between world civilizations. In order to understand the dynamics of modern world history and current global events, students will develop an understanding of how people have historically interacted economically, politically, culturally and militarily. Students will be expected to read and analyze primary source documents including works of art, literature and music in this course.

NCAA

B318 | **AP World History: Modern**　　　　[FY] 0.5/sem

Students will develop greater understanding of the evolution of global processes and interaction through their study of world history from circa 1200 CE to the present. The course highlights the nature of changes in international frameworks and their causes and consequences, as well as comparisons among major societies. This course prepares students for the Advanced Placement exam in World History: Modern. The successful completion of this course will meet the graduation requirement for world history. This course is recommended for students interested in exploring global studies in detail.

NCAA

B316 | **Seminar: AP World History**　　[FY] 0.5 elective credit/sem

Students will develop their ability to function as independent learners in the Advanced Placement World History course. This course is recommended for students who require additional practice, guidance and experiences beyond those available in the standard AP World History course or for students taking an AP Social Studies course for the first time.

B328 | **AP U.S. Government & Politics**　　　[FY] 0.5/sem

This course provides students with an analytical perspective on government and politics the United States. This course will prepare students for the Advanced Placement exam in U.S. Government and Politics. Students may take this course to meet the graduation requirement in U.S. Government and the opportunity to earn college credits. This course is recommended for students interested in exploring government, law, and leadership and American studies in detail. They will investigate critical public issues and apply what they have learned about government to the solving of real-world problems in their community-earning 10 hours toward their service-learning graduation requirement.

NCAA

B326 | **Seminar: AP U.S. Government & Politics**
　　　　　　　　　　　　[FY] 0.5 elective credit/sem

Students will develop their ability to function as independent learners in the Advanced Placement U.S. Government and Politics course. This course is recommended for students who require additional practice, guidance and experiences beyond those available in the standard AP U.S. Government and Politics course or for students taking an AP Social Studies course for the first time.

B380 | **US Government**　　　　　　　[FY] 0.5/sem

Students will study the structure and functions of government and politics in the United States, analyze the role of the U.S. government in world affairs, and how democratic principles and practices have evolved by studying Supreme Court cases, and civil and criminal law. They will investigate critical public issues and apply what they have learned about government to the solving of real-world problems in their community-earning 10 hours toward their service-learning graduation requirement.

NCAA

B387 | **Honors US Government**　　　　　[FY] 0.5/sem

Students will study the structure and functions of government and politics in the United States, analyze the role of the U.S. government in world affairs, and how democratic principles and practices have evolved by studying Supreme Court cases, and civil and criminal law. They will investigate critical public issues and apply what they have learned about government to the solving of real-world problems in their community-earning 10 hours toward their service-learning graduation requirement. For STEM students, this course may be offered as a hybrid.

NCAA

B41 | **Honors Social Issues**　　　　　　　0.5sem

Students will identify, analyze, and articulate an informed response to 21st century issues and problems that impact global societies, and are "shared" by groups of people. In order to use academic and civic dialogue to respond, students will need to locate and examine the current events, news media publications, and data sets related to a variety of contemporary topics and social issues. Students will be required to use a framework of academic research, sociological investigation, and civic action to engage with and respond to social issues, developing critical thinking, communication, and civil public discourse skills.

NCAA **DUAL**

B42 | AP Comparative Government & Politics   [FY] 0.5/sem

Students will examine the models used to interpret political relationships and institutions found in national politics around the world in order to apply them to specific countries and their governments. This course will prepare students for the AP examination in Comparative Government and Politics and the opportunity to earn college credits. This course is recommended for students interested in exploring government, law, and leadership and American studies in detail.

NCAA

B43 | Honors Constitutional History & Law   0.5sem

Students will study significant Supreme Court cases in U.S. history for a better understanding of how the Constitution protects the liberties and rights of the people. Current issues being heard by the Supreme Court will be analyzed. This course is recommended for students interested in exploring government and law in detail.

NCAA

B45 | Criminal Justice   0.5sem

In this course, students will investigate issues of crime and justice, the police, the courts, corrections, and juvenile justice. This course is recommended for students interested in exploring government, law, and leadership in detail.

NCAA

B498 | AP European History   [FY] 0.5/sem

Students will study the achievements and accomplishments of European civilization from 1450 to the present. Students will be expected to analyze issues in class and to be able to express their thoughts in a logical manner, both orally and in writing. This course will prepare students for the Advanced Placement exam in European History and the opportunity to earn college credits. This course if recommended for students interested in exploring global studies in detail.

NCAA

B496 | Seminar: AP European History   [FY] 0.5 elective credit/sem

Students will develop their ability to function as independent learners in the Advanced Placement European History course. This course is recommended for students who require additional practice, guidance and experiences beyond those available in the standard AP European History course or for students taking an AP Social Studies course for the first time.

B508 | AP US History   [FY] 0.5/sem

Students will study United States history from the pre-colonial period to the present. Students will be expected to analyze issues in class and to be able to express their thoughts in a logical manner both orally and in writing. The successful completion of this course will meet the graduation requirement for United States History. This course will prepare students for the Advanced Placement exam in U.S. History and the opportunity to earn college credits.

NCAA

B506 | Honors Historical Inquiry   [FY] 0.5/sem

In this course, students will extend their knowledge and understanding of the key themes in the AP US History course. Students will also refine their historical thinking skills through a variety of research projects, document-based activities, simulations, and debates. This course will prepare students for both the rigor of the disciplinary literacy portions of AP US History exam, as well as subsequent AP History courses. Historical Inquiry is mandatory for high school freshman taking the AP US History course.

B51 | AP Economics—Macro   0.5sem

Macroeconomics includes the study of national income and price determination, and economic performance measures, economic growth, and international economics. Students will be expected to analyze issues in class and to be able to express their thoughts in a logical manner both orally and in writing. This course will prepare students for the Advanced Placement Examination in Macroeconomics and the opportunity to earn college credits.

NCAA

B52 | AP Economics—Micro   0.5sem

Microeconomics includes the study of the principles of economics that apply to the functions of individual decision-makers, both consumers and producers, within the larger economic system; and the role of government in promoting greater efficiency and equity in the economy. Students will be expected to analyze issues in class and to be able to express their thoughts in a logical manner both orally and in writing. This course will prepare students for the Advanced Placement Examination in Microeconomics and the opportunity to earn college credits.

NCAA

B56 | Honors Economics   0.5sem

Students will study the principles of economics, including the concept of choice, supply and demand and the relationship of labor and management. Students will also develop an understanding of the role of government and international economic interdependence.

NCAA

B59 | General Psychology   0.5sem

Students will learn the research methods in psychology used to understand human behavior and development. They will learn about the physical systems of the body and how they affect emotions and behaviors as well as learning theories and social interaction.

NCAA **DUAL**

B60 | Psychology of the Individual   0.5sem

Students will study people and their interactions with others. They will discuss self-concept, develop an understanding of how people function as individuals and as members of groups, and understand the impact of social institutions.

Prerequisite(s): *General Psychology*

NCAA

B61 | AP Psychology   [FY] 0.5/sem

Students will study the behavior and mental processes of human beings. This includes the facts, principles, and phenomena associated with each of the major subfields in psychology. Students are expected to analyze issues in class and to be able to express their thoughts in a logical manner, both orally and in writing. This course will prepare students for the Advanced Placement exam in Psychology and the opportunity to earn college credits.

NCAA

B62 | Sociology   0.5sem

In this course, students investigate the field of Sociology: the study of social life, social change, and the social causes and consequences of human behavior. Students will use a social science research model to investigate contemporary American issues of social inequality, patterns of behavior, forces for social change and resistance, and how social systems work.

NCAA **DUAL**

B69 | **Honors Comparative Religions** 0.5sem

Students will study the beliefs of the world's five major religious groups: Judaism, Christianity, Buddhism, Hinduism and Islam. They will analyze similarities and differences among the beliefs and practices of these world religions. Students will be required to read primary source material, including religious texts, in this course. This course is recommended for students interested in exploring global studies in detail.

NCAA

B70 | **Honors International Studies** 0.5sem

This course is for students with a strong interest in world affairs. Students will examine the actions of nations and analyze responses to these actions. Students will also recognize that decision-making is based on accurate information and knowledge of how to deal with particular world situations. This course is recommended for students interested in exploring global studies in detail.

NCAA **DUAL**

B718 | **AP Human Geography** [FY] 0.5/sem

Students investigate the nature, perspective and methods of geography, population, cultural patterns and processes, use maps and spatial data sets; define regions and evaluate the regionalization process; and characterize and analyze changing interconnections among places. This course will prepare students for the Advanced Placement exam in Human Geography and the opportunity to earn college credits. This course is recommended for students interested in exploring global studies in detail.

NCAA

B716 | **Seminar: AP Human Geography** [FY] 0.5 elective credit/sem

Students will develop their ability to function as independent learners in the Advanced Placement Human Geography course. This course is recommended for students who require additional practice, guidance and experiences beyond those available in the standard AP Human Geography course or for students taking an AP Social Studies course for the first time.

B75 | **Honors Women's History** 0.5sem

Students will examine the changing roles of women in United States history. They will analyze the social, economic, and legal-political status of women in different eras in U.S. history. Students will also investigate the causes and consequences of issues that affect women in contemporary American society (e.g. violence, poverty, education, equal opportunity). In this course, students will be expected to be able to read and analyze primary source documents, including works of art, literature and music. This course is recommended for students interested in exploring American studies in detail.

NCAA **DUAL**

B77 | **Honors African American History** 0.5sem

Through the investigation of local and national historic events, students will examine the achievements of African Americans in their struggle for political, economic, and social equality throughout American history. Students will also examine the achievements of African Americans in their struggle for political, economic, and social equality. Students will also investigate the causes of issues that continue to face African Americans in society today. Throughout the course students will read and analyze primary sources. This course is recommended for students interested in exploring American studies in detail.

NCAA **DUAL**

B87 | **Department Aide—Social Studies** No credit

Social Studies Aide courses offer students the opportunity to assist instructors in preparing and/or organizing. Students may provide tutorial or instructional assistance to other students.

World & Classical Languages

The acquisition of skills in a language other than English is critical to preparation for life in our global society. We believe that these skills are developed through a communicative approach, with regular exposure to authentic language in all forms. It should be a challenging and enjoyable experience. Students are asked to experiment with the target language, to take risks and challenge themselves to read, write and speak at a proficiency level appropriate for their level of language study. Teachers and students monitor progress with authentic tasks relevant to life in our digital, global society. Students will make connections with other cultures as they see and hear about other lifestyles from around the world and compare it to their own experiences.

We highly recommend that students and parents consider continued language studies for as long as possible - well beyond the state graduation requirement of two credits. With access to language courses beginning in sixth grade, it is possible for students to reach advanced levels by the time they are midway through their high school career. Students with a love of languages should be encouraged to engage in yet another language of study during the later high school years. Research indicates that students who pursue other language studies perform higher on English language assessments - from the primary years to college entrance exams.

Note— Language offerings vary at each school.

World & Classical Language Graduation Requirements

Students seeking to qualify for admission to Maryland colleges and universities must complete a minimum of two credits of World Language. It is highly recommended that students continue language studies beyond the requisite levels in order to become more proficient and effective communicators in the global society and to boost college application consideration. Please check with colleges or universities of interest regarding their acceptance of your language of choice.

E01 | **American Sign Language 1**   [FY] 0.5/sem

Designed to introduce students to American Sign Language, American Sign Language 1 enables students to communicate with deaf persons through finger spelling, signed words, and gestures. Course topics may include the culture of and issues facing deaf people.

`NCAA` `DUAL`

E02 | **American Sign Language 2**   [FY] 0.5/sem

American Sign Language 2 builds upon skills developed in American Sign Language 1, extending students' ability to understand and express themselves in American Sign Language and increasing their vocabulary and speed. Typically, students learn how to engage in discourse for informative or social purposes and to comprehend the language when signed slowly.

`NCAA`

E03 | **Honors American Sign Language 3**   [FY] 0.5/sem

American Sign Language 3 focuses on having students express increasingly complex concepts while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when viewing the language signed at normal rates and conversing easily within limited situations.

`NCAA`

E04 | **Honors American Sign Language 4**   [FY] 0.5/sem

American Sign Language 4 focuses on advancing students' skills and abilities to sign and understand the language so that they can maintain simple conversations with sufficient vocabulary and in an acceptable pace and have sufficient comprehension skills to understand the language when signed at a normal pace.

E11 | **French 1**   [FY] 0.5/sem

Designed to introduce students to French language and culture, French 1 emphasizes authentic language exposure, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. French culture is introduced through the art, literature, customs, and history of the French-speaking people.

`NCAA` `DUAL`

E12 | **French 2**   [FY] 0.5/sem

French 2 builds upon skills developed in French 1, extending students' ability to understand and express themselves in French and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of French-speaking people to deepen their understanding of the culture(s).

`NCAA`

E13 | **Honors French 3**   [FY] 0.5/sem

French 3 focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

`NCAA`

E14 | **Honors French 4**   [FY] 0.5/sem

French 4 focuses on advancing students' skills and abilities to read, write, speak, and understand the French language so that they can maintain conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.

NCAA

E15 | **AP French Language**   [FY] 0.5/sem

Designed to parallel third-year college-level courses in French Composition and Conversation, AP French Language builds upon prior knowledge and develop students' ability to understand others and express themselves (in French) accurately, coherently, and fluently. Students will develop a vocabulary large enough to understand literary texts, magazine/newspaper articles, films and television productions, and so on.

NCAA

E20 | **Introductory Chinese**   0.5sem

Chinese Conversation and Culture provides students with an introduction to the Chinese language and the culture(s) of Chinese-speaking people, placing greater emphasis on speaking and listening skills while de-emphasizing writing and reading the language.

NCAA

E21 | **Chinese 1**   [FY] 0.5/sem

Designed to introduce students to Chinese language and culture, Chinese 1 emphasizes basic syntax, simple vocabulary, written characters, and spoken tones so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. Chinese culture is introduced through the art, literature, customs, and history of Chinese-speaking people.

NCAA **DUAL**

E22 | **Chinese 2**   [FY] 0.5/sem

Chinese 2 builds upon skills developed in Chinese 1, extending students' ability to understand and express themselves in Chinese and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and phrasing, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Chinese-speaking people to deepen their understanding of the culture(s).

NCAA

E23 | **Honors Chinese 3**   [FY] 0.5/sem

Chinese 3 focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

NCAA

E24 | **Honors Chinese 4**   [FY] 0.5/sem

Chinese 4 focuses on advancing students' skills and abilities to read, write, speak, and understand the Chinese language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of language rules and a strong vocabulary.

NCAA

E25 | **AP Chinese Language**   [FY] 0.5/sem

AP Chinese extends students' facility with the language so that they are able to understand, initiate, and sustain general conversations on topics beyond basic survival needs. Reading and writing tasks will usually include all normal verb tenses (present, past, and future).

NCAA

E41 | **German 1**   [FY] 0.5/sem

Designed to introduce students to German language and culture, German 1 emphasizes authentic language exposure, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. German culture is introduced through the art, literature, customs, and history of the German-speaking people.

NCAA **DUAL**

E42 | **German 2**   [FY] 0.5/sem

German 2 builds upon skills developed in German 1, extending students' ability to understand and express themselves in German and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of German-speaking people to deepen their understanding of the culture(s).

NCAA

E43 | **Honors German 3**   [FY] 0.5/sem

German 3 focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

NCAA

E44 | **Honors German 4**   [FY] 0.5/sem

German 4 focuses on advancing students' skills and abilities to read, write, speak, and understand the German language so that they can maintain conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.

NCAA

E45 | **AP German Language**   [FY] 0.5/sem

Designed to parallel third-year college-level courses in German Language, AP German Language builds upon prior knowledge and develop students' ability to understand spoken German in various conversational situations, to express themselves (in German) accurately and fluently, and to have a command of the structure of the German language. Students will develop a vocabulary large enough to understand literature, magazine/newspaper articles, films and television productions, and so on.

NCAA

E48 | **Italian 1**   [FY] 0.5/sem

Designed to introduce students to Italian language and culture, Italian 1 emphasizes authentic language exposure, simple vocabulary and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. Italian culture is introduced through the art, literature, customs, and history of the Italian-speaking people.

NCAA **DUAL**

E49 | **Italian 2**   [FY] 0.5/sem

Italian 2 builds upon skills developed in Italian 1, extending students' ability to understand and express themselves in Italian and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Italian-speaking people to deepen their understanding of the culture(s).

NCAA

E50 | **Honors Italian 3**   [FY] 0.5/sem

Italian 3 focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

E51 | **Honors Italian 4**   [FY] 0.5/sem

Italian 4 focuses on advancing students' skills and abilities to read, write, speak, and understand the Italian language so that they can maintain conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.

E52 | **AP Italian**   [FY] 0.5/sem

Designed to parallel third-year college-level courses in Italian Composition and Conversation, AP Italian Language builds upon prior knowledge and develop students' ability to understand others and express themselves (in Italian) accurately, coherently, and fluently. Students in AP Italian will learn about contemporary Italian culture by examining its products, practices and perspectives through thematic study and the use of authentic resources and literature to develop language skills and communicative proficiency in real-life settings.

E54 | **Turkish 1**   [FY] 0.5/sem

Designed to introduce students to a Turkic/Ural-Altaic language (e.g., Turkish, Finnish, and Hungarian) and culture, Turkic/Ural-Altaic Language 1 emphasizes basic grammar and syntax, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. Available at Chesapeake Science Point only.

NCAA

E55 | **Turkish 2**   [FY] 0.5/sem

Turkic/Ural-Altaic Language 2 builds upon skills developed in Turkic/Ural-Altaic Language 1, extending students' ability to understand and express themselves in a Turkic/Ural-Altaic language (e.g., Turkish, Finnish, and Hungarian) and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of appropriate people to deepen their understanding of the culture(s). Available at Chesapeake Science Point only.

NCAA

E56 | **Honors Turkish 3**   [FY] 0.5/sem

Turkic/Ural-Altaic Language 3 focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations. Available at Chesapeake Science Point only.

NCAA

E57 | **Honors Turkish 4**   [FY] 0.5/sem

Turkic/Ural-Altaic Language 4 focuses on advancing students' skills and abilities to read, write, speak, and understand the language so that they can maintain conversation with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary. Available at Chesapeake Science Point only.

NCAA

E61 | **Spanish 1**   [FY] 0.5/sem

Designed to introduce students to Spanish language and culture, Spanish 1 emphasizes authentic language exposure, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. Spanish culture is introduced through the art, literature, customs, and history of Spanish-speaking people.

NCAA **DUAL**

E62 | **Spanish 2**   [FY] 0.5/sem

Spanish 2 builds upon skills developed in Spanish 1, extending students' ability to understand and express themselves in Spanish and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Spanish-speaking people to deepen their understanding of the culture(s).

NCAA

E63 | **Honors Spanish 3**   [FY] 0.5/sem

Spanish 3 focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

NCAA

E64 | **Honors Spanish 4**   [FY] 0.5/sem

Spanish 4 focuses on advancing students' skills and abilities to read, write, speak, and understand the Spanish language so that they can maintain conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.

NCAA

E65 | **AP Spanish Language**   [FY] 0.5/sem

Designed by the College Board to parallel third-year college-level courses in Spanish Composition and Conversation, AP Spanish Language builds upon prior knowledge and develop students' ability to understand others and express themselves (in Spanish) accurately, coherently, and fluently in both formal and informal situations. Students will develop a vocabulary large enough to understand literary texts, magazine/newspaper articles, films and television productions, and so on.

NCAA

E656 | **Seminar: AP Spanish Language & Culture**
                    [FY] 0.5 elective credit/sem

Students focus on enhancing skills and concepts that will support success in AP Spanish Language & Culture. This course is for students who need additional practice in interpersonal, presentational and interpretive modes of communication in the target language. Concurrent enrollment in AP Spanish Language is required.

E66 | **AP Spanish Literature**   [FY] 0.5/sem

Designed by the College Board to parallel college-level Introduction to Hispanic Literature courses, AP Spanish Literature covers representative works from the literatures of Spain and Spanish America, encompassing all genres. The builds students' Spanish language proficiency so that they are able to read and understand moderately difficult prose and express critical opinions and literary analyses in oral and written Spanish (an ability equivalent to having completed a third-year college-level Spanish Language course).

NCAA

E67 | **Arabic 1**   [FY] 0.5/sem

Designed to introduce students to Arabic language and culture, Arabic 1 emphasizes basic grammar and syntax, simple vocabulary, and the spoken accent so that students can read, write, speak, and understand the language at a basic level within predictable areas of need, using customary courtesies and conventions. Arabic culture is introduced through the art, literature, customs, and history of the Arabic-speaking people.

DUAL

E68 | **Arabic 2**   [FY] 0.5/sem

Arabic 2 builds upon skills developed in Arabic 1, extending students' ability to understand and express themselves in Arabic and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar, and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Arabic-speaking people to deepen their understanding of the culture(s).

E69 | **Honors Arabic 3**   [FY] 0.5/sem

Arabic 3 focuses on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

E70 | **Honors Arabic 4**   [FY] 0.5/sem

Arabic 4 focuses on advancing students' skills and abilities to read, write, speak, and understand the Arabic language so that they can maintain simple conversations with sufficient vocabulary and an acceptable accent, have sufficient comprehension to understand speech spoken at a normal pace, read uncomplicated but authentic prose, and write narratives that indicate a good understanding of grammar and a strong vocabulary.

E87 | **Department Aide—World Languages**   No credit

World Language and Literature Aide offers students the opportunity to assist instructors in preparing, organizing or delivering course curricula. Students may provide tutorial or instructional assistance to other students.

Certificate of Completion Courses

These courses are designed to meet the Individualized Education Program (IEP) needs of students with disabilities and provide specialized instruction and real-life experiences to prepare students with significant disabilities for life beyond high school. The following courses utilize a variety of strategies and instructional methods to provide students with specialized instruction in English, science, social studies, mathematics and vocational programs.

Maryland High School Certificate of Program Completion Requirements

This certificate shall be awarded only to students with disabilities who cannot meet the requirements for a diploma but who meet the following standards:

1. the student is enrolled in an education program for at least 4 years beyond grade 8 or its age equivalent, and is determined by an IEP team, with the agreement of the parents of the student with disabilities, to have developed appropriate skills for the individual to enter the world of work, act responsibly as a citizen, and enjoy a fulfilling life, including but not limited to: gainful employment, work activity centers, sheltered workshops; and supported employment; or

2. the student has been enrolled in an education program for 4 years beyond grade 8 or its age equivalent and will have reached age 21 by the end of the student's current school year. [COMAR 13A.03.02.09D]

The decision to award a student with disabilities a Maryland High School Certificate of Program Completion will not be made until after the beginning of the student's last year in high school unless the student is participating in the alternative Maryland School Assessment Program (Alt-MSA) as determined by an IEP team. [COMAR 13A.03.02.09D(3)]

Additional Opportunities available for students earning a Certificate of Program Completion:

Anne Arundel County Public Schools offers several programs (outside of the high school) to help students with significant disabilities make successful transitions from school to adult life. Students must apply and meet eligibility requirements to participate in one of these programs. Students who participate in either program will graduate from his/her high school receiving a Certificate of Achievement/Citation and will receive their Maryland High School Certificate of Program Completion upon successful completion of the program. Please contact your transition facilitator if you have any questions or would like additional information about the program.

On-Campus Transition Program (OCTP)

A two-year program at Anne Arundel Community College for students who have been identified with a developmental disability and are within their last two years of entitlement with AACPS. The OCTP allows learning opportunities and experiences with age-appropriate peers by participating in selected community college courses and campus activities. Life skills, functional academic, and self-determination instruction are provided by an AACPS Special Education teacher and supported by AACPS teaching assistants. Course selections will vary from year to year but are typically in the areas of art, health, and physical education.

Project SEARCH

A one-year, business-led transition program that takes place entirely at the host business for students in their last year of entitlement with AACPS. Project SEARCH provides real-life work experiences to help students make successful transitions from school to employment. Total workplace immersion facilitates a seamless combination of classroom instruction, career exploration, and relevant job-skills training through strategically designed internships. Project SEARCH is an international trademarked and copyrighted program model, which focuses solely on employment for Project SEARCH interns.

N19 | **English/Reading 9–12**   [FY] 0.5/sem

This course will develop skills in listening, speaking, reading, and writing, as specified in the Individualized Education Program for each student enrolled to fulfill course requirements for graduation. Students in grades 11–12 focus on listening, speaking, reading, and writing as it relates to the transition to adulthood.

N29 | **Mathematics 9–12**   [FY] 0.5/sem

This course will develop skills in basic mathematical concepts and real-world problem solving as specified in the Individualized Education Program for each student enrolled to fulfill course requirements for graduation.

N39 | **Social Studies 9–12**   [FY] 0.5/sem

Students will study information related to history, economics, geography, and government.

N49 | **Science 9–10**   [FY] 0.5/sem

Students will study the relationship of organisms to other organisms in their environment. Students will study scientific skills, processes, and concepts of Biology using modified texts and materials.

N730 | **Community Skills 9–12**   [FY] 0.5/sem

This course provides students with information about a wide range of subjects to assist them in becoming wise consumers and productive adults. These courses often emphasize goal setting, decision-making, and setting priorities; money and time management; relationships; and the development of self.

N950 | **Community Vocational Program 11–12**   No Credit

This course provides students with work experience in a field related to their interests. Goals are typically set cooperatively with teacher, student, and employer. This course may include classroom activities as well, involving further discussion regarding experiences that students encounter in the workplace.

Interdisciplinary Courses

X01 | **Office Aide** No Credit
Office Aide courses offer students the opportunity to assist in preparing, organizing or delivering materials to teachers and/or students.

X02 | **Media Aide** No Credit
Media Aide courses offer students the opportunity to assist in preparing, organizing or delivering materials to teachers and/or students.

X04 | **School Counseling Aide** No Credit
School Counseling Aide courses offer students the opportunity to assist in preparing, organizing or delivering materials to teachers and/or students.

X12 | **AP Capstone: Seminar** [FY] 0.5/sem
The Advanced Placement (AP) Capstone is built on the foundation of two new AP courses — AP Seminar and AP Research. It is designed to complement and enhance the in-depth, discipline-specific study provided through other AP courses. AP Seminar provides sustained practice of investigating issues from multiple perspectives and cultivates student writing abilities so they can craft, communicate, and defend evidence-based arguments. Students are empowered to collect and analyze information with accuracy and precision and are assessed through a team project and presentation, an individual written essay and presentation, and a written exam.

X15 | **AP Capstone: Research** [FY] 0.5/sem
The Advanced Placement (AP) Capstone is built on the foundation of two new AP courses — AP Seminar and AP Research. It is designed to complement and enhance the in-depth, discipline-specific study provided through other AP courses. The AP Capstone curriculum fosters inquiry, research, collaboration, and writing skills through the intensive investigation of topics from multiple perspectives.

X20 | **Alternative Credit** 0.5/sem
This offering includes all individual work-study programs and experiences occurring outside the school which award credit towards graduation but do not result in money payment to the student. Plans for alternative credit experiences can originate with the student, teacher, a community group or individual. Alternative credit experiences of particular note are those leading to community service and accelerated research study. Community service credit may be used to meet the one credit Practical Arts requirement. Alternative credit is elective in nature and usually awarded as alternative credit in a particular content area. It is important that these experiences match well with the student's general education plan and interests. Students interested in alternative credit should seek the advice of a counselor.

X21 | **Gifted & Talented Mentorship** 0.5/sem
Tutoring Practicum courses provide students with the opportunity to offer tutorial assistance to their peers or to younger students. After an initial training period during which students learn how to work with other students and how to make use of the available resources (e.g., staff, written material, audiovisual aids, and so on), students engage in tutoring and assisting others who need or request help.

X40 | **PSAT/SAT Preparation** 0.5sem
Students in grades 10-12 prepare for the New PSAT and the SAT by developing and applying strategies to strengthen critical reading, writing, and mathematical abilities and test-taking skills. Through focused instruction, practice with actual test items, and independent activities, students diagnose their individual needs and implement a program to improve their immediate scores and their greater academic performance in high school and beyond.
Prerequisite(s): *Algebra 1*

X42/3/4 | **Student Leadership 1/2/3** 0.5/sem
In this class, students will explore leadership traits and characteristics, goal setting, decision-making, communication and listening skills, conflict resolution and problem solving, group work and team building, meeting skills, project planning, financial literacy, ethics, organizational skills, critical thinking skills and civic responsibility. Students will study, practice and develop the processes associated with individual and group leadership. This class would develop and evaluate leadership traits and characteristics through a leadership-in-action model.

X43 | **Financial Literacy** 0.5sem
In this class, students will study the practical and real-life applications of economic theory through consumer decision making. Consumer saving, investing, budgeting, use of credit, insurance, housing, career choice, insurances, retirement and estate planning will be investigated.

X45–9/0/1/2 | **Student Seminar 9/10/11/12** 0.25/sem
The major theme of Student Seminar is to help students with the numerous decisions that must be made in their educational and career development. Student Seminar addresses five major skill areas: Self-Knowledge, Life Skills, Educational Development, Work Ethics and Career Planning. The activities contained in these five areas have been developed in accordance with the Maryland School-To-Work initiative.

X46–9/0/1/2 | **Student Seminar 9 /10/11/12** 0.5/sem
The major theme of Student Seminar is to help students with the numerous decisions that must be made in their educational and career development. Student Seminar addresses five major skill areas: Self-Knowledge, Life Skills, Educational Development, Work Ethics and Career Planning. The activities contained in these five areas have been developed in accordance with the Maryland School-To-Work initiative.

X03 | **Innovation through Project-Based Learning 9** [FY] 1.0/sem
This course will engage students in a project-based learning approach (PBL) while providing a pathway to a vibrant venue for applying content standards relevant to student's lives. Students will work collaboratively with their teachers, peers and community partners to create projects that take into account student interests and align with content standards. While focusing on an end product, course standards are extended and applied as students become engaged in their learning. Students will complete problem/project-based modules focused on a current STEM and Humanities topic or project that is relevant in today's workplace/world. This course will expose students to and develop skills in Problem/Project based learning, Socratic Dialogue, and collaborative teamwork. Once students complete a project, it will be presented to a public audience. This course will enable students to make the connection between relevant real-world experiences and core subject areas, preparing them to gain important work and life skills. Available only at Mary Moss at J. Albert Adams Academy and will be graded using S or U.

N61 | **Coping Skills** 0.5/sem

This course teaches students the social skills needed for independent functioning within the community. Topics may include self-control, self-expression, obeying rules, decision-making, appropriate situational behavior, interacting with others, and maintaining relationships. Students may develop independence, self-confidence, and self-reliance.

N62 | **Learning Strategies** 0.5/sem

This course prepares students for success in high school and/or for postsecondary education. Course topics may vary according to the students involved, but typically include reading improvement skills, such as scanning, note-taking, and outlining; library and research skills; listening and note-taking; vocabulary skills; and test-taking skills. This course may also include exercises designed to generate organized, logical thinking and writing.

Programs of Choice

The AACPS Division of Advanced Studies and Programs believes strongly in providing innovative educational programs for our students. It is through offering Programs of Choice in Advancement Via Individual Determination (AVID), International Baccalaureate (IB), Science, Technology, Engineering, and Mathematics (STEM), and Performing and Visual, Arts (PVA) that students explore their interests, talents, and abilities in a highly specialized and rigorous instructional setting. In the Programs of Choice, students learn about and explore issues current and relevant within their field of study. Students take both pride and ownership in being a part of a Magnet program as they prepare themselves to be future leaders.

Contents

AVID

(Advancement Via Individual Determination)

AVID, Advancement Via Individual Determination, is a college readiness system for elementary through higher education that is designed to increase school-wide learning and performance. Although AVID serves all students, the AVID elective focuses on the least-served students in the academic middle who have the desire to go to college and the willingness to work hard. AVID pulls these students out of their unchallenging courses and puts them on the college track: acceleration instead of remediation. The formula is simple — raise expectations of students and, with the AVID support system in place, they will rise to the challenge. At the secondary grade levels (6th–12th grades), AVID is an academic elective course taken during the school day. Students are usually selected to enroll in an AVID class after an application process. Students learn organizational and study skills, work on critical thinking and asking probing questions, get academic help from peers and college tutors, and participate in enrichment and motivational activities that make college seem attainable. Students enrolled in AVID are typically required to enroll in at least one of their school's toughest classes, such as honors or Advanced Placement, in addition to the AVID elective.

Students may wear an AVID cord during graduation if the following requirements are met:

1. Take an AP/IB exam and/or earn college credit for at least one course.

2. Take the SAT or ACT.

3. Complete the senior AVID data and submit it to the AVID Center on time.

4. Participate in the AVID elective course for at least three full high school years. Years do not have to be consecutive, but the third year must be the full senior year.

5. Apply and be accepted into at least one four-year college.

6. Have an unweighted GPA of at least 2.75.

X30 | **AVID Tutor 1–2**   0.5/sem

The AVID (Advancement Via Individual Determination) academic elective class utilizes trained tutors to guide the AVID students toward academic and personal excellence. Tutors are active participants in the learning, growth, and personal development of the AVID students. Juniors and seniors may apply to become AVID Tutors by meeting with the AVID Site Coordinator and completing a request for alternative credit.

K19 | **AVID 9**   [FY] 0.5/sem

The AVID elective provides a strong, relevant writing and reading curriculum, study skills, assistance with organization and time management, college research, and tutoring. Students will develop their organizational skills using the AVID Binder, participate in rigorous tutorials aimed at improving inquiry and collaboration techniques, and improve their knowledge of subject matter in all academic classes using Cornell notes. AVID 9 serves as a transition from middle school to high

school where students will continue their focus on acceptance into a four-year college or university of their choice. Students in AVID 9 are expected to prepare for a rigorous high school schedule that includes challenging honors and AP courses.

K20 | **AVID 10**   [FY] 0.5/sem

The AVID elective provides a strong, relevant writing and reading curriculum, study skills, assistance with organization and time management, college research, and tutoring. Students will develop their organizational skills using the AVID Binder, participate in rigorous tutorials aimed at improving inquiry and collaboration techniques, and improve their knowledge of subject matter in all academic classes using Cornell notes.

K21 | **AVID 11**   [FY] 0.5/sem

The AVID elective provides a strong, relevant writing and reading curriculum, study skills, assistance with organization and time management, college research, and tutoring. AVID 11 builds upon the skills and techniques developed in AVID 6-10, by working towards the goal of college acceptance. To this end, students receive support preparing for their SAT/ACT tests, finding and narrowing down their best fit colleges, writing their college essay, and preparing for senior year. Students also receive support for their honors and Advanced Placement courses and skills and strategies to prepare for the academic rigors of college as well as support selecting appropriate courses to best prepare students for college.

K22 | **AVID 12**   [FY] 0.5/sem

The AVID elective provides a strong, relevant writing and reading curriculum, study skills, assistance with organization and time management, college research, and tutoring. AVID 12 builds upon the skills and techniques developed in AVID 6-11, by working towards the goal of college accepted. To this end, students receive support filling out college applications, building resumes, finding scholarships, and preparing for the transition from high school to college. Students also receive support for their honors and Advanced Placement courses and acquire skills and strategies to prepare for the academic rigors of college. Students in AVID 12 are expected to apply to four-year colleges or universities, find and apply to scholarships, and research possible majors and careers.

JROTC

(Junior Reserve Officers' Training Corps)

Anne Arundel County Public Schools offers three Junior Reserve Officers' Training Corps (JROTC) programs focusing on student leadership, citizenship and service to the community. Through partnerships with the United States Army (Meade HS), Navy (Annapolis HS) and Marines Northeast HS), instructors from all three branches prepare students in grades 9-12 for leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens through rigorous instruction and hands-on activities.

JROTC prepares students for life and they are not under any obligation to join the military. However, if they choose to further their interest in the military, satisfactory completion of the JROTC program can lead to advanced placement credit in the Senior ROTC program (college level) or advanced rank in any of the Armed Forces

Navy JROTC

The purpose of Navy JROTC is to instill in students the value of citizenship, service to the United States, personal responsibility and a sense of accomplishment. Specific goals for the Naval Junior Reserve Officers Training Corps (NJROTC) program and course work include patriotism, developing informed citizens and responsible citizens; promoting habits of orderliness and precision; developing a high degree of self-discipline and leadership; promoting an understanding of the basic elements and requirements for national security; developing respect for and an understanding of the need for constituted authority in a democratic society; providing incentives to live healthy and drug-free lives; developing leadership potential; promoting high school completion; providing information on the military services as a possible career.

The NJROTC program is offered to students in grades 9–12. These courses are available at Annapolis High School but may be taken by students enrolled at other high schools that are willing to provide their own transportation, providing there is room at Annapolis. All uniforms, texts, insignia, and training materials are provided.

X50 | **Navy Junior ROTC 1**   [FY] 0.5/sem

Naval Science 1 is the first of the Naval Science program. The NJROTC program emphasizes each person's responsibilities in democratic society. The program includes classroom instruction, physical fitness, and military drill, wearing the correct uniform, practicing military customs and courtesies, and basic leadership training. Students will be introduced to leadership theories on ethics and values. Instructional topics also include naval ships and aircraft, citizenship and U.S. government and other forms of government, wellness and fitness, geography and survival skills. The program is designed to motivate students to use the skills learned in NJROTC to be successful in high school, in advanced education and in other education and training. Students must meet grooming and discipline standards.

X51 | **Navy Junior ROTC 2** [FY] 0.5/sem

This course continues the instruction offered in Naval Science 1 at an advanced level. The second level course is intended to meet the needs of cadets who desire further training in Naval subjects and to gain additional leadership experiences. Topics include: Maritime History, Leadership, Maritime Geography, Meteorology, Astronomy, Physical Science, and Oceanography. Naval Science 2 and 3 topics may be alternated annually if approved by the senior instructor. Students must meet grooming and discipline standards.

X52 | **Navy Junior ROTC 3** [FY] 0.5/sem

This course continues the instruction offered in Naval Science 1 and 2 at an advanced level. The third level course is designed to meet the needs of cadets who desire advanced training in Naval subjects and to gain additional leadership experiences while holding cadet officer positions. Cadets may also be selected to staff positions. Topics include: National Security, Naval Operations and Support Functions, Military Law, International Law, Ship Construction, Shipboard Organization, Seamanship, Navigation, Naval Weapons and Aircraft. Naval Science 2 and 3 topics may be alternated annually if approved by the senior instructor. Students must meet grooming and discipline standards.

X53 | **Navy Junior ROTC 4** [FY] 0.5/sem

This course continues the instruction offered in Naval Science 1, 2, and 3 at an advanced level. The fourth level course is designed to meet the needs of senior cadets participating in the full four-year NJROTC program. Fourth year NJROTC cadets comprise the majority of the command staff responsible for planning, organizing, and administering unit activities. Cadets also receive course work in advance leadership and organizational theory; ethics and workshops on college preparation; and career exploration. Students must meet grooming and discipline standards.

Army JROTC

Students may take anywhere from one semester to eight semesters of AJROTC, earning from 0.5 to 4 elective credits. These courses prepare students for responsible leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens. All uniforms, texts, insignia, and training materials are provided. All classes maintain a focus on physical fitness through routine physical training. Additionally, all cadets complete the entire National Endowment for Financial Education (NEFE) six phase High School Financial Planning Program.

Cadets may have the opportunity to participate in several co-curricular activities offered by JROTC:

- JROTC Leadership Challenge and Academic Bowl (JLAB): a competitive program that imparts values of leadership and citizenship while preparing for higher education milestones like college entrance exams.
- JROTC Raider Challenge: A competitive program for JROTC Cadets in five different fitness and skill events.
- Drill Competitions: Programs for traditional drill formations including regulation and exhibition/pageantry categories.
- JROTC Cadet Leadership Challenge (JCLC): Approximately ten percent of students in the program are afforded the opportunity to attend a six day camp conducted at Fort A.P. Hill, VA, where cadets are provided the opportunity to participate in a safe, healthy and fun training environment that is both physically and mentally challenging, to provide hands-on training designed to develop leadership, discipline, teamwork and self-confidence. Cadets are provided adventure training not normally available on campus in order to practice leadership in a challenging environment and allow them to participate in citizenship-building exercises in a military setting.
- Various field trips/college visits to include the U.S. Naval Academy at Annapolis, MD, the U.S. Military Academy at West Point, NY, as well as others.

The AJROTC program is offered to students in grades 9–12. These courses are available at Meade High School but may be taken by students enrolled at other high schools that are willing to provide their own transportation, providing there is room at Meade. All uniforms, texts, insignia, and training materials are provided.

X55 | **Army Junior ROTC 1** [FY] 0.5/sem

Focus is on the Foundations of Army JROTC. Topics of instruction include: Being a Leader, Knowing Yourself, Study Skills, Achieving a Healthy Lifestyle, The Globe, You the People—Citizenship Skill, and Your Job as an American Citizen.

X56 | **Army Junior ROTC 2** [FY] 0.5/sem

As the second year in the program, cadets earn leadership opportunities in the classroom. Topics of instruction include: Focus on The Nation's Defense Forces; How to Lead; Communication Skills; Conflict Resolution; Maps, Map Reading and Land Navigation; and Founding and Growth of a Nation (history of the U.S. from 1776 to present).

X57 | **Army Junior ROTC 3** [FY] 0.5/sem

Third year cadets take on the highest leadership roles at the classroom level. Topics of Instruction include: Leading Situations; Making a Difference through Service Learning; Career Planning; the Federal Judicial System; and Sources of Power.

X58 | **Army Junior ROTC 4** [FY] 0.5/sem

Fourth year cadets assume the leadership roles of the entire Mustang Battalion. Topics of Instruction for the senior class include: Planning Skills; Social Responsibility; Drug Prevention/Intervention; Exploring the World; and Advanced Citizenship and American History.

Marine Corps JROTC

The Marine Corps JROTC program, is designed to instill in high school students a value of citizenship, character, service to the United States, personal responsibility, and a sense of accomplishment. It prepares high school students for responsible leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens. The program is a stimulus for promoting graduation from high school and it provides instruction with rewarding opportunities that will benefit the student, community, and nation.

The Marine Corps JROTC program is a cooperative effort on the part of the Marine Corps and the host institution to provide secondary school students with opportunities for total development. Satisfactory completion of the program can lead to advanced placement credit in the Senior ROTC program or advanced rank in the Armed Forces.

The Marine Corps JROTC program is one of the Marine Corps' contributions to assisting America's youth to become better citizens. The program produces successful students and productive adults, while fostering in each school a more constructive and disciplined learning

environment. This program makes substantial contributions to many communities and ultimately to the nation's future. It is the centerpiece of the Department of Defense's commitment to America's Promise for Youth as it emphasizes community service and teen anti-drug efforts.

This program is offered to students in grades 9–12. These courses are available at Northeast High School, but may be taken by students enrolled at other high schools that are willing to provide their own transportation, providing there is room at Northeast. All uniforms, texts, insignia, and training materials are provided.

X66 | **Marine Corps Junior ROTC Level 1**   [FY] 0.5/sem

Level 1 focuses on building character and development of leadership. It is designed to:
- Create informed, patriotic, and responsible citizens,
- Develop responsible young adults who are physically, mentally, and morally fit,
- Develop informed and civic-minded young adults prepared for higher education, civilian careers, and public service, and
- Instill discipline, respect, and responsibility through military-related subjects and activities.

Cadets are expected to wear designated Marine Corps uniforms on a weekly basis and adhere to appropriate grooming standards.

X67 | **Marine Corps Junior ROTC Level 2**   [FY] 0.5/sem

Level 2 MCJROTC cadets focus on leadership principles, Esprit De Corps, citizenship, and personal growth and responsibilities. Cadets will demonstrate leadership theory, style, and principles. Cadets will additionally perform leadership roles within the Cadet Company and extracurricular activities. These activities include Drill Team/Color Guard, Raider (physical fitness) team, Air Rifle Team, orientation trips, community service projects, and social events.

X68 | **Marine Corps Junior ROTC Level 3**   [FY] 0.5/sem

The Level 3 course builds upon the knowledge and experience attained during Leadership Education 1 and 2. The course continues to stress classroom instruction and practical application in leadership education, citizenship, personal growth and responsibility, self-discipline, and character development. Training includes leadership, physical fitness, drill and ceremonies, military customs and courtesies, general military subjects, air rifle marksmanship. During this year, there is also an increased emphasis on the consideration and exploration of post high school educational and career opportunities.

X69 | **Marine Corps Junior ROTC Level 4**   [FY] 0.5/sem

The Level 4 course allows senior cadets the opportunity to serve as both a training facilitator for the MCJROTC instructional staff and as a mentor for junior cadets. Senior cadets are expected to display positive attitudes, requisite leadership ability, and perform in leadership roles within the MCJROTC cadet organization. Senior cadets are also assigned to Leadership Education I-III classes; modeling leadership, serving as a role model, conducting training, and/or mentoring junior cadets as a means to enhance their leadership education and prepare them for a career after high school.

Signature Courses

A Signature is a theme chosen by a school and its surrounding community to connect classroom instruction with real-world situations and workforce skills. A Signature brings together educators with local business and community leaders to make classroom instruction relevant, interesting, and challenging for all students and expands opportunities that connect to the 21st century workplace. Each of the 12 comprehensive high schools in Anne Arundel County offers a unique Signature Program providing enrichment to the educational experience. These programs align with AACPS Strategic Plan to eliminate the achievement gap by providing all students with access to rigorous coursework.

There are multiple opportunities for students to participate in the school's Signature Program. Signature specific classes will be available to all students on a space-available basis. Students who participate in the Signature are able to choose from specially designed courses, co-curricular and career opportunities enhanced with the school's unique theme. These may include seminars with leaders in their field, internships, mentoring, technical and community college courses, online learning, and other real-world experiences. Students may develop individual pathways and create a portfolio that demonstrates their unique skills and talents surpassing information found in a traditional high school transcript.

College Classes in AACPS

The Signature Program, in partnership with Anne Arundel Community College, currently offers AACC college courses taught by AACC college professors during the regular school day in several of our high schools. These courses are **dual credit**, providing both credit towards a student's high school diploma as well as transcripted college credits. Completing these courses may earn an industry certification, a pathway to a post-secondary degree, or a cluster of transferrable credits, giving students a jumpstart on their time in college. All high schools will have a Signature-embedded college pathway in the future.

All Signature Programs

X17 | **Global Community Citizenship** 0.5sem

Global Community Citizenship is an introductory signature course designed to explore the values and diversity of our local, national, and global communities. Through Project Based Learning, students will identify and discuss issues, events, and essential questions relevant to the community which will allow them to understand their role in demonstrating civic virtues. Students will consider the cultural and technological influences that have shaped our modern society and consider how these impact the students' social options in the future. Students will begin with self-exploration to understand what events, traditions and circumstances have shaped their views, behaviors and goals followed by them exploring the cultures, religions, and traditions of people in our community. Strategies integral to this course include the ability to discuss and debate mature topics and themes respectfully, a level of comfort with a variety of non-print mediums, working collaboratively in groups and participating in multi-disciplinary project-based learning. This course meets the graduation requirement for Global Community Citizenship. Additionally, it satisfies one semester of the Signature Explorations 1 requirement for pathway students.

Annapolis High School
Change Engineering

The Change Engineering Signature Program redefines the classroom and awakens the intellectual curiosity of young leaders by empowering them to transform their world. We teach them the positive benefits of change and provide them the leadership and a toolkit to methodically identify, analyze, plan, implement, and create change.

X06--0 | **Change Engineering Exploration 1** [FY] 0.5/sem

The Change Engineering Exploration 1 course provides a forum for students to connect, collaborate, solve, and share knowledge toward innovating and improving the global transformation. Through a model driven approach, interactive projects, and real-life applications, students are challenged to Identify, Analyze, Plan, Implement, and Engineer Change. This is a one semester A Day/B Day course that can be taken in the fall or the spring. Available at Annapolis High School only.

X07--0 | **Change Engineering Exploration 2** [FY] 0.5/sem

The Change Engineering Exploration 2 course provides a forum for students to connect, collaborate, solve, and share knowledge toward innovating and improving the global transformation. Students will learn to negotiate change in self, community, organizations, and in the global community through a variety of leadership traits. Through a model driven approach, interactive projects, and real-life applications, students are challenged to Identify, Analyze, Plan, Implement and Engineer Change. This is a full year A Day/B Day course. Available at Annapolis High School only.

Arundel High School
Community Development and Global Citizenship

Community Development is a way of working with communities and importantly a way of looking at all the careers involved in making a society successful and sustainable. Global Citizenship encourages people to consider their individual impact on the wider community including participation in political, economic, social, cultural, and environmental conditions in which they live.

X06--1 | **Community Development/Global Citizenship Ex 1**
[FY] 0.5/sem

In the Community Development and Global Citizenship Explorations Course students will identify and discuss issues, events, and essential questions relevant to youth in a globalized society, consider the cultural and technological influences that have shaped our modern society, and consider how these impact the students social and professional options in the students' future. Available at Arundel High School only.

X22 | **Community Dev/Global Citizenship Ex w/ Gaming 1**
[FY] 0.5/sem

This is an alternative level 1 exploration that includes a gaming component. Students take one or the other level 1 course but not both.

X07--1 | **Community Development/Global Citizenship Ex 2**
[FY] 0.5/sem

This course explores the skills, competencies, and workforce connections to be a successful leader in the 21st century globalized community. Students will identify and discuss character, time management, communication, ethics, trust, innovation, and morals as well as consider how these impacts their professional options in the future. Strategies integral to this course include the effective and responsible use of the internet, the ability to discuss and debate mature topics and themes respectfully, working in cooperative groups, and participating in multi-disciplinary project-based learning. The course is based on James Kouzes and Barry Posner's The Student Leadership Challenge and the Five Practices of Exemplary Leadership model. Available at Arundel High School only.

X24 | **Exploring the Possibilities** 0.25qtr

All students are also community members who should have a vested interest in solving local problems. This course will empower students to make a difference in current local issues. It will afford students with the opportunity to better understand problems in their communities, analyze data related to those problems, collaborate to brainstorm solutions, hear from community members and leaders who manage issues related to the problem, and develop presentations to share their learning and recommendations. The course is designed for any student who has a passion to be a change-maker. Students will use EXCEL to organize and analyze data. They will use software like Piktochart to develop presentations that summarize their experiences in their research.

Broadneck High School
Environmental Literacy

Environmental Literacy embraces the idea that everything we do affects the environment and the environment affects everything we do. In our program, students are taught to examine environmental issues not only in science, but also in subjects such as economics, health, and government through field experiences, guest speakers, and student led classroom activities.

X06--2 | **Environmental Literacy Exploration 1**   [FY] 0.5/sem

Through the Environmental Literacy Explorations course, students survey environmental issues related to sustainability and the connectedness of environmental awareness to personal and career opportunities. Available at Broadneck High School only.

X07--2 | **Environmental Literacy Exploration 2**   [FY] 0.5/sem

The purpose of this course is to explore sustainability practice though local, regional, national, and global perspectives. Students will design and implement their own sustainability plan. Available at Broadneck High School only.

Chesapeake High School
Information Management

Information Management and the technology used to manage information impacts every facet of our lives. The Information Management Signature Program will help students be more effective in their careers by teaching them the principles of Information Management.

X06--3 | **Information Management Exploration 1**   [FY] 0.5/sem

The introductory Signature course in Information Management will address the variety of methods used to collect, protect, manage, and finally, apply information personally, publicly, and privately. Available at Chesapeake High School only.

X07--3 | **Information Management Exploration 2**   [FY] 0.5/sem

The study of the collection and management of information as it relates across multiple disciplines. Available at Chesapeake High School only.

Glen Burnie High School
Public Service

Students gain an understanding of ethical standards and techniques needed to meet current and future challenges facing our community through innovative thinking and real-world experiences in a variety of public service careers that help a community grow and thrive.

X06--4 | **Public Service Exploration 1**   [FY] 0.5/sem

The Public Service Explorations 1 course exposes students to aspects of service as provided by private, public, or non-government agencies. Units covered in the course include criminal justice, law enforcement, national security, social policy, citizenship, and leadership. Students will be provided with opportunities to attend field experiences, explore careers and colleges of interest, and interact with professionals within the public service sector. Available at Glen Burnie High School only.

X07--4 | **Public Service Exploration 2**   [FY] 0.5/sem

Public Service Exploration 2 enhances students' understanding of careers in public service. It includes but is not limited to law enforcement, military, public health, public education and emergency management. Through completion of this course, students will be able to identify public service careers as well as what they provide to the people. They will also understand government structures and the role the play in the United States. Available at Glen Burnie High School only.

Prerequisite(s): *Public Service Exploration 1*

X35 | **911 Training**   [FY] 0.5/sem

This course prepares students for careers in Police/Fire/Rescue call centers. Through direct classroom instruction, observation of emergency call center activities and through simulations and practice activities, students will learn use of CAD, Vesta, and Vela call software; the laws, policies and procedures for receiving and screening emergency calls and transmitting dispatch orders; communication skills; social/emotional skills allowing them to provide an appropriate response to specific situational emergencies; mapping location skills. Following successful completion of a written exam, practical simulation testing, and on the job training, students will be qualified for employment by the Anne Arundel County Police Department (AACPD) as 911 Call Takers. Only seniors will be eligible to take this course, as one must be 18 years old by the completion of the class in order to be hired by AACPD. Available at Glen Burnie High School only.

Crofton High School
To Be Announced

Crofton High School, the newest high school in Anne Arundel County, will follow the lead of the other 12 comprehensive high schools in creating and implementing a Signature program. As of publication of this Program of Study, community members and interested business and industry partners are working to identify a Signature theme which encompasses the interests, resources, jobs/careers and "feel" of the Crofton community. An *Integrated Community Stakeholders Team (ICST)* will then be formed to work with school and community members to develop a course of study and additional real-world opportunities for students, which will prepare them for careers or higher education within that theme.

   For up-to-date information on the Crofton High Signature theme, please visit our website: *www.aacps.org/croftonsignature.*

Meade High School
Homeland Security

Will identify, promote, and prepare our students for college and career opportunities in the field of Homeland Security and all of its applications. To incorporate STEM and Language/Cultural content and knowledge throughout all of the curriculum areas, to embed the career skills and experiences in all of our co-curricular events and empower our students to become leaders in their future educational and career endeavors.

X06--5 | **Homeland Security Exploration 1** [FY] 0.5/sem

The Homeland Security Explorations 1 and 2 courses incorporate technologies that are applied in practical work environments and related to homeland security and emergency management. We examine various policy measures and practices as they relate to democratic values, civil responsibilities and liberties. Available at Meade High School only.

CTE

X07--5 | **Homeland Security Exploration 2** [FY] 0.5/sem

The purpose of this course is designed to enhance emergency and disaster preparedness for students by providing training in the knowledge necessary for preparedness, mitigation, response, and recovery. This course provides an introduction to public health emergency preparedness, including natural disasters, unintended human acts, terrorism, and emerging threats such as a pandemic on the federal, state, local and personal levels. Available at Meade High School only.

CTE

X11 | **Honors Homeland Security Counterterrorism & Intelligence** [FY] 0.5/sem

This course provides an in-depth view of terrorism, transnational criminal enterprise, and the intelligence process. Students will explore social and economic issues, government policies in relation to terrorism and the role of law enforcement in counterterrorism. Topics will include a historical and contemporary study of domestic and international terrorism, psychological and sociological features of terrorism, and the impact of 9/11 on American security policies. Students will also examine the intelligence process and explore intelligence collection methodologies, intelligence tasking processes, and intelligence analysis practices. This course is available only at Meade High School.

X31 | **Honors Geographic Information Systems 1** 0.5sem

Students will be introduced to Geographic Information system (GIS) and Remote Sensing (RS) technology to study their local and regional communities. This course is open to all students and is the foundation of the STARS Entry-Level GIS Technician Certification. Available at Meade High School only.

CTE

X32 | **Honors Geographic Information Systems 2** 0.5sem

This MSDE approved course will help the student learn the skills required to work on and/or build a Geographic Information Systems/Remote Sensing project. Students and teachers will follow a course of hands-on instructions to learn skills ranging from introductory digital mapping to image analysis. In this second course on the path to STARS Entry-Level GIS Technician Certification, students are introduced to each skill with a real-world application and led through the problem-solving process. Follow-up applied practice application will direct the student to apply acquired skills to cases in the local community using the supplied data. This repetition will set the stage for further student driven projects. Available at Meade High School only.

CTE

X33 | **Honors Geographic Information Systems 3** 0.5sem

In GIS 3, students will learn to apply those skills. Students will learn and apply Spatial Analyst and 3D Analyst. The ArcGIS Spatial Analyst extension allows students to examine the spatial relationships within a specific area as well as study site suitability. The ArcGIS 3D Analyst extension allows students to gain a different perspective on their environment by modeling surfaces three dimensionally. Students will also learn methods of integrating external hardware in order to incorporate real time data from GPS units in order to accurately survey their community. Combined with a trouble-shooting unit and general review of skills acquired in Course 2, Course 3 can become an invaluable tool. Available at Meade High School only.

CTE

X34 | **Honors Geographic Information Systems 4** 0.5sem

In GIS 4, an MSDE approved course, students will learn and apply Spatial Analyst and 3D Analyst. The ArcGIS Spatial Analyst extension allows students to examine the spatial relationships within a specific area as well as study site suitability. The ArcGIS 3D Analyst extension allows students to gain a different perspective on their environment by modeling surfaces three dimensionally. Students will also learn methods of integrating external hardware in order to incorporate real time data from GPS units in order to accurately survey their community. Available at Meade High School only.

AACC Courses at Meade
The suggested course sequence is as follows:

Junior Year, Spring Semester, 4th Period

CJS111 **Introduction to Criminal Justice** (3 credits)

A survey of history, development and philosophy of law enforcement. Introduces the local, state and federal agencies involved in the administration of criminal justice. The court and trial process are included.

SOC111 **Introduction to Sociology** (3 credits)

Learn sociological principles and perspectives as a way of understanding everyday social life. Study meanings and functions of various roles in historical and contemporary societies. Evaluate causes, consequences and comparisons of social hierarchies.
Prerequisite: Eligibility for ENG 101 or 101A

ACA100 **Student Success** (1 credit)

Explore college academic support services and faculty expectations. Examine study skills, note taking, strengthening memory and concentration, and time management. Assess your own learning style, choose a career path, set goals and develop an educational plan. Transition to college and develop tools to ensure your academic success.

Senior Year, Fall Semester, 4th Period

HLS211 **Intelligence Analysis & Security Management** (3 credits)

Examines intelligence analysis and its indispensable relationship to the security management of terrorist attacks and other threats. Explores vulnerabilities of our national defense and private sectors, as well as the threats posed to these institutions by terrorists, man-made disasters, and natural disasters. Students will discuss substantive issues regarding intelligence support of Homeland Security measures implemented by the United States and explore how the intelligence community operates.
Prerequisite(s): *HLS 111 or permission of director*

GEO102 **World Regional Geography** (3 credits)

Study major world regions, their populations, natural environments, cultural and economic development within a glob al context.

Prerequisite: Eligibility for ENG 101 or 101A

Senior Year, Spring Semester, 4th Period

CJS206 **Cybercrime** (3 credits)

Focus on technology-based crimes. Explore cyber offenses including information warfare, cyber terrorism, information theft, data corruption and disruption of service. Discuss computing devices as instruments furthering exploitation of children, organized crime and other criminal acts. Identify vulnerabilities within national and private infrastructures, assess risks and structure security measures.

HLS/CJS260 **Terrorism/Counterterrorism** (3 credits)

Provides a historical analysis of terrorism. Introduces the historical and contemporary issues relevant to domestic and international terrorism. Examines methods utilized by law enforcement and intelligence agencies in preventing and detecting terrorism. Also explores the process utilized for collecting and documenting evidence for the capture and effective prosecution of terrorists. Topics include the role of the media in covering, investigating and reporting terrorist events, and the constitutional and sociological dilemmas involved in investigating terrorist acts in democracies, such as the threats to privacy and individual rights.

North County High School
International Trade, Transportation, and Tourism

IT3 connects students to the career opportunities in their immediate community, creates college and career pathways through partnerships with community and business partners at BWI Marshall Airport, the Port of Baltimore, Maryland state transportation agencies, the Maryland Office of Tourism, international trade associations and many other IT3-related organizations. Opportunities are made visible to students so they can step into a rich future.

X06-16 | **International Trade, Transportation & Tourism Exploration 1—Part A** [FY] 0.5/sem

Focusing on International Trade, Transportation and Tourism, the North County Signature Explorations course relies on small group problem-based projects to expose students not only to current issues in those industries but also to viable career pathways after high school. Available at North County High School only.

CTE

X061-6 | **International Trade, Transportation & Tourism Exploration 1—Part B** [FY] 0.5/sem

This course builds on previous knowledge by delving deeper into the trade, transportation, and tourism industries as well as workforce needs and critical skills that will make students successful on these career pathways. Major topics include leadership and management, international business, policy and regulations, finance and economics, and professional culture. Available at North County High School only.

CTE

X07--- | **International Trade, Transportation & Tourism Exploration 2** [FY] 0.5/sem

Students will develop their ability to function as independent learners in the dual credit Career and Technology Education completer program. This year long seminar style class addresses College Academic Skills, Career Skills, Work Ethics, College & Career Planning. Concurrent with the International Trade Transportation & Tourism Exploration 3. Available at North County High School only.

AACC Courses at North County
The suggested course sequence is as follows:

Junior Year

BPA235 **Intro to Transportation & Logistics** (3 credits)

Surveys the organization and operations of the commercial transportation industry and its impact on the bottom-line of today's modern businesses. Course topics include the legal and regulatory environment, costing and pricing, major transportation options, managing transportation partnerships and the use of information and technology in the logistics sector. The course also includes an industry-specific "current issues" component, an "employment opportunities" section that explores the industry job market and a look at the technologies and issues that will shape the future of transportation and logistics.

BPA236 **Intro to Airport and Seaport Operations** (3 credits)

Surveys the organization and operations of the commercial transportation industry and its impact on the bottom-line of today's modern businesses. Course topics include the legal and regulatory environment, costing and pricing, major transportation options, managing transportation partnerships and the use of information and technology in the logistics sector. The course also includes an industry-specific "current issues" component, an "employment opportunities" section that explores the industry job market and a look at the technologies and issues that will shape the future of transportation and logistics.

Senior Year

BPA237 **Supply Chain Management** (3 credits)

Introduces students to the global supply chain with an emphasis on supply sources, distribution, production planning, information systems, customer service, inventory management, warehouse management, supply chain relationships and challenges facing managers today. Students completing the course will understand supply chain management systems and relationships, and will be able to integrate information regarding the flow of materials across the supply chain.

Prerequisite(s): *BPA 235 or permission of department chair.*

BPA238 **Domestic & International Freight Operations** (3 credits)

Examines current issues and best practices in the area of domestic and international freight operations. Course topics include transportation providers, regulation and policy, carrier strategies, costing and pricing, information systems, transportation management, and the negotiation and bidding process.

Prerequisite(s): *BPA 235 or permission of department chair.*

BPA275 **Internship in Business 1** (3 credits)

A course designed to give students in business technology areas an opportunity to acquire practical experience with classroom learning. Objectives are set by the supervising employer, the student and the faculty member.

Prerequisite(s): *Permission of instructor or department chair.*

HLS213 **Transportation and Border Security 3** (3 credits)

Provides an in-depth view of modern border and transportation security. Specific topics include security for seaports, ships, aircraft, trains, trucks, pipelines, buses, etc. Focuses on the technology needed to detect terrorists and their weapons as well as includes discussion on legal, economic, political, and cultural aspects of the problem. Lab fee $20.

Prerequisite(s): *HLS 111 or BPA 235 or permission of director.*

X08--6 | **International Trade, Transportation & Tourism Exploration 3** [FY] 0.5/sem

This course surveys the organization and operations of the commercial transportation industry and its impact on the bottom-line of today's modern businesses. Course topics include the legal and regulatory environment, costing and pricing, major transportation options, managing transportation partnerships and the use of information and technology in the logistics sector. This course begins a dual credit Career and Technology Education completer program in the MSDE Transportation Technologies Career cluster. Available at North County High School only.

CTE **DUAL**

X09--6 | **International Trade, Transportation & Tourism Exploration 4** [FY] 1.0/sem

This course continues the dual credit Career and Technology Education completer program in the MSDE Transportation Technologies Career cluster. Available at North County High School only.

CTE **DUAL**

select any two of these courses per semester, each course counting for 0.25 credits. Some examples for the possible Human Performance related passion courses are classes where students may

- investigate mindfulness by researching, designing and creating a relaxation water or light feature for a public space;
- learn about music and the brain while working with senior citizens to develop music playlists from their youth to support their daily lives;
- explore engineering principles and ergonomics while designing and building healthy seating for the workplace and home;
- build personal budgets related to given profiles of young professionals living in a variety of geographic locations across the country

These 0.25 credit passion courses are designed to immerse students in themes related to Human Performance - topics ultimately linked to workforce-related areas of potential interest that students may want to consider exploring more deeply in the future.

PTLW Biomedical Science

M36	**Honors Human Body Systems**	0.5sem
M35	**Honors Principles of Biomedical Sciences**	[FY] 0.5/sem
M37	**Honors Medical Interventions**	[FY] 0.5/sem
M38	**Honors Biomedical Capstone**	

| M39 | **Biomedical Innovations** | [FY] 0.5/sem |

In the final course of the PLTW Biomedical Science sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent project with a mentor or advisor from a university, medical facility, or research institution.

Northeast High School
Human Performance

Students will explore the how health, fitness, leisure, financial security, and environment influences quality of life among individuals and communities. In a project/problem-based environment, integrated with human performance coursework, students solve real-world local and global problems with their peers using cutting-edge technology, job shadow experiences, and internships.

X06--7 | **Human Performance Exploration 1** [FY] 0.5/sem

The Human Performance Exploration 1 Course will provide an introduction and overview for students to explore the how health, fitness, leisure, financial security, and environment influences quality of life among individuals and communities. In a project/problem-based environment, integrated with human performance coursework, students solve real-world local and global problems with their peers using cutting-edge technology, job shadow experiences, and internships. Available at Northeast High School only.

TBA | **Human Performance Exploration 2** [FY] 0.25/sem

This Human Performance Exploration 2 course is currently being reconfigured as quarter-credit passion classes, each revolving around a deeper dive into a different aspect of the Ex 1 curriculum. Students may

Old Mill High School
International Economics and Finance

The mission of the International Economics & Finance Signature at Old Mill High School is to help students develop a sense of individual responsibility, learn life and career skills, gain business, finance, and economic skills, and the critical thinking skills necessary to achieve the highest levels of personal, academic, and career success.

X06--8 | **International Economics/Finance Exploration 1A** [FY] 0.5/sem

Students will work with our community through collaborative learning opportunities in order to gain the skills and knowledge necessary to make informed decisions and positively contribute to global economics and finance as innovators and leaders. Available at Old Mill High School only.

X061--8 | **International Economics/Finance Exploration 2** [FY] 0.5/sem

Students will work with our community through collaborative learning opportunities to explore types of industry, ownership, and for ad non-profit organizations. Students will examine case studies detailing successful and failed businesses including current events as they arise. Available at Old Mill High School only.

Severna Park High School
Business, Innovation, and Leadership

Students work collaboratively to analyze the organizations of businesses, current national and international business policies and trends through case studies, field trips, and guest industry specialists. They will work in teams to solve an innovative project-based businesses challenge and formally present their idea to community stakeholders.

X06--9 | Business Innovation & Leadership Exploration 1
[FY] 0.5/sem

In the Business, Innovation, & Leadership Signature Explorations course, students will gain a basic understanding of business practices, roles, and systems, by designing innovative strategies and products. Through participation in case studies, students will investigate the world beyond their immediate environment and learn how to effectively communicate their ideas with diverse audiences. They will work in teams with a mentor from the Integrated Community Stake holder partnership to solve an innovative project-based business challenge. Students will formally present their idea to their mentor, community stakeholders, and students. Available at Severna Park High School only.

X07--9 | Business Innovation & Leadership Exploration 2 [FY] 0.5/sem

In the Severna Park High School Business, Innovation, & Leadership Signature Exploration 2 course, students will apply skills learned in Explorations 1 to work collaboratively to run and maintain a student-led business. In this course, students will be able to design and manufacture products to be marketed and sold throughout the school and community. Technical, design, and manufacturing skills are learned while using several machines ranging from vinyl cutters, laser engravers, CNC machines, 3D printers, and screen printing. Financial literacy and entrepreneurial thinking are practiced through managing pricing, marketing, sales, and inventory. Available at Severna Park High School only.

AACC Courses at Severna Park

BPA103 Introduction to Entrepreneurship   (3 credits)

Discover and practice the components of entrepreneurship, idea generation, creative thinking, and opportunity recognition. Experiment using entrepreneurial methods and evaluate potential business ideas. Compare and analyze various strategies entrepreneurs have used to start and grow their businesses.

BPA111 Business and its Environment   (3 credits)

Introduction to the ways that business relates to, and interacts with, individuals, groups and institutions in the 21st century United States. Provides the terminology and concepts of the functional areas of business, setting the foundation for interpreting and analyzing the legal, social and ethical issues facing business (both the institution and its members) today. Integrates global awareness and cultural diversity throughout the course. Prepares for careers in business and for business careers in the arts, sciences and technologies.

Prerequisite(s): *Eligibility for ENG 101/101A is strongly recommended for BPA 111.*

South River High School
Global Communications and Public Affairs

Global Communications and Public Affairs combines government relations, media communications, issue management, corporate and social responsibility, information dissemination, technology, and strategic communications advice.

X061-0 | Global Communications & Public Affairs Exploration 1
[FY] 0.5/sem

This course will provide students with an understanding of international and intercultural communications in a multimedia world. In a project/problem-based environment, integrated with advanced coursework, students solve real-world local and global problems with their peers using cutting-edge technology, discussions, and case studies. The course will cover a variety of global issues including diversity of news and mass communications; emerging trends in global business communication and media; advances in technology; global sources and systems of communication; ethical and legal issues; and the role and impact of advertising and public relations in the global marketplace. Available at South River High School only.

X071-0 | Global Communications & Public Affairs Exploration 2
[FY] 0.5/sem

Students in this course look for possible solutions to issues on international relations, including international politics and international trade. They also study global issues, such as international security, international order, and the shift of power from developed countries to emerging countries. They also learn about the power of information and roles played by mass media, which are spreading beyond national boundaries. Students deepen their knowledge through field trips, industry experts, job shadowing experiences, internships, project/problem-based research, discussions, and the Global Summit. Available at South River High School only.

Southern High School
Design: Preservation and Innovation

Students, through exposure to the Signature theme become design-thinkers with vital workforce skills such as, communication, collaboration, critical thinking, and creativity. They assess needs, apply global awareness and learning, design new ways of doing and develop new products appropriate to evolving needs. Students use a Design Process: Investigate, Interpret, Ideate, Experiment, Evolve.

X061-1 | **Design: Preservation & Innovation Exploration 1** [FY] 0.5/sem

Students will learn how to apply a design-based model to approach, understand and solve complex real-world challenges utilizing both traditional and outside-the-box design thinking perspectives in an innovative, interactive, collaborative environment. Students will attend field experiences, explore careers and colleges of interest, and interact with professionals to acquire practical knowledge and investigate pathways for future explorations. Course topics may include design thinking, graphic design, media design, urban planning, architecture, agriculture design, and landscape design. Available at Southern High School only.

X071-1 | **Design: Preservation & Innovation Exploration 2** [FY] 0.5/sem

Students will collaboratively apply a design-based model to solve real-world problems using innovative ideas. They will work with mentors from the business community to design and implement their projects. Students will present their projects to community stakeholders. Available at Southern High School only.

AACC Courses at Southern

Fall Semester

COM111 **Fundamentals of Oral Communication** **(3 credits)**

Learn about public speaking theory, and develop the skills needed to speak effectively in various situations. Learn about clear oral expression, informed critical thinking, research techniques, rhetorical modes and group communication. Write and deliver several speeches.
Note: Eligibility for ENG 101 or ENG 101A is strongly recommended.

Spring Semester

ESI111 **Business and Its Environment** **(3 credits)**

Explore the way that business is related to, and interacts with, individuals, groups, and institutions in the 21st century. Learn the terminology and concepts of the functional areas of business, setting the foundation for interpreting and analyzing the legal, social, and ethical issues facing business (both the institution and its members) today. Examine global awareness and cultural diversity throughout the course. Prepare for a career in business and/or a business career in the arts, sciences, and technologies. Lab fee $5.
Note: Eligibility for ENG 101/ENG 101A recommended.

Magnet Programs

Magnet courses are available only to students enrolled in a Magnet Program.

The Magnet Programs in Anne Arundel County support the shared Programs of Choice vision to offer all students and families choice in their education.

Students apply online to participate in a Magnet Program and if selected and accepted, attend school at their Magnet School, located at one of the public schools in the county. The Magnet School is determined by program and students' home school. Students entering high school may apply for one of the following Magnet Programs in AACPS:

- Centers for Applied Technology (CAT) at CAT-North and CAT-South;
- International Baccalaureate Programme (IB/MYP) at Annapolis High School, Old Mill High School, and Meade High School;
- Performing and Visual Arts (PVA) at Annapolis High School and Broadneck High School;
- Science Technology Engineering and Mathematics (STEM) at North County High School and South River High School
- STEM BioMedical/Allied Health (BMAH) at Glen Burnie High School.

Centers of Applied Technology

Center of Applied Technology North & South

The CAT Magnet program is an educational choice that allows students to be both career and college ready. Students have the opportunity to add value to their overall education by earning industry-recognized certifications and college credit while still in high school. Students who complete a CAT program fulfill the completer path needed for graduation. Additionally, since most of the CAT magnet programs are two-year programs, many student's complete coursework necessary to be career completers as well as college completers (DUAL completers).

The CAT centers offer 25 different Career and Technology Education (CTE) programs which are guided by industry standards and are embedded in a framework of career clusters key to Maryland's economy. Please note that not all programs are available at both centers.

Arts, Media and Communication
- Interactive Media Production
- Digital Imaging/Video
- Simulation & Gaming
- Print/ Media Technology

Construction and Development
- Building/ Industrial Maintenance
- Carpentry
- Integrated Design/CAD
- Electricity
- Heating, Ventilation, and Air Conditioning (HVAC)
- Masonry
- Plumbing
- Welding

Consumer Services, Hospitality and Tourism
- Baking and Pastry
- Cosmetology
- Culinary Arts

Environmental, Agriculture, and Natural Resources
- Environmental Resource Management

Health and Biosciences
- Academy of Health Professions
- Nursing Assistant
- Medical Assistant
- Pharmacy Technician
- Dental Assisting

Information Technology
- IT Networking Academy (CISCO)

Manufacturing, Engineering and Technology
- Manufacturing Technology

Transportation Technology
- Automotive Collision Repair/Refinishing
- Automotive Technology
- Diesel Power Technology
- Marine Service Technology

CAT Students may be selected for National Technical Honor Society membership which recognizes excellence in Career and Technology Education. CAT students may join SkillsUSA, a national leadership organization for CTE students. Members can develop leadership skills and compete in program related skill areas at the regional/state/national level. CAT graduates are focused on their future. They have the skills and training needed to enter the workforce, but they also have a clear picture of how continuing education beyond high school will lead to advancement within their chosen career field.

T96 | **Career Exploration** 0.5/sem

Career Explorations provides students with an opportunity to experience four different career programs during one semester. Although this course in not required for acceptance into a Level One Magnet program, it allows students to explore possible areas of career interest before applying to a Level One program. This course is open to students in grades 9 and 10.

T86 | **Technical Mathematics** [FY] 0.5/sem

Many programs offered at the Centers of Applied Technology provide students with an opportunity to earn one mathematics elective credit towards graduation. The curriculum for each program is designed to prepare students to meet industry certification standards and incorporates the mathematical practices that students will utilize in their chosen industry.

C01 | **Honors Pre-Engineering** [FY] 0.5/sem

In this course, students apply the principles of physics to everyday life. Students use mathematics to study motion, forces, energy and other concepts of physics. This program is available at the Centers of Applied Technology North and South and provides students an opportunity to earn science elective credit.

Prerequisite(s): *Algebra 1 and Biology*

NCAA

T00 | **Foundations of Patient Care** [FY] 0.5/sem

In this course, students learn the foundation of skills and health concepts as it relates to pursuing a career in health care. Students will participate in a variety of hands-on lab settings learning about the equipment, materials, and safety rules used in the delivery of essential health care services. Fundamentals of medical terminology, body systems, infection control and legal issues in health care are covered in this course. Students learn introductory health care record documentation skills and anthropometric conversions. The information gained can be of significant value in career planning and expanding a student's interests and abilities. Available only at CAT-South.

IB

The International Baccalaureate Program

Annapolis, Meade, and Old Mill High Schools

The International Baccalaureate is a globally recognized educational foundation committed to creating a better world through education. Its teaching methodology promotes student-centered inquiry, critical thinking, and effective communication while challenging students to consider their role in both local and global communities. Annapolis, Meade, and Old Mill High Schools are all authorized by the IB Organization.

Students attend the IB Middle Years Programme (MYP) in grades 9 and 10. Students who have applied and been accepted into the IB Diploma Programme (DP) will complete the IB DP course of studies in grades 11 and 12. IB Diploma students will complete a Theory of Knowledge course, an Extended Essay of 4,000 words, and approximately 150 Creativity, Activity, Service (CAS) hours as well as six subject exams. Students who meet all of these requirements and successfully complete all IB assessments and examinations will be eligible for the IB Diploma, recognized by colleges and universities in countries around the world. This unique international program has the capacity to open global doors and expand worldwide opportunity. Upon graduation, all IB students will be prepared to continue their university studies both in the United States and abroad. IB DP courses are only available to students enrolled in the IB DP Magnet Program.

Language & Literature

| Y17 | **IBMYP Global Community Citizenship** | 0.5sem |

| Y09 | **IBMYP English 9** | [FY] 0.5/sem |

| I11 | **Honors IBMYP English 9** | [FY] 0.5/sem |

Students apply a four-stage journey to their study of literature, language, and composition, and to themselves as entering high school students and emerging adults. Students practice critical reading, analyze themes, structures, and details, apply grammar, and use research for oral and written compositions. MYP sections are assigned reading during the preceding summer. Students in MYP English 9 receive early comprehensive preparation for success in subsequent IB English courses.
Prerequisite(s): *Placement in the high school IB Middle Years Programme*
NCAA

| Y10 | **IBMYP English 10** | [FY] 0.5/sem |

| I12 | **Honors IBMYP English 10** | [FY] 0.5/sem |

Students explore America's literary themes, including works by Hawthorne, Twain, and Miller, through these essential questions: How do you form a free society? How do you reform a free society? Students develop portfolios, set goals, extend their ability to research and write, and reflect on their development. MYP sections are assigned reading during the preceding summer. During the second semester, tenth grade students complete ten required hours of service learning.

Students in MYP 10 English receive early comprehensive preparation for success in subsequent IB English courses. English 10 prepares students for the end-of-course Maryland English High School Assessment.
Prerequisite(s): *Placement in the high school IB Middle Years Programme*
NCAA

| I13 | **IB English 1—Language and Literature** | [FY] 0.5/sem |

Students apply critical and analytical skills to works of traditional and contemporary world authors. Because the themes of the literature explore values and issues of the world-wide culture, the voice of each author may give frank examination of the human condition. Students complete all internal and external assessments as required.
NCAA

| I14 | **IB English 2—Language and Literature** | [FY] 0.5/sem |

Students apply critical and analytical skills to works of traditional and contemporary world authors. Because the themes of the literature explore values and issues of the world-wide culture, the voice of each author may give frank examination of the human condition. Students complete all internal and external assessments as required.
Prerequisite(s): *Placement in the IB Diploma Programme and successful completion of IB English 1*
NCAA

| I15 | **IB Theatre Arts 1** | [FY] 0.5/sem |

This course is designed to encourage students to examine theatre in its diversity of forms from around the world. Theatre Arts emphasizes the importance of working individually and as a member of an ensemble. Students are encouraged to develop the organizational and technical skills needed to express themselves creatively. A further challenge for students taking this course is for the to become aware of their own perspectives and biases and to learn to understand the values of others.

| I16 | **IB Theatre Arts 2** | [FY] 0.5/sem |

This course is designed to encourage students to examine theatre in its diversity of forms from around the world. Theatre Arts emphasizes the importance of working individually and as a member of an ensemble. Students are encouraged to develop the organizational and technical skills needed to express themselves creatively. A further challenge for students taking this course is for the student to become aware of their own perspectives and biases and to learn to understand the values of others. Students explore: Theatre in the Making, Theatre in Performance and Theatre in the World. Students at HL are required to choose one from the following two options: Option A: Devising practice—allows students to develop and explore in depth the devising and actualization of a performance concept; Option B: Exploring practice—allows students to undertake a comparative study of theatre in advanced practice.

Individuals & Societies

| I19 | **IB World Religions** | [FY] 0.5/sem |

The Diploma Programme World Religions course is a systematic, analytical yet empathetic study of the variety of beliefs and practices encountered in nine main religions of the world. The course seeks to promote an awareness of religious issues in the contemporary world by requiring the study of a diverse range of religions.

| I20 | **IB Economics 1** | [FY] 0.5/sem |

This course emphasizes the economic theories of microeconomics, which deal with economic variables affecting individuals, firms and markets, and the economic theories of macroeconomics, which

deal with economic variables affecting countries, governments and societies. These economic theories are not to be studied in a vacuum—rather; they are to be applied to real-world issues. Prominent among these issues are fluctuations in economic activity, international trade, economic development and environmental sustainability. The ethical dimensions involved in the application of economic theories and policies permeate throughout the economics course as students are required to consider and reflect on human end-goals and values. This course encourages students to develop international perspectives, fosters a concern for global issues, and raises students' awareness of their own responsibilities at a local, national and international level. The course also seeks to develop values and attitudes that will enable students to achieve a degree of personal commitment in trying to resolve these issues, appreciating our shared responsibility as citizens of an increasingly interdependent world.

I40 | **IB Economics 2**   [FY] 0.5/sem

This course emphasizes the economic theories of microeconomics, which deal with economic variables affecting individuals, firms and markets, and the economic theories of macroeconomics, which deal with economic variables affecting countries, governments and societies. These economic theories are not to be studied in a vacuum—rather; they are to be applied to real-world issues. Prominent among these issues are fluctuations in economic activity, international trade, economic development and environmental sustainability. The ethical dimensions involved in the application of economic theories and policies permeate throughout the economics course as students are required to consider and reflect on human end-goals and values. This course encourages students to develop international perspectives, fosters a concern for global issues, and raises students' awareness of their own responsibilities at a local, national and international level. The course also seeks to develop values and attitudes that will enable students to achieve a degree of personal commitment in trying to resolve these issues, appreciating our shared responsibility as citizens of an increasingly interdependent world.

Y38 | **IBMYP US Government**   [FY] 0.5/sem

I21 | **Honors IBMYP American Government**   [FY] 0.5/sem

Students will concentrate on the historical period of the United States from the late 19th century to the present. Students will use problem solving and critical-thinking skills to identify major issues of the period and analyze their importance to us today. Topics of special interest will include the Depression, the Civil Rights Movement, the changing role of women, Vietnam, Watergate and Reaganomics, and the end of the Cold War. In this course, students will be expected to read and analyze primary source documents, including works of art, literature and music. Students in MYP History of the United States receive an early comprehensive preparation for success in subsequent IB History courses.

Prerequisite(s): *Placement in the Middle Years Programme*

NCAA

I23 | **IB History 1**   [FY] 0.5/sem

The IB History course is a world history course based on a comparative, multi-perspective approach to history and focused around key historical concepts such as change, causation and significance. It involves the study of a variety of types of history, including political, economic, social and cultural, encouraging students to think historically and to develop historical skills. In this way, the course involves a challenging and demanding critical exploration of the past. The DP history course requires students to study and compare examples from different regions of the world, helping to foster international mindedness.

NCAA

I24 | **IB History 2**   [FY] 0.5/sem

The IB History course is a world history course based on a comparative, multi-perspective approach to history and focused around key historical concepts such as change, causation and significance. It involves the study of a variety of types of history, including political, economic, social and cultural, encouraging students to think historically and to develop historical skills. In this way, the course involves a challenging and demanding critical exploration of the past. The DP history course requires students to study and compare examples from different regions of the world, helping to foster international mindedness.

NCAA

I25 | **IB Theory of Knowledge 1**   0.5sem

Obligatory for every Junior IB degree candidate, Theory of Knowledge (TOK) 1 aims to stimulate critical self-reflection of students' knowledge and experiences. Course content generates questions regarding the bases of knowledge and their verification in the disciplines of mathematics, natural sciences, human sciences, and history, with an awareness of moral, political, and aesthetic judgments and biases. Students learn to appreciate the strengths and limitations of various kinds of knowledge; to related studied subjects to one another, general knowledge, and living experiences; to formulate rational arguments; and to evaluate the role of language in knowledge and to convey knowledge.

NCAA

I26 | **IB Theory of Knowledge 2**   0.5sem

Obligatory for every Senior IB Diploma candidate, Theory of Knowledge (TOK) 2 aims to stimulate critical self-reflection of students' knowledge and experiences. Course content generates questions regarding the bases of knowledge and their verification in the disciplines of mathematics, natural sciences, human sciences, and history, with an awareness of moral, political, and aesthetic judgments and biases. Students learn to appreciate the strengths and limitations of various kinds of knowledge; to related studied subjects to one another, general knowledge, and living experiences; to formulate rational arguments; and to evaluate the role of language in knowledge and to convey knowledge.

NCAA

Y20 | **IBMYP History of the US**   [FY] 0.5/sem

I27 | **Honors IBMYP US History**   [FY] 0.5/sem

Students will concentrate on the historical period from the late 19th century to the present. Students will use problem solving and critical thinking skills to identify major issues of the period and analyze their importance to us today. Topics of special interest will include the Depression, the Civil Rights Movement, the changing role of women, Vietnam, Watergate, Reaganomics, and the end of the Cold War. In this course, students will be expected to read and analyze primary source documents, including works of art, literature, and music. Students will receive early comprehensive preparation for success in subsequent IB History courses.

NCAA

I28 | **IB Psychology 1**   [FY] 0.5/sem

In this course, students examine the interaction of biological, cognitive and socio-cultural influences on human behavior. Understanding how psychological knowledge is generated, developed and applied enables students to achieve a greater understanding of themselves and appreciate the diversity of human behavior. The ethical concerns raised by the methodology and application of psychological research are key considerations in IB psychology. IB psychology takes a holistic approach that fosters intercultural understanding and respect. In the core of the IB psychology course, the biological level of analysis demonstrates

what all humans share, whereas the cognitive and socio-cultural levels of analysis reveal the immense diversity of influences that produce human behavior and mental processes. Cultural diversity is explored, and students are encouraged to develop empathy for the feelings, needs and lives of others within and outside their own culture.

| I30 | **IB Psychology 2** | [FY] 0.5/sem |

IB Psychology 2 course prepares students to the International Baccalaureate Psychology exams at either the Subsidiary or Higher level. Course content includes developmental and social psychology, cognition and learning, and personality subject areas, which are approached from biological/physiological, behavioral, and humanistic points of view. This course may also include the study of research design and statistics and involve practical work in psychological research.

Sciences

| Y65 | **IBMYP Environmental Science** | [FY] 0.5/sem |
| Y26 | **IBMYP Biology** | [FY] 0.5/sem |

| I31 | **Honors IBMYP Biology** | [FY] 0.5/sem |

Biology is the study of organisms and relationships of these organisms to other organisms and the environment. Students use the skills and processes of science to learn biological concepts with a strong emphasis on laboratory activities. Researching global and topical issues and focused investigations through collaboration are emphasized in this course. Biology is a graduation requirement for all students. Each May, students take the Maryland High School Assessment in Biology. Students in MYP Biology receive early and comprehensive preparation for future IB Science courses. This course is required for all IB students.

Prerequisite(s): *Algebra 1 and Placement in the high school*
IB Middle Years Programme

NCAA

| Y45 | **IBMYP Chemistry** | [FY] 0.5/sem |

| I32 | **Honors IBMYP Chemistry** | [FY] 0.5/sem |

Students will be able to develop the ability to use scientific skills and processes to explain the composition and interactions of matter. Mathematics helps students to predict and analyze the outcomes of chemical reactions and the interactions of matter and energy. Science skills and processes learned in this course build on those developed in biology and prepare students for continued development of scientific inquiry in other science disciplines. Research inquiry of current issues and focus on the environmental impact of global decisions are emphasized in this course. Students in this course receive early comprehensive preparation for subsequent IB Science courses.

NCAA

| I33 | **IB Biology 1** | [FY] 0.5/sem |

IB Biology courses prepare students to take the International Baccalaureate Biology exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Biology promotes under-standing of the facts, principles, and concepts of underlying the biological field; critical analysis, evaluation, and generation of specific scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of biology and scientific advances in biology upon both society and issues of ethical, philosophical, and political importance. Course content varies but includes study of living organisms from the cellular level through functioning entities within the biosphere. Laboratory experimentation is an essential part of this course.

NCAA

| I34 | **IB Biology 2** | [FY] 0.5/sem |

IB Biology courses prepare students to take the International Baccalaureate Biology exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Biology promotes under-standing of the facts, principles, and concepts of underlying the biological field; critical analysis, evaluation, and generation of specific scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of biology and scientific advances in biology upon both society and issues of ethical, philosophical, and political importance. Course content varies but includes study of living organisms from the cellular level through functioning entities within the biosphere. Laboratory experimentation is an essential part of this course.

NCAA

| I35 | **IB Physics 1** | [FY] 0.5/sem |

IB Physics courses prepare students to take the International Baccalaureate Physics exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Physics promotes understanding of the facts, patterns, and principles underlying the field of physics; critical analysis, prediction, and application of scientific information and hypothesis; improved ability to communicate scientific ideas; and an awareness of the impact of scientific advances in physics upon both society and issues of ethical, philosophical, and political importance. Course content varies but includes the study of the fundamental laws of nature and the interaction between concepts of matter, fields, waves, and energy. Laboratory experimentation is essential; calculus may be used in some courses.

NCAA

| I36 | **IB Physics 2** | [FY] 0.5/sem |

IB Physics courses prepare students to take the International Baccalaureate Physics exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Physics promotes understanding of the facts, patterns, and principles underlying the field of physics; critical analysis, prediction, and application of scientific information and hypothesis; improved ability to communicate scientific ideas; and an awareness of the impact of scientific advances in physics upon both society and issues of ethical, philosophical, and political importance. Course content varies but includes the study of the fundamental laws of nature and the interaction between concepts of matter, fields, waves, and energy. Laboratory experimentation is essential; calculus may be used in some courses.

NCAA

| I37 | **IB Chemistry 1** | [FY] 0.5/sem |

IB Chemistry courses prepare students to take the International Baccalaureate Chemistry exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Chemistry promotes understanding of the facts, patterns, and principles underlying the field of chemistry; critical analysis, evaluation, prediction, and generation of scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of chemistry and scientific advances in chemistry upon both society and issues of ethical, philosophical, and political importance. Course content varies but includes the study of the materials of the environment, their properties, and their interaction. Laboratory experimentation is an essential part of these courses.

NCAA

I38 | **IB Chemistry 2**   [FY] 0.5/sem

IB Chemistry courses prepare students to take the International Baccalaureate Chemistry exams at either the Subsidiary or Higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Chemistry promotes understanding of the facts, patterns, and principles underlying the field of chemistry; critical analysis, evaluation, prediction, and generation of scientific information and hypotheses; improved ability to communicate scientific ideas; and an awareness of the impact of chemistry and scientific advances in chemistry upon both society and issues of ethical, philosophical, and political importance. Course content varies but includes the study of the materials of the environment, their properties, and their interaction. Laboratory experimentation is an essential part of these courses.

I39 | **IB Environmental Systems**   [FY] 0.5/sem

Environmental systems and societies is an interdisciplinary course firmly grounded in both a scientific exploration of environmental systems in terms of their structure and function, and in the exploration of cultural, economic, ethical, political and social interactions of societies with the environment. As a result of studying this course, students will become equipped with the ability to recognize and evaluate the impact of our complex system of societies on the natural world.

Mathematics

Y27 | **IBMYP Algebra 1**   [FY] 0.5/sem
Y28 | **IBMYP Geometry**   [FY] 0.5/sem

I41 | **Honors IBMYP Geometry**   [FY] 0.5/sem

This high school graduation requirement course serves as the second in a series of advanced mathematical courses by providing a foundation of the geometry topics as defined by the Maryland High School Core Learning Goal 2. Students will represent problem situations with geometric models, classify figures in terms of congruence and similarity, and deduce properties of and relationships between figures from given assumptions. Graphing calculators recommended. Students in MYP Geometry receive early comprehensive preparation for success subsequent IB Math courses.
Prerequisite(s): *Placement in the high school IB Middle Years Programme*

NCAA

Y18 | **IBMYP Daily Algebra 1**   0.5 Math & 0.5 Elective/sem
Y29 | **IBMYP Algebra 2**   [FY] 0.5/sem

I42 | **Honors IBMYP Algebra 2**   [FY] 0.5/sem

This course will expand students' knowledge of functions to include exponential, logarithmic and power functions by examining real-world problems. Students will gain an understanding of the characteristics and transformation of function. Graphing calculators are required. Designing and researching projects with an international connection and exposure to the IB assessment criteria/rubrics are included in this course. Students in MYP Algebra 2 receive early comprehensive preparation for subsequent IB Math courses
Prerequisite(s): *Placement in the high school IB Middle Years Programme.*

NCAA

I93 | **Mathematics: Analysis and Approaches 1 (HL and SL)**
[FY] 0.5/sem

The IB DP Mathematics: Analysis and Approaches course is an analytic methods course with an emphasis on calculus – appropriate for pure mathematicians, engineers, scientists, economists, and those with an interest in analytic methods. Students are encouraged to apply their mathematical knowledge to solve abstract problems as well as those set in a variety of meaningful contexts. Students should expect to develop insight into mathematical form and structure and should be intellectually equipped to appreciate the links between concepts in different topic areas. Topics include: Number and algebra, Functions, Geometry and trigonometry, Statistics and probability, Calculus, the Development of investigational, problem-solving and modelling skills and the exploration of an area of mathematics. This course begins students' preparation to take the IB Mathematics Analysis and Approaches exam at the Higher or Standard level.

I94/I95 | **Mathematics: Analysis & Approaches 2 (HL & SL)**
[FY] 0.5/sem

This course continues and extends studies begun in Mathematics: analysis and Approaches 1.

I90 | **Mathematics: Applications & Interpretation 1 (HL & SL)**
[FY] 0.5/sem

The IB DP Mathematics: Applications and Interpretation course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. To give this understanding a firm base, this course includes topics that are traditionally part of a pre-university mathematics course such as Calculus and Statistics. Students are encouraged to solve real-world problems, construct and communicate this mathematically and interpret the conclusions or generalizations. Students should expect to develop strong technology skills and will be intellectually equipped to appreciate the links between the theoretical and the practical concepts in mathematics. Topics include: Number and algebra, Functions, Geometry and trigonometry, Statistics and probability, Calculus, the Development of investigational, problem-solving and modelling skills and the exploration of an area of mathematics. This course begins students' preparation to take the IB Mathematics Applications and Interpretation exam at the Higher or Standard level.

I91/I92 | **Mathematics: Applications & Interpretation 2 (HL & SL)**
[FY] 0.5/sem

This course continues and extends studies begun in Mathematics: Applications and Interpretation 1.

Language Acquisition

Y21 | **IBMYP Chinese 1**   [FY] 0.5/sem

I48 | **IBMYP Chinese Level 2**   [FY] 0.5/sem

This course continues the development of the students' communicative competency and linguistic accuracy while expanding the students' awareness and appreciation within the Chinese culture. Classes are conducted in Chinese. Students in an MYP Level 2 language receive early comprehensive preparation for success in subsequent IB language courses.

NCAA

Y23 | **Honors IBMYP Chinese 3**   [FY] 0.5/sem
Y24 | **Honors IBMYP Chinese 4**   [FY] 0.5/sem

I49 | **IB DP Chinese 1** [FY] 0.5/sem

IB DP Chinese 1 is an additional language-learning course designed for students who studied Chinese and have successfully completed level 3 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either Standard Level (SL). The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

NCAA

I50 | **IB DP Chinese 2** [FY] 0.5/sem

IB DP Chinese 2 is an additional language-learning course designed for students who studied Chinese and have successfully completed level 3 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either Standard Level (SL). The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

NCAA

Y11 | **IBMYP French 1** [FY] 0.5/sem

I51 | **IBMYP French Level 2** [FY] 0.5/sem

This course continues the development of the students' communicative competency and linguistic accuracy while expanding the students' awareness and appreciation within the Francophone culture. Classes are conducted in French. Students in an MYP Level 2 language receive early comprehensive preparation for success in subsequent IB language courses.

NCAA

I52 | **Honors IBMYP French Level 3** [FY] 0.5/sem

This course expands and refines the students' linguistic accuracy and increases their ability to function appropriately within the Francophone culture. Emphasis is on developing the students' ability to use their French language skills to make decisions, solve problems, investigate topics and create new products in real life situations. Students receive early comprehensive preparation for subsequent IB Language courses. Interaction with the IB assessment criteria and increasing oral discourse are emphasized in this course. Classes are conducted in the target language.

NCAA

Y14 | **Honors IBMYP French 4** [FY] 0.5/sem

I53 | **IB DP French 1** [FY] 0.5/sem

IB DP French 1 is an additional language-learning course designed for students who studied French and have successfully completed level 3 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either Standard Level (SL) or Higher Level (HL). The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and

should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

NCAA

I54 | **IB DP French 2** [FY] 0.5/sem

IB DP French 2 is an additional language-learning course designed for students who studied French and have successfully completed level 3 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either Standard Level (SL) or Higher Level (HL). The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

NCAA

Y61 | **IBMYP Spanish 1** [FY] 0.5/sem

I55 | **IBMYP Spanish Level 2** [FY] 0.5/sem

This course continues the development of the students' communicative competency and linguistic accuracy while expanding the students' awareness and appreciation within the Spanish culture. Classes are conducted in Spanish. Students in an MYP Level 2 language receive early comprehensive preparation for success in subsequent IB language courses.

NCAA

I56 | **Honors IBMYP Spanish Level 3** [FY] 0.5/sem

This course expands and refines the students' linguistic accuracy and increases their ability to function appropriately within the Spanish culture. Emphasis is on developing the students' ability to use their Spanish language skills to make decisions, solve problems, investigate topics and create new products in real life situations. Students receive early comprehensive preparation for subsequent IB Language courses. Interaction with the IB assessment criteria and increasing oral discourse are emphasized in this course. Classes are conducted in the target language.

NCAA

Y64 | **Honors IBMYP Spanish Level 4** [FY] 0.5/sem

I57 | **IB DP Spanish 1** [FY] 0.5/sem

IB DP Spanish 1 is an additional language-learning course designed for students who studied Spanish and have successfully completed level 3 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either Standard Level (SL) or Higher Level (HL). The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

NCAA

I58 | **IB DP Spanish 2**   [FY] 0.5/sem

IB DP Spanish 2 is an additional language-learning course designed for students who studied Spanish and have successfully completed level 3 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either Standard Level (SL) or Higher Level (HL). The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

NCAA

Y48	**IBMYP Italian 1**	[FY] 0.5/sem
Y49	**IBMYP Italian 2**	[FY] 0.5/sem
Y50	**Honors IBMYP Italian 3**	[FY] 0.5/sem
Y51	**Honors IBMYP Italian 4**	[FY] 0.5/sem

I61 | **IB DP Italian 1**   [FY] 0.5/sem

IB DP Language B Italian 1 is an additional language-learning course designed for students who studied Italian and have successfully completed level 3 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either Standard Level (SL) or Higher Level (HL). The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

NCAA

I62 | **IB DP Italian 2**   [FY] 0.5/sem

IB DP Italian 2 is an additional language-learning course designed for students who studied Italian and have successfully completed level 3 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either Standard Level (SL) or Higher Level (HL). The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

NCAA

Y71	**IBMYP Arabic 1**	[FY] 0.5/sem
Y72	**IBMYP Arabic 2**	[FY] 0.5/sem
Y73	**Honors IBMYP Arabic 3**	[FY] 0.5/sem
Y74	**Honors IBMYP Arabic 4**	[FY] 0.5/sem

I60 | **IB DP Arabic 1**   [FY] 0.5/sem

IB DP Language B Arabic 1 is an additional language-learning course designed for students who have studied Arabic and successfully completed levels 3 or higher, and who are admitted in the IB Diploma Programme.

I84 | **IB DP Arabic 2**   [FY] 0.5/sem

IB DP Language B Arabic 2 is an additional language-learning course designed for students who have studied Arabic and successfully completed levels 4 or higher, and who are admitted in the IB Diploma Programme. It may be studied at either SL or HL. The main focus of the course is on language acquisition and development of language skills. These language skills should be developed through the study and use of a range of written and spoken material. Such material will extend from everyday oral exchanges to literary texts and should be related to the culture(s) concerned. The material should be chosen to enable students to develop mastery of language skills and intercultural understanding. It should not be intended solely for the study of specific subject matter or content.

Arts & Electives

I71 | **IB Music 1**   [FY] 0.5/sem

IB Music courses prepare students to take the International Baccalaureate Music exam at either the Standard or Higher level. IB Music courses develop students' knowledge and understanding of music through training in musical skills (listening, performing, and composing); exposure to music theory; and formulation of an historic and global awareness of musical forms and styles. Historical, theoretical, and practical studies are suggested by the IB Curriculum Board.

I72 | **IB Music 2**   [FY] 0.5/sem

IB Music courses prepare students to take the International Baccalaureate Music exam at either the Standard or Higher level. IB Music courses develop students' knowledge and understanding of music through training in musical skills (listening, performing, and composing); exposure to music theory; and formulation of an historic and global awareness of musical forms and styles. Historical, theoretical, and practical studies are suggested by the IB Curriculum Board.

I73 | **IB Dance 1**   [FY] 0.5/sem

Consistent with the educational philosophy of the IB, the Diploma Programme dance curriculum aims for a holistic approach to dance and embraces a variety of dance traditions and cultures. Performance, creative, and analytical skills are mutually developed and valued whether the students are writing papers or creating/perform.

I74 | **IB Dance 2**   [FY] 0.5/sem

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| Y19 | **IBMYP Foundations of Studio Art** | 0.5sem |

I75 | **IB Art 1**   [FY] 0.5/sem

IB Art/Design courses prepare students to take the International Baccalaureate Art/Design exams at either the Standard or Higher level. IB Art/Design courses help develop students' aesthetic and creative faculties, offer training in awareness and criticism of art, and enable students to create quality works of art of their own. Students perform both studio and research work; the research component is designed to investigate particular topics or concepts of interest in further detail.

I76 | **IB Art 2**   [FY] 0.5/sem

IB Art/Design courses prepare students to take the International Baccalaureate Art/Design exams at either the Standard or Higher level. IB Art/Design courses help develop students' aesthetic and creative

faculties, offer training in awareness and criticism of art, and enable students to create quality works of art of their own. Students perform both studio and research work; the research component is designed to investigate particular topics or concepts of interest in further detail.

Y70	**IBMYP Health**	0.5sem
Y82	**IBMYP Fitness for Life**	0.5sem

I78 | **IB Information Technology 1**   [FY] 0.5/sem

Information Technology in a Global Society is the study and evaluation of the impact of information technology (IT) on individuals and society. It explores the advantages and disadvantages of the use of digitized information at the local and global levels. ITGS provides a framework for the student to make informed judgments and decisions about the use of IT within social contexts. Projects and a portfolio, along with successful completion of the Inter-national Baccalaureate ITGS exam at the Standard or Higher Level, are required.

I79 | **IB Information Technology 2**   [FY] 0.5/sem

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I80 | **IB Film 1**   [FY] 0.5/sem

At the core of the IB film course lies a concern with clarity of understanding, critical thinking, reflective analysis, effective involvement, and imaginative synthesis that is achieved through practical engagement in the art and craft of film. All students are encouraged to develop their creative and critical abilities and to enhance their appreciation and enjoyment of film.

I81 | **IB Film 2**   [FY] 0.5/sem

At the core of the IB film course lies a concern with clarity of understanding, critical thinking, reflective analysis, effective involvement, and imaginative synthesis that is achieved through practical engagement in the art and craft of film. All students are encouraged to develop their creative and critical abilities and to enhance their appreciation and enjoyment of film.

I82 | **IB DP Business Management 1**   [FY] 0.5/sem

The IB Diploma Programme Business Management courses are designed to develop students' knowledge and understanding of business management theories, as well as their ability to apply a range of tools and techniques. Students learn to analyze, discuss and evaluate business activities at local, national and international levels. The courses cover a range of organizations from all sectors, as well as the socio-cultural and economic contexts in which those organizations operate. Emphasis is placed on strategic decision-making and the operational business functions of human resource management, finance and accounts, marketing and operations management. Links between the topics are central to the course, as this integration promotes a holistic overview of business management. Through the exploration of six concepts underpinning the subject (change, culture, ethics, globalization, innovation and strategy), the Business Management courses allow students to develop their understanding of interdisciplinary concepts from a business management perspective.

I83 | **IB DP Business Management 2**   [FY] 0.5/sem

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I85 | **IB DP Design Technology 1**   [FY] 0.5/sem

The IB Diploma Programme Design Technology courses aim to develop internationally minded people whose enhanced understanding of design and the technological world can facilitate our shared guardianship of the planet and create a better world. They focus on analysis, design development, synthesis and evaluation. The creative tension between theory and practice is what characterizes design technology within the Diploma Programme sciences group. Inquiry and problem-solving are at the heart of the subject. IB Diploma Programme Design Technology requires the use of the design cycle as a tool, which provides the methodology used to structure the inquiry and analysis of problems, the development of feasible solutions, and the testing and evaluation of the solution. In these courses a solution can be defined as a model, prototype, product or system that students have developed independently. IB Diploma Programme Design Technology achieves a high level of design literacy by enabling students to develop critical-thinking and design skills, which they can apply in a practical context. While designing may take various forms, it will involve the selective application of knowledge within an ethical framework. A well-planned design program enables students to develop not only practical skills but also strategies for creative and critical thinking.

I86 | **IB DP Design Technology 2**   [FY] 0.5/sem

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IB Core Requirement

I97 | **Honors IB Research** (Fall)   [FY] 0.5/sem

IB Advanced Independent Research and Creative Achievement is an Advanced Course for Junior students participating in the International Baccalaureate Diploma Programme, who are committed to completing independent research and creative work. This course will provide opportunities for advanced research and engaging work with Creativity, Action and Service (CAS), both core components of the IB Diploma Programme. Students will conduct independent research at the college level, evaluate sources, and complete a 4,000-word independent research paper. Students will also work to support their local and global communities through creative action and collaboration with their IB peers around the world. Students will create a portfolio that demonstrates their achievement of their CAS work. (Honors)

Prerequisite(s): *Placement in IB Diploma Programme.*

I96 | **Honors IB Research** (Spring)   [FY] 0.5/sem

IB Advanced Independent Research and Creative Achievement is an Advanced Course for Senior students participating in the International Baccalaureate Diploma Programme, who are committed to completing independent research and creative work. This course will provide opportunities for advanced research and engaging work with Creativity, Action and Service (CAS), both core components of the IB Diploma Programme. Students will conduct independent research at the college level, evaluate sources, and complete a 4000-word independent research paper. Students will also work to support their local and global communities through creative action and collaboration with their IB peers around the world. Students will create a portfolio that demonstrates their achievement of their CAS work. (Honors)

Prerequisite(s): *Placement in IB Diploma Programme.*

PVA
Performing & Visual Arts
Annapolis and Broadneck High Schools

The PVA High School Magnet Program is an education choice for arts students who demonstrate artistic ability, interest and potential wishing to continue building their artistic skills and gaining real-world experience in the arts. A comprehensive curriculum designed to engage students in intense arts instruction that emphasizes the creative process through collaborative opportunities is facilitated by qualified teachers, professional artists and teaching artists. Students are able to focus their study in one of the Arts Primes: Creative Writing, Dance, Film & New Media, Music (Band, Guitar, Orchestra, Piano, or Vocal), Theatre (Acting or Design & Production), or Visual Arts. Upon graduation, students will be prepared to pursue a career in an arts field or attend an arts school, conservatory, or four-year institution of higher learning. Additionally, students will develop skills and knowledge for the business of the arts. They will be able to think in an interdisciplinary way to promote one's own vacation or advocation for the arts. PVA courses are only available to students enrolled in the PVA Magnet Programs.

Mandatory Courses (9th & 12th Grade)

9th Grade Requirement

X17 | **Global Community Citizenship through Foundations of Performing & Visual Arts** (PVA)   0.5sem

Global Community Citizenship is an introductory PVA course designed to explore the values and diversity of our local, national, and global communities through Project-Based Learning. Specifically, through Project Based Learning, students will identify and discuss issues, events, and essential questions relevant to the community which will allow them to understand their role in demonstrating civic virtues. Students will consider the cultural and technological influences that have shaped our modern society and consider how these impact the students' social options in the future. Students will begin with self-exploration to understand what events, traditions and circumstances have shaped their views, behaviors and goals followed by them exploring the cultures, religions, and traditions of people in our community while learning about the creative process, building artistic habits, and collaboration across the arts along the way. In this course, students are also given room to explore ideas, to combine art forms, and sometimes fail- reflecting, revising, and growing as artists along the way. Strategies integral to this course include the ability to discuss and debate mature topics and themes respectfully, a level of comfort with a variety of non-print mediums, working collaboratively in groups and participating in multi-disciplinary project-based learning with a variety of educators of artistic backgrounds while they work together, learn how to give and receive feedback, and present their work to audiences at various stages.

12th Grade Requirements

P32 | **PVA Honors Senior Capstone Collaborative** [FY] 1.0/sem

This required course provides the PVA senior with the support to conceive, create and produce an original collaborative performance, artwork or exhibition (production, art exhibit, ensemble musical or dance performance, recitation, design exhibit, film screening). Students' work review occurs throughout the beginning of the course, followed by a final review prior to the presentation of the senior capstone project collaborative exhibition/performance. The capstone must contain work done predominantly during the senior year. The performance/exhibition is selected, designed and constructed by the student in collaboration with other student artists and/or professional artists or art companies. Assessment is based on the development of an artistic process portfolio. Limited to seniors in the PVA Magnet Program only. Students must also register for PVA Senior Capstone Solo. This course is available at Studio 39 only.

P31 | **PVA Honors Senior Capstone Solo** [FY] 1.0/sem

This required course provides the PVA senior with the support to conceive, create and produce an original individual artwork (production, art exhibit, musical or dance performance, recitation, design exhibit, film screening). It must contain work done predominantly during the senior year. The performance/exhibition is selected, designed and constructed by the student. Assessment is based on the development of an artistic process portfolio. Limited to seniors in the PVA Magnet Program only. Students must also register for PVA Honors Senior Capstone Collaborative. This course is available at Studio 39 only.

Pathways for PVA Students

Creative Writing

P05 | **Honors PVA Creative/Dramatic Writing 1** [FY] 0.5/sem

Students will explore various writing techniques to shape their identity as writers. Using literature as a model, students will write imaginatively while incorporating multiple writing traits to a variety of literary genres (poetry, non-fiction, fiction, and drama). By engaging in personal creativity and opportunities for self-expression, students will learn to provide feedback in a writer's workshop, publish work in an electronic portfolio and submit to the school literary magazine as well as local, regional, and national literary competitions. Guest authors and poets will be used to enhance the working classroom. This course is available at Annapolis High School only.

P06 | **Honors PVA Creative/Dramatic Writing 2** [FY] 0.5/sem

This course will enable students to continue their development of a personal writing style building upon the principles and experiences of PVA Creative and Dramatic Writing 1. Utilizing a variety of literature models, students will expand their capabilities for imaginative writing and deepen their understanding of successful creative writing traits. Students will explore literary genres in a more in-depth way to develop products, critique peer and professional writing and publish work in external publications. This course is available at Annapolis High School only.

PV77 | **Honors PVA Creative Writing: Genre Studies 1** [FY] 0.5/sem

Genre Studies 1 is designed for students in the third year of the PVA Magnet Program on the Creative Writing prime. This course provides intensive study of four specific styles of creative writing: short stories and novels, poetry and lyrics, playwriting, and creative non-fiction. In depth analysis of classic and contemporary works from each genre leads to extensive research and development results in the production of original works to be published. Works written in this course will be

further developed and produced in the Media Writers Workshop Level 3 course in which students are concurrently enrolled. This course is available only at Annapolis High School.

PV78 | **Honors PVA Creative Writing: Genre Studies 2** [FY] 0.5/sem

Genre Studies 2 is designed for students in the fourth year of the PVA Magnet Program in the Creative Writing prime. This course provides intensive study of four specific styles of creative writing: short stories and novels, poetry and lyrics, playwriting, and creative non-fiction. In depth analysis of classic and contemporary works from each genre leads to extensive research and development results in the production of original works to be published. Works written in this course will be further developed and produced in the PVA Honors Senior Capstone Solo course in which students are concurrently enrolled. This course is available only at Annapolis High School.

P10 | **Honors PVA Media/Writers Workshop 1** [FY] 0.5/sem

Students will explore various forms of technology to infuse elements of that technology into original forms of creative and dramatic writing. Since this course is taught simultaneously with Creative Writing & Dramatic Writing 1, the same goals will be reflected while teaching how to create/draw/construct through various applications. This course is available at Annapolis High School only.

P11 | **Honors PVA Media/Writers Workshop 2** [FY] 0.5/sem

Course introduces additional technologies through which professionals participate in creative expression. The emphasis will be placed on the production of a publicly shared finished product. Students will also explore historical works and suggest/plan how technology infusion could enhance them. Since this course is taught simultaneously with Creative Writing/Dramatic Writing 2, the same goals will be reflected while teaching how to create/draw/construct through various technological applications. This course is available at Annapolis High School only.

P12 | **Honors PVA Media/Writers Workshop 3** [FY] 0.5/sem

Students use technology in order to create and publish original pieces using blogs, zines, digital portfolios, and social media sites. During this course, students will further develop, refine, and publish pieces begun in the Genre Studies course in which students are concurrently enrolled. This course is designed for students in the third year of the PVA Magnet Program in the Creative Writing Prime. This course is available only at Annapolis High School.

P13 | **Honors PVA Media/Writers Workshop 4** [FY] 0.5/sem

This course continues use of technologies introduced in PVA Media/Writers 2 and 3. Students will examine historical works in conjunction with current digital texts to create an authentic connection between the works. In connection with their Capstone project, students will use their knowledge of creating, refining, and collaborating to publish works designed for various digital platforms. This course is designed for students in the fourth year of the PVA Magnet Program in the Creative Writing Prime. This course is available only at Annapolis High School.

Dance

PV05 | **Honors PVA Ballet 1** [FY] 0.5/sem

The course will familiarize students with the history, vocabulary, concepts and techniques of ballet. Students will learn posture, alignment, barre and centre techniques in increasingly difficult levels of ballet as they progress through the levels of PVA dance. The course involves creative and critical thinking to make effective decisions to achieve technical goals. The classroom atmosphere will be comfortable yet challenging as students refine the craft of ballet technique. This course is available only at Annapolis High School.

PV06 | **Honors PVA Ballet 2**   [FY] 0.5/sem

This course will further develop the PVA Dance Prime students' stamina and physical abilities at an advanced level with challenges of more complex combinations at the barre and in the center. This course is available only at Annapolis High School.

PV07 | **Honors PVA Ballet 3**   [FY] 0.5/sem

This course will place emphasis on greater technical proficiency. The student will work on fluidity of movement, balance, and combinations with adagio, petit allegro and grand allegro. This course is available only at Annapolis High School.

PV08 | **Honors PVA Ballet 4**   [FY] 0.5/sem

In this advanced level ballet course students focus on integrating energy and strength to artistic movements. The level of difficulty is increased while students exhibit higher degrees of proper line and placement as they move throughout the class. Students take on the role as choreographer creating and producing original compositions. This course is available only at Annapolis High School.

PV01 | **Honors PVA Modern Dance 1**   [FY] 0.5/sem

This course will provide Performing & Visual Arts Magnet Program Dance Prime students, with and without extensive training, the first year of modern dance instruction that is dedicated to a fundamental understanding of anatomically sound placement and movement. This course will establish the habits that will serve students throughout a long career in the field. The contrasting and specific schools of technique, such as Graham, Humphrey-Limon, Horton and Hawkins, simultaneously broaden each student's level of technique while deepening their connection with the beginnings and style of the art form. This course is available only at Annapolis High School.

PV02 | **Honors PVA Modern Dance 2**   [FY] 0.5/sem

This course emphasizes choreography and performance based on modern dance forms. Students experience dance as a performing art and as a means of expression and communication. Designed to teach intermediate dancers the style and technique based on the principles of Cunningham, Nikolais, Humphrey-Weidman and other pioneers of American modern and post-modern dance. This course is available only at Annapolis High School.

PV03 | **Honors PVA Modern Dance 3**   [FY] 0.5/sem

In this course increased emphasis is placed on greater technical proficiency in modern dance. The advanced level challenges the student with more complex combinations. This course will explore the principles of "fall and recovery," symmetry/asymmetry, stage space, and ensemble work. This course is available only at Annapolis High School.

PV04 | **Honors PVA Modern Dance 4**   [FY] 0.5/sem

This course emphasizes proficiency in high level techniques in modern dance. The advanced level challenges the student with refining complex combinations. This course will focus on original composition in choreography. This course is available only at Annapolis High School.

P33 | **Honors PVA Dance Composition/Repertory**   [FY] 0.5/sem

Dance students of the Performing and Visual Arts high school magnet program extend their knowledge of the art form by participating in improvisational dance. The dance students will formulate and use multiple sets of criteria to critique personal performances, improvised and choreographed, and the performances of others composing and choreographing dance pieces. This course is available at Annapolis High School only.

PV37 | **Honors PVA Dance Explorations**   [FY] 0.5/sem

Designed for all Dance Primes, this course extends their knowledge of the art form as they explore a range of other movement vocabularies including Tap, Jazz, African, and Musical Theatre. Through applied learning, dance students understand the origins of a specific dance style, its codification and how clear artistic standards act to uniquely define each style. This course is available only at Annapolis High School in the extended day program.

Film & New Media

P37 | **Honors PVA Elements of Film and New Media 1**   [FY] 0.5/sem

Students will explore film and new media arts. Through the study and production of film, video, animation, photography, installation, and performance, students will enhance their own skills and develop their personal voice. Throughout the course students will further their understanding and articulation of the concepts, vocabulary, and techniques through the analysis of various genres and eras in film and new media art. Students will use state of the art computer-based technologies and equipment to learn and practice film-making techniques. This course is available only at Annapolis High School.

P38 | **Honors PVA Elements of Film and New Media 2**   [FY] 0.5/sem

This course enhances students' understanding of both the conceptual and technical aspects of filmmaking and new media arts. Through the analysis of master works and application through technical based instruction, students learn about artistic endeavors in film, video, animation, photography, installations, performance, social media, and programming. A definitive focus on technical abilities including, cinematography, acting, writing, editing, special effects, Installation, experimental processes are included within the expansion of the content. This course is available only at Annapolis High School.

PV39 | **Honors PVA Elements of Film and New Media 3** [FY] 0.5/sem

This course allows for students to identify a concentration of media within the film and new media genre, with specialized instruction to help cultivate their personal vision as an artist. Students will build upon prior knowledge as well as learn new techniques and have access to higher level technology and equipment within their concentration. Students will study master work by artists relevant to their content matter and within the genre of their concentration This course is available only at Annapolis High School.

P40 | **Honors PVA Elements of Film & New Media 4**   [FY] 0.5/sem

This course allows for students to identify a concentration of media within the film and new media genre, with specialized instruction to help cultivate their personal vision as an artist. Students will build upon prior knowledge and have access to higher level technology and equipment within their concentration. Students will study master work by artists relevant to their Capstone Project. This course is available only at Annapolis High School.

P53 | **Honors PVA Film and New Media Studio 1**   [FY] 0.5/sem

This course is designed to build the student's artistic abilities and observational capabilities. This course is designed to help students understand the creative process through the application of technical skills learned in the Elements of Film and New Media Course. Students will build artistic habits including idea generation, sketchbooks/visual journals, portfolio development, critique and reflection while creating original work in the genres of Film and New Media Arts. This course is available only at Annapolis High School.

P54 | **Honors PVA Film and New Media Studio 2**   [FY] 0.5/sem

This course is designed to build upon knowledge and processes developed in PVA Film and New Media Studio 1. Students will continue to build artistic habits and develop their vision as an artist through the creative process. This course is available only at Annapolis High School.

P55 | **Honors PVA Film and New Media Studio 3**   [FY] 0.5/sem

This course is designed to build upon knowledge and processes developed in PVA Film and New Media Studio 2. Students will be guided in applying previous knowledge of artistic habits and the creative process in order to create a body of artwork for their portfolios and prepare for Senior Capstone projects. This course is available only at Annapolis High School.

P56 | **Honors PVA Film and New Media Studio 4**   [FY] 0.5/Sem

This course is designed to build upon knowledge and processes developed in PVA Film and New Media Studio 3. Students will be guided in applying previous knowledge of artistic habits and the creative process in order to create a body of artwork for their portfolios. Student work will developed focused work to be presented as part of their required Senior Capstone projects. This course is available only at Annapolis High School.

Music

P29 | **Honors PVA Music Technology**   0.25/sem

Students will become familiar with the concepts, processes, materials and tools associated with music technology. Students will develop skills with sequencing, recording, and notation utilizing a variety of music software applications and programs, high-tech software, electronic instruments, and computer-based technologies. This course is available at Broadneck High School only.

P72 | **Honors PVA Music Theory/Composition**   0.25/sem

Students will develop music composition skills and will craft the students' creative processes. Compositional techniques and comprehensive musical literacy will be developed through robust and diverse repertoire. Students will use state of the art computer-based technology to design and arrange musical compositions. They will compose and share their compositions with their peers, school and community. This course is available at Broadneck High School only.

P49 | **Honors PVA Music History Styles & Composition**   0.25/sem

PVA Honors Music Historical Styles & Composition is a course designed to introduce the student to selected masterpieces of Western music throughout major style periods, Medieval through 21st Century, and to lead the student to an understanding of the relationship of music to general culture and human development. The course will provide students with visual and aural identification of stylistic elements in various musical works, and the placement of those works in cultural and historical context. This course is available at Broadneck High School only.

PV55 | **Honors PVA Drum Lab**   0.25/sem

PVA Honors Drum Lab is a course designed to introduce the techniques and concepts of hand drumming and percussion. In this hands-on course students will learn hand-drumming basics: proper body and hand positioning, correct drumming technique, how to breathe, relax, and embrace rhythms. Students will learn the basic rhythmic foundation of the world's most popular rhythms: reggae, samba, hiphop, funk, salsa, bellydance, rock 'n roll, African 6/8 and more. The course will incorporate ENSEMBLE playing and layering multiple interlocking rhythms in traditional and contemporary arrangements (Afro-Cuban Rumba, Bembe & Iyesa, Brazilian Samba & Afoxe, West African Kuku, American Funk and more). This course is available at Broadneck High School only.

P64 | **Honors PVA Ensemble Band 1**   [FY] 0.5/sem

This course is designed to strengthen and refine the band student's musical technique. Wind and percussion students will be immersed in a variety of intensive performing, listening, creating, and evaluating experiences. Emphasis will be placed on a rigorous development of skills, particularly the ability to perform in an ensemble and as a soloist. Students will also engage in transcribing and arranging music. Development of comprehensive literacy will be emphasized through a repertoire that is robust, varied, and representative of diverse genres and cultures. This course is available at Broadneck High School only.

P65 | **Honors PVA Ensemble Band 2**   [FY] 0.5/sem

Designed to build on the earlier year of study to further strengthen and refine the band student's musical technique and expand their experiences in listening, creating, performing and evaluating a comprehensive repertoire of music. This course provides wind, percussion and brass students with more advanced instruction in the development of individual musical skills with emphasis on ability to perform in eclectic mixed ensemble and as a soloist in a variety of public venues. This course is available at Broadneck High School only.

P66 | **Honors PVA Ensemble Band 3**   [FY] 0.5/sem

This course is designed to provide wind and percussion students the advanced concepts to enhance student's musical techniques and refine their skills of interpretation, expression and musicality. This course continues to prepare students and provide opportunities for performance in eclectic mixed ensemble and as a soloist in a variety of public venues while expanding the student's repertoire of various genres and cultures. This course is available at Broadneck High School only.

P67 | **Honors PVA Ensemble Band 4**   [FY] 0.5/sem

This course is designed to refine students' musicianship building on the band instrument skills and techniques developed in previous levels. The focus is on original composition, preparing students for solo performance and audition for college and career choices. This course is available only at Broadneck High School.

P60 | **Honors PVA Guitar 1**   [FY] 0.5/sem

Students will strengthen and refine their guitar technique, with an emphasis on acoustic guitar. Development of comprehensive musicianship will be emphasized through a wide repertoire of original guitar literature, transcriptions, and arrangements. A variety of guitar techniques will be explored through diverse musical genres and styles. This course is available at Broadneck High School only.

P61 | **Honors PVA Guitar 2**   [FY] 0.5/sem

Designed to build upon the earlier year of study, this course provides the Guitar Prime with more advanced instruction in all styles of guitar performance increase the robust and extensive performance skills and opportunities for the Guitar Prime with acoustic guitar as the primary medium. Development of advanced musicianship skills will be emphasized through a wide repertoire of original guitar literature, transcriptions, and arrangements. This course is available at Broadneck High School only.

P62 | **Honors PVA Guitar 3**   [FY] 0.5/sem

This course is designed to expand upon the skills and techniques developed in Levels 1 and 2. The student will master the essential techniques for guitar performance in a variety of musical styles. The student will perform as a soloist, collaboratively with other guitarists and as a collaborative member of mixed vocal and instrumental ensembles. This course is available at Broadneck High School only.

P63 | **Honors PVA Guitar 4** [FY] 0.5/sem

This course is designed to refine students' musicianship building on the guitar skills and techniques developed in previous levels. The focus is on original composition, preparing students for solo performance and audition for college and career choices. This course is available only at Broadneck High School.

PV42 | **Honors PVA Piano 1** [FY] 0.5/sem

This course is designed to strengthen and refine the PVA piano students' keyboard/piano skills through performance-based instruction that includes comprehensive experiences in reading, creating, and listening to music as well as refining their understanding of history, terms, structure and symbols. Students explore classical piano technique, style, interpretation, memorization, and performance practice in a masterclass setting while playing a wide repertoire of keyboard and piano music literature as solo artist and in ensembles. Available at Broadneck High School only.

Prerequisite(s): *Students must have prior piano/keyboard performance experience/skills and have been accepted to the PVA instrumental music piano program. Students are concurrently enrolled in PVA Honors Music Theory.*

PV43 | **Honors PVA Piano 2** [FY] 0.5/sem

Building on skills and concepts in Piano 1, students' keyboard/piano skills will be improved through performance-based instruction that includes comprehensive experiences in reading, creating, and listening to music as well as refining their understanding of history, terms, structure and symbols. Students explore classical piano technique, style, interpretation, memorization, and performance practice in a masterclass setting while playing a wide repertoire of keyboard and piano music literature as solo artist and in ensembles. This course is available only at Broadneck High School.

PV44 | **Honors PVA Piano 3** [FY] 0.5/sem

This course emphasizes advanced performance technique, music analysis and advanced musicianship skills. It is designed to hone students' piano skills while expanding their repertoire and ability to communicate to the audience. This course is available only at Broadneck High School.

PV45 | **Honors PVA Piano 4** [FY] 0.5/sem

This course is designed to refine students' musicianship building on the piano skills and techniques developed in previous levels. The focus is on original composition, preparing students for solo performance and audition for college and career choices. This course is available only at Broadneck High School.

P68 | **Honors PVA Ensemble Orchestra 1** [FY] 0.5/sem

Students will strengthen and refine their musical technique by immersing themselves in a variety of intensive performing, listening, creating, and evaluating experiences. Emphasis will be placed on a rigorous development of skills, particularly the ability to perform in an ensemble and as a soloist. Students will also engage in transcribing and arranging music. Development of comprehensive music literacy will be emphasized through a repertoire that is robust, varied and representative of diverse genres and cultures. This course is available at Broadneck High School only.

P69 | **Honors PVA Ensemble Orchestra 2** [FY] 0.5/sem

Designed to build on the earlier year of study to further strengthen and refine the strings student's musical technique and expand their experiences in listening, creating, performing and evaluating a comprehensive repertoire of music. This course provides violin, viola, bass and cello students with more advanced instruction in the development of individual musical skills with emphasis on ability to perform in eclectic mixed ensemble and as a soloist in a variety of public venues. This course is available at Broadneck High School only.

P70 | **Honors PVA Ensemble Orchestra 3** [FY] 0.5/sem

This course is designed to expand a student's musical technique and diversify their repertoire. An emphasis is on portfolio development and audition preparation for conservatory and/or higher education opportunities. This course provides violin, viola, bass and cello students more advanced instruction in the development of individual musical skills with emphasis on ability to analyze cross cultural musical style influences, such as jazz, rap and hip-hop, and twenty-first century cinematic scores. This course is available at Broadneck High School only.

P71 | **Honors PVA Ensemble Orchestra 4** [FY] 0.5/sem

This course is designed to refine students' musicianship building on the string instrument skills and techniques developed in previous levels. The focus is on original composition, preparing students for solo performance and audition for college and career choices. This course is available only at Broadneck High School.

P76 | **Honors PVA Vocal Music Performance 1** [FY] 0.5/sem

Students will strengthen and refine their musical technique by immersing themselves in a variety of intensive performing, listening, creating, and evaluating experiences. Emphasis will be placed on a rigorous development of skills, particularly the ability to perform in an ensemble and as a soloist. Students will also engage in transcribing and arranging music. Correct vocal production, diction, sight singing, and comprehensive musicianship will be emphasized through representative vocal repertoire from historical periods, musical styles and genres. This course is available at Broadneck High School only.

P77 | **Honors PVA Vocal Music Performance 2** [FY] 0.5/sem

Designed to continue to improve upon the students' vocal music technique. Building upon fundamentals learned in PVA Vocal Music Performance 1, vocal students will continue to evaluate, create, listen to and perform musical selections. Diverse musical styles and genres as well as historical periods will continue to be presented to expand the vocal students' repertoire. This course is available at Broadneck High School only.

P78 | **Honors PVA Vocal Music Performance 3** [FY] 0.5/sem

This course is designed to promote a student's individual vocal performance skills and techniques while increasing their ability to memorize repertoire from a variety of diverse music genres. Building upon fundamentals learned in PVA Vocal Music Performance 2, vocal students will continue to evaluate, create, listen to and perform musical selections. This course is available at Broadneck High School only.

P79 | **Honors PVA Vocal Music Performance 4** [FY] 0.5/sem

This course is designed to refine students' musicianship building on the string instrument skills and techniques developed in previous levels. The focus is on original composition, preparing students for solo performance and auditioning for college and career choices. This course is available only at Broadneck High School.

Theatre—All

P80 | **Honors PVA Theatre History/Stagecraft 1**   [FY] 0.5/sem

Students will be introduced to the history of theatre and stagecraft throughout time. Students will study of the origins and development of theatre from ancient civilizations through the Renaissance to Modern Theatre. Emphasis is placed on the development of dramatic forms through the reading of plays, the evolution of theatre architecture, and production in the western theatre.

P81 | **Honors PVA Theatre History/Stagecraft 2**   [FY] 0.5/sem

Students will deepen their knowledge of the history of theatre and stagecraft throughout time. Students will study of the origins and development of theatre from ancient civilizations through the Renaissance to Modern Theatre. Emphasis is placed on the development of dramatic forms through the reading of plays, the evolution of theatre architecture, and production in the western theatre.

Theatre—Acting

P84 | **Honors PVA Acting/Theatre Performance**   [FY] 0.5/sem

Students will improve their knowledge of historical themes through the study of various aspects of acting performance while honing their craft by layering principles of specific acting techniques which emphasize creativity, communication and collaboration. Instruction includes rigorous exercises that develop and strengthen the movement abilities, vocal agility and imagination of each student through creative problem-solving activities that require self-assessment and critical thinking. This course is available at Annapolis High School only.

PV67 | **Honors PVA Actor's Instrument**   [FY] 0.5/sem

Theatre students of the Performing and Visual Arts magnet school deepen their knowledge of theatrical studies throughout the school year as they alternate units of study between movement and voice work. The movement units allow students to become aware of their bodies as instruments of communication. Students explore basic loco motor and stationary movement patterns through yoga and jazz dance, as well as historical musical theatre dance styles (i.e.—Charleston, Swing, Polka, Waltz and Tango) and stage combat. During classes focused on voice students begin to use different aspects of vocal communication. Issues are addressed such as correct vocal placement, diction, articulation, regional speech habits and pitch. Students apply their vocal knowledge to both spoken and sung repertoire. This course is available only at Annapolis High School.

PV68 | **Honors PVA Actor's Instrument 2**   [FY] 0.5/sem

Theatre students of the Performing and Visual Arts magnet school deepen their knowledge of theatrical studies throughout the school year as they alternate units of study between movement and voice work. The movement units allow students to become aware of their bodies as instruments of communication. Students explore basic locomotor and stationary movement patterns through yoga and jazz dance, as well as historical musical theatre dance styles (i.e. —Charleston, Swing, Polka, Waltz and Tango) and stage combat. During classes focused on voice students begin to use different aspects of vocal communication. Issues are addressed such as correct vocal placement, diction, articulation, regional speech habits and pitch. Students apply their vocal knowledge to both spoken and sung repertoire. This course is available only at Annapolis High School.

PV83 | **Honors PVA Acting in the American Theatre 1**   [FY] 1.0/sem

Utilizing the acting fundamentals put into place by the previous two years of study, students will continue honing their craft by layering principles of specific acting techniques. Instruction focuses on specific acting techniques and their application to theatrical literature of 20th Century America. Instruction includes rigorous exercises that engage students in play exploration through reading, analysis, monologue and scene work. In the second semester, students are guided in directing projects that will result in an evening of one-acts. Several performances throughout each semester, as well as attendance at several student and professional productions (with assigned written analyses) are additional requirements of the course. This course is available only at Annapolis High School.

PV84 | **Honors PVA Acting in the American Theatre 2**   [FY] 1.0/sem

Utilizing the acting fundamentals put into place by the previous three years of study, students will continue honing their craft by layering principles of specific acting techniques. Instruction focuses on specific acting techniques and their application to theatrical literature of 20th Century America. Instruction includes rigorous exercises that engage students in play exploration through reading, analysis, monologue, and scene work. Several performances throughout each semester, as well as attendance at several student and professional productions (with assigned written analyses) are additional requirements of the course. This course is available only at Annapolis High School.

Theatre—Design & Production

P88 | **Honors PVA Theatre Design & Production 1**   [FY] 0.5/sem

Students will create, design and produce detailed elements (sets, costumes, properties, lighting, sound, marketing, and publicity) based upon researched themes that enable quarterly in-class and informal, and quarterly performances to be presented in public venues. Technological literacy is paramount as design work is created, transferred and shared through various electronic media and applicable software. In this course, students work collaboratively and communicate effectively through ongoing, internal production meetings and external marketing of the creative work. This course is available at Annapolis High School only.

P89 | **Honors PVA Theatre Design & Production 2**   [FY] 0.5/sem

In this course technological literacy is paramount as design work is created, transferred and shared through various electronic media and applicable software. Design students work collaboratively and communicate effectively through ongoing, internal production meetings. This course is available only at Annapolis High School.

P90 | **Honors PVA Theatre Design & Production 3**   [FY] 0.5/sem

In this course students will select specific disciplines within the Theatrical Design, Production and Management areas for intensive study. This will include subjects such as Scenic Design and Set Construction, Costume Design, Wardrobe Management and Costume Construction, Lighting Design and Electrics, Sound Design and Sound Engineering, Properties Design and Properties Construction, Stage Management, House Management, and Event Management. Students will focus on the specific skills, techniques, and best practices within the subject of their choosing. In addition, third year design students will train toward becoming "Lead Designers" for their area of specialization. This course is available only at Annapolis High School.

P91 | **Honors PVA Theater Design & Production 4**   [FY] 0.5/sem

In this course students will capitalize on the prior intensive study in the Theatrical Design, Production, and Management areas to synthesize those skills as a "Lead Designer". In this lead designer capacity, students will apply skills within their area of specialization to create real world connections to productions within PVA or non-PVA school-based productions. Students will apply collaborative skills in working with other members of the production team as well as to apply best practices in Theatrical Design and Production. This course is available only at Annapolis High School.

PV81 | **Honors PVA Design Arts:**   [FY] 0.5/sem
Costume, Scenic, Lighting, Sound, Craft, Construction

Students in the Design and Production magnet program concentrated study will explore the various areas of design: Costume, Scenic, Lighting, Sound, Craft and Construction. Application of design concepts are realized as students design, revise, and create costumes, construct sets, project lighting and run sound for performances and theatrical productions throughout each semester. Attendances at professional productions (with assigned written analyses of production designs) are additional requirements of the course. This course is available only at Annapolis High School.

PV82 | **Honors PVA Design Arts 2**   [FY] 0 .5/sem

Students in the Design and Production Prime will continue to explore the various areas of design; Costume, Scenic, Lighting, Sound, Craft, and Construction. Application of design concepts are realized as students design, revise, and create costumes; construct sets; project lighting; and run sound for performances and theatrical productions throughout each semester. Attendance at professional productions (with assigned written analyses of production designs) are additional requirements of the course. This course is available only at Annapolis High School.

Visual Arts

P41 | **Honors PVA Visual Arts Studio 1**   [FY] 1.0/sem

Students will strengthen and refine their artistic abilities and observational capabilities. Students will be provided opportunities to experiment in a variety of media such as drawing, painting, sculpture, photography and digital imaging. Emphasis will be placed on rigorous development of skills, especially design and composition concepts. Included will be experiences in working with artists in residence and museum resources. Sketchbooks and Visual Journals will be required to record ideas, research, and to document their step by step discovery process. This course is available only at Annapolis High School.

PV71 | **Honors PVA Visual Arts Studio 2**   [FY] 1.0/sem

This is a course designed to strengthen and refine the student's artistic abilities and observational capabilities. Students will be introduced to material, techniques and conceptual methods to further develop their art making practice. Emphasis will be placed on rigorous development of skills, concept development, choice-making, execution and presentation through a wide variety of medium. Students will consider their role as visual communicators with consideration of audience, artistic attitude and personal mission as they develop studio practice. Sketchbooks/Visual Journals will be required to record ideas, research, and to document their step by step discovery process. This course is available only at Annapolis High School.

PV72 | **Honors PVA Visual Arts Studio 4**   [FY] 0.5/sem

Students will hone and refine their artistic abilities and their observational drawing skills. Students will experiment with new medias and techniques through a combination of class-based instructions, working with guest artists and field trips. Students will continue to explore their two-dimensional and three-dimensional techniques to develop a broader artistic vocabulary and develop their visual communication skills. Sketchbooks/Visual Journals will be required to record ideas, research, and to document their step by step discovery process. This course is designed for seniors in connection with their capstone project. This course is only available at Annapolis High School.

P01 | **Honors PVA Visual Arts/Portfolio Development 1**   0.5sem

PVA Visual Arts Critique and Portfolio Development 1 will enable students to begin to develop a body of work through creative problem solving that involves personal aesthetic choices and variety of media. Through the assembly of a portfolio, students will learn to value their work and examine artistic relationships based on personal criteria. Through critiques, students will articulate the aesthetic characteristics and meaning of personal, peer, and master artworks. This course is available only at Annapolis High School.

P02 | **Honors PVA Visual Arts/Portfolio Development 2**   0.5sem

Designed to expand students' analysis skills through examination of a body of work created through creative problem solving that involves personal aesthetic choices and variety of media. Adding to their portfolio, students will learn to value their work and examine artistic relationships based on personal criteria and contemporary practices. Through oral and written critiques, students will articulate the aesthetic characteristics and meaning of personal, peer, and master artworks. Students will be able to determine what they are trying to get from a work of art and what they are trying to communicate through a work of art and express their analysis in artist's statements and peer critiques. This course is available only at Annapolis High School.

P04 | **Honors PVA Visual Arts/Portfolio Development 4** [FY] 0.5/sem

Students will continue to expand upon their work in analysis and examination of their artistic body of work. By developing their final portfolio, students will understand the value of their work through oral and written critiques, examining their artistic and aesthetic characteristics of the work while developing a creative process to criteria in contemporary practices. Students will utilize traditional and digital formats with multiple display options to design and present their overall body of work. This course is designed for seniors in connection with their capstone project. This course is only available at Annapolis High School.

PVA Electives—Studio 39

PV63 | **Honors PVA Printmaking**   [FY] 0.5/sem

PVA Printmaking is an honors course designed to introduce the techniques and concepts of traditional printmaking processes, including intaglio, relief, and monotype. Students will experiment the tools, methods and materials for making printed artworks with particular focus on how manual printing and traditional techniques relate to contemporary concepts and individual art practice. This study includes the creation and utilization of various printmaking procedures and how to work in a professional print shop environment

P58 | **Honors PVA Color Theory**   0.5sem

This course presents students with an in-depth exploration of color theory, including additive and subtractive color and its implications for the artist and designer. Color and its relationship to composition will be investigated through interaction of color harmony and contrast; application to solve spatial problems; and thinking and information of color design for a variety of visual effects. With historical meanings as the frame, students will embrace the ever changing and ephemeral nature of color perception in contemporary design.

PV73 | **PVA Anatomy and Figure Drawing**   0.5sem

PVA Anatomy and Figure Drawing is a course designed to develop skills in observation and drawing from life, a special emphasis will be placed on the understanding and application of structure, anatomy and the expressive human form. This course will offer an in-depth study of the figure and the surface anatomy exploring a wide variety of media and techniques.

P57 | **Honors PVA Art: Space & Time**   0.5sem

This course is designed to incorporate a variety of media including photography, drawing, painting, video, sound and sculptural materials in works that expand physical boundaries beyond the art object. Experimentation with different processes and media drive the student in considering sites for the installation of art pieces. Students verbally, visually and in written form document the process, development of ideas as they complete artist statements, critiques and presentations of their works.

PV52 | **PVA Acting for the Artist**   0.5sem

This acting course for non-acting students expands the PVA students' understanding of "performance" in a collaborative atmosphere. While significant memorization will be required, students will be required to prepare simple assignments outside of class. Students will be expected to actively participate in exercises. Particular emphasis will be given to expanding the imagination, supporting classmates' growth, collaborating effectively, and building self-confidence. Course instruction makes vocalists and dancers more comfortable with acting as part of their vocal/dance work. (For PVA students interested in musical theatre. Not for PVA acting students.)

PV53 | **PVA Voice for the Artist**   0.5sem

In this course students will discover their best singing voice and more experienced singers will gain an opportunity to exercise their vocal muscles through group work. The course focuses on proper techniques for breathing, projection, voice placement, and articulation taught through singing. Instruction emphasizes text interpretation and characterization in song. This course teaches singing technique to broaden the actor's and/or dancers' spoken vocal range. Course instruction makes actors and dancers more comfortable with singing as part of their acting/dance work. Students will also learn techniques to help protect their voices when they sing. (For PVA students interested in musical theatre. Not for PVA vocal students.)

PV54 | **PVA Movement for the Artist**   0.5sem

This dance course is suitable for ambitious students who have minimal or no prior dance training, but who would like to learn the fundamentals of dance and movement for theatre. This course is designed to support actors and singers to connect fully to their bodies in movement. Through group exercises and devised assignments, students will become more adept at playing in the environment of a scene, creating fully realized characters, and will develop their vocabulary in the language of the body. (For PVA students interested in musical theatre. Not for PVA dance students.)

PV56 | **PVA Broadcasting & Recording**   0.5sem

In this course students will learn to understand and manage complex sound systems, including recording studios and live sound reinforcement installations. Through practical application students will gain the ability to properly set up, operate, and manage sound systems effectively utilizing their understanding of both sound and electrical or audio signals. This course provides students an introductory look at sound systems, both analog and digital, from initial acoustic inception, to power and acoustic reproduction.

PV23 | **PVA Film Production & Technology 1**   0.5sem

Students will become familiar with the techniques, theories, vocabulary and practices of film production and technology. This course is designed to introduce students to the basic concepts of film production, including storyboarding, lighting, stage design, scene setting, and editing. Students will use both pre and post-production methods to create video and cinematic pieces that explore concepts in new medias; including social media, commercial design, and marketing. Students will develop a digital portfolio to share and display their work utilizing professional software standards.

PV24 | **PVA Film Production & Technology 2**   0.5sem

This course builds upon the foundations of Film Production and Technology 1 by placing greater emphasis on film techniques and videography. Students will explore the history of film and cinematic arts and apply new concepts, vocabulary, and techniques to their projects. Students will work collaboratively and independently to develop original films and video that explore local and societal issues. Students will use digital software and equipment to explore film techniques with additional coursework on digital production, animation, scene editing, and sound overlay.

STEM

Science Technology Engineering & Math

North County and South River High Schools

The STEM Magnet program is an educational choice for academically eligible and highly motivated students interested exploring the importance of science, technology, engineering, and mathematics in all aspects of the world today. Through a project/problem-based environment integrated with advance STEM coursework, cutting-edge technology, STEM job shadow experiences, and research internships, STEM students will work collaboratively to solve real-world local and global problems with their peers, teachers, mentors, community partners, and STEM professionals.

The STEM Magnet Program offers five pathways that students may pursue: Earth & Space Systems, Green Technologies, Nanotechnology and Materials Science, Computer Science and Applied Mathematics, and Engineering. Upon graduation, students will be ready to enter the STEM workforce directly or to continue their education along their chosen STEM pathway at a four-year college or university. STEM courses are only available to students enrolled in the STEM Magnet Program.

9th Grade Requirement

X17 | **Global Community Citizenship through Project Based Learning (STEM)**   [FY] 0.25/qtr

Global Community Citizenship is an introductory STEM course designed to explore the values and diversity of our local, national, and global communities through Project-Based Learning. Specifically, through Project Based Learning, students will identify and discuss issues, events, and essential questions relevant to the community which will allow them to understand their role in demonstrating civic virtues. Students will consider the cultural and technological influences that have shaped our modern society and consider how these impact the students' social options in the future. Students will begin with self-exploration to understand what events, traditions and circumstances have shaped their views, behaviors and goals followed by them exploring the cultures, religions, and traditions of people in our community. Strategies integral to this course include the ability to discuss and debate mature topics and themes respectfully, a level of comfort with a variety of non-print mediums, working collaboratively in groups and participating in multi-disciplinary project-based learning with STEM business and higher-education partners. The uniqueness to this course is the STEM topic or project contextualization that is relevant in today's workplace. This course additionally introduces students to the main philosophical pillars of the STEM program: Problem/Project based learning (open-ended projects with real-world connections), Socratic Dialogue (strategic way of communicating to better understand what others are thinking), and collaborative teamwork

Content Core Courses

S09710/20 | **Honors English 9 STEM**   [FY] 0.5/sem

Honors English 9 builds upon students' prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and includes the four aspects of language use: reading, writing, speaking, and listening. This course introduces and defines various genres of literature, including world literature, from a spectrum of time periods with writing expectations aligned to reading selections. Honors English 9 challenges students to apply analytic and critical skills to complex texts and to complete rigorous assignments. Students may be assigned reading over the preceding summer.

S10710/20 | **Honors English 10 STEM**   [FY] 0.5/sem

In Honors English 10 students apply critical theories and rhetorical analysis to literature and composition using challenging texts to practice critical reading; analyze themes, structures and details; apply grammar; and use research for oral and written compositions. Texts represent a variety of genres of literature, including world literature, from a spectrum of time periods. Students may be assigned reading over the preceding summer.

S38710/20 | **Honors US Government STEM**   [FY] 0.5/sem

Students will study the structure and functions of government and politics in the United States, analyze the role of the U.S. government in world affairs, and how democratic principles and practices have evolved by studying Supreme Court cases, and civil and criminal law. They will investigate critical public issues and apply what they have learned about government to the solving of real-world problems in their community earning 10 hours toward their service-learning graduation requirement. For STEM students, this course may be offered as a hybrid.

S28710/20 | **Honors Geometry STEM**   [FY] 0.5/sem

This course serves as the second course in the advanced mathematical sequence. Students will formalize their geometry experiences from elementary and middle school, using more precise definitions and developing careful proofs; represent problem situations with geometric models; classify figures in terms of congruence and similarity; deduce properties of and relationships between figures from given assumptions; and translate geometric figures to an algebraic coordinate representation and algebraic models; apply right triangles and trigonometry. Through the use of dynamic software, students will gain an understanding of the relationships among mathematical figures and become active participants in the inductive and deductive processes of thinking. Students will actively engage in rigorous mathematical activities to attain mastery of course standards. Honors students will be introduced to advanced topics. Graphing calculator is required.

S28731/32 | **Honors Geometry STEM**   [FY] 0.5/sem

This course serves as the second course in the advanced mathematical sequence. Students will formalize their geometry experiences from elementary and middle school, using more precise definitions and developing careful proofs; represent problem situations with geometric models; classify figures in terms of congruence and similarity; deduce properties of and relationships between figures from given assumptions; and translate geometric figures to an algebraic coordinate representation and algebraic models; apply right triangles and trigonometry. Through the use of dynamic software, students will gain an understanding of the relationships among mathematical figures and become active participants in the inductive and deductive processes of thinking. Students will actively engage in rigorous mathematical activities to attain mastery of course standards. Honors students will be introduced to advanced topics. Graphing calculator is required.

S29710/20 | **Honors Algebra 2 STEM**   [FY] 0.5/sem

This course will expand students' knowledge of functions to include polynomial, rational and radical functions. Students will work with expanding features of the functions and draw connections with the experiences of linear, quadratic, and exponential functions. Students will model situations to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Students will build on their experiences to work with trigonometric ratios and functions. This course also has a focus on data and probability distributions. Honors students will be introduced to advanced topics. Graphing calculator is required. Students will actively engage in rigorous mathematical activities to attain mastery of course standards.

S29731/32 | **Honors Algebra 2 STEM**   [FY] 0.5/sem

This course will expand students' knowledge of functions to include polynomial, rational and radical functions. Students will work with expanding features of the functions and draw connections with the experiences of linear, quadratic, and exponential functions. Students will model situations to solve equations, including solving quadratic equations over the set of complex numbers and solving exponential equations using the properties of logarithms. Students will build on their experiences to work with trigonometric ratios and functions. This course also has a focus on data and probability distributions. Honors students will be introduced to advanced topics. Graphing calculator is required. Students will actively engage in rigorous mathematical activities to attain mastery of course standards.

S51710/20 | **Honors Pre-Calculus STEM**   [FY] 0.5/sem

This course integrates the study of trigonometry, analytic geometry, and advanced algebraic topics into a logical approach to the solution of real-world problems. This course is a prerequisite for Advanced Placement Calculus. Graphing calculator required. Honors students will be introduced to advanced topics.

S62010/20 | **Spanish 2 STEM**   [FY] 0.5/sem

Spanish 2 courses build upon skills developed in Spanish 1, extending students' ability to understand and express themselves in Spanish and increasing their vocabulary. Typically, students learn how to engage in discourse for informative or social purposes, write expressions or passages that show understanding of sentence construction and the rules of grammar and comprehend the language when spoken slowly. Students usually explore the customs, history, and art forms of Spanish speaking people to deepen their understanding of the culture(s).

S63710/20 | **Honors Spanish 3 STEM**   [FY] 0.5/sem

Spanish 3 courses focus on having students express increasingly complex concepts both verbally and in writing while showing some spontaneity. Comprehension goals for students may include attaining more facility and faster understanding when listening to the language spoken at normal rates, being able to paraphrase or summarize written passages, and conversing easily within limited situations.

STEM Core Courses

S19010/20 | **Foundations of Art STEM**   [FY] 0.5/sem

This course provides the foundation for the visual arts high school program of study. Students will experience a variety of media and processes while exploring two- and three-dimensional art problems in drawing, painting, printmaking, sculpture and mixed media. Critical and creative thinking skills will be integrated into all studio experiences.

S45010/20 | **Studio 1 2D STEM**   [FY] 0.5/sem

This course is the introductory course to two-dimensional art processes: drawing, painting, printmaking, crafts and mixed media. Students will be challenged to develop a personal style by creating expressive works of art based on a variety of artists, art movements, and techniques. A process portfolio and sketchbooks/journals will reflect personal aesthetic choices in the development of a body of work.

S25710/20 | **Honors Principles of Engineering STEM**

[FY] 0.5/sem

This course provides an overview of engineering and engineering technology and includes the development of problem-solving skills used to solve real-world engineering problems. The course of study includes: Overview & Perspective of Engineering, Design Process, Communication & Documentation, Engineering Systems & Manufacturing Processes, Materials & Materials Testing, Thermodynamics, Engineering for Quality & Reliability, and Dynamics.

B83 | **Honors STEM Policy**   0.5sem

Students will work collaboratively to analyze current national and international STEM-related policies, study the role professional STEMists have in making these policies, review different perspectives on STEM-related public issues, and discuss the policy development process—including the role of the individual citizen—at the local, state, and federal levels. In this course students will create timelines, analyze reports and budgets, and interview stakeholders to research a contemporary local issue from a STEM perspective. Students will use their findings to collaboratively write an annotated executive STEM policy brief to be presented to a panel of experts.

NCAA

B84 | **Honors STEM Policy**   [FY] 0.25/qtr

Students will work collaboratively to analyze current national and international STEM-related policies, study the role professional STEMists have in making these policies, review different perspectives on STEM-related public issues, and discuss the policy development process—including the role of the individual citizen—at the local, state, and federal levels. In this course students will create timelines, analyze reports and budgets, and interview stakeholders to research a contemporary local issue from a STEM perspective. Students will use their findings to collaboratively write an annotated executive STEM policy brief to be presented to a panel of experts. This course is in the BMAH program also.

NCAA

C03 | **Honors System Science A (STEM)**   0.75/sem

This course is a two-year program in which the Core Learning Goals of Honors Biology, Honors Chemistry and Honors Physics are integrated based on topic and common assessment limits. The course is implemented using the Problem-Project Based format based on the Buck Institute Model. In depth inquiry, student-driven research, and communication of results are interwoven into each module as appropriate. Nearly 40% of class time is spent in lab-based experiences. By immersing our students in this rigorous program based on relevant challenges, laboratory experience and projects, we are fostering students who are engaging in critical thinking, problem-solving, and collaboration. Each module affords itself to Differentiated Learning and Thinking Map implementation. The course is a pipeline at the end of the two years into AP Science programs. It is intended for advanced learners in the STEM Magnet Program.

C06 | **Honors System Science B (STEM)**   0.75/sem

This course is a two-year program in which the Core Learning Goals of Honors Biology, Honors Chemistry and Honors Physics are integrated based on topic and common assessment limits. The course is implemented using the Problem-Project Based format based on the Buck Institute Model. In depth inquiry, student-driven research, and communication of results are interwoven into each module as appropriate. Nearly 40% of class time is spent in lab-based experiences. By immersing our students in this rigorous program based on relevant challenges, laboratory experience and projects, we are fostering students who are engaging in critical thinking, problem-solving, and collaboration. Each module affords itself to Differentiated Learning and Thinking Map implementation. The course is a pipeline at the end of the two years into AP Science programs. It is intended for advanced learners in the STEM Magnet Program.

X63 | **Project Based Learning 2 (STEM)**   0.5sem

Students will work with STEM business and higher-education partners on three, six, or nine-week problem/project-based modules focused on a current STEM topic or project that is relevant in today's workplace. This course will continue to expose students to the main philosophical pillars of the STEM program: Problem/Project based learning, Socratic Dialogue, and collaborative teamwork.

B54 | **Project Based Learning 2 (STEM)**   [FY] 0.25/sem

Students will work with STEM business and higher-education partners on three, six, or nine-week problem/project-based modules focused on a current STEM topic or project that is relevant in today's workplace. This course will continue to expose students to the main philosophical pillars of the STEM program: Problem/Project based learning, Socratic Dialogue, and collaborative teamwork.

X64 | **Honors Project Based Learning 3 (STEM)**   0.5sem

This is an 11th grade STEM course for the Advanced Learning in the STEM Magnet program and is modeled after the Honors Challenge at the University of California at Davis. Students are grouped and paired with a mentor who brings the students an authentic challenge on a local, national or global issue. This one semester course immerses students in professionalism, critical thinking, program solving, research, prototyping, revising, professional writing and collaboration as they consult on the topic/challenge/project given to them by their mentors (community stakeholders, business partners, higher education, local government agencies, etc). In this Honors course, students engage in research, analysis, prototyping, etc. and complete a White Paper and Formal Presentation for mentors. This course is also in the BMAH program.

Prerequisite(s): *Successful completion of PBL 1 and PBL 2*

Pathway Courses

Earth & Space Systems

C668 | **AP Environmental Science**   [FY] 0.5/sem

M03 | **Honors Aeronautics (STEM)**   [FY] 0.5/sem

This is a Pathway 1 course in the Earth & Space Systems Pathway. This course (SRHS only), year one of Pilot's License Training Ground School, is designed to prepare students for the Federal Aviation Administration ground school exam. Through the use of flight simulator, textbook assignments, and rich activities, students will gain the knowledge towards becoming a private pilot. There will be an opportunity to meet with guest speakers, including local flight school instructors.

By involving aspects of science, technology, engineering, and mathematics, students will experience an inter-curricular method of teaching and learning which creates a deep relevancy to material learned in the classroom. Students completing this course, in addition to taking the FAA exam, are eligible to continue to study at a local pilot training school to complete flight hours at a licensed training facility to earn their pilot's license. It is intended for the advanced learner in the STEM Magnet Program. NOTE: Students must enroll in both semesters in the same academic year.

C37 | **Earth/Space Missions**   [FY] 0.5/sem

This course is a Pathway 2 course, part of the STEM Earth and Space Systems Pathway, designed as a collection of 4-6 weeklong missions. Students will assume the roles of NASA Mission Scientists within teams as they work together to explore problem-based activities in a hybrid earth and space science learning environment. Earth mission modules include a focus on earthquakes, volcanoes, plate tectonics, weather, climate, and climate predictions. Space mission modules include topics such as rocky planets, gas giants, extra-solar planetary systems, the Milky Way, galaxies in the uni.25verse, and the Big Bang theory. In this course, students will attend weekly mission briefings, work online alongside scientists, and collect and analyze recent NASA data from the stream of current explorations. NASA technology support tools allow students to collect and analyze data, and present their findings using authentic methods of practicing scientists. This course is intended for advanced learners in the STEM Magnet Program.

Prerequisite(s): *AP Environmental Science or Aeronautics 1 & 2 (SRHS only) AP Computer Science or AP Statistics (NCHS only)]. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.*

C10 | **Research/Data Analysis (STEM)**   [FY] 0.5/sem

This is a STEM Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present formally their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. This STEM Capstone course is for advanced learners in the STEM Magnet programs at both North County and South River High Schools. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional STEM-ists, support from a STEM teacher, and time to carry out an experimental research project in a supportive setting.

Prerequisite(s): *Successful completion of AP Environmental or AP Computer Science or AP Statistics, in addition to one STEM Pathway 2 course with advanced weighting.*

Green Technologies

C668 | **AP Environmental Science**   [FY] 0.5/sem

C27 | **Environment/Society 1 (STEM)**   0.5sem

Magnet program in the Green Technologies Pathway at the NCHS site only. In this interdisciplinary course, students will examine the influence of media on shaping the individual's understanding and response to environmental issues. During the second semester students will apply the concepts, skills, and experiences acquired during the first semester

to a multimedia presentation delivered to a panel of their peers and community stakeholders. This final multimedia presentation will be designed to be used by a community and/or regional stakeholder. In this advanced course, students participate in research, analysis, prototyping, and written reports on par with local college level requirements.

Prerequisite(s): *Computer Science or AP Statistics and STEM Environment & Society. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.*

C10 | **Research/Data Analysis (STEM)** [FY] 0.5/sem

This is a STEM Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present formally their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. This STEM Capstone course is for advanced learners in the STEM Magnet programs at both North County and South River High Schools. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional STEM-ists, support from a STEM teacher, and time to carry out an experimental research project in a supportive setting.

Prerequisite(s): *Successful completion of AP Environmental or AP Computer Science or AP Statistics, in addition to one STEM Pathway 2 course with advanced weighting.*

M245 | **Green Architecture/Urban Planning (STEM)** [FY] 0.5/sem

Students will explore traditional architecture as it relates to green and sustainable practices, urban development, and urban rehabilitation. In the second semester of this capstone course, students will apply the concepts, skills, and experiences acquired during the first semester to draw, create, and construct a scale model of an original design that helps to address an environmental problem of their choice. Students will present their design to a panel of their peers and STEM community stakeholders. South River High School students only.

Prerequisite(s): *AP Environmental Science and STEM Environment & Society. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.*

Nanotechnology & Materials Science

R20	**AP Computer Science A (South River Only)** [FY] 0.5/sem
C568	**AP Physics 1** [FY] 0.5/sem
C578	**AP Physics 2** [FY] 0.5/sem

C60 | **Materials Science (STEM)** 0.5sem

Materials Science is a revolutionary science that pushes innovation and industry forward through the study of how materials (such as ceramics and polymers) work and how advances in technology will continue to improve these materials. Students in this course will use hands-on exploration and authentic challenges to study Chemistry, Physics, Engineering, Biology, and Medicine as these subjects relate to Materials Science. This course is paired with STEM Nanotechnology offered in the opposite semester. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.

C61 | **Nanotech Exploration (STEM)** 0.5sem

This course is a one semester Pathway 2 course in the STEM Nanotechnology and Materials Science Pathway. This course engages students in the exploration of the impact of size on chemical and physical characteristics with an emphasis one depth of learning, cross-cutting STEM concepts, relevance to real world applications, and the hands-on practice of science and engineering through inquiry and design. As students explore the nano world, they gain an enduring understanding of the applicability of Nanotechnology to all areas of science and how this relativity young science is changing the way we view and interact with computing, environmental issues, materials design, engineering and medicine. This advanced course is paired with STEM Materials Science offered in the opposite semester to round out the Pathway 2 experience.

Prerequisite(s): *AP Computer Science or AP Statistics [NCHS only] This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.*

C10 | **Research/Data Analysis (STEM)** [FY] 0.5/sem

This is a STEM Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present formally their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. This STEM Capstone course is for advanced learners in the STEM Magnet programs at both North County and South River High Schools. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional STEM-ists, support from a STEM teacher, and time to carry out an experimental research project in a supportive setting.

Prerequisite(s): *Successful completion of AP Environmental or AP Computer Science or AP Statistics, in addition to one STEM Pathway 2 course with advanced weighting.*

Computer Science & Applied Mathematics

M05 | **Mathematics/Science Modeling (STEM)** 0.5sem

This is a one semester Pathway 2 course in the STEM Computer Science and Theoretical Applied Mathematics. This course provides an interactive environment for the study real world of problems through mathematical and scientific modeling. A model is a simple construct which unveils or describes important properties of a more complex system that a learner may want to understand more fully. Students learn about the nature and structure of scientific models, limitations of models, model strengths and weaknesses. Numerous technological modeling tools will be used to explore and study complex problems and challenges within an inquiry-based classroom setting. This course is paired with STEM Parallel Computing to round out the Pathway 2 experience and is intended for the Advanced Learner in the STEM Magnet Program.

Prerequisite(s): *AP Computer Science. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.*

R01 | **Parallel Computing (STEM)** 0.5sem

This is a one semester Pathway 2 course in the STEM Computer Science and Theoretical Applied Mathematics. This course will prepare students for increasingly popular large-scale computing that takes place in the real world, such as search engines, social networking sites, and scientific computational needs. Parallel computing has historically played a key role in addressing the performance demands of high-end engineering and scientific applications. It has now moved to center stage in light of current hardware trends and device power efficiency limits. All computer systems — embedded, game consoles, laptop, desktop, high-end supercomputers, and large-scale data center clusters --- are being built using chips with an increasing number of processor cores, with little or no increase in clock speed per core. Unlike previous generations of hardware evolution, this shift will impact all segments of the IT industry and all areas of Computer Science. This course introduces students to the foundations of parallel computing and provide application project experience in collaboration with government and industry partners. This advanced course is paired with STEM Mathematical and Scientific Modeling to round out the Pathway 2 experience.

Prerequisite(s): *AP Computer Science. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.*

C10 | **Research/Data Analysis (STEM)** [FY] 0.5/sem

This is a STEM Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present formally their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. This STEM Capstone course is for advanced learners in the STEM Magnet programs at both North County and South River High Schools. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional STEM-ists, support from a STEM teacher, and time to carry out an experimental research project in a supportive setting.

Prerequisite(s): *Successful completion of AP Environmental or AP Computer Science or AP Statistics, in addition to one STEM Pathway 2 course with advanced weighting.*

Engineering (North County)

M16 | **Introduction to Robotics** 0.5sem

M49 | **Honors Civil Engineering & Architecture** [FY] 0.5/sem

X165 | **STEM Modern Biotechnologies** [FY] 0.5/sem

STEM Modern Biotechnologies is an Advanced Course for students participating in the Science Technology Engineering Math (STEM) Magnet program and who have successfully completed course offerings in a STEM-related subject and who are committed to completing research and coursework that results in a project or product that could be published, eligible for a patent, presented at a national conference, and/or entered in a nationally or internationally recognized competition. Students must submit a proposal in an area of research and/or product development related to the key areas of modern biotechnologies, using biological molecules, particles, cells, organisms, and or processes to improve life in the areas of food, fuels or medicine.

C10 | **Research/Data Analysis (STEM)** [FY] 0.5/sem

This is a STEM Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present formally their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. This STEM Capstone course is for advanced learners in the STEM Magnet programs at both North County and South River High Schools. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional STEM-ists, support from a STEM teacher, and time to carry out an experimental research project in a supportive setting.

Prerequisite(s): *Successful completion of AP Environmental or AP Computer Science or AP Statistics, in addition to one STEM Pathway 2 course with advanced weighting.*

PTLW Engineering (South River)

M30 | **Honors Aerospace Engineering** [FY] 0.5/sem

M49 | **Honors Civil Engineering & Architecture** [FY] 0.5/sem

S26710/20 | **Honors Engineering Design (IED) STEM** [FY] 0.5/sem

This course is part of the PLTW pre-engineering program of study and is a course that develops student's problem-solving skills, with emphasis on visualization and communication skills using AutoCAD Inventor 3-D solid modeling software. Units of study include: Introduction to Design, Student Portfolio Development, Sketching & Visualization, Geometric Relationships, Modeling, Assembly Modeling, Model Analysis & Verification, Model Documentation, Presentation, Production, and Marketing.

S27710/20 | **Honors Digital Electronics STEM** [FY] 0.5/sem

This course is the third course of a pre-engineering completer program known as Project Lead the Way. In this course, students investigate topics in applied logic that encompasses the application of electronic circuits and devices. Computer simulation software is used to design and test digital circuitry prior to the actual construction of circuits and devices.

S44710/20 | **Honors Engineering Design (EDD) 2 STEM** [FY] 0.5/sem

Students work in teams to research, design and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by a community mentor. They must present progress reports, submit a final written report and defend their solutions to a panel of outside reviewers at the end of the school year.

C10 | **Research/Data Analysis (STEM)** [FY] 0.5/sem

This is a STEM Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present formally their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. This STEM Capstone course is for advanced learners in the STEM Magnet programs at both North County and South River High Schools. In

this interdisciplinary course, students will have the opportunity to receive mentoring from professional STEM-ists, support from a STEM teacher, and time to carry out an experimental research project in a supportive setting.

Prerequisite(s): *Successful completion of AP Environmental or AP Computer Science or AP Statistics, in addition to one STEM Pathway 2 course with advanced weighting.*

Electives

B27 | **Honors Social Innovation & Change (STEM)** 0.5sem

This course is designed to introduce the students to the individual as a vector of change in today's society. They can continue their work to a deeper level of inquiry and implementation from the middle school level course or can take it for the first time if they did not have that opportunity in middle school. Through self-exploration of local social issues, the student will formulate a strategy for promoting, changing, and engaging the public in an issue that needs attention. Students will be supported and encouraged to move from ideas to action within the semester timeframe. Available at Glen Burnie, North County, and South River only.

Prerequisite(s): *Honors Biology and either Honors/AP US Government or Honors/AP US History*

C99 | **Advanced Independent Research — Science** [FY] 0.5/sem

STEM/BMAH Independent Research is an Advanced Course for students participating in the Science Technology Engineering Math (STEM) or BioMedical Allied Health (BMAH) Magnet programs and who have successfully completed course offerings in a STEM-related subject and who are committed to completing independent research and coursework that results in a project or product that could be published, eligible for a patent, presented at a national conference, and/or entered in a nationally or internationally recognized competition Students must submit a proposal in an area of research and/or product development related to the Sciences (Physics, Chemistry, Biology, Earth Science, Environmental Science, Space Science, Oceanography, etc). The proposal must be accepted by appropriate school-based and STEM/BMAH-Office-based personnel.

G33 | **Honors Photo/Digital 2 (STEM)** 0.5sem

This course builds upon skills and techniques developed in Photography and Digital Processes 1. Students will be challenged to create original, expressive works of art based on a variety of photographers, digital artists and photo/digital styles and techniques. A process portfolio and sketchbooks/journal will reflect personal aesthetic choices and design solutions in the development of a body of work.

C807 | **Honors Astronomy (STEM)** [FY] 0.5/sem

The Methods in Astronomy module will focus on Earth and Planetary Systems as a science, first discussing the history of the field as a study of the scientific process and then moving to the tools and methods available to modern astronomers. This area will also address notions of scale, celestial mechanics, stellar formation and lifecycle, galactic structure, and cosmology. In this area, scientific computing as a tool of any modern scientist or engineer will be introduced and edified. The Planetary Science module will focus on how the tools and ideas developed in the previous module enable modern astronomers to make new discoveries in our solar system and in other stellar systems. This module will enable students to critically think about the energetics and dynamics of celestial bodies as they relate to how internal, surface, and atmospheric processes shape bodies in our solar system and in other systems. Furthermore, students will investigate the scientific aims of modern NASA/ESA missions.

D99 | **Advanced Independent Research — Math** [FY] 0.5/sem

Students will submit a proposal in an area of research and/or product development related to Applied and/or Theoretical Mathematics with the goal of creating a product or project that is eligible for a patent or publication, could be presented at a national conference, and/or suitable for entrance in a national or international competition. Students will be paired with a mentoring STEM professional. At the end of the course, students will formally present their research to their mentor, STEM faculty, students, and community stakeholders.

M12 | **Design & Innovation Engineering Capstone (STEM)**
[FY] 0.5/sem

This capstone course immerses the student in the real-world challenges faced by today's engineers relevant to current themes in the workplace (ie. The Grand Challenges sponsored by the National Academies of Engineering). Students will do the deep dive to explore and design a revolutionary product, scheme and/or process/product to enhance everyday lives. Whether it be a common tool or a theoretical part that will enhance space exploration or environmental cognizance, the student will design and build an artifact along with a full analysis of its function and precision in application. Advanced Weighting.

Prerequisite(s): *Precision Machining I and either AP Computer Science or AP Physics*

M65 | **Honors Introduction to Unmanned Aerial Systems (STEM)**
0.5sem

This course is an introduction to unmanned aerial systems for STEM High School students. Drones are becoming the next big thing in aviation and there is a lack of technically skilled individuals needed to maintain and develop the field for the future. By involving aspects of science, technology, engineering, and mathematics; students will experience an inter-curricular method of teaching and learning which creates a deep relevancy to material learned in the classroom. Available at South River only.

Prerequisite(s): *Honors Systems Science A and B and Aeronautics I & II*

M75 | **Honors Unmanned Aerial Systems (STEM)** [FY] 0.5/sem

This course is a yearlong exploration of the field of Unmanned Aerial Systems. Students will be exposed to this exciting STEM career field that is poised to create more than 70,000 new American jobs in the first three years following the integration of unmanned aircraft systems (UAS) into U.S. national airspace system (NAS). Integration is scheduled to take place in 2015. Beyond the first three years, the study projects that more than 100,000 new jobs will be created by 2025. In this course students will build, program and operate an UAS, Unmanned Aerial System. Starting with the basics of what is a UAS and how they work and the tasks they can complete. Emphasis on systems components — parts, Theory of Control Loop automation, FC Software, Communications technologies, Ground Station Mission planning, Flight (Stabilize/Acro, Auto) and First Person View will be taught through presentations, demonstrations, laboratory work (build an ArduCopter UAS), flight training (simulator and actual) challenges, and a final flight mission challenge.

R24 | **Honors Computer Science 1 (STEM)** [FY] 0.5/sem

This course studies computer language (Java) and programming practices and procedures. Topics to be covered will include fundamentals of the Java programming language, input and output, flow of control features, data structures and searching and sorting algorithms through the lens of STEM. This course is offered in a hybrid model.

R99 | **Advanced Independent Research — Computer Science**
[FY] 0.5/sem

STEM/BMAH Independent Research is an Advanced Course for students participating in the Science Technology Engineering Math (STEM) or BioMedical Allied Health (BMAH) Magnet programs and who have successfully completed course offerings in a STEM-related subject and who are committed to completing independent research and coursework that results in a project or product that could be published, eligible for a patent, presented at a national conference, and/ or entered in a nationally or internationally recognized competition Students must submit a proposal in an area of research and/or product Programs of Choice development related to the Computer Sciences. The proposal must be accepted by appropriate school-based and STEM/BMAH-Office-based personnel.

C22 | **Environmental Media (STEM)**
[FY] 0.5/sem

This STEM Capstone course is for advanced learners in the STEM Magnet programs at both North County and South River High Schools. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional STEM-ists, support from a STEM teacher, and time to carry out an experimental research project in a supportive setting.

Prerequisite(s): *Successful completion of AP Environmental or AP Computer Science or AP Statistics, in addition to one STEM Pathway 2 course with advanced weighting.*

STEM/BMAH
BioMedical Allied Health

Glen Burnie High School The BMAH Magnet program is an educational choice for highly motivated and academically eligible students that are interested in exploring career and research opportunities across the healthcare spectrum. In conjunction with excellent coursework options, students will work with medical and allied health professionals both in and out of the classroom through relevant and hands-on problem/project-based modules, job shadows and internship opportunities.

The BMAH Magnet Program offers five pathways that students may pursue: Project Lead the Way Bioengineering, Project Lead the Way Bioscience, Aging and Wellness, Health, Information, and Technology, and Public and International Health. Juniors and seniors will have the opportunity to attend Anne Arundel Community College for dual enrollment, allowing students to gain college credit towards a degree, certificate, or letter of recognition while still completing their high school graduation requirements. Upon graduation, students will be ready to enter the healthcare workforce directly or to continue their education along their chosen allied health pathway or other healthcare major at a four-year college or university. BMAH courses are only available to students enrolled in the BMAH Magnet Program.

BMAH Core Courses

X17 | **Global Community Citizenship through Medical Rounds (BMAH)**
[FY] 0.25/sem

Global Community Citizenship is an introductory STEM/BMAH course designed to explore the values and diversity of our local, national, and global communities through Project-Based Learning. Specifically, through Project Based Learning, students will identify and discuss issues, events, and essential questions relevant to the community which will allow them to understand their role in demonstrating civic virtues. Students will consider the cultural and technological influences that have shaped our modern society and consider how these impact the students' social options in the future. Students will begin with self-exploration to understand what events, traditions and circumstances have shaped their views, behaviors and goals followed by them exploring the cultures, religions, and traditions of people in our community. Strategies integral to this course include the ability to discuss and debate mature topics and themes respectfully, a level of comfort with a variety of non-print mediums, working collaboratively in groups and participating in multi-disciplinary project-based learning with BMAH business and higher-education partners. The uniqueness to this course is the STEM/Medical topic or project contextualization that is relevant in today's workplace. This course additionally introduces students to the main philosophical pillars of the STEM program: Problem/Project based learning (open-ended projects with real-world connections), Socratic Dialogue (strategic way of communicating to better understand what others are thinking), and collaborative teamwork.

X14 | **Medical Rounds 2 (BMAH)**   [FY] 0.25/sem

Students will work with BMAH business and higher-education partners on three, six, or nine-week problem/project-based modules focused on a current BMAH topic or project that is relevant in today's workplace. This course will continue to expose students to the main philosophical pillars of the BMAH program: Problem/Project based learning, Socratic Dialogue, and collaborative teamwork

Prerequisite(s): *Medical Rounds 1*

X64 | **Honors Project Based Learning 3 (STEM)**   0.5sem

This is an 11th grade STEM course for the Advanced Learning in the STEM Magnet program and is modeled after the Honors Challenge at the University of California at Davis. Students are grouped and paired with a mentor who brings the students an authentic challenge on a local, national or global issue. This one semester course immerses students in professionalism, critical thinking, program solving, research, prototyping, revising, professional writing and collaboration as they consult on the topic/challenge/project given to them by their mentors (community stakeholders, business partners, higher education, local government agencies, etc). In this Honors course, students engage in research, analysis, prototyping, etc. and complete a White Paper and Formal Presentation for mentors. This course is also in the BMAH program.

Prerequisite(s): *Successful completion of PBL 1 and PBL 2*

B83 | **Honors STEM Policy**   0.5sem

Students will work collaboratively to analyze current national and international STEM-related policies, study the role professional STEMists have in making these policies, review different perspectives on STEM-related public issues, and discuss the policy development process—including the role of the individual citizen—at the local, state, and federal levels. In this course students will create timelines, analyze reports and budgets, and interview stakeholders to research a contemporary local issue from a STEM perspective. Students will use their findings to collaboratively write an annotated executive STEM policy brief to be presented to a panel of experts.

NCAA

B84 | **Honors STEM Policy**   [FY] 0.25/qtr

Students will work collaboratively to analyze current national and international STEM-related policies, study the role professional STEMists have in making these policies, review different perspectives on STEM-related public issues, and discuss the policy development process—including the role of the individual citizen—at the local, state, and federal levels. In this course students will create timelines, analyze reports and budgets, and interview stakeholders to research a contemporary local issue from a STEM perspective. Students will use their findings to collaboratively write an annotated executive STEM policy brief to be presented to a panel of experts. This course is in the BMAH program also.

NCAA

S19 | **Foundations of Art STEM**   0.5sem

This course provides the foundation for the visual arts high school program of study. Students will experience a variety of media and processes while exploring two- and three-dimensional art problems in drawing, painting, printmaking, sculpture and mixed media. Critical and creative thinking skills will be integrated into all studio experiences.

S45 | **Studio 1 2D STEM**   0.5sem

This course is the introductory course to two-dimensional art processes: drawing, painting, printmaking, crafts and mixed media. Students will be challenged to develop a personal style by creating expressive works of art based on a variety of artists, art movements, and techniques. A process portfolio and sketchbooks/journals will reflect personal aesthetic choices in the development of a body of work.

S25 | **Honors Principles of Engineering STEM**   [FY] 0.5/sem

This course provides an overview of engineering and engineering technology and includes the development of problem-solving skills used to solve real-world engineering problems. The course of study includes: Overview & Perspective of Engineering, Design Process, Communication & Documentation, Engineering Systems & Manufacturing Processes, Materials & Materials Testing, Thermodynamics, Engineering for Quality & Reliability, and Dynamics.

Pathway Courses

Aging and Wellness

C155 | **BMAH Public/Intern Health 1**   0.5sem

BMAH Public & International Health 1 is an 11th grade BMAH Pathway 2 course for the Advanced Learner in the BMAH Magnet program. It is the first in a series of three courses in the Public and International Health Pathway. In this course, students will explore how the public health sector works to improve human health through the development and application of knowledge that prevents disease, protects the public from harm, and promotes health throughout the state, nation, and the world. Immersed in problem-based learning and critical thinking, students in this first of three one-semester courses, will develop and apply knowledge from multiple disciplines to explore the origins of public health, public health policies, the agencies involved in the public health sector, and local, national and global issues with a focus on Nutrition and Social Behavior. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.

C18 | **Honors BMAH Aging/Wellness 1**   0.5sem

Students will analyze literature and conduct research on the genetic, biological, clinical, behavioral, social, psychological, and economic aspects of aging. Aging populations' health issues affected by race, ethnicity, gender, socioeconomic status (SES), age, education, occupation, and other, as yet unknown, lifetime and lifestyle differences will be studied. Students will use research insights and advances to influence policy on the health, wellness, economic status, and quality of life of all aging adults. Immersed in problem-based learning and critical thinking, students will develop and apply knowledge from multiple disciplines to explore the event of aging, common illnesses, physiological problems, and the mental and social aspects involved in aging. Students will also explore how the health system engages with aging populations.

C19 | **BMAH Aging/Wellness 2**   0.5sem

Students will continue to analyze literature and conduct research on the genetic, biological, clinical, behavioral, social, psychological, and economic aspects of aging. Aging populations' health issues affected by race, ethnicity, gender, socioeconomic status (SES), age, education, occupation, and other, as yet unknown, lifetime and lifestyle differences will be studied. Students will use re-search insights and advances to influence policy on the health, wellness, economic status, and quality of life of all aging adults. Immersed in problem based learning and critical thinking, students will develop and apply knowledge from multiple disciplines to explore the event of aging, common illnesses, physiological problems, and the mental and social aspects involved in aging. Students will also explore how the health system engages with aging populations. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.

C20 | **BMAH Capstone Research**   [FY] 0.5/sem

BMAH Research/Data Analysis (Capstone) is a STEM/BMAH Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional BMAH-ists, support from a BMAH teacher. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.

Public & International Health

C155 | **BMAH Public/Intern Health 1**   0.5sem

BMAH Public & International Health 1 is an 11th grade BMAH Pathway 2 course for the Advanced Learner in the BMAH Magnet program. It is the first in a series of three courses in the Public and International Health Pathway. In this course, students will explore how the public health sector works to improve human health through the development and application of knowledge that prevents disease, protects the public from harm, and promotes health throughout the state, nation, and the world. Immersed in problem-based learning and critical thinking, students in this first of three one-semester courses, will develop and apply knowledge from multiple disciplines to explore the origins of public health, public health policies, the agencies involved in the public health sector, and local, national and global issues with a focus on Nutrition and Social Behavior. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.

C165 | **BMAH Public/Intern Health 2**   0.5sem

BMAH Public & International Health 2 is an 11th grade BMAH Pathway 2 course for the Advanced Learner in the BMAH Magnet program. It is the second in a series of three courses in the Public and International Health Pathway. In this course, students will explore how the public health sector works to improve human health through the development and application of knowledge that prevents disease, protects the public from harm, and promotes health throughout the state, nation, and the world. Immersed in problem-based learning and critical thinking, students in this second of three one-semester courses, will develop and apply knowledge from multiple disciplines to explore the financial issues in health services and public health systems, explore the legal issues in health services and public health systems, explore the legal

and ethical issues involving race, ethnicity, and poverty related to health disparities, evaluate the planning and marketing of health safety and preparedness in the public health sector regarding local, national and global issues with a focus on Epidemics and Health Systems. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.

C175 | **BMAH Public/Intern Health 3**   0.5sem

In this course, students engaged in research, analysis, prototyping, etc. and complete a Scientific Poster, Scientific White Paper and Formal Presentation for mentors. Grouped and paired with a mentor, students practice professionalism, critical thinking, problem solving, research, prototyping, revising, professional writing and collaboration as they consult with experts and literature on the topic/challenge/project approved to by their mentors (community stakeholders, business partners, higher education, local government agencies, etc.).

C20 | **BMAH Capstone Research**   [FY] 0.5/sem

BMAH Research/Data Analysis (Capstone) is a STEM/BMAH Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional BMAH-ists, support from a BMAH teacher. This course receives Advances Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.

Health Information Technologies

Q60 | **Honors BMAH Health Information Systems**   0.5sem

This course is paired with Health Database Management to complete the BMAH Pathway 1-year course. Health Information Systems is a tool for collecting and processing vital data from multiple sources and is used to make policy and manage healthcare services. In this course, students will work in teams on analyzing the Health Information Systems that exist in developed versus developing countries. Students will use real world data available from such resources as the World Bank, Organization for Economic Cooperation and Development—Health Statistics and the World Health Organization—Data and Statistics. Students will analyze the impact of Health Information Systems on a country's educational, financial, and political status. Students will design and use database structures to produce data-based briefs, data-driven arguments and presentations related to targeted health issues.

R64 | **Honors Database Management (BMAH)**   0.5sem

In this course students will study how the health care industry, government organizations, and associated organizations use information technology to research and analyze healthcare patient data as well as local, regional, national, and international health data trends and patterns. Students will work in teams on real world healthcare issues, using multiple software programs to collect, collate, and analyze data. Databases from the World Health Organization (WHO), National Institutes of Health (NIH), Centers for Disease Control (CDC), Organization for Economic Co-Operation and Development (OECD), and the United Nations International Children's Emergency Fund (UNICEF) provide the rich healthcare datasets from which the students will do their project-based/problem-based work.

M05 | **Mathematics/Science Modeling (STEM)**　　0.5sem

This is a one semester Pathway 2 course in the STEM Computer Science and Theoretical Applied Mathematics. This course provides an interactive environment for the study real world of problems through mathematical and scientific modeling. A model is a simple construct which unveils or describes important properties of a more complex system that a learner may want to understand more fully. Students learn about the nature and structure of scientific models, limitations of models, model strengths and weaknesses. Numerous technological modeling tools will be used to explore and study complex problems and challenges within an inquiry-based classroom setting. This course is paired with STEM Parallel Computing to round out the Pathway 2 experience and is intended for the Advanced Learner in the STEM Magnet Program.

Prerequisite(s): *AP Computer Science. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.*

R01 | **Parallel Computing (STEM)**　　0.5sem

This is a one semester Pathway 2 course in the STEM Computer Science and Theoretical Applied Mathematics. This course will prepare students for increasingly popular large-scale computing that takes place in the real world, such as search engines, social networking sites, and scientific computational needs. Parallel computing has historically played a key role in addressing the performance demands of high-end engineering and scientific applications. It has now moved to center stage in light of current hardware trends and device power efficiency limits. All computer systems — embedded, game consoles, laptop, desktop, high-end supercomputers, and large-scale data center clusters --- are being built using chips with an increasing number of processor cores, with little or no increase in clock speed per core. Unlike previous generations of hardware evolution, this shift will impact all segments of the IT industry and all areas of Computer Science. This course introduces students to the foundations of parallel computing and provide application project experience in collaboration with government and industry partners. This advanced course is paired with STEM Mathematical and Scientific Modeling to round out the Pathway 2 experience.

Prerequisite(s): *AP Computer Science. This course receives Advanced Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.*

C20 | **BMAH Capstone Research**　　[FY] 0.5/sem

BMAH Research/Data Analysis (Capstone) is a STEM/BMAH Capstone course for seniors and is designed to support student exploration and research in an area of the student's choosing. This may be a continuation of, extension of, and/or inspired by problems and/or projects explored via Problem Based Learning 3: Community Challenge and/or Internship experience. Students will be expected to write and submit a professional paper (White Paper), create and present a Scientific Poster, and formally present their experience and/or findings. Students will develop project management skills as they apply to their year-long endeavor, with daily updates and modifications to their plan. In this interdisciplinary course, students will have the opportunity to receive mentoring from professional BMAH-ists, support from a BMAH teacher. This course receives Advances Weighting (the same as AP courses) because it has a prerequisite that is Advanced Placement.

PTLW BioEngineering

M26 | **Honors Engineering Design (IED)**　　[FY] 0.5/sem

M27 | **Honors Digital Electronics**　　[FY] 0.5/sem

X165 | **STEM Modern Biotechnologies [FY] 0.5/sem**

STEM Modern Biotechnologies is an Advanced Course for students participating in the Science Technology Engineering Math (STEM) Magnet program and who have successfully completed course offerings in a STEM-related subject and who are committed to completing research and coursework that results in a project or product that could be published, eligible for a patent, presented at a national conference, and/or entered in a nationally or internationally recognized competition. Students must submit a proposal in an area of research and/or product development related to the key areas of modern biotechnologies, using biological molecules, particles, cells, organisms, and or processes to improve life in the areas of food, fuels or medicine.

M44 | **Honors Engineering Design & Development**

PTLW Biomedical Science

M36 | **Honors Human Body Systems**　　0.5sem

M35 | **Honors Principles of Biomedical Sciences**　　[FY] 0.5/sem

M37 | **Honors Medical Interventions**　　[FY] 0.5/sem

M38 | **Honors Biomedical Capstone**

M39 | **Biomedical Innovations**　　[FY] 0.5/sem

In the final course of the PLTW Biomedical Science sequence, students build on the knowledge and skills gained from previous courses to design innovative solutions for the most pressing health challenges of the 21st century. Students address topics ranging from public health and biomedical engineering to clinical medicine and physiology. They have the opportunity to work on an independent project with a mentor or advisor from a university, medical facility, or research institution.

CTE Career Completer Programs

Career Technology Education (CTE) Completer Programs provides students the opportunity to pursue a sequential technical and academic program of study—including addition to a wide variety of elective courses—leading to advancement in a career field. These careers require varying levels of education—high school and postsecondary certificates, apprenticeships, or two- and four-year college degrees. As an added benefit, CTE programs provide opportunities for students to earn industry-recognized credentials and college credit while still in high school.

Anne Arundel Community College Program Pathways

Anne Arundel Community College (AACC) and Anne Arundel County Public Schools (AACPS) are partnering to support the successful transition of students from high school to college and careers. This is an exciting opportunity for students to earn free AACC credits for successfully completing high school career and technology programs.

Visit the link under *Program Connections* for each relevant completer and look for *Credit for Previous Learning* on the AACC webpage to find out how the high school pathway continues into a corresponding college degree or certificate programs.

Career & Technology Programs of Choice—Benefits beyond the Diploma

Beyond graduation, students can earn valuable certifications and credits toward future career and college pathways.

Location	Program	Earn an AACPS Diploma Plus...
CAT-North and CAT-South	**Academy of Health Professions***	AACC Proficiency Assessment (3 transcripted credits)[†]
		CPR/AED & First Aid Certification—American Heart Association
		Certified Nursing Assistant (CNA)
		Geriatric Nursing Assistant (GNA)
		Certified Clinical Medical Assistant (CCMA)
		Pharmacy Technician (ExCPT)
	Automotive Collision Repair & Refinishing*	Student Automotive Service Excellence Certification (ASE)
		Safety and Pollution Prevention Certification (S/P2)
	Automotive Technology*	Student Automotive Service Excellence Certification (ASE)
		Safety and Pollution Prevention Certification (S/P2)
		Refrigerant Recovery & Recycling Certification (CFC)
	Carpentry*	NCCER Certification (Core and Level 1 Carpentry)
		AACC Proficiency Assessment (3 transcripted credits)[†]
	IT Networking Academy*	CompTIA Net Plus A Plus
		Cisco Certified Networking Associate Certificate (CCNA)
		AACC Proficiency Assessment (up to 15 transcripted credits)[†]
	Cosmetology	Maryland Department of Labor, Licensing and Regulation State Board of Cosmetologist, Cosmetologist License
	Culinary Arts*	ServSafe Certification—National Restaurant Association Educational Foundation
		Certified Fundamental Cook (ACF)
	Electricity	NCCER Certification (Core and Level 1 Electricity)
		Apprenticeship Credit available by review
	Heating, Ventilating & Air Conditioning*	ASE Refrigerant Recovery Certification
		MD Department of Labor, Licensing, & Regulation HVAC Apprenticeship License
		NCCER Certification (Core and Level 1 HVAC, EPA Core, CFC)
	Welding	D1-1 Certification—American Association of Welding
		NCCER Certification (Core and Level 1 Welding)
		American Welding Society (AWS) Certification
	Plumbing	NCCER Certification (Core & Level 1 Plumbing)
		Apprenticeship Credit available by review

* **Articulated Credit:** Students may earn college credit for work completed in high school, based upon an agreement between AACPS and the post-secondary institution. Students must enroll in that institution and complete specific requirements to receive credit.

[†] **Proficiency Credit:** Students can take an assessment provided by the college after completing a designated high school course. Students may earn *transcripted* college credit while still in high school.

Benefits Beyond the Diploma, continued

Location	Program	Earn an AACPS Diploma Plus...
CAT-North Only	**Baking & Pastry***	ServSafe Certification—National Restaurant Association Educational Foundation
		Certified Fundamental Pastry Cook (ACF)
	Building/ Industrial Maintenance	NCCER Certification (Core and Level 1 Industrial Maintenance)
	Diesel Power Technology	Student Automotive Service Excellence Certification (ASE)
		Safety and Pollution Prevention Certification (S/P2)
	Environmental Resource Management	AACC Proficiency Assessment (4 transcripted credits)[†]
	Graphic Design	PrintED (Advertising Design)
	Integrated Design/CAD	AACC Proficiency Assessment (up to 6 transcripted credits)[†]
	Masonry	NCCER Certification (Core and Level 1 Masonry)
	Print/Media Technology*	PrintED Certifications (Graphic Communication, Digital File Prep, Press Operation)
CAT-South Only	**Dental Assisting**	National Board, Radiology, Health, and Safety Certification
		National Board Expanded Function Certification
		CPR Certification - American Heart Association
	Interactive Media Production	Adobe Certified Associate (ACA)/AACC Proficiency Assessment (Up to 3 transcripted credits)[†]
	Marine Service Technology	American Boat & Yacht Council (ABYC) / Marine Service Technician
High Schools	**Business Management***	AACC Proficiency Exam (3 transcripted credits)[†] (Severna Park only)
		College credit through Dual Enrollment
		Microsoft Office Specialist Certification
	Construction Design and Management	AutoCAD credentialing
		Revit Architecture Certification
	Early Childhood Education	90 Clock Hours + 9 Hours Communication Certificate
	Food and Beverage Management (ProStart)	ServSafe certification—National Restaurant Association Educational Foundation ProStart National Certificate of Achievement (COA)
	Homeland Security Emergency Preparedness	AACC Proficiency Assessment (3 transcripted credits)[†]
		STARS certification
	Marketing	College credit through Dual Enrollment
	Project Lead the Way—Biomedical Sciences*	Transcripted credit available through affiliated colleges and universities[†]
	Project Lead the Way—Engineering*	AACC articulation agreement (3 or * maximum per degree)
		Transcripted credit available through affiliated colleges and universities[†]
	Transportation Management	Transportation, Logistics, and Cargo Security Certificate (AACC)
		Global Logistics Associate (GLA) Industry Certification

* Articulated Credit: Students may earn college credit for work completed in high school, based upon an agreement between AACPS and the post-secondary institution. Students must enroll in that institution and complete specific requirements to receive credit.

[†]Proficiency Credit: Students can take an assessment provided by the college after completing a designated high school course. Students may earn *transcripted* college credit while still in high school.

Academy of Health Professions

The Academy of Health Professions 1 is a full year course designed for 11th grade students interested in health-related professions. The primary areas of study include foundations of medicine, health sciences, and structure & function of the human body. Students will also engage in processes and hands-on procedures that are used in the delivery of essential healthcare services. Field trips to explore health career opportunities will be provided. Students can become certified in CPR / First Aid and have the opportunity to earn Proficiency Credits from Anne Arundel Community College. Successful course completion is required to proceed to the Academy of Health Professions Level 2. The Academy of Health Professions 2 course prepares 12th grade students for employment and further post-secondary education. Emphasis is placed on expanding content knowledge and skills that relate to the roles of the Nursing Assistant and Medical Assistant. Hands-on experience in various clinical settings provides exposure to diverse career opportunities. Eligible students have the opportunity to earn Maryland State CNA (Certified Nursing Assistant), GNA (Geriatric Nursing Assistant) and CCMA (Certified Clinical Medical Assistant) certifications and are expected to take the proficiency exam for Anne Arundel Community College credit.

Associated Certifications: Certified Nursing Assistant (CNA), Geriatric Nursing Assistant (GNA), Certified Clinical Medical Assistant (CMA)

Prerequisites: Biology (recommended grade of C or better)

Recommended: Chemistry (concurrent enrollment acceptable), Foundations of Patient Care

Note: Completion of AoHP 1 will satisfy the health education graduation requirement. Student must earn a grade of 70% or higher in Academy of Health Professions 1 to proceed to Level 2.

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/health-sciences/

AACC: This high school completer program offers college credit.
For more information, visit www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

Minimum Credits: 7	Credits per Semester	Maximum Possible
T01 Honors Academy of Health Professions 1—Foundations	2.0	4.0
T02 Honors Academy of Health Professions 2—Structure & Function*	1.5	3.0
Extension		
T703 Health Professions Work Based Learning	1.0	2.0

Availability: CAT North, CAT South

*Students who earn CNA/GNA certification during the first semester of T02 may proceed to T703 and complete the program with 6.5 credits.

Accounting & Finance

Students who complete this program of study will be competent in working with accounting systems. They will learn to record business transactions, analyze and prepare income cash flow, balance sheet statements, and financial reports. Students will become skilled in accounting software (e.g. Excel, QuickBooks) and the use of the internet for financial and economic research; they will practice business decision-making and critical thinking skills. Advanced topics such as tax accounting, investing, and corporate accounting will be covered. Career pathways for accounting will be examined and the use of accounting knowledge in a variety of career clusters will be explored. Students will obtain the necessary skills to continue their education at a post-secondary institution or begin employment immediately after high school as accounting clerks. Eligible students will have the opportunity to earn college credit through dual enrollment.

Program Connection: Anne Arundel Community College
www.aacc.edu/programs-and-courses/credit-and-degree-seekers/accounting/

Minimum Credits: 4	Credits per Semester	Maximum Possible
Q20 Principles of Business Management & Entrepreneurship	0.5	1.0
Q01 Principles of Accounting and Finance	0.5	1.0
Q02 Honors Accounting 2	0.5	1.0
Plus, one credit from the following options:		
Q03 Honors Accounting 3	0.5	1.0
or B51 AP Economics–Macro **and** B52 AP Economics–Micro	0.5	1.0
or T704 Accounting Work Based Learning	1.0	2.0
or BPA111 Business & its Environment (AACC Dual Credit) **and** BPA162 Business Communication (AACC)	0.5	1.0

Availability: Arundel, Chesapeake, Severna Park

Administrative Services Management

The Business Administrative Services Pathway provides students with knowledge of how to effectively utilize technology in the analysis, and communication of ideas; and the management, organization, and examination of information for strategic business decision making. Students are expected to think analytically; improve written and oral communication skills; enhance listening and questioning skills; learn and practice the art of conversation; broaden their awareness of career options; practice decision making and problem solving; learn the importance of communication skills in professional business practice; and utilize data to engender decisions. Upon completion of this program, students will be prepared to sit for the Microsoft Office Specialist (MOS) Certification exam, a globally recognized credential desired by academia and business.

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/business-and-law/

Minimum Credits: 4	Credits per Semester	Maximum Possible
Q20 Principles of Business Management & Entrepreneurship	0.5	1.0
Q63 Business & Personal Finance	0.5	0.5
Q50 Introduction to Microsoft® Office	0.5	0.5
Q64 Microsoft® Office Applications (xls/dbf)	0.5	0.5
Q71 Microsoft® Office Applications (doc/ppt)	0.5	0.5
Plus, one credit from the following options:		
Q40 Honors Administration Services Management	0.5	1.0
S41 Administrative Services Work-Based Learning	1.0	2.0

Availability: Chesapeake, Glen Burnie, Meade, Northeast, Old Mill

Auto Collision Repair/Refinishing

Techniques and spray painting in the repair of automobile bodies is offered in this two to three-year course. Technician and restorer positions are available in garages, shops, and dealerships. This program is Automotive Service Excellence (ASE) Certified by the National Automotive Technicians Education Foundation (NATEF).

Associated Certifications: ASE Student Certifications

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 5	Credits per Semester	Maximum Possible
T07 Auto Collision Repair 1	1.0	2.0
T08 Auto Collision Repair 2	1.5	3.0
Extension		
T09 Auto Collision Repair 3 -or- T701 Auto Collision Repair/Refinishing Work-Based Learning	2.0	4.0

Availability: CAT North, CAT South

Automotive Technology

An opportunity to learn how to inspect, repair, and adjust automobiles is provided in this two to three-year course. Positions as Specialist in alignment, engine tune up, fuel injection, brake, engine repair, trouble shooting, air conditioning and electrical systems are found in auto repair centers. This program is Automotive Service Excellence (ASE) Certified by the National Automotive Technicians Education Foundation (NATEF). Students enrolled in Auto Technology 1 will be enrolled in C01 (Pre-Engineering).

Associated Certifications: ASE Student Certifications

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Prerequisite: Current enrollment in Algebra 1

Note: C01 Honors Pre-Engineering (taught concurrently with Level 1 during one semester... 0.5sem

Program Connection: Catonsville Community College

Minimum Credits: 5	Credits per Semester	Maximum Possible
T10 Automotive Technology 1	1.0	2.0
T11 Automotive Technology 2	1.5	3.0
Extension		
T12 Automotive Technology 3 -or- T701 Automotive Technology Work-Based Learning	2.0	4.0

Availability: CAT North, CAT South

Baking & Pastry (ACF)

An opportunity to learn ingredients recognition, cost conversion, bake shop production, use of equipment, basic decorations, airbrush applications is provided in this course. Students may receive national sanitation certification and can have a job shadowing experience. Career opportunities include cake decorator, baker, caterer, consultant, food service manager. Students are eligible for college credit through Anne Arundel Community College upon successful completion of the program.

Associated Certifications: ACF

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/continuing-education/
hotel-culinary-arts-and-tourism/

AACC: This high school completer program offers college credit. For information, visit
www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

Minimum Credits: 4	Credits per Semester	Maximum Possible
T81 Honors Baking and Pastry 1	1.0	1.0
T82 Honors Baking and Pastry 2	1.5	3.0
Extension		
T83 Honors Baking and Pastry 3 -or- T701 Baking & Pastry Work-Based Learning	2.0	4.0

Availability: CAT North

Building/Industrial Maintenance

Participants master a variety of skills in the areas required to maintain large industrial buildings. Topics include, safety, tools, fasteners, cutting and welding, pumps, material handling, reading and understanding construction drawings, piping systems, steam systems, and distillation systems.

Associated Certification: NCCER Certification (Core and Level 1)

Required Course: Math T86

Minimum Credits: 4	Credits per Semester	Maximum Possible
T20 Building/ Industrial Maintenance 1	1.0	1.0
T21 Building/ Industrial Maintenance 2	1.5	3.0
Extension		
T703 Building/Industrial Maintenance Work-Based Learning	2.0	4.0

Availability: CAT North

Business Management

A student who completes this program pathway will be able to develop a business plan for a small business. They will apply accounting, marketing, and management concepts to realistic business scenarios. All aspects of managing a business will be discussed in addition to the competencies learned in computer applications, business communications and financial management. The business management program of study recommends that students should have access to work study, mentorship, internship, and job shadow opportunities. Students will also benefit from involvement in national professional organizations such as DECA and the Future Business Leaders of America (FBLA). Eligible students will have the opportunity to earn college credit through dual enrollment. The student who completes this program will be prepared to work as a management trainee, manage a small business, and continue their education after graduation.

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/business-and-law/business-management/

AACC: This high school completer program offers college credit at Severna Park High School. For information, contact sbeger@aacc.edu

Minimum Credits: 4	Credits per Semester	Maximum Possible
Q20 Principles of Business Management & Entrepreneurship	0.5	1.0
Q01 Principles of Accounting & Finance	0.5	1.0
Q61 Honors Business Management	0.5	0.5
Q34 Honors Entrepreneurship	0.5	0.5
Plus, one credit from the following options:		
B51 AP Economics—Macro **and** B52 AP Economics—Micro	0.5	1.0
or T704 Business Management Work-Based Learning	1.0	2.0
or BPA111 Business and Its Environment: AACC (Dual Credit) **and** BPA162 Business Communication: AACC	0.5	1.0

Availability: All high schools except Broadneck, Northeast, and Southern

Career Transitions

Career Connections and Transition (CCT) combines academics and the real world, providing hands-on learning that puts you at the center of the action. Learn essential skills, explore career interests, and discover your passions, all while planning a pathway to success after high school. CCT also helps develop critical thinking, problem-solving, teamwork, and communication skills, which means you are better prepared for college and career.

Minimum Credits: 4	Credits per Semester	Maximum Possible
Q22 Career Connections	0.5	1.0
Q83 Career Transitions	0.5	1.0
S249 Workplace Immersion	1.0	2.0

Availability: All high schools except Severna Park, and including the Phoenix Academy and Anne Arundel Evening High School

Carpentry

An opportunity to learn to construct new buildings, handle work connected with remodeling, maintenance, and repair is provided in this two to three-year course. Positions as rough, finish or maintenance carpenter, inspector, home remodeling, project superintendent, and self-employment are included in the job opportunities. This program is certified by the National Center for Construction Education and Research (NCCER) and students may also be eligible to receive proficiency credits from Anne Arundel Community College.

Associated Certifications: NCCER

Required: T86 Technical Math (taught concurrently with Level 2)........... 0.5/sem

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/science-and-technology/architecture-and-interior-design/

AACC: This high school completer program offers college credit. For information, visit www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

Minimum Credits: 4	Credits per Semester	Maximum Possible
T22 Carpentry 1	1.0	1.0
T23 Carpentry 2	1.5	3.0
Extension		
T24 Carpentry 3 -or- T701 Carpentry Work-Based Learning	2.0	4.0

Availability: CAT North, CAT South

CASE—Curriculum for Agricultural Education

The CASE POS prepares students to be successful in numerous careers in the agricultural sciences as well as preparing them to further their education at the post-secondary level. This inquiry-based POS incorporates classroom learning, FFA leadership and career development, as well as outside of the classroom experiences through Supervised Agricultural Experiences (SAE) and other internship opportunities. Students will work in teams through inquiry-based projects exploring biotechnology research methodology, DNA/ gene transfer, biofuels, micro propagation, embryo transfer, transgenic materials, and microbial biotechnology. As a foundation, biochemistry and the regulations, laws, and ethics governing biotechnology will addressed.

Minimum Credits: 4	Credits per Semester	Maximum Possible
M53 Introduction to AFNR (Agriculture, Food, and Natural Resources)	0.5	1.0
M54 Honors Principles of Agricultural Sciences/Plants -or- M55 Honors Principles of Agricultural Sciences/Animals	0.5	1.0
M56 Honors Animal & Plant Biotechnology	0.5	1.0
M58 Honors Agricultural Business Research & Development (Capstone)	0.5	1.0

Availability: Phoenix Academy, Southern

Construction Design and Management

Minimum Credits: 4

This program is a four course CTE Program of Study. Students will develop an understanding of the built world through the design and construction process. Each course uses a 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. AACPS adopted the MSDE program and will meet all of the standards outlined in the State approved Program of Study. Additionally, each course will be expanded to include 'real-world' projects and problem solving to align with the school's Signature—Community Development & Global Citizenship.

Associated Certifications: AutoCAD credentialing
Revit Architecture certification

	Credits per Semester	Maximum Possible
M77 Introduction to Construction Design & Management	1.0	1.0
M78 Principles of Construction Design	1.0	1.0
M79 Honors Advanced Design and 3-D Modeling	0.5	1.0
M80 Honors Advanced Construction Management	0.5	1.0

Availability: Arundel

Cosmetology

Minimum Credits: 10.5

Cosmetology provides students an opportunity to learn hair shaping, manicuring, hairstyling, facial massage, make-up, hair coloring and salon management. Graduates of this 1500 hour/three-year program are required to sit for the State licensure exam. Due to the hour requirement for licensure, Level 3 students must commit to participate in an extended day schedule.

Associated Certification: State Board of Cosmetology
Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

	Credits per Semester	Maximum Possible
T25 Cosmetology 1	1.5	3.0
T26 Cosmetology 2	1.5	3.0
T27 Cosmetology 3	2.25	4.5
Extension		
T701 Cosmetology Work-Based Learning	2.0	4.0

Availability: CAT North, CAT South

Culinary Arts

Minimum Credits: 4

Students will learn the use of commercial equipment, purchase food, plan menus, provide banquet buffet service, management, cook, bake, and sanitation techniques, and may be eligible to receive sanitation certification. Career opportunities include dining room management or supervisor, food service management or supervisor, food service manager, purchasing agent, proprietor, host/hostess, consultant, dietitian, caterer or cook/chef. This program is certified by the American Culinary Federation Foundation (ACF).

Associated Certifications: Certified Fundamental Cook, ServeSave

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/continuing-education/hotel-culinary-arts-and-tourism/

AACC: This high school completer program offers college credit. For information, visit
www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

	Credits per Semester	Maximum Possible
T77 Honors Culinary Arts 1	1.0	1.0
T78 Honors Culinary Arts 2	1.5	3.0
Extension		
T79 Honors Culinary Arts 3 -or- T701 Culinary Arts Work-Based Learning	2.0	4.0

Availability: CAT North, CAT South

Database Academy (Oracle)

Minimum Credits: 4

The Oracle Database Academy Program is a nationally recognized program that prepares students for successful careers in Information Technology (IT), including database administration, database programming, IT consulting, IT project management and computer engineering. The Database Academy Program educates high school students in database programming, as well as the professional skills students require to pursue quality academic and professional opportunities. The last course in the program of study is an online course that offers dual-enrollment opportunity for students.

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/science-and-technology/computer-science/

AACC: This high school completer program offers college credit.
For information, please contact sbeger@aacc.edu

	Credits per Semester	Maximum Possible
R18 Honors Computer Science Program—Java	0.5	2.0
R20 AP Computer Science A	1.0	
Q78 Advanced Web Page Design 1	0.5	
Q79 Honors Advanced Web Page Design 2	0.5	
R10 Honors Database Design/Programming (SQL)	0.5	1.0
R11 Honors Database Application Development (PL/SQL)	0.5	1.0
Extension		
T704 Database Work-Based Learning Internship (Recommended)	0.5	1.0

Availability: Glen Burnie, South River

Dental Assisting

Students will be instructed in the areas of receptionist, chairside assistant, business office manager, and dental laboratory assistant. Clinical experiences and observations take place in a dental clinic and are supervised by a doctor of dentistry. A senior year clinical experience may be available in a dental office.

Associated Certification: CPR, Radiation Health & Safety, National Board Expanded Function

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 5

	Credits per Semester	Maximum Possible
T55 Honors Dental Assisting 1	1.0	2.0
T56 Honors Dental Assisting 2/Radiology	1.5	3.0
Extension		
T702 Dental Assisting Work-Based Learning	2.0	4.0

Availability: CAT South

Diesel Power Technology (State name: Diesel Engine Technology)

The Diesel Power Technology course prepares the student to service and repair a wide variety of diesel powered vehicles and equipment. This program provides training in the Inspection, diagnosis, repair and service of diesel engines, brakes, suspension & steering, electrical/electronic systems, heating, ventilation & air conditioning, preventative maintenance Inspection, and hydraulic systems. This course has been developed in partnership with Cummins Power Systems and is certified by the National Automotive Technicians Education Foundation (NATEF).

Associated Certification: ASE Student Certification

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 5

	Credits per Semester	Maximum Possible
T28 Diesel Power Technology 1	1.0	2.0
T29 Diesel Power Technology 2	1.5	3.0
Extension		
T30 Diesel Power Technology 3 -or- T702 Diesel Power Work-Based Learning	2.0	4.0

Availability: CAT North

Early Childhood

This completer program is designed for students who wish to pursue a career in the field of early childhood care and/or the field of education. The course sequence provides performance-based training and assessment, which prepares students for both work and college. A senior year internship is required. Students can earn the Maryland State 90 clock hours plus 9 hours of communication certification.

Program Connection: Anne Arundel Community College: www.aacc.edu/programs-and-courses/credit-and-degree-seekers/education/

AACC: This high school completer program offers college credit. For information, please contact sbeger@aacc.edu

Minimum Credits: 5

	Credits per Semester	Maximum Possible
H20 Child Development 1	0.5	1.0
H21 Child Development 2	0.5	1.0
H81 Introduction to Teaching Profession	0.5	1.0
H22 Honors Child Development 3	0.5	1.0
H26 Childhood Internship	1.0	1.0

Availability: All High Schools except Phoenix Academy

Early Childhood Education/ Child Care

The Early Childhood Education/Child Care Services program follows the high school Child Development Associate (CDA) Program of the National Credentialing Program. The CDA is nationally transferable, most widely recognized, credible and valid credential in the Early Childhood Education field. Students may earn the CDA in center-based programs, family childcare and home visitors. Students complete 120 clock hours of child development education and 480 hours of experience working directly with children in licensed facilities. In addition to industry certification, students also can earn college credit.

Associated Certification: Child Development Associate (CDA)

Minimum Credits: 5

	Credits per Semester	Maximum Possible
TBD Child Growth and Development	0.5	1.0
TBD Learning Environment: Preschool	0.5	1.0
TBD Establishing a Purposeful Program: Preschool	0.5	1.0
TBD Child Development Associate Review and Completion	0.5	1.0
H26 Childhood Internship	1.0	1.0

Availability: Crofton High School Only

Electrical—Construction Trades

Students will be instructed in wiring diagrams and schematics, electrical safety, wiring methods, blueprint reading, furnace controls, wiring heat lamps and air condition electrical motors and starters is provided. Career opportunities include line meter installer, cable splicer, wire-person, inspector, trouble shooter, motor repair person, control expert, distribution panel installer, electrical contractor or self-employment. This program is certified by the National Center for Construction Education and Research (NCCER).

Associated Certifications: NCCER

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Recommended: Completion of Algebra 1 (C or better)

Minimum Credits: 4	Credits per Semester	Maximum Possible
T34 Electricity 1	1.0	1.0
T35 Electricity 2	1.5	3.0
Extension		
T36 Electricity 3 -or- T702 Electricity Work-Based Learning	2.0	4.0

Availability: CAT North, CAT South

Environmental Resource Management

The Environmental Resource Management Program will give students working knowledge and first-hand experience in the areas of: Water Resource, Fisheries/Wildlife, Soil, Forests, and Watershed Restoration. Instruction will include classroom, hands-on, lab, field, and project-based activities, while incorporating instruction in various environmental technologies including GIS and GPS. Students will work in close association with Arlington Echo's Chesapeake Connections program, community, private, and local government programs. The Natural Resource Management program will utilize the Chesapeake Bay Watershed as a model and for sites for work experience and study. Upon completion of the program, students will have acquired knowledge and work experience to aid them in further study or employment in fields such as: fish or forestry technicians, environmental engineers, wildlife managers, park rangers, naturalists, environmental scientists, and landscape workers. Students may earn proficiency credit from Anne Arundel Community College upon successful completion of the program.

Program Connection: ....Anne Arundel Community College www.aacc.edu/about/schools-of-study/science-and-technology/biology/

AACC: This high school completer program offers college credit. For information, visit www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

Minimum Credits: 5	Credits per Semester	Maximum Possible
T43 Environmental Resource Management 1	1.0	1.0
T44 Honors Environmental Resource Management 2	2.0	4.0
Extension		
T45 Honors Environmental Resource Management 3 -or- T701 Environmental Resource Management Work-Based Learning	2.0	4.0

Availability: CAT North

Food & Beverage Management (ProStart)

The ProStart program introduces high school students to a wide variety of careers within the restaurant, food service and hospitality industry. Students will study and practice professional food preparation, preparation of international cuisines, food safety and sanitation, customer service relations, accounting, cost control, marketing and an introduction to aspects of lodging management. Students will follow the National Restaurant Association Educational Foundation industry standard curriculum with the potential to earn a ProStart and ServSafe certification. Senior year, students must complete a 270-hour work-based learning experience. In addition, for ProStart Certification, the student internship must allow them to complete 52 competency goals plus an additional 130 hours.

Program Connection: Anne Arundel Community College www.aacc.edu/about/schools-of-study/continuing-education/ hotel-culinary-arts-and-tourism/

AACC: This high school completer program offers college credit. For information, visit www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

Minimum Credits: 4	Credits per Semester	Maximum Possible
H77 Honors Culinary & Hospitality Management 1	0.5	1.0
H78 Honors Culinary & Hospitality Management 2	0.5	1.0
H74 Prostart Work-based Learning	1.0	2.0

Availability: All high schools, Phoenix Academy, and Anne Arundel Evening High Schools

Graphic Design (State name: Digital Media & Web Design/Development)

Students will be introduced to publication design as a means of communication with a focus on studying and applying layout and design concepts used in the fields of graphic design, web page design and printing. Students use the IMac computer with software applications to learn basic page layout techniques, photo manipulation, advertising design, and digital illustration. Career opportunities exist as a graphic artist, ad designer, web page designer, and pre-press operator.

Associated Certifications: PrintED

Minimum Credits: 5	Credits per Semester	Maximum Possible
T16 Graphic Design 1	1.0	1.0
T17 Graphic Design 2	2.0	4.0
Extension		
T704 Graphic Design Work-Based Learning	2.0	4.0

Availability: CAT North

Heating, Ventilating, Air Conditioning (HVAC)—Construction Trades

Basic principles and practical applications to the Air Conditioning and Heating Industry are introduced in this course. Electro-Mechanical Theory, basic electricity, and wiring diagrams are studied. Outcomes include trouble shooting, maintenance, wiring diagram, ducting, and repair of central heating and air conditioning systems. Jobs are available in manufacturing, wholesaling, retailing, and building maintenance. This program is certified by the National Center for Construction Education and Research (NCCER).

Associated Certifications: NCCER

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 4

	Credits per Semester	Maximum Possible
T04 HVAC 1	1.0	1.0
T05 HVAC 2	1.5	3.0
Extension		
T06 HVAC 3 -or- T702 HVAC Work-Based Learning	2.0	4.0

Availability: CAT North, CAT South

Homeland Security Emergency Preparedness

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

Associated Certifications: STARS certification

Program Connection: Anne Arundel Community College
www.aacc.edu/programs-and-courses/credit-and-degree-seekers/homeland-security-management/

AACC: This high school completer program offers college credit.
For information, visit www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

Minimum Credits: 4

	Credits per Semester	Maximum Possible
X06 Homeland Security Explorations 1	0.5	1.0
X07 Homeland Security Explorations 2	0.5	1.0
X31 Honors Global Information Systems (GIS) 1	0.5	0.5
X32 Honors GIS 2	0.5	0.5
X33 Honors GIS 3	0.5	0.5
X34 Honors GIS 4	0.5	0.5
Extension		
T704 Homeland Security Work-Based Learning	0.5	1.0

Availability: Meade

Information Technology (IT) Software—Computer Sciences

The Information Technology (IT) Software Pathway program, Computer Science, 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). Upon completion of the program sequence, students may earn college credit for introductory-level Computer Science through Advanced Placement (AP) Computer Science exam(s). In addition, students may earn industry certification as a Microsoft Technology Associate (MTA). Certification options include Software Development Fundamentals (Exam 98-361), Windows Development Fundamentals (Exam 98-362), or Web Development Fundamentals (Exam 98-363). Students in the Computer Science CTE Program of Study are required to take at least one of the assessment options listed above (leading to industry certification and/or early college credit).

Associated Certifications: Software Development Fundamentals (Exam 98-361),
Windows Development Fundamentals (Exam 98-362),
Web Development Fundamentals (Exam 98-363)

Minimum Credits: 4

	Credits per Semester	Maximum Possible
R06 Foundations of Computer Science	0.5	1.0
R04 AP Computer Science Principles	0.5	1.0
R20 AP Computer Science A	0.5	1.0
R22 C++, Dual Enrollment or Internship	0.5	1.0

Availability: Chesapeake and Meade

Integrated Design/CAD

Minimum Credits: 4

Students will be instructed in basic drafting, orthographic projection, sketching drawings, ANSI standard lettering, blueprint reading, CAD, geometric construction, sectioning, auxiliary views, detail and assembly drawings, inking drawings, architectural layouts of floor plans and elevation drawings. Career opportunities include drafter, engineering technician, mechanical engineer, industrial designer, teacher, architect, and construction superintendent. Students may also be eligible for Proficiency Credits from Anne Arundel Community College.

Required: T86 Technical Math 0.5/sem

Note: Completion of M20 and M21(Engineering Drawing/ CAD 1/2) (C or better) may be taken for two Semesters in the home school Technology Education Program to satisfy the requirements for T31.

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/science-and-technology/architecture-and-interior-design/

www.aacc.edu/programs-and-courses/credit-and-degree-seekers/engineering/

AACC: This high school completer program offers college credit. For information, visit www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

	Credits per Semester	Maximum Possible
M20 Integrated Design/CAD 1	0.5	
M21 Integrated Design/CAD 2	0.5	
-or-		1.0
T31 Integrated Design/CAD 1	1.0	
T32 Integrated Design/CAD 2	1.5	3.0
Extension		
T33 Integrated Design/CAD 3		
-or-	2.0	4.0
T702 Integrated Design Work-Based Learning		

Availability: CAT North

Interactive Media Production—*CAT South*

Minimum Credits: 5

The IMP program will enable students to create a range of projects by combining sound, video, graphics, animation, and web technology. These media tools are used by business and industry to develop content for marketing, training, and entertainment. Students will prepare for the Adobe Creative Suite Certification(s) and have the opportunity to earn college credit toward post-secondary study. The Level 1 course will provide an introduction and overview of all topics. Students will then select the focus of their study to be in the area of Digital Imaging, Video, and Motion Graphics, or Simulation and Gaming.

Associated Certifications: Adobe Certified Associate

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/liberal-arts/visual-arts-and-humanities/

AACC: This high school completer program offers college credit. For information, visit www.aacc.edu/earn-college-credits-while-in-high-school/proficiency-credit/

	Credits per Semester	Maximum Possible
Q16 Honors Interactive Media Production 1	1.0	1.0
Choose one:		
Q17 Honors IMP Digital Imaging/Video	2.0	4.0
Q23 Honors IMP Simulation & Gaming	2.0	4.0
Extension		
Q18 Honors Interactive Media Production 3	2.0	4.0

Availability: CAT South

Interactive Media Production—*High Schools*

Minimum Credits: 4

The IMP program will enable students to create a range of projects by combining sound, video, graphics, animation, and web technology. These media tools are used by business and industry to develop content for marketing, training, and entertainment. Students will prepare for the Adobe Creative Suite Certification(s) and have the opportunity to earn college credit toward post-secondary study.

Program Connection: Anne Arundel Community College
www.aacc.edu/about/schools-of-study/liberal-arts/visual-arts-and-humanities/

	Credits per Semester	Maximum Possible
Q16 Honors Interactive Media Production 1	0.5	1.0
Q17 Honors Interactive Media Production 2	0.5	1.0
Q18 Honors Interactive Media Production 3	0.5	1.0
Q19 Honors Interactive Media Production 4	0.5	1.0

Availability: Chesapeake, Old Mill, Severna Park

IT Networking Academy (CISCO)

Students will be taught the conceptual and technical skills to design, install, operate and maintain state-of-the-art computer networks. Each participant will have the opportunity for theory, component recognition, cabling techniques and design. This two-year course is a Cisco Systems Certified program and students can elect to test for a variety of CompTIA and CISCO Certifications. Students may be eligible to earn proficiency credits from Anne Arundel Community College upon successful completion of the program.

Associated Certifications: CompTIA, APlus, NetPlus, CISCO

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Prerequisites: Algebra 1 (C or better)

Program Connection: Anne Arundel Community College
www.aacc.edu/programs-and-courses/credit-and-degree-seekers/
cybersecurity-and-digital-forensics//

AACC: This high school completer program offers college credit.
For information, visit www.aacc.edu/earn-college-credits-while-in-high-school/
proficiency-credit/

Minimum Credits: 5

	Credits per Semester	Maximum Possible
T58 Honors Cisco Academy 1	1.0	2.0
T59 Honors Cisco Academy 2	1.5	3.0
Extension		
T607 Honors Cisco Academy 3	2.0	4.0

Availability: CAT North, CAT South

Manufacturing Technology (Machine Tool Operation)

Students will develop skills to read and interpret prints, use precision measuring instruments and hand tools. Students will efficiently setup and operate drill presses, vertical milling machines, engine lathes and grinders. Students will also develop CNC programs using software applied in the industrial field. Career opportunities include Machinist, Maintenance Machinist, Instrument Maker, Inspector, Tool and Die Maker, Shop Supervisor and Engineer.

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 4

	Credits per Semester	Maximum Possible
T46 Manufacturing Technology 1	1.0	1.0
T47 Honors Manufacturing Technology 2	1.5	3.0
Extension		
T48 Manufacturing Technology 3 -or- T703 Manufacturing Technology Work-Based Learning	2.0	4.0

Availability: CAT North

Marine Service Technology

Standards and guidelines set by the American Boat & Yacht Council (ABYC) are incorporated in this program and supported by ABYC. Students will learn boat related skills in carpentry, marine wiring, diagnoses and repair of marine engines, painting, refinishing, plumbing, fiber glassing and rigging. Career possibilities include crew member, refinishing, rigging, carpentry, fiberglass fabrication and repair, sales, and cleaning and maintenance.

Associated Certifications: ABYC, Marine Service Technician

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 5

	Credits per Semester	Maximum Possible
T71 Marine Service Technology 1	1.0	2.0
T72 Marine Service Technology 2	1.5	3.0
Extension		
T73 Marine Service Technology 3 -or- T702 Marine Service Technology Work-Based Learning	2.0	4.0

Availability: CAT South

Marketing

In the Marketing pathway, students learn about the consumer's role, research in global marketing, developing a marketing plan and the importance of ethics and social responsibility. Internships and mentored projects are highly recommended. Graduates may earn college credit through articulation agreements or dual enrollment.

Program Connection: Anne Arundel Community College
www.aacc.edu/programs-and-courses/credit-and-degree-seekers/
advertising/

Minimum Credits: 4

	Credits per Semester	Maximum Possible
Q20 Principles of Business Management & Entrepreneurship	0.5	1.0
Q01 Principles of Accounting & Finance	0.5	1.0
Q30 Honors Marketing 1	0.5	1.0
Plus, one credit from the following options:		
Q31 Honors Marketing 2	0.5	1.0
or B51 AP Economics—Macro **and** B52 AP Economics—Micro	0.5	1.0
or S32 Marketing Work-Based Learning	1.0	2.0
or BPA162 Business Communication: AACC (Dual Credit) **and** BPA127 E-Marketing: AACC	0.5	1.0

Availability: Annapolis, Meade, North County, Severna Park, Southern

Masonry—Construction Trades

Students will learn to work with brick, block, stone and concrete. They will be able to estimate the cost of materials, read blueprints, and layout projects. Career opportunities in this trade offer a promising future for graduates as a Mason tender, Bricklayer, Layout person, Foreman, Estimator, Superintendent, and Contractor. This program is certified by the National Center for Construction Education and Research (NCCER).

Associated Certifications: NCCER

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 4	Credits per Semester	Maximum Possible
T49 Masonry 1	1.0	1.0
T50 Masonry 2	1.5	3.0
Extension		
T51 Masonry 3 -or- T702 Masonry Work-Based Learning	2.0	4.0

Availability: CAT North

Plumbing—Construction Trades

Students will be instructed in the areas of soldering, brazing, repairing sinks and toilets, repairing water heaters, reading blueprints and designing bathrooms. A senior year internship is available, which can lead to an Apprenticeship program. Career opportunities exist as plumber, gas fitter, maintenance engineer, engineer, steam fitter, sprinkler system mechanic, boiler mechanic, plumbing sales representative, service person or estimator. This program is certified by the National Center for Construction Education and Research (NCCER).

Associated Certifications: NCCER

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Program Connection: Catonsville Community College
Community College of Baltimore County

Minimum Credits: 4	Credits per Semester	Maximum Possible
T52 Plumbing 1	1.0	1.0
T53 Honors Plumbing 2	1.5	3.0
Extension		
T54 Plumbing 3 -or- T703 Plumbing Work-Based Learning	2.0	4.0

Availability: CAT North & CAT South

Print Media Technology (State name: Graphic & Printing Technology)

Students will have the opportunity to learn all aspects of the printing process including digital printing, digital file management, offset lithography, binding and finishing, and production planning. Students will learn to use iMac computers, Adobe Suite, computer to plate system, printing press, and bindery equipment. Students will develop an understanding of inventory and cost control, electronic prepress and employment responsibilities. Career opportunities include pressman or bindery operator, prepress technician, production planning, purchasing and customer service.

Associated Certifications: PrintED

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 4	Credits per Semester	Maximum Possible
T40 Printing Technologies 1	1.0	1.0
T41 Printing Technologies 2	1.5	3.0
Extension		
T42 Printing Technologies 3 -or- T703 Printing Technology Work-Based Learning	2.0	4.0

Availability: CAT North

	Credits per Semester	Maximum Possible
T40 Printing Technologies 1 *(daily yearlong)*	1.0	2.0
T41 Printing Technologies 2 *(daily single semester)*	1.0	1.0
T43 Printing Technologies 3 *(daily single semester)*	1.0	1.0
Extension		
T703 Printing Technology Work-Based Learning	1.0	2.0

Availability: Phoenix Academy

Project Lead the Way (PTLW)—Biomedical Sciences

The goal of the program is to increase the number of students pursuing careers in the biomedical sciences, including healthcare. Students who complete the program are prepared for employment and further education at two- and four- year college levels. Stevenson University, the Maryland PLTW Biomedical Sciences Affiliate University, will offer four (4) transcripted credits for its first semester majors biology course (BIO 113). The credit will be offered for those students who complete the entire PLTW biomed sequence of courses and score at least 80% on each end-of-course assessment.

Minimum Credits: 4	Credits per Semester	Maximum Possible
T40 Printing Technologies 1 *(daily yearlong)*	1.0	2.0
T41 Printing Technologies 2 *(daily single semester)*	1.0	1.0
T43 Printing Technologies 3 *(daily single semester)*	1.0	1.0
Extension		
T703 Printing Technology Work-Based Learning	1.0	2.0

Project Lead the Way (PLTW)—Pre-Engineering

Project Lead the Way (PLTW) is a CTE instructional program that incorporates the national standards of The National Council of Teachers of Mathematics, the National Science Standards and the International Technology Education Association. The program prepares students for further education and careers in engineering and engineering technology. The list of courses provided meet the criteria of the Project Lead the Way Program. Specialty courses are selected by the school and not all courses listed are offered at every PLTW school.

Program Connection: Anne Arundel Community College
www.aacc.edu/programs-and-courses/credit-and-degree-seekers/
engineering/

AACC: This high school completer program offers college credit.
For information, contact sbeger@aacc.edu

Minimum Credits: 4

	Credits per Semester	Maximum Possible
M25 Honors Principles of Engineering*	0.5	
M26 Honors Engineering Design (IED)	0.5	3.0
M27 Honors Digital Electronics	0.5	
M28 Honors Computer Integrated Manufacturing	0.5	
M29 Honors Environmental Sustainability	0.5	
M30 Honors Aerospace Engineering	0.5	1.0
M49 Honors Civil Engineering & Architecture	0.5	
M44 Honors Engineering Design & Development (EDD)	0.5	

Availability: Crofton, Glen Burnie, Meade, Severna Park, South River

* If M25 is used to satisfy Basic Technology requirements for graduation,
it cannot be used to meet requirements towards this completer program.

Transportation Management

In response to community demands for career-ready high school graduates, North County High School offers students unique thematic courses and co-curricular opportunities that are challenging and workforce relevant and may include technical, community college, and/or four-year college pathways. This is the first completer program that directly supports AACPS Signature initiatives. Students will experience purposeful, real-world learning, career opportunities, transportable credentials and higher education experiences. This program combines Career and Technology Education with Early College Access and will allow students to graduate with 18 college credits and a Certification in Transportation, Logistics and Cargo Security, while preparing them to earn the Global Logistics Associate (GLA) Industry Certification. The program is a combination of courses developed by both AACPS and AACC. The six AACC courses are taken through the dual credit program.

Associated Certifications: Transportation, Logistics and Cargo Security Certificate (AACC)
Global Logistics Associate (GLA) Industry Certification

Program Connections: Anne Arundel Community College
www.aacc.edu/programs-and-courses/credit-and-degree-seekers/
supply-chain-management/

AACC: This high school completer program offers college credit.
For information, visit www.aacc.edu/earn-college-credits-while-in-high-school/
north-county/

www.aacc.edu/earn-college-credits-while-in-high-school/

Minimum Credits: 4

	Credits per Semester	Maximum Possible
X06 International Trade, Transportation & Tourism Exploration 1	0.5	0.5
X07 International Trade, Transportation & Tourism Exploration 2	0.5	0.5
X08 International Trade, Transportation & Tourism Exploration 3	0.5	1.0
X09 International Trade, Transportation & Tourism Exploration 4	1.0	2.0

Availability: North County

Welding—Construction Trades

Students will be instructed in blueprint reading, oxy-acetylene welding and cutting, brazing, arc welding, plasma cutting and welding, and pulse MIG welding. Career opportunities exist as production welder, machine operator, job shop welder, fabricator, pipeline. welder, sheet metal mechanic and welder, construction welder, and welding shop owner. This program is certified by the National Center for Construction Education and Research (NCCER).

Associated Certifications: NCCER, D1.1 American Welding Society (AWS)

Required: T86 Technical Math (taught concurrently with Level 2) 0.5/sem

Minimum Credits: 4

	Credits per Semester	Maximum Possible
T61 Welding 1	1.0	1.0
T62 Welding 2	1.5	3.0
Extension		
T63 Welding 3 -or- T703 Welding Work-Based Learning	2.0	4.0

Availability: CAT North, CAT South

To find out more about Career Technology Programs,
visit www.aacps.org/cte.

If you have questions about any of the
courses or programs described in this book,
see your School Counselor.

Advanced Co-Curricular Programs

The Advanced Co-Curricular Programs Office at AACPS offers a broad range of learning experiences outside of the traditional classroom for all students. It is intended to complement, broaden and provide practical application of knowledge students receive in regular classes and give students a chance to participate in activities they enjoy. Some involve outside organizations while others are maintained within the confines of the schools.

Co-Curricular activities require students to think critically, solve problems, manage time, work as a team, and grow as an individual.

https://www.aacps.org/cocurricular

Adjunct Programs

Adjunct programs augment the instructional program outside the regular school day. They provide an enriching complement to a student's regular education experience. Anne Arundel County Public Schools is fortunate to have strong partnerships with organizations in the community that comprise unparalleled resources, including the Naval Academy, the National Security Agency, St. John's College, Johns Hopkins University Applied Physics Laboratory (JHUAPL), National Electronics Museum, and Maryland Hall for the Creative Arts. Here, you will find a brief description of after-school, weekend or summer program options. Participation in these adjunct programs affords students the opportunity to enrich and extend their current program studies. Both student aptitude and interest should be considered when registering for these programs.

Maryland Hall for the Creative Arts AACPS Scholarship Program

Maryland Hall for the Creative Arts in Annapolis offers after-school and Saturday courses in the creative and performing arts. Twenty percent of the enrollment each year is provided tuition-free to students of financial need from Anne Arundel County Public Schools. Sculpting, painting, jewelry design, classical ballet and acting are just some of the classes offered for ages five to seventeen. Scholarship applications and course offering booklets are distributed in schools for fall, winter/spring, and summer sessions.

A course catalog with application form is available through the main office at each school or on-line at the Advanced Co-Curricular Programs Adjunct Web site (www.aacps.org/cocurricular). For further information, contact Maryland Hall for the Creative Arts directly at 410-263-5544 or visit their website.

www.marylandhall.org

United States Naval Academy (USNA) Advanced Studies Program

The Advanced Study Program is sponsored and funded by the Advanced Co-Curricular Programs Office. Only public school students may attend during the fall and spring semesters of the school year. During the summer session, the program is also open to non-public school students for a fee. The program consists of advanced studies in mathematics, computer applications, humanities, and the sciences for grades six through twelve. In addition to the regular classes, the Advanced Studies Program at the USNA also offers several Saturday morning "hands-on" physics lab demonstrations during the school year. Parents and teachers are welcome to attend with their students.

A course catalog with application form is available through the main office at each school or on-line at the Advanced Co-Curricular Programs Adjunct Web site.

www.aacps.org/cocurricular

St. John's Seminar

The Office of Advanced Studies and Programs, English and Social Studies Offices, in collaboration with St. John's College, invites Advanced Placement and Honors classes in English and Social Studies to participate in seminar classes led by St. John's tutors. Students will also be guests of the college for lunch and a tour of the campus. The instructional format of a Socratic seminar is such that the number of

participants must not exceed 20 per seminar and be either all English, all social studies or a mixture of both classes of students.

Topics in the past have included short works, papers, poetry or drama from Shakespeare, Machiavelli, Yeats, Sophocles, or Chaucer, as well as historical works such as the Constitution, the Gettysburg Address and the Federalist's Papers.

MSDE Maryland Summer Center

The Maryland Summer Center Program, in partnership with public and nonpublic agencies, provides Maryland's diverse gifted and talented population with advanced rigorous, experiential learning opportunities that nurture these students' talents and abilities within unique learning environments. One to three weeks in duration, these residential or non-residential summer courses cover a wide range of interests from computer sciences, to history, to fine arts to STEM.

For further information, contact the MSDE Summer Center at 410-767-4821 or log on to their website.

www.marylandpublicschools.org/summercenters

Destination ImagiNation®

Each year, five different Team Challenges are unveiled to more than 400,000 students worldwide. Teams of up to seven members select a challenge and spend several months perfecting their solutions. The culmination is a series of tournaments where teams demonstrate their unique solutions to teams of appraisers. Only teams who register with the Advanced Co-Curricular Programs Office are eligible for discounted team registration numbers.

https://www.destinationimagination.org/

Activities and Competitions

Co-curricular programs augment the instructional program outside the regular school day. They provide an enriching complement to a student's regular educational experience. Below, you will find a brief description of before-school, during school, after-school, weekend and/or summer program options for students. Some take place with face-to-face contact while others are online requiring remote access. Participation in these activities or competitions affords students the additional opportunities to enrich their current program of studies. Contact your school to obtain specific information and offerings. For more information, visit the program's website.

AVID Enrichment Club

In conjunction with the AVID Office, this club serves as an opportunity to apply skills and techniques learned in AVID courses. Enrichment options may be offered based upon student needs and availability.

Continental Math League (CML), Inc.

The Continental Math League invites students at all grade levels who have above average mental mathematical skills and reading skills. In the Pythagorean or Euclidean Divisions students in grades 4–9 will participate in increasingly difficult meets. Participation will demonstrate progress in the art of problem-solving and analytical reasoning capabilities. Books covering sample challenging math questions for each grade level and division are available online.

www.continentalmathematicsleague.com

CyberPatriot

is the National Youth Cyber Education Program created by the Air Force Association (AFA) to inspire K-12 students toward careers in cybersecurity or other STEM disciplines critical to our nation's future.

At the center of CyberPatriot is the National Youth Cyber Defense Competition, which puts teams of high school and middle school students in the position of newly hired IT professionals tasked with managing the network of a small company. Through a series of online competition rounds, teams are given a set of virtual operating systems and are tasked with finding and fixing cybersecurity vulnerabilities while maintaining critical services.

Destination ImagiNation® Grades K–12

Each year, five Team Challenges are unveiled to an anxiously awaiting audience of more than 400,000 kids worldwide. The challenges are carefully concocted brainteasers that challenge kids by purposefully stimulating the different senses we use to learn. Teams of up to seven members choose one Team Challenge and spend several months perfecting their solutions. The culmination of the year is a series of Tournaments, where Teams demonstrate their unique solutions to teams of Appraisers. Only AACPS School's teams who have registered their team(s) through the Advanced Co-Curricular Programs Office may request financial assistance for Global competitions.

www.idodi.org

Integrated Arts or Fine Arts Club or STEM Club

Students participating in this enrichment club incorporate a variety of fine arts in their extension activity. They explore topics in a project-based, real-world application environment where elements of the visual arts, music, performing arts and dance may co-exist with current technology. STEM-based clubs must get approval from the STEM Coordinator at your school.

MD (National) History Day

Through the National History Day contest, students in grades 6–12 engage in discovery and interpretation of historical topics related to an annual theme. In the process, they hone their talents and produce creative and scholarly projects in the form of exhibits, documentaries, historical papers, performances, or web site. After a series of district and state contests, the program culminates with a national competition at the University of Maryland in College Park each June.

www.nationalhistoryday.org

MESA—Mathematics, Engineering and Science Achievement

Maryland MESA, sponsored by The Johns Hopkins Applied Research Laboratory, is a structured K–12 pre-college program designed to prepare students for academic and professional careers in mathematics, engineering, science and technology. MESA is a competition-based club which focuses on under-represented groups. Students research, plan, create projects and complete in activities ranging from engineering to computer programming to applied technology.

https://secwww.jhuapl.edu/mesa

Mock Trial

Mock Trial is an activity in which students learn the principles of trial advocacy and then apply those principles as they try a fictitious case. Involvement in Mock Trial fosters increased self-confidence, improved analytical and speaking skills and the ability to work well with others. Students participating in Mock Trial learn how to conduct a trial from start to finish. They are trained in how to plan, draft and present opening statements, direct examinations, cross examinations and closing arguments. Mock Trial also teaches students how to argue objections intelligently, as well as how to handle various courtroom procedures like entering an exhibit into evidence and impeaching a witness. Aside from the technical aspects of trial advocacy, students learn how to think creatively when dealing with matters of trial strategy.

www.collegemocktrial.org

Model United Nations

Model United Nations is a simulation of the UN General Assembly and other multilateral bodies. In Model UN, students step into the shoes of ambassadors from UN member states to debate current issues on the organization's agenda. While playing their roles as ambassadors, student "delegates" make speeches, prepare draft resolutions, negotiate with allies and adversaries, resolve conflicts, and navigate the Model UN conference rules of procedure — all in the interest of mobilizing "international cooperation" to resolve problems that affect countries all over the world. By researching, Model UN participants learn how the international community acts on its concerns about topics including peace and security, human rights, the environment, food and hunger, economic development and globalization. Model UN delegates also look closely at the needs, goals and foreign policies of the countries they will represent at the event. The insights they gain from their exploration of history, geography, culture, economics and science contribute to the authenticity of the simulation when the role playing gets under way.

www.unausa.org

On-line Book Club Hybrid

Held in conjunction with the Language Arts/English Department and the AP/College Prep Office, advanced language arts students are invited to participate in an on-line book club during the school year. They will need internet access in order to join a blackboard discussion group. A final project or special culminating activity is designed for each book at each grade level.

Robotics Club or FIRST LEGO League

The FIRST LEGO League (FLL) is a global program created to introduce students (ages 9–14, up to 16 outside of the U.S. and Canada), to science, technology, and engineering. Students use elements such as sensors, motors, and gears to gain hands-on experience in engineering and computer programming principles as they construct and program their unique robot inventions. The cornerstones of the program are its core values, which emphasize contributions of others, friendly sportsmanship, learning, and community involvement to share their experiences and receive recognition for their efforts.

www.firstlegoleague.org

Science and Engineering Expo

The high school science program provides students with the opportunity to do independent or team research in science. Every student enrolled in a high school science course is expected to participate in science research as part of the curriculum experience. As a showcase of that research, students may compete in school and then district based Science and Engineering Expos. Students are encouraged to think beyond the traditional three-fold display board and consider exhibiting their projects with PowerPoints, videos, posters, and prototypes. Students have the option of entering research as individuals or as a team of two or three students. Research categories are:

- Animal Science
- Behavioral & Social Sciences
- Biochemistry
- Biomedical Engineering
- Chemistry
- Earth and Astronomy
- Energy: Chemical
- Energy: Physical
- Engineering Mechanics
- Environmental Science
- Health Sciences
- Intelligent Machines/Robotics
- Materials Science
- Mathematics
- Medical Sciences
- Microbiology
- Physics
- Plant Sciences
- Sustainable Design
- Systems Software

SEAPerch—Underwater Robotics

This engineering design course focuses on design, development and building of an underwater remotely operated vehicle (ROV). Students will learn the principles of engineering in a fun-filled project-based club environment. Sea Perch Underwater Robotics Competitions will be held locally, regionally, and nationally.

Signature-Based Co-Curricular Clubs

Each of the 12 AACPS high schools has its unique Signature Program. In order to enrich its Signature curriculum area, schools have developed various opportunities for students to enhance the study of their unique programs. For activities specific to your high school, check with the designated signature support person at the high school or contact the AACPS Signature Office.

Career & Technology Programs

The Career and Technology Education Office offers a variety of career technical student organizations. Some involve outside organizations while others are maintained within the confines of the individual schools or Anne Arundel County Public Schools.

SkillsUSA

SkillsUSA is a partnership of students, teachers and industry representatives working together to ensure America has a skilled workforce that helps each student to excel. SkillsUSA is a national organization serving teachers and high school and college students who are preparing for careers in technical, skilled and service occupations. SkillsUSA programs include local, state and national competitions in which students demonstrate occupational and leadership skills. At the annual national-level SkillsUSA Championships, more than 6,000 students compete in 100 occupational and leadership skill areas. SkillsUSA programs also help to establish industry standards for job skill training in the lab and classroom and promote community service. SkillsUSA is recognized by the U.S. Department of Education and is cited as a "successful model of employer-driven youth development training program" by the U.S. Department of Labor.

www.skillsusa.org

FBLA

Future Business Leaders of America-Phi Beta Lambda is a nonprofit 501(c)(3) education association with a quarter million students preparing for careers in business and business-related fields. Business teachers, advisors, and advisory councils (including school officials, businesspeople, and community representatives) guide local chapters. State advisors and committee members coordinate chapter activities for the national organization. FBLA National Awards Program recognizes and rewards excellence in a broad range of business and career-related areas. Through state-based competition at the spring State Leadership Conferences, students compete in events testing their business knowledge and skills. Top state winners then are eligible to compete for honors at the National Leadership Conference each summer.

www.fbla-pbl.org

National ProStart Invitational®

The National ProStart Invitational® is the country's premier secondary school competition focused on restaurant management and culinary arts. Top ProStart® students from across the globe compete in the event. Talented students showcase their passion and skills in front of nearly 1,000 friends and family, educators and industry leaders. Annually, 350 student competitors put their skills to the test in front of industry leaders, NRAEF Trustees, state restaurant associations, and family and friends - all with hopes of earning a coveted scholarship from one of the nation's premier culinary and restaurant management programs.

The National ProStart Invitational is composed of two distinct competitions—management and culinary—that showcase the most important skills needed on either side of the restaurant and foodservice industry:

Management teams develop a proposal for the next promising restaurant concept and present it to a panel of industry judges. Next, their problem-solving skills are tested as they quickly solve challenges faced by managers daily.

The culinary competition highlights each team's creative abilities through the preparation of a three-course meal in 60 minutes, using only two butane burners, and without access to running water or electricity. There is no room for error as they are evaluated on taste, skill, teamwork, safety and sanitation.

www.nraef.org/ProStart/Invitational

Technology Student Association (TSA)

The Technology Student Association (TSA) is a national organization of students engaged in science, technology, engineering and mathematics (STEM). TSA is supported by educators, parents, and business leaders who believe in the need for a technologically literate society. Members learn through exciting competitive events, leadership opportunities and much more. The diversity of activities makes TSA a positive experience for every student. From engineers to business managers, our alumni credit TSA with a positive influence on their lives. All TSA competitions are correlated with national science, technology, engineering and mathematics standards. Expert judging by technology educators and industry representatives inspires the best from participants. Competitions take place at the local, state, regional and national level. A component of leadership is often entailed in events at both levels, with some events being devoted to leadership (such as the Leadership Challenge).

www.tsaweb.org

High School Program Information

	Annapolis High School	Arundel High School	Broadneck High School	Chesapeake High School	Crofton High School	Glen Burnie High School	Meade High School
Website	www.annapolishighschool.org	www.arundelhigh.org	www.broadneck.org	www.chesapeakehighcougars.org	www.aacps.org/croftonhs	www.glenburniehs.org	www.meadeseniorhigh.org
Main Office	410-266-5240	410-674-6500	410-757-1300	410-255-9600	410-451-6142 (Temporary)	410-761-8950	410-674-7710
Counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling
Signature Program	Change Engineering *www.aacps.org/annapolissignature*	Community Development and Global Citizenship *www.aacps.org/arundelsignature*	Environmental Literacy *www.aacps.org/broadnecksignature*	Information Management *www.aacps.org/chesapeakesignature*	TBD *www.aacps.org/croftonsignature*	Public Service *www.aacps.org/glenburniesignature*	Homeland Security *www.aacps.org/meadesignature*
Magnet Program	International Baccalaureate www.aacps.org/ibhigh	N/A	Performing and Visual Arts www.aacps.org/pvahigh	N/A	N/A	BioMedical and Allied Health www.aacps.org/stem	International Baccalaureate www.aacps.org/ibhigh

	North County High School	Northeast High School	Old Mill High School	Severna Park High School	South River High School	Southern High School
Website	www.northcountyhs.org	www.northeasthigh.org	www.oldmillhs.org	www.severnaparkhigh.org	www.southriverhigh.org	www.southernhigh.org/
Main Office	410-222-6970	410-437-6400	410-969-9010	410-544-0900	410-956-5600	410-867-7100
Counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling
Signature Program	International Trade, Transportation and Tourism (IT3) *www.aacps.org/northcountysignature*	Human Performance *www.aacps.org/northeastsignature*	International Economics and Finance *www.aacps.org/oldmillsignature*	Business, Innovation and Leadership *www.aacps.org/severnaparksignature*	Global Communications & Public Affairs *www.aacps.org/southriversignature*	Design: Preservation and Innovation *www.aacps.org/southernsignature*
Magnet Program	Science, Technology, Engineering and Math (STEM) www.aacps.org/stem	N/A	International Baccalaureate www.aacps.org/ibhigh	N/A	Science, Technology, Engineering and Math (STEM) www.aacps.org/stem	N/A

	CAT– North	CAT– South	Mary E. Moss @ J. Albert Adams Academy	Phoenix Academy	Studio 39	Chesapeake Science Point
Website	www.catnorth.org	www.catsouth.org	www.weareadmirals.weebly.com	www.aacps.org/phoenix	www.aacps.org/studio39	mycsp.org
Main Office	410-969-3100	410-956-5900	410-222-1639	410-222-1650	410-280-1501	443-757-5277
Counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling	www.aacps.org/counseling

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Superintendent of Schools

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