2020 - 2021

Program of Studies

“Preparing Students for College and Career”
WASHINGTON COUNTY BOARD OF EDUCATION

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School Year 2020-2021
Washington County Public Schools offers a variety of traditional courses, special programs, and other challenging educational opportunities for every high school student, all of which can be found in the Program of Studies. Beyond the general course descriptions, students will also find graduation requirements, University System of Maryland requirements, and Career Technology Education Completer Program information in the booklet.

Students are encouraged to work with school counselors to assist them in selecting courses based on academic interests and strengths. In the back of the booklet there is a sample secondary education plan, which is a great blueprint for your future coursework. Please review it carefully and meet with your high school counselor to establish or update your plan in accordance with your interests and future plans.

The courses you choose are important, as each one will impact your high school experience, your options for postsecondary education, and your career path. High school is a great time to explore many academic paths, and I encourage you to choose challenging courses that will prepare you for a future career or to continue your education.

WCPS academic staff members are here to support your success. If you, your parent(s) or guardian(s) have questions about the registration process, graduation requirements, or options available, please contact your school counselor.

Best wishes for a very successful year of learning.

Respectfully,

Boyd J. Michael, Ed.D.
Superintendent of Schools
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Graduation Requirements

To earn a high school diploma, students must:
• Earn the minimum number of required credits
• Complete the requirements for a completer program
• Meet the state required assessments
• Complete a minimum of 75 hours of approved student service learning hours

Credit Requirements
The minimum credit requirements for graduation from Washington County Public Schools adhere to, but are not limited by, the standards established by the State of Maryland. Students must earn a minimum of 24 credits as outlined in the table below:

<table>
<thead>
<tr>
<th>Credits</th>
<th>Subject</th>
<th>Requirements</th>
<th>Required Assessments</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>English</td>
<td>English 9-12 (or Honors English 9-12)</td>
<td>English 10 MCAP</td>
</tr>
<tr>
<td>4</td>
<td>Mathematics</td>
<td>1 Algebraic concepts&lt;br&gt;1 Geometric concepts&lt;br&gt;2 additional Mathematics credits&lt;br&gt;BEGINNING WITH THE 9TH GRADE CLASS ENTERING HIGH SCHOOL IN 2014-2015, EACH STUDENT SHALL ENROLL IN A MATHEMATICS COURSE IN EACH YEAR OF HIGH SCHOOL</td>
<td>Algebra I MCAP</td>
</tr>
<tr>
<td>3</td>
<td>Science (Laboratory-based)</td>
<td>1 Biology&lt;br&gt;2 additional Science credits</td>
<td>HS-MISA/Biology MCAP</td>
</tr>
<tr>
<td>3</td>
<td>Social Studies</td>
<td>1 United States Studies II&lt;br&gt;1 Local, State, and National Government&lt;br&gt;1 World History</td>
<td>Government MCAP</td>
</tr>
<tr>
<td>1</td>
<td>Physical Education</td>
<td>Physical Education I</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Health/Life Skills</td>
<td>Health/Life Skills course</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Fine Arts</td>
<td>Any Fine Arts course</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Technology Education</td>
<td>Foundations of Technology or Introduction to Engineering Design</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Electives</td>
<td>Any elective courses</td>
<td></td>
</tr>
</tbody>
</table>

Completer Requirements
Students must also earn credits to satisfy the University of Maryland Completer Program and/or a Career and Technology Education Completer Program. In addition to the requirements listed above, the University of Maryland completer requires 2 World Language credits in the same language, and 4 credits of mathematics. The 4 mathematics credits must include Algebra I, Geometry, and Algebra II. Students who complete Algebra II prior to their final year must complete the four-year mathematics requirement by taking a course or courses that utilize non-trivial algebra such as Pre-Calculus/Trigonometry, Calculus, Statistics, and College Algebra.

Maryland Comprehensive Assessment Program (MCAP)
Students must take a combination of MCAP assessments for English 10, Algebra I, Science and Government. Students must achieve one of the following current criteria to meet that graduation requirement:
1. A passing score on each test.
2. A combined overall score equal to the combined minimum passing score of all required assessments.
3. A specific score on an MSDE approved comparable assessment(s).
4. Successful completion of the MCAP/Bridge Plan requirements.

Student Service Learning Requirements
Students must complete a minimum of 75 hours of Student Service Learning hours. Contact your school’s Counseling Office for more information.
Maryland Comprehensive Assessment Program (MCAP)

Maryland Assessments at the High School Level
The Maryland Integrated Science Assessment (MISA), Government HSA and the Algebra I and English 10 MCAP Assessments are challenging tests that students must pass to earn a Maryland high school diploma. They measure student achievement of the state’s Maryland College and Career-Ready Standards (MCCRS), which are identified by the Maryland State Department of Education as the skills and knowledge necessary to show understanding of each course’s content and which are embedded in the Washington County Public Schools (WCPS) essential curriculum. The courses associated with these assessments are typically taken during freshman and sophomore years. Some students take the MCAP Algebra I in Middle School.

High School Assessments
Students must meet the Maryland High School Assessment requirements:
- Take the MCAP in English 10, Algebra I, Science, and Government
- Pass all tests or
- Earn a combined score equal to the total of the three passing scores or
- Earn a passing score on approved substitute tests or
- Meet the MCAP requirements through successful completion of the Bridge Program
* The Biology HSA was replaced by the Maryland Integrated Science Assessment (MISA) beginning in 2017-18.

MCAP/MISA Graduation Requirements
To receive the Maryland High School Diploma, students will either:

Take and pass MCAP assessments in English 10, Algebra I, Government, and MISA or a state-approved substitute assessment, such as the Advanced Placement Test in the same subjects.

OR

Earn a combined score equal to the passing scores of required assessments. *Passing scores are as follows:

<table>
<thead>
<tr>
<th>MCAP Assessment</th>
<th>Passing Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>400</td>
</tr>
<tr>
<td>Government</td>
<td>394</td>
</tr>
<tr>
<td>MCAP English 10</td>
<td>725**</td>
</tr>
<tr>
<td>MCAP Algebra I</td>
<td>725**</td>
</tr>
<tr>
<td>MISA</td>
<td>TBD</td>
</tr>
</tbody>
</table>

OR

Meet the requirements through the Bridge Plan for Academic Validation.

Note: Students taking the MCAP Algebra I and MCAP English 10 assessments in 2016-2017 school year and beyond are required to pass the assessments.

** The cutoffs for Algebra I/English 10 assessments is 725 for 2016-2017. An increase to 750 as a cutoff is under consideration.
* Not all assessments may be combined.
Assessment Outcomes
The following chart lists possible outcomes after taking the Maryland High School Assessment and MCAP.

<table>
<thead>
<tr>
<th>MCAP Course</th>
<th>+</th>
<th>Associated Assessment</th>
<th>=</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pass</td>
<td>Pass</td>
<td>Pass</td>
<td>On track to receive Maryland High School Diploma</td>
</tr>
<tr>
<td>Pass</td>
<td>FAIL</td>
<td>Retake course</td>
<td></td>
</tr>
<tr>
<td>FAIL</td>
<td>Pass</td>
<td>Retake course</td>
<td></td>
</tr>
<tr>
<td>FAIL</td>
<td>FAIL</td>
<td>Retake course and exam</td>
<td></td>
</tr>
</tbody>
</table>

Bridge Plan for Academic Validation Option
The Maryland State Department of Education recognizes that there will be some students who will struggle on the MCAPs, even after they take the tests several times and take advantage of academic remediation. The Bridge Plan for Academic Validation is an alternative means to meeting the graduation requirements.

The Bridge Plan is for students who have passed the MCAP-related course, but have not yet passed the associated assessment after two or more attempts.

Students utilizing the Bridge Plan to meet the assessment graduation requirements complete projects in the content areas to demonstrate their knowledge and skills of the course. The projects are evaluated by a panel of educators to determine proficiency in the content area. The Bridge Plan will not be required for students participating in the MISA during 2017-18 and 2018-19.

Multi-State Alternate Assessment and Alternate Maryland Integrated Science Assessment (Alt-MISA)

The MSAA for English/language arts and mathematics are administered in grades 3 through 8 and 11. The Alt-MISA is administered in grades 5, 8, and 11. Students who participate in the alternate assessments have been determined eligible for participation by their IEP teams and must participate in all three content areas.

College and Career Ready Determination

The Maryland Legislature passed The College and Career Readiness and College Completion Act of 2013 (CCRCCA) in the spring of 2013. This legislation required specific action in regard to developing and implementing transition courses for high school students. Specifically, beginning in 2015-2016, all students shall be assessed no later than 11th grade to determine whether the student is ready for college-level credit-bearing course work in English language arts/literacy, and mathematics. By 2016-2017 MSDE, in collaboration with local school systems and public community colleges, shall develop and implement transition courses or other instructional opportunities to be delivered in the 12th grade to students who have not achieved college and career readiness by the end of 11th grade.

In Maryland, college and career readiness in terms of academic preparation was defined in the ESEA Flexibility Request, Principle I: College- and Career-Ready Expectations for All Students, and by the College Success Task Force as: The student is prepared to succeed in credit-bearing postsecondary introductory general education courses or in an industry certification program without needing remediation.
Grading

The Board of Education of Washington County recognizes its responsibility for assuring the practice of regularly reporting the progress of pupils as they proceed through their formal educational experiences. High schools will employ the practice of reporting pupil achievement as follows:

- **90-100** indicates performance that consistently exceeds Washington County standards and requirements;
- **80-89** indicates performance that consistently and occasionally exceeds Washington County standards and requirements;
- **70-79** indicates performance that meets Washington County standards and requirements;
- **60-69** indicates performance that minimally meets Washington County standards and requirements;
- **0-59** indicates failure to meet Washington County standards and requirements.

Additionally, student effort will be assessed and reported each marking period as follows:

- **“+”** indicates demonstration of outstanding effort;
- **“*”** indicates demonstration of average effort;
- **“-”** indicates the need to exert more effort;
- **“0”** indicates the failure to exert any effort.

Reporting Student Progress

Report cards are available in digital format to parents at the conclusion of each marking period. The interim/progress report reflects the progress of the student through the date of issuance and does not represent the marking period or final grade.

Promotion

Students in grades 9 through 12 earn credits for graduation through completion of courses. Students must have a minimum of **four** credits for promotion to grade 10, **ten** credits for promotion to grade 11, and **sixteen** credits for promotion to grade 12.

Weighted Quality Point Values

Weighted Quality Point Values are awarded to students who accept the challenges of more rigorous courses of study, while ensuring maintenance of a high grade point average (GPA). Rigorous courses are identified as receiving “accelerated credit,” “AP credit,” or “IB credit” in its course description. AP = Advanced Placement  IB = International Baccalaureate

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Standard Quality Point Value</th>
<th>Accelerated Quality Point Value</th>
<th>AP or IB Quality Point Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>90-100</td>
<td>4.0</td>
<td>4.72</td>
<td>5.0</td>
</tr>
<tr>
<td>80-89</td>
<td>3.0</td>
<td>3.54</td>
<td>4.0</td>
</tr>
<tr>
<td>70-79</td>
<td>2.0</td>
<td>2.36</td>
<td>3.0</td>
</tr>
<tr>
<td>60-69</td>
<td>1.0</td>
<td>1.18</td>
<td>2.0</td>
</tr>
<tr>
<td>0-59</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Honor Rolls and Graduation Honors

A student must have 80% and above in all subjects to be on the Honor Roll. To be on the Distinguished Honor Roll, a student must have all 90’s and above in all subjects. Academic honors designation at commencement will be awarded as follows:

- **Highest Honors:** Minimum 4.0 GPA, at least 14 credits in courses taken in high school (Grades 9-12) identified as Honors and/or AP/IB, and the completion of University of Maryland requirements
- **High Honors:** Minimum 3.75 GPA, at least 12 credits in courses taken in high school (Grades 9-12) identified as Honors and/or AP/IB
- **Honors:** Minimum 3.5 GPA

Maryland Scholars

The Maryland Scholars program is designed to encourage students to complete a rigorous course of study in high school to ensure that they are well prepared to succeed in college, the workplace, and in life. Students who participate in this course of study will contribute to a more highly skilled and productive workforce and a stronger, more prosperous economy. Maryland Scholars Requirements:

- **4 credits of English**
- **4 credits of Math (Algebra I, Geometry, Algebra II)**
- **3 credits of Science (Biology, Chemistry, and one additional lab science-Physics preferred)**
- **2 credits of the same World Language**
- **Minimum 3.0 G.P.A. or higher**
Appropriate counseling will be provided to students regarding course selection. Every effort is made to build a master schedule to meet the needs of all students. Last minute changes in student schedules or the master schedule can negatively impact a significant number of students. After final student schedules have been created, changes will be considered only on rare occasions. Student requests for course changes will not be accepted after the fifth class period of the course. There is no guarantee that the student's request can be honored. Any student-requested course change may be recorded as a "W" on the student's transcript. In extenuating circumstances, the principal has the final authority on class changes and grading issues. Final grades will be based on the average of all marking period grade reports per credit. Beginning and end of marking periods will be recommended by the Calendar Committee and approved by the Board of Education.

A student not completing a course will receive a failing grade and earn no credit.

**Credits from Middle School**

Credit will be awarded for courses taken prior to enrollment in high school in each academic curricular area (e.g., Algebra I, and world languages) under the following circumstances:

- The course is identified as an approved course for high school credit;
- The middle school course follows the outcomes and rigor of the approved high school course;
- The student passed the approved middle school course and any associated state assessments.

Credit awarded in the middle school will not be calculated in a student's high school grade point average (GPA). Only grades earned for courses taken in high school will be used in the calculation of a student's high school GPA.

Credit will not be awarded in the middle school when it is determined that the course should be repeated before continuing with the sequence of courses in any given content area. Transfer students will have transcripts reviewed on an individual basis to determine if MSDE guidelines permit awarding of credit.

**Credit by Exam**

Students who have met all other graduation requirements may earn credit through examination for English 12 and Algebra II. Students who wish to be considered for this option must contact their school counselor.

- **English 12** - Students who desire to obtain Maryland high school graduation credit by examination for English 12 must take two tests: SAT and SAT Subject Test in Literature. To obtain the credit, the student must achieve a minimum combined score of 1080 on the SAT Subject Test in Literature and the writing portion of the SAT with a minimum of 520 on the writing portion of the SAT.

- **Algebra II** - Students who wish to receive Maryland high school graduation credit by examination for Algebra II must achieve a minimum of 1150 on the American Diploma Project Algebra II exam developed by Maryland and 14 other states under the leadership of Achieve, Inc. After conducting a standards process, Achieve determined that a score of 1150 indicates a student is prepared for college.

**Antietam Academy Twilight and Evening High Program**

Antietam Academy Twilight and Evening High Program (AATEHP) offers Washington County students the opportunity to take original and repeat high school credit courses during extended hours. AATEHP follows the standards established for all WCPS high schools. Students have the opportunity to earn between 1 to 4 credits each semester at AATEHP. The program is open to WCPS students presently enrolled in a regular day school program. AATEHP classes are offered at Antietam Academy and Washington County Technical High School Monday through Thursday. Enrollment at AATEHP after the scheduled registration times requires the review and approval of the AATEHP administrator prior to enrollment.

**Blended Learning**

WCPS offers students multiple ways to earn credits towards a Maryland high school diploma including blended learning opportunities. In blended learning courses, 80% or less of the instruction is conducted online. High schools may offer Advanced Placement (AP), honors, and grade-level blended learning courses during the school day. Twilight and Evening High Programs at Antietam Academy offer WCPS students the opportunity to earn original high school credit through blended learning courses and to repeat courses after the school day. For further information, please contact your school counselor to discuss potential blended learning opportunities.
WCPS Academic Eligibility For Participation in High School Extracurricular Activities, Including Athletics

Note: The following information is a general summary of the WCPS academic eligibility requirements. For some specific information please refer to the Board of Education Policy IGDL, Student Activities Eligibility (High Schools), and the academic eligibility section of the Washington County Public Secondary Schools Athletic Association (WCPSSAA) Handbook (revised annually).

1. Students enrolled in a WCPS high school or the STEMM Middle College program at HCC who have a full day, and who fail two (2) or more classes in a marking period are ineligible to participate in extracurricular activities.
2. Students enrolled in a WCPS high school who have less than a full schedule, meaning they are not scheduled in a WCPS course each instructional period of the day must pass all courses to be eligible.
3. Grades earned at Evening High School do not affect academic eligibility.

For interpretation and/or additional information please check with the athletic director in each high school.

National Collegiate Athletic Association (NCAA) Division I - Eligibility Standards

For athletic scholarships at Division I colleges, a procedure must be followed. All student-athletes must register with the NCAA Eligibility Center. There is a charge of $90.00 for this. Students must meet the NCAA’s academic standards to practice, compete, and receive an athletic scholarship as a freshman. The standards are different for different divisions.

Students planning to enter college who wish to be eligible to participate in athletics at a Division I college or university will need to show the following 16 core courses on their high school transcripts:

- 4 credits in English
- 3 credits of mathematics (Algebra I or higher)
- 2 credits of natural/physical science (one must be a lab science)
- 1 additional credit of English, math, or natural/physical science
- 2 credits of social studies
- 4 additional core courses from those listed above or from foreign language
- Ten (10) core courses completed before the seventh semester; seven (7) of the 10 must be in English, math or natural/physical science.
- Theses courses/grades are “locked in” at the start of the seventh semester (cannot be repeated for grade-point average (GPA) improvement to meet initial-eligibility requirements for competition).
- Students who do not meet core-course progression requirements may still be eligible to receive athletics aid and practice in the initial year of enrollment by meeting academic redshirt requirements.

In addition, students must meet the NCAA Core GPA/Test Score Sliding Scale. This is a scale of core GPA’s (grade-point averages) and SAT or ACT scores. It allows for a student to compensate for a lower SAT or ACT score with a higher GPA, or compensate for a lower GPA with a high SAT or ACT score. School counselors can advise students as to what courses count as core courses. For more information about NCAA initial-eligibility requirements, please refer to the NCAA web site or call 1.877.262.1492 (weekdays 8:30 a.m. – 6:00 p.m.). The website address is www.eligibilitycenter.org or www.2point3.org.
WCPS Advanced Programs is the umbrella term for programs that serve students identified as having gifted and talented education (GATE) needs, highly able learners, and emergent scholars. Specific Advanced Programs include WCPS High School Magnet Programs, WCPS Honors and Advanced Placement courses, and WCPS Emergent Scholars Programs. Identified GATE students and other advanced learners have additional program options through Career Technology Education (CTE) Academies and Completers; Early College options; and Specialized Programs, such as Barbara Ingram School for the Arts and Washington County Technical High School.

Advanced Learner Definitions

**Gifted and Talented**
A gifted and talented learner is defined by Maryland’s Annotated Code § 8-201 as an elementary or secondary student who is identified by professionally-qualified individuals as: (1) Having outstanding talent and performing, or showing the potential for performing, at remarkably high levels of accomplishment when compared with other students of a similar age, experience, or environment; (2) Exhibiting high performance capability in intellectual, creative, or artistic areas; (3) Possessing an unusual leadership capacity; or (4) Excelling in specific academic fields.

Students are formally identified as “gifted and talented” (GATE)* based on multiple criteria of ability/aptitude, performance, and potential; however, these students typically have ability stanine scores of 8 or 9 if they are native speakers of English. English Learners (EL) with a nonverbal stanine score of 7, 8, or 9 are also identified as GATE students. Students who are twice exceptional (2e) or “gifted and distractible” (have Attention Deficit/Hyperactivity Disorder, anxiety, autism, depression, dysgraphia, dyslexia, etc.) are also identified as WCPS’s GATE students; these students may have large discrepancies between areas of the Cognitive Abilities Test (CogAT) or between the CogAT and performance.

*It is critical to note that the gifted and talented identification process is designed to dictate specialized educational needs for the student, rather than label or dictate privilege.

**Highly Able**
A highly-able learner is one who demonstrates above average ability and/or performs at advanced levels in one or more content areas.

**Emergent Scholar**
WCPS Emergent Scholars have the desire and determination to take more rigorous courses and may perform at an average level. Emergent Scholar programs are designed for highly motivated students who are in the academic middle and aspire to attend a 4-year college or university and require the supports to help them achieve this goal. WCPS Emergent Scholars are typically those who will be the first in their family to attend and/or complete college.

WCPS Emergent Scholars may also participate in the Promise Pathway Program at their home schools. The Promise Pathway Program is a partnership between Hagerstown Community College and WCPS and places eligible students in the pipeline to receive additional academic guidance, mentoring, and access to financial assistance for college coursework.

Advanced and GATE Learner Courses/Program Guide

**Advanced Placement (AP) and Honors Courses**
- Available at every school in WCPS
- Listed and described within the Course Description Section for each content area

**Barbara Ingram School for the Arts**
- BISFA is a dedicated arts high school for students in Grades 9-12
- Students must successfully audition or produce a portfolio as part of the application process to attend this program for intellectually and/or creatively gifted students.
Career Technology Education (CTE) Academies and Completers

- Offerings vary by school
- See the following sections:
  - Academy, Advanced, Magnet, and Specialized Programs
  - Academies and Magnet Programs
  - Career and Technology Education

Early College Options

- STEMM Middle College Program
  - See the following sections:
    - Academy, Advanced, Magnet, and Specialized Programs
    - Early College Programs

Emergent Scholars Programs

- AVID
  - Schools: North Hagerstown High School, Smithsburg High School, South Hagerstown High School
  - See the following sections:
    - Academy, Advanced, Magnet, and Specialized Programs
    - Additional Educational Opportunities—lists courses

HCC Promise Pathways

- Schools: All
  - See the following sections:
    - Emergent Scholars Programs

- HCC TRiO Upward Bound
  - Schools: Hancock High School, North Hagerstown High School, South Hagerstown High School, Williamsport High School
  - See the following section
    - Early College Programs

High School Magnet Programs

- Academic Leadership Academy (ALA) at South Hagerstown High School
- AP Capstone™ at Clear Spring High School
- International Baccalaureate Diploma Programme at North Hagerstown High School
- International Baccalaureate Career-related Programme at North Hagerstown High School
- For the programs listed above see the following sections:
  - Academy, Advanced, Magnet, and Specialized Programs
  - Academies and Magnet Programs
  - Course Description sections for each content area

Washington County Technical High School

- “Tech High” is a comprehensive academic and career technology high school for students in Grades 11 and 12.
- During Grade 10, students must apply and be accepted to attend.
- See the following sections:
  - Academy, Advanced, Magnet, and Specialized Programs
  - Academies and Magnet Programs
  - Career and Technology Education
WASHINGTON COUNTY PUBLIC SCHOOLS & HAGERSTOWN COMMUNITY COLLEGE

EARLY COLLEGE PROGRAMS

Washington County Public Schools (WCPS) and Hagerstown Community College (HCC) work in partnership to provide high achieving WCPS students opportunities to earn college credit while in high school, including the Science, Technology, Engineering, Math, and Medical (STEMM) Middle College Program, Upward Bound Program, Concurrent Enrollment, and Dual Credit.

STEMM Middle College Program*

WCPS students who are accepted as students to HCC following the successful completion of specific 9th and 10th grade courses may qualify to attend the STEMM Middle College program at HCC. Students in the program will take dual credit courses that apply toward a high school diploma and a college diploma or certificate.

* The STEMM Middle College Program requirements and the criteria for a high school may apply to some HCC programs outside of STEMM.

1. To participate in the STEMM Middle College program at HCC, WCPS students must attend a WCPS high school, pass the 14 courses listed below, and have a Grade Point Average (GPA) of 3.75 or higher by the end of 10th grade:
   a. Honors English 9 and Honors English 10
   b. Honors CC Geometry and Honors CC Algebra II
      (Note: students can no longer take Geometry in middle school)
   c. Honors Biology and Honors Chemistry
   d. Honors U.S. Studies II and Honors Government
   e. Honors World Language Level 1 and Honors World Language Level 2
      (Note: students can earn credit for World Language courses taken during middle school)
   f. Physical Education and Health/Life Skills
   g. A fine art
   h. Foundations of Technology

2. While attending HCC full time during the 11th and 12th grade, every WCPS student in the STEMM Middle College Program must pass the following courses to earn both high school and college credit and qualify for a high school diploma:
   a. MAT-101 College Algebra in the 11th grade and another college-level math in the 12th grade
   b. Eng-101 English Composition in the 11th grade and Eng-102 English Composition and Literature or English-112 Technical Writing during the 12th grade
   c. HIS-102 World History in the 11th grade
   d. A college level, lab-based science during the 11th grade
   e. A minimum of four (4) additional college-level courses

The final grades earned in the core courses at H.C.C. (a,b,c, and d above) will be calculated in the student’s high school GPA, using the Accelerated Quality Point Values. The additional credits earned at HCC (e) will be calculated in the student’s high school GPA, using the Standard Quality Point Values. Students will receive 1 high school credit per dual credit course, and HCC will determine the number of college credits the student will earn for each course. All courses taken at HCC as part of the STEMM Middle College Program will be recorded on the student’s high school transcript.

The HCC programs available to WCPS students through the STEMM Middle College Program are listed below.

- A.S. Arts and Sciences—Option in Biology
- A.S. Arts and Sciences—Option in Chemistry
- A.S. Arts and Sciences—Option in Mathematics (Calculus)
- A.S. Arts and Sciences—Option in Physics
- A.S. Arts and Sciences—Option in Pre-Med/Biology
- A.S. Computer Science
- A.S. Cybersecurity
- A.S. Engineering
- A.A.S. Alternative Energy Technology
- A.A.S. Biotechnology
- A.A.S. Digital Instrumentation and Process Control
- A.A.S. Mechanical Engineering Technology
- A.A.S. Simulation and Digital Entertainment—Track A: Programming and Development
- Pre-Pharmacy
Upward Bound Program
WCPS students who are accepted into the Upward Bound Program following the successful completion of the eighth grade are eligible to earn either high school elective credit or college credit during the summer at HCC. The high school credits earned in courses instructed by WCPS teachers will be graded pass/fail and upon successful completion, the credits will count toward graduation requirements, but will not be calculated in the student's GPA. The credits earned in the college courses do not apply toward high school graduation requirements and will not be calculated in the student's high school GPA.

Concurrent Enrollment
WCPS students who are accepted as students to HCC following the successful completion of the 10th grade may attend their home school part of the day to complete their high school graduation requirements and electives and attend HCC part of the day to take college courses. The credits earned in the college courses do not apply toward high school graduation requirements and will not be calculated in the student's high school GPA.

Dual Credit
Qualifying students can take designated dual credit courses that are taught in high school. Upon successful completion of a dual credit course, students will be awarded both high school and college credit and the grade will be calculated in the high school GPA, using the Standard Quality Point Values.

Recording and Awarding High School Credits
The practice of recording the HCC courses on a high school transcript and calculating the grades earned in those course into a WCPS student's high school GPA applies only to the credits earned in the STEMM Middle College and Dual Credit courses; the college credits earned through Concurrent Enrollment do not receive high school credit and are not calculated into the high school GPA.

Tuition Rates to Hagerstown Community College
WCPS students attending HCC will pay a fee equivalent to 90% of a special discounted tuition rate that is 25% less than the regular tuition rate for the first four courses. After four courses, students will pay a fee equivalent to 90% of the regular tuition rate. Some students may qualify for additional tuition assistance.
Articulation Program with Hagerstown Community College

This agreement between Washington County Public Schools and Hagerstown Community College has been entered into for the purpose of assisting students in the transition from high school to college. The agreement specifies the conditions under which Hagerstown Community College awards credit to students for work successfully completed while they attend Washington County public high schools. With this latest articulation agreement, Washington County Public Schools and Hagerstown Community College reaffirm their partnership and their commitment to student success. While Hagerstown Community College maintains transfer agreements with many baccalaureate institutions, student should be aware that some institutions and programs might not accept college credits granted for high school work. Students should consult with their Hagerstown Community College advisor prior to transfer.

Articulation Procedures (WCPS) and (HCC)

The purpose of this document is to outline responsibilities for ensuring that students earn college credit for coursework that meets requirements specified in the HCC/WCPS Articulation Agreement. Responsibilities are shared by WCPS, HCC, and students.

Washington County Public Schools

• Communicate details of articulation agreements, including time limits for earning articulated credit, to high school principals, teaching staff, counseling personnel, and students.
• Program or course instructor and school counselor complete and sign Articulated Course Certification form.
• A copy of the Certification form is maintained in student’s permanent record.

Student

• Apply for admission to HCC and provide a copy of the high school transcript.
• Submit a copy of the Articulated Course Certification form to Enrollment Services staff upon admission to the college or during the first semester of enrollment at HCC. Application for articulated credit must be submitted within twelve months of high school graduation.
• Discuss the articulation process with HCC advisor.
• Be enrolled as a student in good standing at HCC and successfully complete requirements described in the Articulation Agreement.

Hagerstown Community College

• The Director of Instructional Support Services maintains articulation agreements and coordinates updates to the agreements with WCPS.
• Office of Academic Advising and Registration staff, advisors, division directors, and faculty members maintain current knowledge of relevant articulation agreements and procedures.
• The Office of Financial Aid and Records maintains copies of completed Articulated Course Certification forms in student academic folders.
• Upon completion by the student of requirements specified in the articulation agreement, the Office of Financial Aid and Records awards the appropriate number of credits.
• The Registrar posts the credits awarded on the student’s transcript and sends a copy of the transcript to the student.
• At the close of each semester, the Registrar sends a report listing the numbers of students receiving articulated credit and their programs of study to the Vice President of Academic Affairs and Student Services.

Articulation agreements have been developed for the following courses or programs of study:

<table>
<thead>
<tr>
<th>Academy of Finance</th>
<th>Health Occupations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy of Teaching Professions</td>
<td>Honors Computer Programming</td>
</tr>
<tr>
<td>Advanced C++</td>
<td>Honors Pre-Calculus</td>
</tr>
<tr>
<td>Software Specialist</td>
<td>Honors Trigonometry</td>
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<tr>
<td>Advanced Placement Calculus</td>
<td>AP/IB Computer Science</td>
</tr>
<tr>
<td>Advanced Placement Computer Science (JAVA)</td>
<td>Interactive Media Production</td>
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<tr>
<td>Advanced Placement Statistics</td>
<td>Introduction to Sustainable Agriculture</td>
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<tr>
<td>Art History</td>
<td>Robotics</td>
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<tr>
<td>Child Care Guidance and Management</td>
<td>Marketing</td>
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<tr>
<td>Computer Game Development and Animation</td>
<td>Multimedia and Graphic Design</td>
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<tr>
<td>Cisco Academy</td>
<td>PLTW Biomedical Sciences</td>
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<tr>
<td>Homeland Security – Law Enforcement</td>
<td>PLTW Pre-engineering</td>
</tr>
<tr>
<td>Design and Managing Websites</td>
<td>Word Processing</td>
</tr>
<tr>
<td>English</td>
<td>World Languages</td>
</tr>
<tr>
<td>Finance and Accounting</td>
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</tbody>
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Copies of the updated articulation agreement are available in school counseling centers and from the Supervisor of Career Technology Education. Some programs have articulation agreements with other institutions of higher education; interested students should check with their teacher.
AVID (Advancement Via Individual Determination) at
• North Hagerstown High School
• Smithsburg High School
• South Hagerstown High School

AVID is an in-school academic support and college readiness system that prepares students for college eligibility and success. AVID focuses on students in the academic middle who have the desire to attend college and the willingness to work hard. Students who are capable of completing rigorous curriculum, but maybe falling short of their potential, are selected to participate in AVID after an application and interview process. AVID eases students into WCPS Honors Courses that align to their area(s) of strength to prepare them for Advanced Placement Courses. Formally-trained tutors facilitate AVID students’ access to rigorous curriculum through twice-weekly tutoring sessions. The involvement of parents is a priority in AVID. Parents sign a contract agreeing to support all AVID academic requirements; encourage and support their children’s academic success; and attend AVID parent meetings.

Emergent Scholars who may be a fit for AVID are students on the cusp of achieving above-grade level performance; they may also have been recommended by their teacher of counselor. Grade 8, 9, and 10 students interested in AVID can request an application from the participating high school in their attendance zone. Students may also be invited to apply to AVID based on their performance. Qualified applicants will be interviewed by one or more AVID Site Team members.

Hagerstown Community College’s Promise Pathway Program

Designed to “address the financial barriers for Washington County Students who have the academic readiness and the commitment to succeed in college” (www.hagerstowncc.edu). The Promise Pathway Program is available at all schools and places eligible students – known as “Prospects” – in the pipeline to receive academic guidance, mentoring, and access to financial assistance for college coursework. Prospects remain in the pipeline until Grade 10 or later, when they can formally be awarded admission to an HCC Program of Study. The majority of Promise Pathway Program services begin in Grade 10. Prospects must maintain a minimum 2.5 grade point average, have documented financial need, and commit to complete the Free Application for Federal Student Aid (FAFSA). All Prospects are required to participate in two bridge program meetings during the school year.

Students living in Washington County can apply to the program, with the support of their parents and school officials, as early as sixth grade, as program “prospects.” Student prospects will need to do well in school to be admitted in the program. They will not receive the financial support promise until 10th grade or later, when the student is formally awarded early admission status into an HCC program of study.

The primary criteria for admission into and retention within the program are maintenance of a minimum 2.5 GPA in high school and at HCC, documented family financial need, and a commitment to complete the FAFSA application. All applicants must apply for and use all available federal and state aid, as well as external scholarships they have, before the “promise dollars” are awarded.

HCC TRiO Upward Bound at
• Hancock Middle Senior High School
• North Hagerstown High School
• South Hagerstown High School
• Williamsport High School

The HCC TRiO: Upward Board Program is a year-round college-preparatory program made possible through a U.S. Department of Education grant.

HCC Upward Bound is a program designed to provide students with the skills and motivation necessary to succeed in high school and college.

Upward Bound’s mission is to assist low-income, and/or first-generation college bound high school students in the successful completion of secondary education by preparing them academically as well as socially for enrollment and completion of higher education.
This is accomplished by providing participants with rigorous and nurturing academic courses; tutoring services; college-preparatory workshops; academic, college, and financial aid advising; career exploration; leadership opportunities; and cultural enrichment.

Upward Bound offers services to students through after-school programs and Saturday Academies during the school year as well as a six-week Summer Enrichment or Summer Bridge Programs.

These Emergent Scholars are students who have a least a 2.5 GPA in college pre/core classes and are committed to attending post-secondary education. Incoming or current freshmen or sophomores enrolled at Hancock Middle Senior High School, North Hagerstown High School, South Hagerstown High School, or Williamsport High School who are potential first generation college student or meet federal eligibility requires may apply.
In today’s economy, all high school graduates need some post-secondary education and/or training if they are to have or maintain their career options and opportunities. This post-secondary education can come in many forms – a four-year university, a community college, a technical or vocational school, or a formal apprenticeship – all of which can prepare students for a career.

**What does it mean to be college and career ready?**

Students who are career-ready have the knowledge and skills needed to qualify for and be successful in the education or training required for their chosen career.

Students who are college-ready possess the knowledge and skills needed to enter and succeed in entry-level, credit bearing courses at two- or four-year colleges without the need for remedial coursework.

College and career readiness skills include reading, writing, mathematics, communications, teamwork, critical thinking, problem-solving, and technology. Colleges expect applicants to be enrolled in rigorous course work during all 4 years of high school. Completion of Honors, Advanced Placement, and specialized course work improves the opportunity for success in college and readiness for the work world.

WCPS offers a number of advanced and specialized programs to match the aptitudes and interests of its students. Families are encouraged to attend open house events and consult with program contacts to gather additional information about the benefits of each program.

**Advanced Placement (offered at all high schools)**

Advanced Placement (AP) courses offer highly motivated students the opportunity to take college-level classes in high school. AP programs are available at every high school and are designed to challenge students in various content areas and prepare them to take the Advanced Placement (AP) Exam for a given course of enrollment. A qualifying score on an AP exam can mean that a student is eligible to receive college credit at a college/university and it can often augment a student’s application to that school. Students who take an AP course are expected to take the Advanced Placement exam offered for that course in early May. **Washington County Public Schools pays half the cost of the AP exam.** Other financial support may be available. For more specific information on Advanced Placement courses and examinations, consult a school counselor or the Washington County Public Schools’ Advanced Programs office. Information is also available at AP Central of the College Board website: [www.collegeboard.com](http://www.collegeboard.com).

**AP Capstone™ (offered at Clear Spring High School)**

AP Capstone™ is an innovative diploma program that allows students to develop the skills that matter most for college success: research, collaboration, and communication. The program consists of two courses taken in sequence: AP® Seminar and AP Research. Developed in direct response to feedback from higher education faculty and college admission officers, AP Capstone complements the in-depth, subject-specific study of other Advanced Placement® courses and exams. Students who earn scores of 3 or higher on AP Seminar and AP Research assessments and on four additional AP Exams of their choosing will earn the AP Capstone Diploma™. This signifies their outstanding academic achievement and attainment of college-level academic and research skills. Students who earn scores of 3 or higher on both AP Seminar and AP Research assessments only (but not on four additional AP Exams) will earn the AP Seminar and Research Certificate™.

**AVID (Advancement Via Individual Determination)**

An advanced program for emergent scholars, AVID is a four-year, in-school academic support and college readiness system that prepares students for college eligibility and success. AVID targets students in the academic middle who have the desire to attend college and the willingness to work hard. Students who are capable of completing rigorous curriculum but are falling short of their potential are selected to participate in AVID after an application and interview process. AVID puts students on the college track with Honors and Advanced Placement courses as appropriate to students’ strengths. Formally trained tutors facilitate AVID students’ access to rigorous curriculum through twice-weekly tutoring sessions. The involvement of parents is a priority in AVID. Parents sign a contract agreeing to support all AVID academic requirements; encourage and support their children’s academic success; and attend AVID parent meetings. The AVID program is offered at North Hagerstown, Smithsburg, and South Hagerstown.

**Early College Program**

The Early College Program is a partnership between Washington County Public Schools and Hagerstown Community College (HCC) that provides eligible students with the opportunity to earn college credits while still in high school. Early College Programs include STEMM Middle College, Upward Bound, Concurrent Enrollment, and Dual Credit.
International Baccalaureate Diploma Programme (Offered at North Hagerstown High School)
The International Baccalaureate Organization (IBO) authorizes North Hagerstown High School to offer highly motivated Washington County students International Baccalaureate Diploma Programme (IBDP) courses. The IBO recognizes North Hagerstown High School as an IB World School. IBO requires IB World Schools to provide students with a well-rounded preparation for post-secondary education. IB requires students to complete college level courses in six academic groups while also completing a Theory of Knowledge course, writing an Extended Essay and participating in Creative (the arts), Action (physical activity) and Service (community service) activities. These requirements ensure students are prepared for a post-secondary education by providing students with a freshman college experience during the students’ junior and senior years of high school. Students receive recognition from IBO for IB courses by completing the assessment process of an internal assessment and two or three external assessments. Washington County Public School pays the IB registration fee and half the cost of each IB exam. Students successfully completing all requirements may earn an IB diploma. For more information regarding the International Baccalaureate Diploma Programme, please contact the IB coordinator at North Hagerstown High School or the Washington County Public Schools’ Advanced Programs office. Information is also available on the International Baccalaureate Organization website at www.ibo.org.

International Baccalaureate Career-related Programme (IBCP) (Offered at North Hagerstown High School)
The International Baccalaureate Organization (IBO) recognizes North Hagerstown High School as an International Baccalaureate Career-related Programme. To prepare students for the 21st century, the International Baccalaureate has developed the IB Career-related Programme, an academic qualification designed to support schools and colleges that offer career-related courses to their students. The newest of the four IB programs, the IBCP is offered in 228 schools worldwide. There are approximately 132 schools in the United States offering the IBCP. The IBCP provides the basis for effective collaboration in the workplace, additional training in a career-related field, as well as improved mobility and flexibility in one’s employment. The IBCP offers a learning and assessment program that promotes access to an IB education, school retention, responsibility for one’s own actions, skills development, reflection of life experiences and self-esteem through meaningful achievements. IBCP students complete a sequence of an accredited career-related course of study. IBCP students also complete at least two IBDP courses, either at the standard (SL) or higher level (HL), in the subject groups recommended by NHHS. These courses will be relevant to the student’s career-related studies, and the IBCP student must take the corresponding exams and score at least a 3. The IBCP takes place during Grades 11 and 12.

The IBCP Core requires the following:
1. Personal and Professional Skills (PPS) is a required interdisciplinary course intended to stimulate critical reflection. With an emphasis placed primarily within the context of work, PPS promotes the development of transferable skills such as communication; critical thinking; intercultural understanding; and personal development to improve skill sets to successfully operate in the 21st century. The Personal and Professional Skills course seeks to develop a coherent approach to learning that bridges the gap between practical and knowledge skills while promoting self-awareness and cross-cultural connections.
2. Service Learning (SL) is a fundamental part of the IBCP curriculum. Participation in service learning activities emphasizes service learning, service as a vehicle for learning that has academic value, reflects upon the career-related studies and relates to the Reflective Project. This involvement allows IBCP students to share their energies and talents while developing awareness, concern, and the ability to work cooperatively with others. The goal of educating the whole person and fostering a more compassionate citizenry comes alive in an immediate way when students reach beyond themselves.
3. IBCP candidates are required to undertake original research and produce a reflective work known as the Reflective Project (RP). This project offers the opportunity to investigate an ethical dilemma associated with the student’s career-related study and acquaints the student with the kind of independent research skills expected beyond high school.
4. The Language Development (LD) aspect allows students to expand their awareness of cultural diversity through another language. This component encourages the importance of developing knowledge and skills in a foreign language relevant to their background, context, and career-related study. With the help of their Language Development mentor, students will create an original language development portfolio in a format determined by NHHS.

Online Learning Opportunities
High schools may utilize online learning to expand the range of courses and educational opportunities for students. Several online Advanced Placement courses are offered when scheduling conflicts and limited teacher availability occur. Students are expected to be independent and highly motivated participants, communicating with the teacher and fellow students via email and other online learning methods. Eligible students are not guaranteed enrollment in any WCPS online course. Enrollment is based on course and teacher availability AND approval by appropriate WCPS personnel. Credit for online courses will only be granted for Maryland State Department of Education approved Maryland Virtual Learning Opportunities courses. Your school counselor will be able to discuss any potential enrollment requirements and consideration for these courses.

STEMM Middle College Program
WCPS students who are accepted to HCC following the successful completion of specific 9th and 10th grade courses may qualify to attend the STEMM (Science, Technology, Engineering, Math and Medical) Technical Middle College and earn postsecondary credits and credentials. This new program allows county high school students to finish their last two years of high school on the HCC campus, taking specific dual credit courses that apply toward a high school diploma and a college diploma or certificate. STEMM Middle College students have the opportunity to earn at least 30 college credits. For more information visit http://hagerstowncc.edu/admissions/middle-college.
Upward Bound (offered at Hancock Middle-Senior High School, North Hagerstown High, South Hagerstown High, and Williamsport High Schools)

A partnership between WCPS and Hagerstown Community College, the grant-funded TRiO Upward Bound program provided year-round college-prep. Upward Bound is designed to assist first-generation college bound high school students in the successful completion of secondary education by preparing them academically and socially for enrollment and completion of higher education. Participants are provided with rigorous and nurturing academic courses; tutoring services; college-preparatory workshops; academic, college, and financial aid advising; career exploration; leadership opportunities; and cultural enrichment. Upward Bound offers services to students through after-school programs and Saturday Academies during the school year, as well as a multi-week Summer Enrichment or Summer Bridge Programs. For more information visit http://www.hagerstowncc.edu/upwardbound.

Specialized Programs

Barbara Ingram School for the Arts
Grades: 9 - 12
University of Maryland Completer

The Barbara Ingram School for the Arts is a Washington County Public Schools academic and arts magnet school located in downtown Hagerstown. The school provides students with a rigorous college preparatory curriculum rooted in intense, pre-professional training in one of six arts areas: dance, instrumental music, literary arts, theatre, visual arts, and vocal music. Arts instruction takes place at the Barbara Ingram building on South Potomac Street, in the Arts and Entertainment district near The Maryland Theatre. Students take literary arts classes and all academic classes at the University System of Maryland building on Washington Street. Instruction is provided for all required courses with Advanced Placement and online learning options also available. The Barbara Ingram School will also offer Computer, Design, Gaming and Animation (CDGA) and Digital Communications, Career Technology Education completers beginning in the Fall of 2020. These programs are high-tech cutting edge programs that will blend technology and the arts and will offer students the opportunity to obtain stackable credentials and other value added opportunities. These programs will also give students the ability to work with business and industry to gain real life experiences in those disciplines. Students are expected to participate in ensembles, large group practices, performances, and shows after the regular school day; therefore, the Barbara Ingram School for the Arts does not have interscholastic athletic teams. Students will, however, have the opportunity to participate in school clubs and organizations.

Washington County Technical High School
Grades: 11 and 12
Career Technology Education Completer with University of Maryland Completer Option

Washington County Technical High School is a comprehensive career technology and academic school for students in grades 11 and 12. Washington County Technical High School attracts 11th and 12th grade students from across the county to its award-winning specialized completer programs. The application process is highly-competitive with specific requirements for course completion by its students prior to entry. With the availability of several Advanced Placement courses offered alongside technical coursework, WCTHS offers rigorous programming to meet the demands of students seeking academic excellence in addition to technological training. WCTHS has 18 completer programs available to students.

• Academy of Biomedical Sciences PLTW
• Academy of Teaching Professions
• Applied Manufacturing Engineering
• Artificial Intelligence (AI) and Cloud Computing
• Automotive Technology
• Carpentry
• Collision Repair
• CISCO Academy
• Cosmetology
• Culinary Arts
• Early Childhood Professions
• Electrical Construction
• Fire and Rescue Academy
• Homeland Security Global Imaging and Communications Technology
• Homeland Security-Law Enforcement
• Academy of Health Professions
• Engineering Academy PLTW
• Multimedia and Graphic Design II
Academic Leadership Academy (ALA)
South Hagerstown High School
Grades 9-12
University of Maryland Completer
The Academic Leadership Academy, an academic magnet program based at South Hagerstown High School, provides students with ample opportunity to earn college credit while building leadership skills and demonstrating those skills through a project to better the community. Students take honors courses and a minimum of 6 Advanced Placement classes. ALA students attend summer academic workshops and leadership training, complete a Leadership Project, and are expected to assume leadership roles in the schools and community. ALA students will have the opportunity to attend the Maryland Leadership Workshop with other leaders from across the state. For more information on the Academic Leadership Program, please call South Hagerstown High School at 301-766-8369 and ask for the ALA Coordinator.

The Academy of Biomedical Sciences PLTW
Washington County Technical High School
Grades: 11 and 12
Career Technology Education Completer
The Project Lead the Way Biomedical Sciences program is a dynamic program using hands-on, real-world problems to engage and challenge students interested in math, science, and the human body. This program is appropriate for students interested in pursuing a career in biological sciences, emergency services, health care or medicine creating an exciting environment of biomedical techniques, anatomy and physiology, interventions to support life and treat disease as well as research. Additionally, students solve problems, participate as part of a team, lead teams, conduct research, investigate real-world problems, analyze data, and learn outside the classroom. Students enrolled in this academy must also be enrolled in college-preparatory mathematics and science courses. The Biomedical Sciences are not designed to replace the traditional science course, but are designed to enhance them and to focus on the concepts directly related to the field of Biomedical Sciences. This program is available at Washington County Technical High School.

This program requires enrollment at Washington County Technical High School (WCTH) during the 11th and 12th grades.

The Academy of Finance
Williamsport High School
Grades: 10, 11, and 12
Career Technology Education Completer
The Academy of Finance (AOF) prepares students for post-secondary education and careers through academic learning and hands-on work experiences within a theme-based, contextualized curriculum. Students are exposed to broad career opportunities in the financial services industry. The AOF is affiliated with the National Academy Foundation (NAF), an organization that sustains a national network of career academies.

Enrollment in the AOF is open to students from all county high schools; however, students will complete all 10th, 11th, and 12th grade classes at Williamsport High School. In 12th grade, students enroll in a business course at Hagerstown Community College. In the summer between 11th and 12th grade, students will participate in a paid internship in the financial industry.
The Academy of Health Professions
Washington County Technical High School
Grades: 11 and 12
Career Technology Education Completer
The Academy of Health Professions (AoHP) uses project and problem-based learning, clinical and internship experiences, and classroom and lab instruction to teach students about the field of healthcare. Students are introduced to healthcare knowledge and skills through curriculum developed by Stevenson University. There are opportunities for students to apply what they are learning to real-life healthcare situations by participating in a supervised clinical experience and will earn state and/or nationally recognized certifications.

The Academy of Science, Technology, Engineering and Mathematics
Williamsport High School
Grades: 11 and 12
Career Technology Education Completer
The Academy of Science, Technology, Engineering and Mathematics (STEM) based at Williamsport High School prepares students for post secondary education and careers in engineering, science applications, and mathematics as applied to engineering and manufacturing through challenging academic course work and hands-on experiences with the Project Lead the Way principals of civil engineering design, aerospace and biotechnical engineering, fabrication, and manufacturing processes. During the first two years, students will lay the ground work for one of four pathways. At the end of their sophomore year, they will choose one of the four pathways to concentrate in. All four pathways have an engineering component, since it is believed that this is a great basis for choosing any college major and career in science, technology, engineering or math.

Academy of Teaching Professions
North Hagerstown High School,
South Hagerstown High School,
Washington County Technical High School
Grades: 11 and 12
Career Technology Education Completer
The mission of the Academy of Teaching Professions is to encourage a diverse group of students to enter the teaching professions by providing the support and foundation necessary for success as both students and teachers. In the Academy, the classroom is the context for learning to teach. The best way to learn how to teach is to observe and interact with experiences and enthusiastic teachers, and to talk with them about their profession. In the Academy courses, students learn to apply information, concepts, and theories to real life educational settings. The Academy curriculum is designed to prepare students for careers in education, either as teachers or paraprofessionals, and to expose them to the essentials of teaching by offering: 1) courses related to teaching, learning, and children; 2) field experience internships and tutoring opportunities; and 3) college credit bearing course work transferable to local colleges and universities. This Academy prepares students for an internship with a practitioner in secondary education, and an opportunity to complete the Parapro and the Praxis I exams.

AP Capstone™
Clear Spring High School
Grades: 9-12
University of Maryland Completer
AP Capstone™ is a new academic magnet program based at Clear Spring High School. AP Capstone includes two courses, designed with an interdisciplinary format, that promote critical and creative thinking, argumentation, and research skills: AP Seminar and AP Research. Both courses include performance tasks, assessments, and application of research methodology, which complement the other AP Courses that AP Capstone participants will take. AP Seminar and AP Research permit the in-depth pursuit of a topic of interest at the local, national or global levels. At least four AP courses will be taken in addition to AP Seminar and AP Research. By earning the AP Capstone Diploma, participants distinguish themselves to colleges and universities, as these students have actively practiced the real world skills necessary for college and career. For more information about AP Capstone™, please call Clear Spring High School at 301-766-8082 and ask for the AP Coordinator.
Barr Construction Institute
All High Schools
Grades: 11 and 12
Career Technology Education Completer
The Washington County Public Schools – Barr Construction Institute was developed to provide a means to train high school students in the construction trades of Plumbing and Heating, Ventilation, and Air Conditioning (HVAC). The institute is administered by the Associated Builders and Contractors, Inc., Cumberland Valley Chapter, at the Barr Construction Institute located on North Locust Street in Hagerstown. This program provides students with the opportunity to complete two levels of the NCCER Plumbing and/or HVAC curriculum / work hour requirements to transfer into the Apprenticeship program at the BCI after graduation from high school. Washington County Public Schools support students by paying the required tuition for Core, Level I and Level II courses and provides some limited equipment and materials for the program. Students will need to enroll in evening courses at BCI.

Environmental Agricultural Science Academy
Clear Spring High School
Grades: 9, 10, 11, and 12
Career Technology Education Completer
This academy prepares students for post-secondary education and careers through challenging academic and technical course work and internship opportunities. The Environmental Agricultural Science Academy combines technical, academic and work place skills in an integrated curriculum to prepare students for entering the work force or post-secondary education in the fields of environmental science and natural resources, plant or animal sciences. Students will take tests for specific industry certifications, where appropriate.

International Baccalaureate Diploma Programme (IBDP)
North Hagerstown High School
Grades: 11 and 12
University of Maryland Completer
The International Baccalaureate Diploma Programme, based at North Hagerstown High School, provides hardworking, motivated, organized, and creative students the opportunity to pursue a rigorous pre-university courses of study. The IBDP is a comprehensive two-year curriculum that begins in the 11th grade. Descriptions of the IB courses that will be offered can be found in each content section throughout this booklet. Students may receive college credit from participating universities by earning an IB diploma. Students receive recognition from IBO for IB courses by completing the assessment process of an internal assessment and two or three external assessments. Students successfully completing all requirements may earn an IB diploma. Washington County Public Schools pays half the cost of the exam. Other financial support may be available. Enrollment in the International Baccalaureate Diploma Programme is open to students from all county schools; however, students will complete all 9th through 12th grade classes at North Hagerstown High School. For more information on the IB Diploma Programme, please call North Hagerstown High School at 301-766-8238 and ask for the IB coordinator.

Required Courses:
Senior class standing.
NCCER Core
NCCER Level I
NCCER Level II
Expected internship / work experience

Required Courses:
Honors Biology, Biotechnology, Foundations of Environmental and Agricultural Science, and courses in one of the following pathways: Animal Pathway (Production and Companion Animal Veterinary Technology, Veterinary Internship); Environmental and Natural Resources Pathway (Aquatics and Wildlife, Forestry, Soils and the Environment)

Required Courses:
Six required IB courses; 3 at standard level and 3 at higher levels, Theory of Knowledge course, Extended Essay, Community, Action, Services projects. Students will also take pre-IB courses in 9th and 10th grades.
International Baccalaureate Career-related Program (IBCP)
North Hagerstown High School
Grades: 11 and 12
University of Maryland Completer
MSDE CTE Completer
The Career-related Programme is the most recent addition to the IB. Its key aim is to provide a choice of different pathways for students in Grades 11 and 12. Modern life places complex demands on graduates entering further/higher education or employment. An integral part of the Career-related Programme is enabling students to become self-confident, skilled and career-ready learners. To prepare students to succeed in a rapidly changing world, schools must not only equip them with the necessary skills and the learning dispositions, but also the ability to manage and influence change. The Career-related Programme helps students to:
• develop a range of broad work-related competencies and deepen their understanding in specific areas of knowledge through their Diploma Programme courses.
• develop flexible strategies for knowledge acquisition and enhancement in varied contexts
• prepare for effective participation in the changing world of work
• foster attitudes and habits of mind that allow them to become lifelong learners willing to consider new perspectives
• become involved in learning that develops their capacity and will to make a positive difference.

Fire and Rescue Academy
Washington County Technical High School
Grades: 11 and 12
Career Technology Education Completer
The Fire and Rescue Academy was developed to provide a means to train high school students in the art of fire fighting and emergency medical technology. The academy classes are conducted at the Public Service Academy and the City of Hagerstown Fire Department’s training center. This academy prepares students for post-secondary education and careers in the fire and rescue services or its allied professions. Upon completion of the two years of training, the student will be qualified to apply for National Certification at the Firefighter II level and eligible to obtain a National Certification as an Emergency Medical Technician-Basic. Students have the opportunity to earn 12-16 transcript credits through the University of Maryland. Prerequisite: Participants must be a member in good standing of a Washington County Volunteer Fire and/or Rescue Department or a Mutual Aid Company and sixteen (16) years old at the beginning of 11th grade.

Engineering Academy PLTW
Washington County Technical High
Grades: 11 and 12
Career Technology Education Completer
The Academy prepares students for post-secondary education and careers through a sequence of courses that, when combined with college preparatory mathematics and science courses, introduces students to the scope, rigor, and discipline of engineering technology. The Pre-Civil Engineering and Architecture Academy might be for you if:
• You are interested in being with talented group of students in a special curriculum
• You’ve decided that you’d like to specialize in a particular course of study.
• Work and school are equally important to you.
• You like the idea of specialized instruction.
• You’re a hands-on type of person.
• You like the idea of college level courses during high school.
• Architecture and/or engineering sound interesting to you.

Required Courses:
At least 2 IBDP courses at standard or higher level with one as a 2-year course; corresponding course exams (minimum score of 3) must be taken; completion of career-related studies pathway; completion of the IBCP Core, which includes Personal and Professional Skills Course, Reflective Project, Language Development, and Service Learning.

Required Courses:
Fire Emergency Medical Training/High School Cadet Level I, Fire Emergency Medical Training/High School Cadet Level II, Fire Emergency Medical Training/High School Cadet Level III.

Required Courses:
College Preparatory Science and Mathematics concurrent with PLTW courses, Engineering Academy PLTW I, Engineering Academy PLTW II.
English Course Descriptions

Students are required to earn four (4) credits in English to meet the requirements to earn a high school diploma. Students are also encouraged to enhance their skills as readers and writers through participation in one or more English elective courses. All students must pass Grade 10 MCAP.
# High School English Suggested Pathways

<table>
<thead>
<tr>
<th>Additional</th>
<th>AP Lang and/or AP Lit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4th English Credit</strong></td>
<td><strong>ON GRADE LEVEL PATHWAY</strong> Students with on grade level reading and writing skills</td>
</tr>
<tr>
<td>English 12 (A108)</td>
<td>Honors English 12 (A108H) AP Lang and/or AP Lit</td>
</tr>
<tr>
<td></td>
<td>AP Lang (A116AP)</td>
</tr>
<tr>
<td></td>
<td>AP Lit (A115AP)</td>
</tr>
<tr>
<td><strong>3rd English Credit</strong></td>
<td><strong>HONORS/PRE-AP PATHWAY</strong> Students with on or above grade level reading and writing skills</td>
</tr>
<tr>
<td>English 11 (A106)</td>
<td>Honors English 11 (A106H)</td>
</tr>
<tr>
<td></td>
<td>AP Lit (A115AP)</td>
</tr>
<tr>
<td></td>
<td>AP Lang (A116AP)</td>
</tr>
<tr>
<td><strong>2nd English Credit</strong></td>
<td><strong>BELOW GRADE LEVEL PATHWAY</strong> Students with below grade level reading and writing skills. Previously or dually enrolled in reading intervention.</td>
</tr>
<tr>
<td>English 10 (A104)</td>
<td>Honors English 10 (A104H)</td>
</tr>
<tr>
<td><strong>1st English Credit</strong></td>
<td><strong>ON GRADE LEVEL PATHWAY</strong> Students with on grade level reading and writing skills</td>
</tr>
<tr>
<td>English 9 (A102)</td>
<td>Honors English 9 (A102H)</td>
</tr>
</tbody>
</table>

Students may change columns as a result of increased skill or of a desire to elect a more challenging course load.

↑ = Suggested pathway upon successful completion of course
ENGLISH 9
A102  Grade Level 9  1 English Credit
English/Language Arts I (9th grade) courses build upon students’ prior knowledge of grammar, vocabulary, word usage, and the mechanics of writing and usually include the four aspects of language use: reading, writing, speaking, and listening. Typically, these courses introduce and define various genres of literature, with writing exercises often linked to reading selections.

HONORS ENGLISH 9
A102H  Grade Level 9  1 English Credit
Honors English 9 is a rigorous course of study that is aligned with the Maryland College and Career-Ready Standards. This course utilizes pre-AP strategies and is designed to prepare students for the rigor of the Advanced Placement English courses and exams. Students independently read challenging works of fiction and literary non-fiction and engage in the Shared Inquiry Method for close analysis of their reading. Research and writing activities focus on using the writing process with an emphasis on editing and revision. Integrated grammar and vocabulary study enhance students’ reading comprehension and communication skills. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students are expected to complete challenging assignments above grade-level, both in and out of class.

ENGLISH 10
A104  Grade Level 10  1 English Credit
English/Language Arts II (10th grade) courses usually offer a balanced focus on composition and literature. Typically, students learn about the alternate aims and audiences of written compositions by writing persuasive, critical, and creative multi-paragraph essays and compositions. Through the study of various genres of literature, students can improve their reading rate and comprehension and develop the skills to determine the author’s intent and theme and to recognize the techniques used by the author to deliver his or her message.

Prerequisite: Successful completion of English 9

HONORS ENGLISH 10
A104H  Grade Level 10  1 English Credit
Honors English 10 is a rigorous course of study aligned with the Maryland College and Career-Ready Standards. This course utilizes pre-AP strategies and is designed to prepare students for participation in Advanced Placement English courses. Students study a variety of literary genres (such as speeches, letters, documents, fiction, poetry, essays, etc.). Students analyze and evaluate the rhetoric of writers and apply these techniques in their own written argumentation, including on-demand responses and research-based papers. Integrated grammar and vocabulary study enhance students’ reading comprehension and communication skills. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students are expected to complete challenging assignments above grade-level, both in and out of class. Students must pass the MCAP ELA/Literacy 10 Assessment during this course to meet graduation requirements.

Prerequisite: Successful completion of Honors English 9/English 9

ENGLISH 11
A106  Grade Level 11  1 English Credit
English/Language Arts III (11th grade) courses continue to develop students’ writing skills, emphasizing clear, logical writing patterns, word choice, and usage, as students write essays and begin to learn the techniques of writing research papers. Students continue to read works of literature, which often form the backbone of the writing assignments. Literary conventions and stylistic devices may receive greater emphasis than in previous courses.

Prerequisite: Successful completion of English 10

HONORS ENGLISH 11
A106H  Grade Level 11  1 English Credit
Honors English 11 is a rigorous course of study that is aligned with the Maryland College and Career-Ready Standards. This course utilizes pre-Advanced Placement strategies and is designed to prepare students for participation in Advanced Placement English coursework. The course engages students in individual and small group investigations of ideas found in literary texts from the United States and of the connections among these American texts and literary texts from other countries. Students apply their understanding of archetypes and universal themes as they engage in close reading, text-based discussion, and authentic writing to construct meaning relevant to life in modern times. Students in Honors classes are expected to complete challenging assignments above grade-level, both in and out of class.

Prerequisite: Successful completion of Honors English 10/English 10

ENGLISH 12
A108  Grade Level 12  1 English Credit
English/Language Arts IV (12th grade) courses blend composition and literature into a cohesive whole as students write critical and comparative analyses of selected literature, continuing to develop their language arts skills. Typically, students primarily write multi-paragraph essays, but they may also write one or more major research papers.

Prerequisite: Successful completion of English 11
HONORS ENGLISH 12
A108H  Grade Level 12  1 English Credit
Honors English 12 is a rigorous course of study that is aligned with the Maryland College and Career-Ready Standards. This course utilizes pre-Advanced Placement strategies and is designed to prepare students for the rigors of a university freshman English course. This course engages students in the study of literary texts that speak to the issues and dilemmas of our time. Students engage in close reading, text-based discussion, and authentic writing to develop an understanding of the world in which they live so that they can enter college prepared to participate effectively in finding solutions to the challenges we face.
Prerequisite: Successful completion of Honors English 11/English 11

ADVANCED PLACEMENT ENGLISH LITERATURE AND COMPOSITION
A115AP  Grade Level 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level English courses, AP English Literature and Composition courses enable students to develop critical standards for evaluating literature. Students study the language, character, action, and theme in works of recognized literary merit; enrich their understanding of connotation, metaphor, irony, syntax, and tone; and write compositions of their own (including literary analysis, exposition, argument, narrative, and creative writing).
Prerequisite: Honors English 10/English 10

ADVANCED PLACEMENT ENGLISH LANGUAGE AND COMPOSITION
A116AP  Grade Level 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level English courses, AP English Language and Composition courses expose students to prose written in a variety of periods, disciplines, and rhetorical contexts. These courses emphasize the interaction of authorial purpose, intended audience, and the subject at hand, and through them, students learn to develop stylistic flexibility as they write compositions covering a variety of subjects that are intended for various purposes.
Prerequisite: Honors English 10/English 10

ENGLISH TRANSITION
A112SM  Grade Level 12  1 Elective Credit
The English Transition Course is a semester long English course designed to strengthen skills developed in English 11. The course infuses College and Career Readiness Standards in the curriculum to deepen student understanding and proficiency in literary analysis and authentic writing. Differentiated support will be provided to meet specific needs of individual students. Students will retake the English 11 MCAP exam or other College and Career Readiness (CCR) exam during this course in order to meet the College and Career Readiness requirement for English.
Prerequisite: Must be a senior and have earned an English 11 credit but have not passed the English 10 MCAP exam.

THE NOVEL: A CULTURAL LENS (HONORS)
A110H  Grade Level 11, 12  1 Elective Credit
The Novel: A Cultural Lens is designed to provide junior and senior level students with an Honors level English elective that will both satisfy their academic curiosity and prepare them for the reading that is required in college English classes. In this class, students study the evolution of the novel from its 18th century roots to the present. The course also explores the various literary genres depicted through novels. Students study the themes, characterization, plots, and styles that reflect the time and society during which they were created.

JOURNALISM I
A122  Grade Level 10, 11  1 Elective Credit
Journalism I focuses on developing skills necessary to produce a news publication. Instructional materials and teaching strategies train students in news gathering, news writing, and overall newspaper production. Technology and media used in professional journalism are highlighted. Students enrolled in this course will participate in the production of a print or electronic high school newspaper.

JOURNALISM II
A124  Grade Level 11, 12  1 Elective Credit
Journalism II reinforces the content and strategies presented in Journalism I. Students are introduced to newspaper management and administration. Students enrolled in this course are expected to serve in a variety of administrative roles and are responsible for the production of the school newspaper.
Prerequisite: Journalism I

CREATIVE WRITING
A130  Grade Level 11, 12  1 Elective Credit
Creative Writing courses offer students the opportunity to develop and improve their technique and individual style in poetry, short story, drama, essays, and other forms of prose. The emphasis of the courses is on writing; however, students may study exemplary representations and authors to obtain a fuller appreciation of the form and craft. Although most creative writing classes cover several expressive forms, others concentrate exclusively on one particular form (such as poetry or playwriting).
PUBLIC SPEAKING AND FORENSICS
A152 Grade Level 10, 11, 12 1 Elective Credit
Public Speaking courses enable students, through practice, to develop communication skills that can be used in a variety of speaking situations (such as small and large group discussions, delivery of lectures or speeches in front of audiences, and so on). Course topics may include (but are not limited to) research and organization, writing for verbal delivery, stylistic choices, visual and presentation skills, analysis and critique, and development of self-confidence. This course offers students the opportunity to learn how to use oral skills effectively in formal and informal situations. Students learn such skills as logic and reasoning, the organization of thought and supporting materials, and effective presentation of one’s voice and body. Often linked to an extracurricular program, these courses introduce students to numerous public speaking situations, and they learn the methods, aims, and styles of a variety of events (e.g., formal debate, Lincoln-Douglas debate, expository speaking, radio broadcast, oral interpretation, and dramatic interpretation). Participation in competition is encouraged, but not always required. This course is available at some schools for dual enrollment credit.

IB ENGLISH (PART 1) (HL)
A106IB Grade 11 1 IB Credit
English (Part 1), offered only at North Hagerstown High School, is the first course in the IB English sequence in preparation for the IB English Higher Level exam. This course provides students with a broad literary and cultural experience that encourages the thoughtful appreciation of both global diversity and literature as an art. Through literature study, IB English also examines and explores the static and dynamic aspects of the human experience throughout time. The course requires students to use knowledge from other disciplines to enhance appreciation and understanding of humanity. Students develop confidence and skill in both written and oral expression through a series of assignments that become progressively more independent of teacher direction.
Prerequisite: Honors at NHHS

IB ENGLISH (PART 1) (SL)
A107 IB Grade 11 1 IB Credit
IB English SL (Part 1), offered only at North Hagerstown High School, is the first course in the IB English sequence in preparation for the IB English Standard Level exam. This course is offered to students participating in the IB Career-related Programme. Students completing this course will have a thorough knowledge of a range of texts and an understanding of other cultural perspectives. They will also have effectively developed skills of analysis and the ability to support an argument in clearly expressed writing, sometimes at significant length. The course will enable them to succeed in a wide range of university courses, particularly in literature but also in subjects such as philosophy, law and language. Students develop confidence and skill in both written and oral expression through a series of assignments that become progressively more independent of teacher direction.

IB ENGLISH (PART 2) (HL)
A108IB Grade 12 1 IB Credit
IB English (Part 2), offered only at North Hagerstown High School, is the concluding course in the IB English sequence in final preparation for the IB English Higher Level exam. This course continues the thoughtful appreciation of both global diversity and literature as an art, providing a broad literary and cultural experience. IB English also examines and explores the static and dynamic aspects of the human experience throughout time as related through literature. The course requires students to use knowledge from other disciplines to enhance appreciation and understanding of humanity. Students exhibit confidence and skill in both written and oral expression through a series of assignments that become progressively more independent of teacher direction. Students must complete all assessment requirements to receive IBO recognition for completing this course.
Prerequisite: IB English (Part 1) (HL)

IB ENGLISH (PART 2) (SL)
A109 IB Grade 12 1 IB Credit
English SL (Part 2), offered only at North Hagerstown High School, is the concluding course in the IB English sequence in final preparation for the IB English Standard Level exam. This course is offered to students participating in the IB Career-related Programme. This course continues the thoughtful appreciation of both global diversity and literature as an art; students will have a thorough knowledge of a range of texts and an understanding of other cultural perspectives. They will also have effectively developed skills of analysis and the ability to support an argument in clearly expressed writing, sometimes at significant length. The course will enable them to succeed in a wide range of university courses, particularly in literature but also in subjects such as philosophy, law and language. Students develop confidence and skill in both written and oral expression through a series of assignments that become progressively more independent of teacher direction, as well as both internal and external assessments as required by the IBO. Students must complete all assessment requirements to receive IBO recognition for completing this course.
Prerequisite: IB English (Part 1) (SL)
English Learner (EL) courses develop academic English language proficiency by recounting, explaining, arguing, and discussing content from a variety of sources from English language arts, mathematics, science, and social studies. Guided by WIDA English Language Development Standards and Maryland College and Career-Ready Standards, the WCPS EL program adjusts instruction to students’ strengths and needs in order for ELs to communicate effectively in English with cultural proficiency, to achieve in academic subjects, and to fully acquire English. Proficiency in reading, writing, listening and speaking is measured annually on the ACCESS for ELLs assessment.
NEWCOMER EL
A180SM  Grade Level 9, 10, 11, 12  1 World Language Credit
A180   Grade Level 9, 10, 11, 12  2 World Language Credits
This course is designed for students who are new to the country with limited English proficiency and is aligned to the WIDA English Language Development Standards. Students focus on developing social and academic language in listening, speaking, reading, and writing while targeting academic vocabulary and academic skills.
Prerequisite: Level 1 Proficiency Level

BEGINNER EL
A181SM  Grade Level 9, 10, 11, 12  1 World Language Credit
A181   Grade Level 9, 10, 11, 12  2 World Language Credits
This course aligns to the WIDA English Language Development Standards and the Maryland College and Career Ready Standards. Students continue to develop social and academic language while building speaking, listening, reading, and writing skills. The course is for beginning level EL students (Level 2) and/or those recommended by the EL teacher and the counselor.
Prerequisite: Level 2 Proficiency Level

INTERMEDIATE EL
A182SM  Grade Level 9, 10, 11, 12  1 World Language Credit
A182   Grade Level 9, 10, 11, 12  2 World Language Credits
This course aligns to both the WIDA English Language Development Standards and the Maryland College and Career Ready English Standards. Students focus on developing listening, speaking, reading, and writing with an emphasis on more complex text, reading comprehension, and academic writing. The course is for intermediate level EL students (Level 3) and/or those recommended by the EL teacher and the counselor.
Prerequisite: Level 3 Proficiency Level

ADVANCED EL
A184SM  Grade Level 9, 10, 11, 12  1 World Language Credit
A184   Grade Level 9, 10, 11, 12  2 World Language Credits
This course aligns to both the WIDA English Language Development Standards and the Maryland College and Career Ready English Standards. Students develop fluency in reading critically and in crafting well written compositions including the use of descriptive, narrative, and argumentative techniques. Students expand and bridge critical reading, writing, and thinking skills. Complex informational texts are used to teach literacy skills in English that transfer to academic content areas to ensure more independent success and work toward career and college readiness.
Prerequisite: Long Term ELs

ACCELERATED EL
A186SM  Grade Level 9, 10, 11, 12  1 World Language Credit
A186   Grade Level 9, 10, 11, 12  2 World Language Credits
This course is designed to accelerate the literacy of long-term ELs by extending reading and writing skills, academic and technical vocabulary, and content in meaningful real-world situations. Students will read and comprehend different types of texts and will engage in structured academic discussions and writings focused on anchor texts. This course is aligned to WIDA and Maryland College and Career’s Standards.
Prerequisite: Long Term ELs

EXTENDED EL
A187SM  Grade Level 9, 10, 11, 12  1 Elective Credit
A187   Grade Level 9, 10, 11, 12  2 Elective Credits
ELs will develop academic and communication skills necessary for success in all content areas. This course reinforces the academic language of English, math, social studies, and/or science and provides state assessment support aligned to WIDA standards.
Prerequisite: Newcomer EL, Beginner EL, Intermediate EL, Advanced EL, and Accelerated EL Students are enrolled upon recommendation of the EL teacher and the school counselor.
Social Studies
Course Descriptions

Students must take the following three courses to meet the Maryland requirements for graduation: United States Studies II; Local, State and National Government; and World History. Students are also strongly encouraged to take elective social studies courses. Students must pass the Government HSA.
Electives for 11th and 12th grade:
Sociology (A217) or Honors Sociology (A217H)
Psychology (A215), Honors Psychology (A215H) or AP Psychology (A284AP)
   AP World History, (A282AP)
   AP Human Geography (A293AP)
   Honors U.S. Civil War (A233H)
Honors U.S. Historical Research (A234H)
   AP U.S. History, (A288AP)
   Honors Philosophy (A292H)
   Honors Economics (A230H)
   AP Macroeconomics (A286AP)
   AP Microeconomics (A287AP)
   AP Comparative Government and Politics, (A209AP)
   AP Government and Politics, (A279AP)
   AP European History (A283AP)

11th grade recommendations:
World History (A208) or
Honors World History (208H) or
   AP World History (A280AP)

10th grade recommendations:
Local, State and National Government (A206) or
Honors Local, State and National Government (A206H) or
   AP Government (A279AP)

9th grade recommendations:
United States Studies II (A204) or
Honors United States Studies II (A204H)

1. Successful completion of three social studies courses is required for high school graduation in Maryland.
2. All students must complete U.S. Studies II; Local, State and National Government; and World History.
3. All students must pass the government HSA.
4. Students interested in taking multiple AP social studies courses are encouraged to schedule more than one social studies course each year.
UNITED STATES STUDIES II
A204        Grade Level 9          1 Social Studies Credit
This is a required course. Modern U.S. History course examines the history of the United States from the Industrial Revolution through the present time. This course includes a historical review of political, military, scientific, and social developments.

HONORS UNITED STATES STUDIES II
A204H        Grade Level 9          1 Social Studies Credit
This is a required course. Modern U.S. History course examines the history of the United States from the Industrial Revolution through the present time. This course includes a historical review of political, military, scientific, and social developments. The honors level provides expectations and opportunities for students to work independently, at an accelerated pace, to engage in more rigorous and complex content, and to develop projects and products that reflect that level of understanding. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expect to complete challenging assignments above grade level, both in and out of class.

LOCAL, STATE, AND NATIONAL GOVERNMENT
A206        Grade Level 10          1 Social Studies Credit
This is a required course. The Government course provides an overview of the structure and functions of the U.S. government and political institutions and examine constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. This course examines the structure and function of state and local governments and may covers certain economic and legal topics.
Prerequisite: U.S. Studies II

HONORS LOCAL, STATE, AND NATIONAL GOVERNMENT
A206H        Grade Level 10          1 Social Studies Credit
This is a required course. The Government course provides an overview of the structure and functions of the U.S. government and political institutions and examine constitutional principles, the concepts of rights and responsibilities, the role of political parties and interest groups, and the importance of civic participation in the democratic process. This course examines the structure and function of state and local governments and may covers certain economic and legal topics. The honors level provides expectations and opportunities for students to work independently, at an accelerated pace, to engage in more rigorous and complex content, and to develop projects and products that reflect that level of understanding. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expect to complete challenging assignments above grade level, both in and out of class.
Prerequisite: U.S. Studies II

WORLD HISTORY
A208        Grade Level 11, 12          1 Social Studies Credit
This is a required course. The World History course provides an overview of the history of human society in the past few centuries—from the Renaissance period to the contemporary period—exploring political, economic, social, religious, military, scientific, and cultural developments.
Prerequisite: Local, State, and National Government

HONORS WORLD HISTORY
A208H        Grade Level 11, 12          1 Social Studies Credit
This is a required course. The World History course provides an overview of the history of human society in the past few centuries—from the Renaissance period to the contemporary period—exploring political, economic, social, religious, military, scientific, and cultural developments. The honors level provides expectations and opportunities for students to work independently, at an accelerated pace, to engage in more rigorous and complex content, and to develop projects and products that reflect that level of understanding. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expect to complete challenging assignments above grade level, both in and out of class.
Prerequisite: Local, State, and National Government

PSYCHOLOGY
A215        Grade Level 11, 12          1 Elective Credit
The psychology course introduces students to the study of individual human behavior. Course content includes an overview of the field of psychology, topics in human growth and development, personality and behavior, and abnormal psychology.

HONORS PSYCHOLOGY
A215H        Grade Level 11, 12          1 Elective Credit
The psychology course introduces students to the study of individual human behavior. Course content includes an overview of the field of psychology, topics in human growth and development, personality and behavior, and abnormal psychology. The honors level provides expectations and opportunities for students to work independently, at an accelerated pace, to engage in more rigorous and complex content, and to develop projects and products that reflect that level of understanding. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expect to complete challenging assignments above grade level, both in and out of class. This could be a possible ESSENCE course.
The sociology course introduces students to the study of human behavior in society. This course provides an overview of sociology, generally including such as social institutions and norms, socialization and social change, and the relationships among individuals and groups in society.

HONORS SOCIOLOGY
A217H Grade Level 11, 12 1 Elective Credit

The sociology course introduces students to the study of human behavior in society. This course provides an overview of sociology, generally including such as social institutions and norms, socialization and social change, and the relationships among individuals and groups in society. The honors level provides expectations and opportunities for students to work independently, at an accelerated pace, to engage in more rigorous and complex content, and to develop projects and products that reflect that level of understanding. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expect to complete challenging assignments above grade level, both in and out of class. This could be a possible ESSENCE course.

HONORS ECONOMICS
A230H Grade Level 11, 12 1 Elective Credit

The economics course provides students with an overview of economics with primary emphasis on the principles of microeconomics and the U.S. economic system. This course also covers topics such as principles of macroeconomics, international economics, and comparative economics. Economic principles may be presented in formal theoretical contexts, applied contexts, or both. The honors level provides expectations and opportunities for students to work independently, at an accelerated pace, to engage in more rigorous and complex content, and to develop projects and products that reflect that level of understanding. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expect to complete challenging assignments above grade level, both in and out of class. This could be a possible ESSENCE course.

HONORS U. S. CIVIL WAR
A233H Grade Level 11, 12 1 Elective Credit

U.S. Wars and Military Conflicts courses focus on the study of one or more wars and major military conflicts in which the United States had a significant role. In this case, the topic is the U.S. Civil War. This courses concentrates on one of many topics related to The Civil War, including the causes; social, political, and economic effects. The honors level provides expectations and opportunities for students to work independently, at an accelerated pace, to engage in more rigorous and complex content, and to develop projects and products that reflect that level of understanding. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expect to complete challenging assignments above grade level, both in and out of class.

TAKING INFORMED ACTION: A PROJECT-BASED EXPLORATION OF CIVIC AND SOCIAL ISSUES
A270 Grades 11 or 12 1 Elective Credit

These courses examine a particular topic pertaining to U.S. government and political institutions rather than provide a general overview of the subject. They may concentrate on one of many topics related to governmental structure, function, and purposes, such as the Constitution, the Supreme Court, Congress, or the Office of the President. In this case, the Taking Informed action course promotes historical awareness and civic competence and responsibility through interactive strategies, relevant content and collaborative role play. Students will consider multiple accounts of currents and historical events and issues in order to understand polices, economics, and history. Student will be involved in research, writing and public speaking throughout the course. Students will also identify local community or schools concerns and propose possible changes to current public policy. Students will investigate our changing world by examining contemporary issues and then deciding for themselves that various roles of global citizens. This course will enable students to participate in We the People, National History Day, Entrepreneur Competitions, Project Citizen, Choices, Mock Trail, and/or others.

AP COMPARATIVE GOVERNMENT AND POLITICS
A209AP Grade Level 10, 11, 12 1 AP Credit

Following the College Board’s suggested curriculum designed to parallel college-level Comparative Government and Politics courses, these courses offer students an understanding of the world’s diverse political structures and practices. The courses encompass the study of both specific countries and general concepts used to interpret the key political relationships found in virtually all national policies. Course content generally includes sovereignty, authority, and power; political institutions; the relationships among citizens, society, and the state; political and economic change; and public policy.

ADVANCED PLACEMENT GOVERNMENT AND POLITICS
A279AP Grade Level 10, 11, 12 1 AP Credit

Following the College Board’s suggested curriculum designed to parallel college-level U.S. Government and Politics courses, these courses provide students with an analytical perspective on government and politics in the United States, involving both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies. The courses generally cover the constitutional underpinnings of the U.S. government, political beliefs and behaviors, political parties and interest groups, the institutions and policy process of national government, and civil rights and liberties.

Prerequisite: U.S. Studies II, completion of or enrolled in Local, State, and National Government, or by department/administration recommendation.
ADVANCED PLACEMENT WORLD HISTORY
A280AP  Grade Level 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level World History courses, AP World History courses examine world history from 1200 CE to the present with the aim of helping students develop a greater understanding of the evolution of global processes and contracts and how different human societies have interacted. These courses highlight the nature of changes in an international context and explore their causes and continuity.
Prerequisite: U.S. Studies II completion of or enrollment in Local, State, and National Government.

ADVANCED PLACEMENT EUROPEAN HISTORY
A283AP  Grade Level 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level European History courses, AP European History courses examine European civilization from the High Renaissance period to the recent past and also expose students to the factual narrative. In addition, these courses help students develop an understanding of some of the principal themes in modern European history and the abilities to analyze historical evidence and to express that understanding and analysis in writing.
Prerequisite: World History

ADVANCED PLACEMENT PSYCHOLOGY
A284AP  Grade Level 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel a college-level psychology course, AP Psychology courses introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals, expose students to each major subfield within psychology, and enable students to examine the methods that psychologists use in their science and practice.
Prerequisite: Local, State, and National Government

ADVANCED PLACEMENT MACROECONOMICS
A286AP  Grade Level 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level macroeconomics, AP Macroeconomics courses provide students with a thorough understanding of the principles of economics that apply to an economic system as a whole. They place particular emphasis on the study of national income and price determination and developing students’ familiarity with economic performance measures, economic growth, and international economics.
Prerequisite: Government

ADVANCED PLACEMENT MICROECONOMICS
A287AP  Grade Level 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level microeconomics, AP Microeconomics courses provide students with a thorough understanding of the principles of economics that apply to the functions of individual decision makers (both consumers and producers). They place primary emphasis on the nature and functions of product markets, while also including a study of factor markets and the role of government in the economy.
Prerequisite: Government

ADVANCED PLACEMENT UNITED STATES HISTORY
A288AP  Grade Level 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level U.S. History courses, AP U.S. History courses provide students with the analytical skills and factual knowledge necessary to address critically problems and materials in U.S. history. Students learn to assess historical materials and to weigh the evidence and interpretations presented in historical scholarship. The course examines the discovery and settlement of the New World through the recent past.
Prerequisite: U.S. Studies II; Local, State, and National Government

HONORS PHILOSOPHY
A292H  Grade Level 11, 12  1 Elective Credit
The philosophy course introduces students to the discipline of philosophy as a way to analyze the principles underlying conduct, thought, knowledge, and the nature of the universe. Course content includes examination of the major philosophers and their writings. The honors level provides expectations and opportunities for students to work independently, at an accelerated pace, to engage in more rigorous and complex content, and to develop projects and products that reflect that level of understanding. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expect to complete challenging assignments above grade level, both in and out of class.

ADVANCED PLACEMENT HUMAN GEOGRAPHY
A293AP  Grade Level 10, 11, 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level Human Geography courses, AP Human Geography introduces students to the systematic study of patterns and processes that have shaped the ways in which humans understand, use, and alter the earth’s surface. Students use spatial concepts and landscape analysis to examine human social organization and its environmental consequences and also learn about the methods and tools geographers use in their science and practice.
Prerequisite: U.S. Studies II
ADVANCED RESEARCH SEMINAR
A299 Grade Level 11, 12 1 Accelerated Credit
Social Sciences and History - Independent Study courses, are conducted with instructors as mentors, enabling students to explore topics of interest within one of the fields of social studies. This course provides students with an opportunity to expand their expertise in a particular specialization, to explore a topic of special interest, or to develop more advanced skills.

IB PSYCHOLOGY (SL)
A284IB Grade Level 11, 12 1 IB Credit
IB Psychology courses prepare students to take the International Baccalaureate Psychology exams at either the standard or higher level. Course content includes biological, cognitive, and socio-cultural influences on human behavior, as well as experimental research methodology. Course content may also include the study of abnormal, developmental, health or sport psychology, the psychology of human relationships, and qualitative research in psychology.
Prerequisite: Honors Local, State, and National Government or AP Government and Politics

IB WORLD HISTORY (PART 1) (HL)
A290IB Grade Level 11 1 IB Credit
IB History courses prepare students to take the International Baccalaureate History exams at either the standard or higher level. In these courses, students study historical developments at national, regional, and international levels; critically reflect on their relationship to the present; and explore the nature of historical documentation and the methods used by historians. IB History courses may survey the history of Europe and the Islamic world or focus on 20th-century topics in an international context and may enable students to undertake individual study on a subject of interest in greater detail and depth.
Prerequisite: Honors Local, State, and National Government or AP Government and Politics

IB WORLD HISTORY (PART 2) (HL)
A291IB Grade Level 12 1 IB Credit
IB History courses prepare students to take the International Baccalaureate History exams at either the standard or higher level. In these courses, students study historical developments at national, regional, and international levels; critically reflect on their relationship to the present; and explore the nature of historical documentation and the methods used by historians. IB History courses may survey the history of Europe and the Islamic world or focus on 20th-century topics in an international context and may enable students to undertake individual study on a subject of interest in greater detail and depth.
Prerequisite: IB World History (Part 1); Counts toward the required World History course

IB PHILOSOPHY SL
A292IB Grade Level 11, 12 1 IB Credit
IB Philosophy courses prepare students to take the International Baccalaureate Philosophy exams at either the standard or higher level. These courses challenge students to reflect upon and question the bases of knowledge and experience, to develop critical and systematic thinking, and to carefully analyze and formulate rational arguments. Students closely examine conceptual themes and philosophical texts, and also undertake philosophical analysis of a non-philosophical stimulus, such as a painting or poem.
Prerequisite: Honors Local, State, and National Government or AP Government and Politics

IB PHILOSOPHY HL
A293IB Grade Level 12 1 IB Credit
IB Philosophy courses prepare students to take the International Baccalaureate Philosophy exams at either the standard or higher level. These courses challenge students to reflect upon and question the bases of knowledge and experience, to develop critical and systematic thinking, and to carefully analyze and formulate rational arguments. Students closely examine conceptual themes and philosophical texts, and also undertake philosophical analysis of a non-philosophical stimulus, such as a painting or poem.
Prerequisite: IB Philosophy SL

IB CORE
A297IB Grade Level 12 1 IB Credit
Obligatory for every International Baccalaureate Diploma degree candidate, IB Theory of Knowledge courses aim 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, the arts, history, ethics, religious knowledge systems, and indigenous knowledge systems, 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 relate studied subjects to one another, general knowledge, and living experiences; to formulate rational arguments; and to evaluate the role of language in knowledge and as a way to convey knowledge.
Prerequisite: Candidate for IB Diploma at North Hagerstown High School and Introduction to IBDP CORE
Obligatory for every International Baccalaureate Diploma degree candidate, IB Theory of Knowledge courses aim 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, the arts, history, ethics, religious knowledge systems, and indigenous knowledge systems, 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 relate studied subjects to one another, general knowledge, and living experiences; to formulate rational arguments; and to evaluate the role of language in knowledge and as a way to convey knowledge.

**Prerequisite:** Candidate for IB Diploma at North Hagerstown High School
Mathematics Course Descriptions

Students are required to earn four (4) credits of mathematics including one credit in Algebra and one credit in Geometry. Each student shall enroll in a mathematics course in each year of high school. To earn a University System of Maryland completer, students need to earn a credit in Algebra II and take a math course of Algebra II or higher their senior year. All students must pass all applicable Maryland assessments.
Students entering high school will be placed according to the most recent course taken and the College and Career-Ready requirements.
ALGEBRA I
A312  Grade Level 9  1 Algebra Mathematics Credit
The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades, deepening and extending students’ understanding of linear and exponential relationships by contrasting them with each other. Students apply models to data that exhibit a trend, and engage in methods for analyzing, solving, and using quadratic functions. All of this includes properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first-degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations. The Mathematical Practice Standards apply throughout, and together with the content, students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Students will take the Algebra I MCAP assessment during this course.

INTERMEDIATE ALGEBRA
A312BC  Grade Level 10  1 Mathematics Credit
Intermediate Algebra revisits standards from Algebra I and students will complete a Bridge Plan for Academic Validation, focusing on relationships within and among linear, quadratic, and exponential functions, in preparation for the Algebra I MCAP assessment during this course. Students also deepen understanding of Algebra standards by exploring additional concepts that extend Algebra 1 understanding into that of Algebra II. The Mathematical Practice Standards apply throughout the course, and together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Students enrolled in this course have passed Algebra I but need to meet MCAP Assessment requirement for graduation. 
Prerequisite: Earned an Algebra I credit

HONORS ALGEBRA I
A312H  Grade Level 9  1 Algebra Mathematics Credit
The fundamental purpose of this course is to formalize and extend the mathematics that students learned in the middle grades, deepening and extending students’ understanding of linear and exponential relationships by contrasting them with each other. Students apply models to data that exhibit a trend, and engage in methods for analyzing, solving, and using quadratic functions. All of this includes properties and operations of the real number system; evaluating rational algebraic expressions; solving and graphing first-degree equations and inequalities; translating word problems into equations; operations with and factoring of polynomials; and solving simple quadratic equations. The Mathematical Practice Standards apply throughout, and together with the content, students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Because it is built on the middle grades standards, this is a more ambitious version of Algebra I than has generally been offered. Honors Algebra 1 is more rigorous than Algebra 1 because additional standards are integrated into the course. Students will take the Algebra I MCAP assessment during this course.

GEOMETRY
A322  Grade Level 10, 11  1 Geometry Mathematics Credit
The fundamental purpose of the course in Geometry is to formalize and extend students’ geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations and justifications of geometric relationships, moving towards formal mathematical arguments or proof. This exploration includes, but is not limited to, concepts of congruence, similarity, parallelism, perpendicularity, and proportion. The Mathematical Practice Standards apply throughout the course, and together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.
Prerequisite: Earned an Algebra I credit

HONORS GEOMETRY
A322H  Grade Level 9, 10  1 Geometry Mathematics Credit
The fundamental purpose of the course in Geometry is to formalize and extend students’ geometric experiences from the middle grades. Students explore more complex geometric situations and deepen their explanations and justifications of geometric relationships, moving towards formal mathematical arguments or proof. This exploration includes, but is not limited to, concepts of congruence, similarity, parallelism, perpendicularity, and proportion. The Mathematical Practice Standards apply throughout the course, and together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Honors Geometry is more rigorous than Geometry because additional standards are integrated into the course. 
Prerequisite: Earned an Algebra I credit

ALGEBRA IIA
A332AC  Grade Level 11  1 Mathematics Credit
Algebra IIA is paired with Algebra IIB. The two courses comprise all of the standards for Algebra II. Algebra IIA includes extending exponential functions and quadratic functions and equations. Also included is making connections to functions of higher-degree, and radical functions. It also includes topics on math SAT and the math college entrance exam. The Mathematical Practice Standards apply throughout the course, and together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Students will not take the Algebra II MCAP during this course.
Prerequisite: Earned an Algebra I credit and a Geometry credit
ALGEBRA IIB
A322BC   Grade Level 11, 12   1 Algebra II Mathematics Credit
Algebra IIB is paired with Algebra IIA. This second course engages students in the remainder of the standards for Algebra II. Algebra IIB includes extending functional knowledge to polynomial, rational, and trigonometric functions. Students also spend extensive time engaging in modeling real-world phenomena. It also includes topics on math SAT and the math college entrance exam. The Mathematical Practice Standards apply throughout the course, and together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Students will take the Algebra II MCAP assessment during this course for USMD Completer requirements.
Prerequisite: Earned an Algebra IIA credit

ALGEBRA II
A332   Grade Level 11, 12   1 Algebra II Mathematics Credit
Algebra II builds on students’ work with linear, quadratic, and exponential functions, to extend their repertoire of functions to include polynomial, rational, radical, functions, and trigonometric. Included in the study of these functions, students will also perform operations with rational and irrational expressions, factor rational expressions, apply properties of higher-degree equations, and perform operations with rational and irrational exponents. It also includes topics on math SAT and the math college entrance exam. The Mathematical Practice Standards apply throughout each course, and together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Students will take the Algebra II MCAP assessments during this course.
Prerequisite: Earned an Algebra I credit and a Geometry credit

HONORS ALGEBRA II
A332H   Grade Level 10, 11, 12   1 Algebra II Mathematics Credit
Honors Algebra II prepares students for advanced work in science and mathematics. It builds on students’ work with linear, quadratic, and exponential functions, to extend their repertoire of functions to include polynomial, rational, radical, functions, and trigonometric. Included in the study of these functions, students will also perform operations with rational and irrational expressions, factor rational expressions, apply properties of higher-degree equations, and perform operations with rational and irrational exponents. It also includes topics on math SAT and the math college entrance exam. Honors Algebra II is more rigorous than Algebra II because additional standards are integrated into the course. The Mathematical Practice Standards apply throughout each course, and together with the content standards, prescribe that students experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations. Students will take the Algebra II MCAP assessments during this course.
Prerequisite: Earned an Algebra I credit and a Geometry credit

INTRODUCTION TO STATISTICS
A336   Grade Level 11, 12   1 Mathematics Credit
Introduction to Statistics develops a basic understanding of statistical analysis and introduces the study of likely events. Topics of study include: concepts and methods used to collect, analyze, and draw conclusions from data as well as populations and samples, measures of central tendency and variability, hypothesis testing, presentation, and making statistical inferences. Additional probability topics include basic probability and statistics: discrete probability theory, odds and probabilities, probability trees, populations and samples, frequency tables.
Prerequisite: Earned an Algebra II credit

HONORS PRECALCULUS/TRIGONOMETRY
A338H   Grade Level 11, 12   1 Accelerated Credit
Honors PreCalculus/Trigonometry combine the study of Trigonometry, Elementary Functions, Analytic Geometry, and Mathematic Analysis topics as preparation for calculus. Topics include the study of complex numbers; polynomial, logarithmic, exponential, rational, right trigonometric, and circular functions, and their relations, inverses and graphs, as well as trigonometric identities and equations, vectors, the polar coordinate system, conic sections, mathematical induction, matrix algebra, sequences and series, and limits and continuity. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: Earned an Honors Algebra II credit

ADVANCED PLACEMENT STATISTICS
A336AP   Grade Level 11, 12   1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level statistics courses, AP Statistics courses introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, sampling and experimentation, anticipating patterns, and statistical inference. Technology is used extensively throughout the course as students are actively engaged in analyzing data from a wide variety of sources. Students will have assigned reading and/or other course-related activities prior to the beginning of this course. Students are expected to take the Advanced Placement Statistics exam.
Prerequisite: Earned an Honors PreCalculus/Trigonometry credit or Math Department Leader recommendation
ADVANCED PLACEMENT CALCULUS AB
A341AP  Grade Level 12  1 AP Credit
Following the College Board’s suggested curriculum designed to parallel college-level calculus courses, AP Calculus AB provides students with an understanding of the concepts of calculus and experience with its methods and applications. This course introduces calculus and include the following topics: functions, graphs, limits, and continuity; differential calculus (including definition, application, and computation of the derivative; derivative at a point; derivative as a function; and second derivatives); and integral calculus (including definite integrals and antidifferentiation).
Prerequisite: Earned an Honors PreCalculus/Trigonometry credit

ADVANCED PLACEMENT CALCULUS AB & BC
A339AP  Grade Level 12  2 AP Credits
Following the College Board’s suggested curriculum designed to parallel college-level calculus courses, AP Calculus BC provides students with an understanding of the concepts of calculus and experience with its methods and applications. This course covers all of the Calculus topics in AP Calculus AB as well as the following topics: Parametric, polar, and vector functions; applications of integrals and polynomial approximations and series, including series of Constants and Taylor series.
Prerequisite: Earned an Honors PreCalculus/Trigonometry credit

COLLEGE ALGEBRA
A346  Grade Level 11, 12  1 Accelerated Credit
College Algebra is a problem solving approach to the nature of mathematics as a logical system. The structure of the number system is developed axiomerically and extended by logical reasoning to cover essential algebraic topics: algebraic expression, functions, and theory of equations. This course will follow the same Scope and Sequence of Hagerstown Community College Math 101 College Algebra. This is a dual enrollment course.
Prerequisite: Earned an Algebra II credit

IB MATHEMATICS: APPLICATIONS AND INTERPRETATION SL
A337IB  Grade Level 11, 12  1 IB Credit
The IB Mathematics: Application and Interpretation (SL) course recognizes the increasing role that mathematics and technology play in a diverse range of fields in a data-rich world. As such, it emphasizes the meaning of mathematics in context by focusing on topics that are often used as applications or in mathematical modelling. To give this understanding a firm base, this course also includes topics that are traditionally part of a pre-university mathematics course such as calculus and statistics. The course makes extensive use of technology to allow students to explore and construct mathematical models. IB Mathematics: Applications and Interpretation will develop mathematical thinking, often in the context of a practical problem and using technology to justify conjectures. The internal assessment exploration will require students to demonstrate mathematical communication and the use of mathematics including relevance. Students must complete all assessment requirements to receive IBO recognition for completing this course.
Prerequisite: Earned an Honors PreCalculus/Trigonometry credit

IB MATHEMATICS: ANALYSIS AND APPROACHES SL
A340IB  Grade Level 11, 12  1 IB Credit
The IB Mathematics: Analysis and Approaches (SL) course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. This course includes topics that are both traditionally part of a pre-university mathematics course (for example, functions, trigonometry, calculus) as well as topics that are amenable to investigation, conjecture and proof, for instance the study of sequences and series. The course allows the use of technology, as fluency in relevant mathematical software and hand-held technology is important regardless of choice of course. However, IB Mathematics: Analysis and Approaches (SL) has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. IB Mathematics: Analysis and Approaches (SL) should be comfortable in the manipulation of algebraic expressions and enjoy the recognition of patterns and understand the mathematical generalization of these patterns. The internal assessment exploration will require students to demonstrate mathematical communication and the use of mathematics including relevance. Students must complete all assessment requirements to receive IBO recognition for completing this course.
Prerequisite: AP Calculus or IB Mathematics: Application and Interpretation SL

IB MATHEMATICS: ANALYSIS AND APPROACHES HL (PART 1)
A343IB  Grade Level 11, 12  1 IB Credit
The IB Mathematics: Analysis and Approaches (Part 1) (HL) course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. This course includes topics that are both traditionally part of a pre-university mathematics course (for example, functions, trigonometry, calculus) as well as topics that are amenable to investigation, conjecture and proof, for instance the study of sequences and series including proof by induction. The course allows the use of technology, as fluency in relevant mathematical software and hand-held technology is important regardless of choice of course. However, IB Mathematics: Analysis and Approaches (Part 1) (HL) has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. IB Mathematics: Analysis and Approaches (Part 1) (HL) students should be comfortable in the manipulation of algebraic expressions and enjoy the recognition of patterns and understand the mathematical generalization of these patterns. The internal assessment exploration will require students to demonstrate mathematical communication and the use of mathematics including relevance, sophistication, with clarity of logic and language.
Prerequisite: AP Calculus
The IB Mathematics: Analysis and Approaches (Part 2) (HL) course recognizes the need for analytical expertise in a world where innovation is increasingly dependent on a deep understanding of mathematics. This course includes topics that are both traditionally part of a pre-university mathematics course (for example, functions, trigonometry, calculus) as well as topics that are amenable to investigation, conjecture and proof, for instance the study of sequences and series including proof by induction at HL. The course allows the use of technology, as fluency in relevant mathematical software and hand-held technology is important regardless of choice of course. However, IB Mathematics: Analysis and Approaches (Part 2) (HL) has a strong emphasis on the ability to construct, communicate and justify correct mathematical arguments. IB Mathematics: Analysis and Approaches (Part 2) (HL) students should be comfortable in the manipulation of algebraic expressions and enjoy the recognition of patterns and understand the mathematical generalization of these patterns. IB Mathematics: Analysis and Approaches (Part 2) (HL) students will have strong algebraic skills and the ability to understand simple proof. They will be students who enjoy spending time with problems and get pleasure and satisfaction from solving challenging problems. The internal assessment exploration will require students to demonstrate mathematical communication and the use of mathematics including relevance, sophistication, with clarity of logic and language. Students must complete all assessment requirements to receive IBO recognition for completing this course.

**Prerequisite:** AP Calculus

**FINANCIAL LITERACY**
A839  Grade Level 11, 12  1 Mathematics Credit
Students will study consumer decision making, consumer protection skills, how credit works, the different types and functions of financial institutions, investing, savings, insurance, paychecks and taxes, housing costs, and using spending plans to accomplish personal financial goals. In each unit students will learn and practice the application of mathematics through the integration of a consumer mathematics curriculum into the lessons. Students will participate in a personal finance management simulation as part of the culminating activity for the course. Financial Literacy does not meet the requirements as a fourth math credit for meeting USMD Completer requirements.

**MATH TRANSITION**
A300SM  Grade Level 12  1 Mathematics Credit
The Math Transition course is a semester long mathematics course designed to hone skills developed in Algebra II and strengthen underlying skills necessary with graphing, evaluating, and interpreting functions. Students will review and build upon algebra concepts beginning with linear, quadratic, and exponential functions and extend through rational and radical functions. Students will retake the Algebra II MCAP exam or a College and Career Readiness assessment during this course in order to meet the College and Career Readiness requirement for math.

**Prerequisite:** Must be a senior and have earned an Algebra II credit but not have passed the Algebra II MCAP exam.
The Computer Science Program provides honors and Advanced Placement computer science courses. Foundations of Computer Science develops students’ computational thinking practices. The Advanced Placement courses prepare students to take the Advanced Placement exams. Interdisciplinary skills needed to solve real world problems are provided to students through an experience-based curriculum. Collaborative learning and project work are an integral and necessary part of each course. The recommended sequence for the Computer Science completer: Foundations of Computer Science, AP Computer Science Principles, AP Computer Science A, then Advanced C++ or another college-level computer science course or the Project Lead The Way Computer Science pathway sequence available at Williamsport High School.
FOUNDATIONS OF COMPUTER SCIENCE
A350H Grade Level 9, 10, 11, 12 1 Elective Credit
Foundations of Computer Science, the first course in the computer science completer, 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. The goal is to develop in students the computational thinking practices of algorithm development, problem solving and programming within the context of problems that are relevant. Students will also be introduced to topics such as interface design, limits of computers, and societal and ethical issues. This course includes a broad range of topics in computing, including robotics; programming in several languages such as Processing and Java; and cyber security. Available at BHS, BISFA, CSHS, HHS, NHHS, SHHS, and SHS.

IB COMPUTER SCIENCE (SL)
A357IB Grade Level 11, 12 1 IB Credit
IB Computer Science, which is offered only at North Hagerstown High School, focuses on software development, fundamentals of computer systems, computer mathematics, algorithms, and the relationship between computing systems and society. Students are expected to acquire mastery of specified aspects of the Java programming language. An emphasis is placed on the use of a logical approach and analytical thinking while using the computer to solve problems. Students will take the IB Computer Science exam at the conclusion of the course. Students must complete all assessment requirements to receive IBO recognition for completing this course.

ADVANCED PLACEMENT COMPUTER SCIENCE A
A358AP Grade Level 11, 12 Either 1 AP CTE Credit or 1 AP Mathematics Credit
AP Computer Science A offers students the opportunity to expand their knowledge in the field of computer science. The topics included in this course closely parallel those of an introductory course for computer science majors at most colleges and universities. This course is designed for the highly motivated learner. Exercises cover rigorous problem definition, program implementation strategies, and investigations into the current AP Case Study.
Prerequisite: Successful completion of Foundations of Computer Science and Advanced Placement Computer Science Principles, completion of or concurrent enrollment in Algebra II, and teacher recommendation

ADVANCED PLACEMENT COMPUTER SCIENCE PRINCIPLES
A352AP Grade Level 10, 11, 12 1 AP Credit
AP Computer Science Principles advances students’ understanding of the technical aspects of computing, including programming and algorithm design, computer system organization and operation, and data representation and information organization. This course includes the use of several programming languages, based on the specific project or problem students must solve. Students in this course are prepared to take the AP Computer Science Principles exam.

ADVANCED C++
A361 Grade Level 11, 12 1 Advanced Credit
This college-level course continues to introduce students to object-oriented programming using C++ and Visual C++. Students learn OOP concepts such as classes, friends and templates and use these to build a program designed to run under a Microsoft Windows environment. Using a hands-on approach, students have the opportunity to design, code and test object-oriented applications. Additional time outside of class will be necessary to write programs. This course is the culminating capstone course for the Computer Science completer.

PLTW COMPUTER SCIENCE ESSENTIALS
A362 Grade Level 9, 10, 11, 12 1 Elective Credit
Essentials uses Python as a primary tool to incorporate multiple platforms and programming languages for computation. This course will introduce critical thinking about computing, and incorporate professional tools that foster collaboration. This course will provide the foundation for the AP Computer Science courses, as well as the Cyber Security course. Available at WHS.

PLTW ADVANCED PLACEMENT COMPUTER SCIENCE PRINCIPLES
A352AP Grade Level 10, 11, 12 1 AP Credit
AP Computer Science Principles advances students’ understanding of the technical aspects of computing, including programming and algorithm design, computer system organization and operation, and data representation and information organization. This course includes the use of several programming languages, based on the specific project or problem students must solve. Students in this course are prepared to take the AP Computer Science Principles exam. Available at WHS.
PLTW ADVANCED PLACEMENT COMPUTER SCIENCE A
A358AP  Grade Level 11, 12  Either 1 AP CTE Credit or 1 AP Mathematics Credit
AP Computer Science A offers students the opportunity to expand their knowledge in the field of computer science. The topics included in this course closely parallel those of an introductory course for computer science majors at most colleges and universities. This course is designed for the highly motivated learner. Exercises cover rigorous problem definition, program implementation strategies, and investigations into the current AP Case Study. Available at WHS.

Prerequisite: Successful completion of Foundations of Computer Science and Advanced Placement Computer Science Principles, completion of or concurrent enrollment in Algebra II, and teacher recommendation

PLTW CYBERSECURITY
A363  Grade Level 11, 12  1 Elective Credit
Cybersecurity allows students to learn the tools and methods of cybersecurity and allows students to design solutions that will allow people to share resources while protecting privacy. This will teach how computational resources are attacked, and teach methods to problem solve and prevent. This also allows students the ability to design and implement protections and alerts to keep information safe. This course will also teach students how information is shared, and the safeguards that need to be in place for security measures. Available at WHS.

IB INFORMATION TECHNOLOGY IN A GLOBAL SOCIETY (ITGS) STANDARD LEVEL (SL)
A200IB  Grade Level 11, 12  1 IB Credit
The IB information technology in a global society (ITGS) standard level (SL) course is a group 3 elective course that may be taken to fulfill the group 6 requirement for the IB Diploma. ITGS is the study and evaluation of the impacts of information technology (IT) on individuals and society. It explores the advantages and disadvantages of the access and use of digitized information at the local and global level. ITGS provides a framework for the student to make informed judgments and decisions about the use of IT within social contexts. Students will complete strands based on social and ethical significance, application to specified scenarios, and IT systems before completing a project developing an original IT product for a specified client. Students will complete the required internal assessments and take the IB ITGS exam at the end of the course.

ROBOTICS, MICROPROCESSORS AND MICROCONTROLLERS
A877/A877SM  Grade Level 9, 10, 11, 12  1 Elective Credit
In this course, students will study the basics of microprocessors/microcontrollers and their applications in industry. A number of topics are covered, including: introduction to C programming language, assembly language, logic gates, hardware configurations, pin functions, modes of operation, and basic input/output timing, control and memories. The goal is for students to be able to design, analyze, and program microprocessors – to be used in a functioning robot. Students will be encouraged to participate in a Vex Robotics competition as an application of the skills obtained during the class. This is being offered as an elective and is not part of a four course completer pathway.
Science Course Descriptions

Students are required to earn a minimum of three credits in science in order to meet the requirements to earn a high school diploma. All science courses except the internship program (A400) qualify for graduation. One of those credits must be Biology. All students must pass all applicable Maryland assessments.
ADVANCED RESEARCH SEMINAR
A299  Grade Level 11, 12  1 Accelerated Credit
This seminar provides students the opportunity to extend their understanding and application of prior learning through an integrated research or service learning project. Students will be expected to use high level reading, writing, research and communication skills to identify and develop a research question; structure and carry out research protocols; analyze and summarize information and data; and create a final research product. Students will work under the direction of an appropriate teacher mentor. All students in this seminar will be expected to present their outcomes in a public forum.

SCIENCE INTERN PROGRAM
A400  Grade Level 12  Up to 4 Accelerated Elective Credits
Students participating in the Werner H. Kirsten Science Intern Program at the National Cancer Institute - Frederick or in the Introduction to Applied Biotechnology Research course as part of the InnovaBio-MD program at Hagerstown Community College are eligible to earn elective science credits for the experiences. Each of these unpaid internship placements is competitively awarded through formal application processes. Students must take part in safety and skills training and then work with research scientists to explore real-world problems. Some students may be allowed to design and conduct their own scientific research as an extension of the program (students are awarded accelerated science elective credits based on the program expectations, the amount of time dedicated to the internship, and the successful completion of the laboratory experiences).
Prerequisite: School pre-approval is required as part of the application process. Applicants are expected to have completed or to be concurrently enrolled in AP level mathematics, science, and/or technology programs

FORENSIC SCIENCE
A401  Grade Level 11, 12  1 Accelerated Credit
Forensic Science is a multi-disciplinary and laboratory-based science course designed to provide an elective science credit for senior students. Topics are drawn from content in chemistry, physics, biology, and earth science with heavy emphasis on problem-solving and the skills and processes of science. Applied technology and mathematics are integral course components. Students develop their observational, analytical, and organizational skills in working with complex problems involving numerical data, evidence, and logical reasoning.
Prerequisite: Three science credits

BIOLOGY
A409  Grade Level 9, 10  1 Biology Credit
Biology is a laboratory-based course that presents fundamental concepts about cells, organisms, life processes, and the interactions between living things and their environment. Dissection of vertebrate organisms is included. This course provides students with information necessary to be educated citizens in a scientific world. This course fulfills the biology requirement for graduation and is preparation for the Maryland Integrated Science Assessment.

HONORS BIOLOGY
A409H  Grade Level 9, 10  1 Biology Credit
Honors Biology is a challenging laboratory-based course that presents detailed information about cells, organisms, life processes, and the interactions between living things and their environment. This course provides students with rigorous information necessary to be educated citizens in a scientific world. Dissection of vertebrate and invertebrate organisms is included. Honors Biology is designed for ninth and tenth grade students with high ability. This course fulfills the biology requirement for graduation and is preparation for the Maryland Integrated Science Assessment. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.

HONORS CHEMISTRY
A411H  Grade Level 9, 10, 11, 12  1 Science Credit
Honors Chemistry is a challenging lab-based course that focuses on the study of matter including atomic structure, bonding, periodicity, chemical formulas, chemical equations, chemical relationships, and energy. These topics are studied theoretically, descriptively, and through laboratory experiences. This course is designed to provide a foundation for students pursuing college training or for those with particular interests in science. Students in this course should have demonstrated success in previous science courses. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class. This course fulfills 1 science requirement for graduation and is preparation for the Maryland Integrated Science Assessment.
Prerequisite: Algebra I

EARTH AND SPACE SCIENCE
A413  Grade Level 9, 10, 11  1 Science Credit
Earth and Space Science is an introductory lab-based course that focuses on the fundamentals of the various systems whose interactions are responsible for the working of planet Earth. The topics of meteorology, climatology, oceanography, mineralogy, astronomy, geology, geomorphology, and volcanism are included. Activities include mapping, laboratory experiences, and field trips. This course fulfills 1 science credit requirement for graduation and is preparation for the Maryland Integrated Science Assessment.
HONORS EARTH AND SPACE SCIENCE
A413H  Grade Level 9, 10, 11  1 Science Credit
Honors Earth and Space Science is a challenging course that focuses on the various systems whose interactions are responsible for the working of planet Earth. Topics include meteorology, climatology, oceanography, mineralogy, astronomy, geology, geomorphology, and volcanism. This course places emphasis on earth science phenomena using textbooks, maps, classroom activities, and laboratory experiences and field trips. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.

HONORS PHYSICS
A419H  Grade Level 10, 11, 12  1 Science Credit
Honors Physics is a challenging lab-based course in the study of energy and its interaction with matter. The following aspects of physics are covered: mechanics: motion, forces, work, heat and sound; electricity and electronics: electric forces and fields, magnetic forces and fields, alternating and direct current, circuits; optics: electromagnetic radiation and wave nature; and atomic physics: atomic structure and nuclear forces. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class. This course fulfills 1 science credit requirement for graduation and is preparation for the Maryland Integrated Science Assessment.

Prerequisite: Algebra I and Geometry

INTEGRATED PHYSICS AND CHEMISTRY
A420     1 Science Credit
Integrated Physics and Chemistry is a lab-based science course in which students will focus on the standards for high school chemistry and physics including: the structure and properties of matter, chemical reactions, nuclear processes, forces, motion and interactions, conservation and transfer of energy, energy in chemical processes, wave properties, electromagnetic radiation, and applications of technology and instrumentation. Learning science concepts at a conceptual level will be linked to the crosscutting concepts of science and be learned through science and engineering practices. This course fulfills 1 science credit requirement for graduation and is preparation for the Maryland Integrated Science Assessment.

Prerequisites: None

ADVANCED PLACEMENT BIOLOGY
A421AP  Grade Level 11, 12  1 AP Credits
Adhering to the curricula recommended by the College Board and designed to parallel college-level introductory biology courses, AP Biology courses emphasize four general concepts: evolution; cellular processes (energy and communication); genetics and information transfer; and interactions of biological systems. For each concept, these courses emphasize the development of scientific inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. AP Biology courses include college-level laboratory investigations.

Prerequisites: Honors Biology, Honors Chemistry, and Algebra II

ADVANCED PLACEMENT CHEMISTRY
A423AP  Grade Level 11, 12  1 AP Credits
Following the curricula recommended by the College Board, AP Chemistry courses usually follow high school chemistry and second-year algebra. Concepts covered may include the structure of matter; bonding of intermolecular forces; chemical reactions; kinetics; thermodynamics; and chemical equilibrium. For each concept, these courses emphasize the development of scientific inquiry and reasoning skills, such as designing a plan for collecting data, analyzing data, applying mathematical routines, and connecting concepts in and across domains. AP Chemistry courses include college-level laboratory investigations.

Prerequisites: Honors Chemistry and completion or concurrent enrollment in Algebra II

ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE
A424AP  Grade Level 11, 12  1 AP Credit
AP Environmental Science courses are designed by the College Board to provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, identify and analyze environmental problems (both natural and human made), evaluate the relative risks associated with the problems, and examine alternative solutions for resolving and/or preventing them. Topics covered include science as a process, ecological processes and energy conversions, earth as an interconnected system, the impact of humans on natural systems, cultural and societal contexts of environmental problems, and the development of practices that will ensure sustainable systems.

Prerequisite: Biology or Honors Biology, Chemistry or Honors Chemistry, and Algebra II

ADVANCED ANATOMY AND PHYSIOLOGY
A427  Grade Level 11, 12  1 Accelerated Credit
Advanced Anatomy and Physiology is a science elective at some schools. Students use a college-level, investigative approach to develop an understanding of the basic structure and function of the human body. Using a combination of lecture, laboratory, research and field trips, this course is designed for those students considering a career in allied health fields. The dissection of a cat is a major laboratory activity.

Prerequisite: Biology or Honors Biology and Chemistry or Honors Chemistry and Algebra II
Advanced Bio-Medical Science is a science elective credit and second level course for the Medical Careers Academy at North Hagerstown High School. This course incorporates components of medical psychology and ethics, forensic science, and biotechnology as well as more complete study of the structure and function of the human body and medical careers. This course offers expanded opportunities for application of high-level science skills to real-world situations.

**Prerequisite:** Advanced Anatomy and Physiology

**ADVANCED PLACEMENT PHYSICS 1**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Grade Level</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A439AP</td>
<td>Advanced Placement Physics 1</td>
<td>Grade Level 11, 12</td>
<td>1 AP Credit</td>
</tr>
</tbody>
</table>

Designed by the College Board to parallel first-semester college-level courses in algebra-based physics, AP Physics 1 courses focus on Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory circuits. These courses may also include college-level laboratory investigations.

**Prerequisites:** Completion of Algebra II and Honors Physics or with teacher recommendation

**ADVANCED PLACEMENT PHYSICS 2**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Grade Level</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A440AP</td>
<td>Advanced Placement Physics 2</td>
<td>Grade Level 11, 12</td>
<td>1 AP Credit</td>
</tr>
</tbody>
</table>

Designed by the College Board to parallel second-semester college-level courses in algebra-based physics, AP Physics 2 courses cover 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. These courses may also include college-level laboratory investigations.

**Prerequisites:** Completion of Algebra II and Advanced Placement Physics I

**IB BIOLOGY (PART 1) (HL, SL)**

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<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Grade Level</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A421IB</td>
<td>IB Biology (Part 1) (HL, SL)</td>
<td>Grade Level 11, 12</td>
<td>1 IB Credit</td>
</tr>
</tbody>
</table>

IB Biology courses prepare students to take the International Baccalaureate Biology exams at either the standard or higher level. In keeping with the general aim of IB Experimental Sciences courses, IB Biology promotes understanding of the facts, principles, and concepts underlying the biological field; critical analysis, evaluation, and generation of 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. IB Biology (Part 1) is a year-long course in the IB Biology sequence at North Hagerstown High School and prepares students to take the IB Biology Higher Level or Standard Level exam as seniors. IB Biology is designed to give students a secure knowledge of a limited body of facts and a broad understanding of the field of biology including the study of statistical analysis, cells, the chemistry of life, genetics, ecology and evolution, and human health. Students develop an understanding and appreciation of the processes and applications of global biology, and the impact of biological science on the culture and society of the world is emphasized. Students define problems, identify viable solutions, and research risks and benefits. They reach decisions based on scientifically proven methods and present their findings coherently and logically. They become scientifically literate world citizens able to make important life decisions. The students in the course will be assessed with the standard IB assessment methods and are expected to continue into IB Biology (Part 2).

**Prerequisite:** Honors Biology and Honors Chemistry and Algebra II

**IB BIOLOGY (PART 2) (HL, SL)**

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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Grade Level</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A422IB</td>
<td>IB Biology (Part 2) (HL, SL)</td>
<td>Grade Level 12</td>
<td>1 IB Credit</td>
</tr>
</tbody>
</table>

IB Biology (Part 2) is the concluding course in the IB Biology sequence at NHHS and prepares students to take the IB Biology Higher Level or Standard Level exam as seniors. Students take the IB Biology Higher or Standard Level exam at the conclusion of the course. Students must complete all assessment requirements to receive IBO recognition for completing this course. Students are required to participate in an IBO Group 4 project with students from the other IB science courses within the school.

**Prerequisite:** IB Biology (Part 1)

**IB PHYSICS (PART 1) (SL)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Grade Level</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A429IB</td>
<td>IB Physics (Part 1) (SL)</td>
<td>Grade Level 10, 11, 12</td>
<td>1 IB Credit</td>
</tr>
</tbody>
</table>

IB Physics courses prepare students to take the International Baccalaureate Physics exams at either the standard 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 hypotheses; 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. IB Physics (Part 1) is the first course in the IB Physics sequence at North Hagerstown High School preparing students to take the IB Physics Standard or Higher Level exam as juniors. IB Physics at the Standard or Higher is a course that develops a search for order and predictability in classical mechanics, thermodynamics, and electromagnetism and leads to the necessary extension into the realms of atomic and nuclear physics, quantum physics, and relativity. Honing mathematical and problem solving skills is an integral part of comprehending our physical world in this course. Students will be assessed with the standard IB assessment methods and are expected to continue into IB Physics (Part 2). Students must complete all assessment requirements to receive IBO recognition for completing this course.

**Prerequisite:** Completion or concurrent enrollment in Precalculus or Trigonometry
IB PHYSICS (PART 2) (SL)
A430IB  Grade Level 11, 12  1 IB Credit
IB Physics (Part 2) is the concluding course in the IB Physics sequence at North Hagerstown High School preparing students to take the IB Physics Standard Level exam. The students in the course will be assessed with the standard IB assessment methods. Students take the IB Physics Standard Level exam at the conclusion of the course. Students are required to participate in an IBO Group 4 project with students from the other IB science courses within the school.
Prerequisite: IB Physics (Part 1)

IB PHYSICS HIGHER LEVEL (HL)
A431IB  Grade Level 12  1 IB Credit
IB Physics courses prepare students to take the International Baccalaureate Physics exams at either the standard 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 hypotheses; 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. IB Physics Higher Level is designed for students who wish to continue their studies of Physics. IB Physics Higher Level students must have earned an IB Physics Standard Level of a 4, 5, 6 or 7. This course deepens students’ understanding of: Measurements and Uncertainties, Mechanics, Thermal Physics, Waves, Electricity and Magnetism, Circular Motion and Gravitation, Atomic, Nuclear and Particle Physics, Energy Production, Relativity, Engineering Physics, Imaging, and Astrophysics while requiring new investigation into Wave Phenomena, Fields, Electromagnetic Induction and Quantum and Nuclear Physics. The course follows IB protocol for internal and external assessments and students take the IB Physics Higher Level exam at the conclusion of the course. Students must complete all assessment requirements including participation in an IBO Group 4 project with students from other IB science courses within the school to receive IBO recognition for completing the course.
Prerequisite: IB Physics Part 1, 2 with a score of 4 or greater.

IB SPORTS, EXERCISE, AND HEALTH SCIENCE (SL)
A713IB  Grade Level 11, 12  1 IB Credit
The IB course in sports, exercise and health science standard level (SL) is a group 4 elective course that may be taken to fulfill the group 6 requirement for the IB Diploma. This course involves the study of the science that underpins physical performance. The course incorporates the traditional disciplines of anatomy and physiology, biomechanics, psychology, and nutrition. Students cover a range of topics and carry out practical (experimental) investigations in both laboratory and field settings. This provides an opportunity to acquire the knowledge and understanding necessary to apply scientific principles and critically analyze human performance. Where relevant, the course will address issues of international dimensions and ethics by considering sport, exercise, and health relative to the individual in a global context. Students will complete the required internal assessments and take the IB sports exercise and health science exam at the end of the course.

IB CHEMISTRY (PART 1) (SL)
A423IB/A423IBSM  Grade Level 10, 11, 12  1 IB Credit
IB Chemistry courses prepare students to take the International Baccalaureate Chemistry exams at either the standard or higher level. IB Chemistry (Part 1) is the first course in the IB Chemistry sequence at North Hagerstown High School preparing students to take the IB Chemistry Standard Level exam. IB Chemistry at the standard level is a course that combines academic study with the acquisition of practical and investigational skills. 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 Stoichiometric Relationships, Atomic Structure, Periodicity, Chemical Bonding/Structure, Energetics/Thermochemistry, Chemical Kinetics, Equilibrium, Acids/Bases, Redox Processes, Organic Chemistry, and Measurement/Data Processing. Students will be assessed with the standard IB assessment methods and are expected to continue into IB Chemistry (Part 2). Students must complete all assessment requirements to receive IBO recognition for completing this course.
Prerequisite: Completion or concurrent enrollment in Honors Pre-Calculus/Trigonometry

IB CHEMISTRY (PART 2) (SL)
A424IB  Grade Level 11, 12  1 IB Credit
IB Chemistry (Part 2) is the concluding course in the IB Chemistry sequence at North Hagerstown High School preparing students to take the IB Chemistry Standard Level exam. Students will study the core topic as well as one additional option topic of Materials, Biochemistry, Energy, or Medicinal Chemistry as selected by the teacher. The students in the course will be assessed with the standard IB assessment methods. Students take the IB Chemistry Standard Level exam at the conclusion of the course.
Prerequisite: IB Chemistry (Part 1)
MARINE SCIENCE/OCEANOGRAPHY
A414/A414SM  Grade Level 12  1 Accelerated Credit
Marine Science is a multidisciplinary, laboratory-based science course designed to provide an elective science credit for senior students. In this class, students will seek to explain phenomena related to the physical structure and chemistry of the ocean, the diversity of ocean life, marine ecology, and the impact of oceans on climate and weather. A variety of marine environments including estuaries, tide pools, reefs, vents and oceanic zones will be studied in this course. The course will also explore the ecological relationships between marine organisms, their habitats, and human interactions with marine ecosystems.

Prerequisite: Three science credits

IB ENVIRONMENTAL SYSTEMS AND SOCIETIES (SL)
A444IB/A444BSM  Grade Level 11, 12  1 IB Credit
IB ESS is an interdisciplinary course (Science, Social Studies) that is offered only at standard level (SL). As an interdisciplinary course, ESS is designed to combine knowledge, methods, and techniques to understand the nature and functioning of natural systems, the relationships that affect environmental equilibrium, and human impact on the biosphere. ESS is a complex course, requiring a diverse set of skills from its students. It is firmly grounded in both a scientific exploration of environmental systems in 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. The interdisciplinary nature of the course requires a broad skill set from students and includes the ability to perform research and investigations and to participate in philosophical discussion. The course requires a systems approach to environmental understanding and problem-solving, and promotes holistic thinking about environmental issues. It is recognized that to understand the environmental issues of the 21st century and suggest suitable management solutions, both the human and environmental aspects must be understood. Students should be encouraged to develop solutions from a personal to a community and to a global scale. Through the exploration of cause and effect, the course investigates how values interact with choices and actions, resulting in a range of environmental impacts. Students develop an understanding that the connections between environmental systems and societies are diverse, varied and dynamic. The complexity of these interactions challenges those working towards understanding the actions required for effective guardianship of the planet and sustainable and equitable use of shared resources.
World language instruction enables students to communicate in a second language in a culturally appropriate manner by integrating communication skills with higher order thinking skills and creativity. World language instruction and assessment use a proficiency-based approach, which focuses on what students can do with the language and to what degree they are able to function in the language. Instruction and assessment use authentic tasks that are performance-based. The study of culture is an integral part of the curriculum; it sets the stage for language use and heightens students’ sensitivity to and appreciation for diverse groups of people, cultures, and customs.

The University of Maryland Completer program requires that students study a minimum of two years of the same language, while some colleges prefer three to four years of language study.

Please speak with your School Counseling Office for your school’s language offerings.
WORLD AND CLASSICAL LANGUAGE COURSE OF SEQUENCE

Spanish AP Literature or IB (HL)
1 AP or IB credit

↑

AP or IB (SL) Part 2 Language
1 credit

↑

Honors Level IV or IB (SL) Part 1
Accelerated Credit

↑

Honors Level III
Accelerated Credit

↑

Honors Level II or Level II

↑

Honors Level I or Level I
## WORLD LANGUAGES

### Level I  
Grade Level 9, 10, 11, 12  
1 World Language Credit

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>French I</td>
<td>A502</td>
</tr>
<tr>
<td>Honors French I</td>
<td>A502H</td>
</tr>
<tr>
<td>German I</td>
<td>A512</td>
</tr>
<tr>
<td>Honors German I</td>
<td>A512H</td>
</tr>
<tr>
<td>Latin I</td>
<td>A522</td>
</tr>
<tr>
<td>Honors Latin I</td>
<td>A522H</td>
</tr>
<tr>
<td>Spanish I</td>
<td>A532</td>
</tr>
<tr>
<td>Honors Spanish I</td>
<td>A532H</td>
</tr>
<tr>
<td>Honors Japanese I</td>
<td>A552H</td>
</tr>
<tr>
<td>Honors Italian I</td>
<td>A572H</td>
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</tbody>
</table>

Designed to introduce students to language and culture, level I world language courses prepare students to communicate authentically in the target language by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information on a variety of topics. They introduce the relationships among the products, practices, and perspectives of the target cultures. Students will end the course at an ACTFL novice mid proficiency level.

### Level II  
Grade Level 9, 10, 11, 12  
1 World Language Credit

<table>
<thead>
<tr>
<th>Course</th>
<th>Code</th>
</tr>
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<tbody>
<tr>
<td>French II</td>
<td>A504</td>
</tr>
<tr>
<td>Honors French II</td>
<td>A504H</td>
</tr>
<tr>
<td>German II</td>
<td>A514</td>
</tr>
<tr>
<td>Honors German II</td>
<td>A514H</td>
</tr>
<tr>
<td>Latin II</td>
<td>A524</td>
</tr>
<tr>
<td>Honors Latin II</td>
<td>A524H</td>
</tr>
<tr>
<td>Spanish II</td>
<td>A534</td>
</tr>
<tr>
<td>Honors Spanish II</td>
<td>A534H</td>
</tr>
<tr>
<td>Honors Japanese II</td>
<td>A554H</td>
</tr>
</tbody>
</table>

Level II world language courses build upon skills developed in level I, preparing students to communicate authentically in the target language by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information on concrete topics. Level II world language courses introduce the relationships among the products, practices, and perspectives of the target cultures. Students will end the course at an ACTFL novice high proficiency level.

### Level III  
Grade Level 9, 10, 11, 12  
1 Accelerated World Language Credit

<table>
<thead>
<tr>
<th>Course</th>
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</thead>
<tbody>
<tr>
<td>Honors French III</td>
<td>A506H</td>
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<tr>
<td>Honors German III</td>
<td>A516H</td>
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<td>Honors Latin III</td>
<td>A526H</td>
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<tr>
<td>Honors Spanish III</td>
<td>A536H</td>
</tr>
<tr>
<td>Honors Japanese III</td>
<td>A556H</td>
</tr>
</tbody>
</table>

Level III world language courses prepare students to communicate authentically in the target language by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information, concepts, and ideas on a variety of topics, including connections to other subject areas. These courses expand students' knowledge of relationships among the products, practices, and perspectives of target language countries and cultures. Students will end the course at an ACTFL intermediate low proficiency level.

### Level IV  
Grade Level 10, 11, 12  
1 Accelerated World Language Credit

<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Honors French IV</td>
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</tr>
<tr>
<td>Honors German IV</td>
<td>A517H</td>
</tr>
<tr>
<td>Honors Latin IV</td>
<td>A527H</td>
</tr>
<tr>
<td>Honors Spanish IV</td>
<td>A537H</td>
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<tr>
<td>Honors Japanese IV</td>
<td>A557H</td>
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Level IV world language courses prepare students to communicate authentically in the target language by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information, concepts, and ideas on a variety of topics, including connections to other subject areas. Level IV courses promote students' understanding of the relationships among the products, practices, and perspectives of target language countries and cultures. Students will end the course at an ACTFL intermediate low/mid proficiency level.
ADVANCED PLACEMENT LANGUAGE AND CULTURE

Prerequisite: Honors IV
Advanced Placement French Language and Culture
A508AP    Grade Level 10, 11, 12    1 AP Credit
Advanced Placement German Language and Culture
A518AP    Grade Level 10, 11, 12    1 AP Credit
Advanced Placement Spanish Language and Culture
A538AP    Grade Level 10, 11, 12    1 AP Credit
Advanced Placement Japanese Language and Culture
A558AP  Grade Level 10, 11, 12    1 AP Credit

Designed by the College Board to parallel third-year college-level courses in World language, AP Language and Culture courses build upon prior knowledge and develop students' ability to express ideas, exchange opinions, and present information in the target language both orally and in writing. These courses also help students understand and interpret the written and spoken target language. In addition, students explore the culture of the target language’s historical and contemporary contexts. Students will end the course at an ACTFL intermediate mid/high proficiency level.

ADVANCED PLACEMENT LATIN VERGIL
A530AP    Grade Level 11, 12    1 AP Credit

Designed to parallel advanced college-level courses in Latin studies, AP Latin courses build upon and increase knowledge of Latin, enabling students to read the language with comprehension, to accurately translate Latin into English, and to appreciate the stylistic literary techniques used by the authors. AP Latin courses also include study of the political, social, and cultural background of the literary works and their authors, as well as their influence on later literature.
Prerequisite: Honors Latin IV

ADVANCED PLACEMENT SPANISH LITERATURE AND CULTURE
Prerequisite: AP Spanish Language and Culture
Advanced Placement Spanish Literature
A540AP    Grade Level 10, 11, 12    1 AP Credit

Designed by the College Board to parallel college-level Introduction to Hispanic Literature courses, AP Spanish Literature and Culture courses cover representative works from the literatures of Spain and Spanish America, encompassing all genres. The courses build students’ Spanish language proficiency, with special attention given to critical opinions and literary analyses in oral and written Spanish. Students are encouraged to relate the texts to their cultural contexts. Students will end the course at an ACTFL intermediate high/advanced low proficiency level.

INTERNATIONAL BACCALAUREATE

INTERNATIONAL BACCALAUREATE LANGUAGE PART 1 STANDARD LEVEL (SL)
Grade Level 11, 12
Prerequisite: Honors III at NHHS
IB FRENCH (PART 1) (SL) A510IB
IB GERMAN (PART 1) (SL) A518IB
IB SPANISH (PART 1) (SL) A540IB

IB Language B—World Language courses prepare students to take the International Baccalaureate Language B exams. These courses focus on improving students’ accuracy and fluency in oral and written communication (usually in the students’ “second” language).

INTERNATIONAL BACCALAUREATE LANGUAGE PART 2 STANDARD LEVEL (SL)
Grade 11, 12
Prerequisite: IB SL (Part 1)
IB FRENCH (PART 2) (SL) A511IB
IB GERMAN (PART 2) (SL) A519IB
IB SPANISH (PART 2) (SL) A541IB

This concluding course prepares students to take the IB Language B—World Language courses prepare students to take the International Baccalaureate Language B exams. These courses focus on improving students’ accuracy and fluency in oral and written communication (usually in the students’ “second” language).
INTERNATIONAL BACCALAUREATE LANGUAGE HIGHER LEVEL (HL)  
Grade 11, 12  
Prerequisite: IB SL (Part 2)

IB FRENCH (HL) A522IB  
IB GERMAN (HL) A520IB  
IB SPANISH (HL) A560IB

This higher level course prepares students to take the IB Language B—World Language courses prepare students to take the International Baccalaureate Language B exams. These courses focus on improving students’ accuracy and fluency in oral and written communication (usually in the students’ “second” language). At HL, students are required to study two literary works originally written in the target language, and are expected to extend the range and complexity of the language they use and understand in order to communicate.

INDEPENDENT STUDY

HONORS LANGUAGE INDEPENDENT STUDY  
A511H  Grade Level 11, 12  1 World Language Credit  
Language Independent Study offers students an independent study of language, literature, and cultures. It is designed to improve a student’s ability to speak and to understand spoken and written in a variety of diverse situations with native speakers and authentic materials. This course improves the student’s ability to read for social and literary needs and to speak and write with increased accuracy and complexity. Students read for social and literary needs. Students explore topics related to history, literature, and the arts. Students in Independent Study are scheduled with students in Levels I, II, III, IV or Advanced Placement.
  A511H--French, Prerequisite Honors French IV  
  A519H--German, Prerequisite Honors German IV  
  A560H--Japanese, Prerequisite Honors Japanese IV  
  A541H--Spanish, Prerequisite Honors Spanish IV

LATIN INDEPENDENT STUDY  
A531H  Grade Level 10, 11, 12  1 World Language Credit  
Latin Independent Study students read and translate rhetorical selection of Epic Literature and poetry. Students develop an understanding of the Roman legal system, civilization, and culture. Understanding of the art of rhetoric is stressed along with complex grammatical structure and literary terms. Students recognize and analyze the influence of classical culture on the modern world. Students in Latin Independent Study are scheduled with students in Honors Latin I, II, III, IV or Advanced Placement Latin Vergil. Latin Independent Study students may choose to take the Advanced Placement Latin Vergil exam.
  Prerequisite: Honors Latin IV
Fine Arts
Course Descriptions

All courses in this section meet the Maryland Fine Arts graduation requirement.

Accelerated Credit Option:* In some Arts courses eleventh and twelfth grade students have the opportunity to earn Accelerated Credit by completing additional activities beyond the regular course of study. Students who commit to and complete the additional activities will earn Honors credit status and weighted grading to recognize their higher levels of achievement. Interested juniors and seniors should speak with their teachers about the availability of this Accelerated Credit option.
ART I
A602 Grade Level 9, 10, 11, 12 1 Credit
Art I is available to all students with no prior high school art experience. Course content includes the study of fundamental visual art elements (i.e., color, line, shape, etc.) and principles of design (i.e., balance, rhythm, contrast, etc.). Students survey art history and appreciation, demonstrate basic skills (i.e., drawing) and conceptual experiences, as well as use a wide variety of techniques and materials. Evaluation (critique/grading) of student works are teacher-directed with participation from students. Students are responsible to learn and improve their artwork. Students also are held accountable for the respect of materials and other students in the class.

ART II
A604 Grade Level 10, 11, 12 1 Credit
Art II is available to all students who have successfully completed Art I. This course is more advanced in concepts, techniques, and materials and includes a review of basic elements (line, shape, etc.) and principles (movement, rhythm, etc.), as well as further study of art history/philosophy with related arts/cultures. Critique and evaluation procedures are more self-directed. An introduction (for study) of commercial, industrial, and environmental design concepts and vocational/avocational possibilities are included. There also is rudimentary exposure to photography and film-making.

Prerequisite: Art I

HONORS ART III
A606H Grade Level 11, 12 1 Credit
Honors Art III is designed to allow students to continue more advanced applications of basic skills learned in Art I and Art II. This course enables students to develop a portfolio of works that may be used for college or job applications. More intensive studies into aesthetic theories, such as imitationalism, formalism, and emotionalism are incorporated into an expanded survey of aesthetic criticism on a personal and investigative level. Written self evaluation is included as a demonstration of understanding of theories and disciplines of the visual arts. Students are required to demonstrate a willingness to practice and continue studies outside of the classroom experience, including exhibiting works and visiting museums. Introduction of careers in the arts is also included. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.

Prerequisite: Art II

HONORS ART IV
A608H Grade Level 11, 12 1 Credit
Honors Art IV provides a studio environment to students who successfully completed Art I, II, and III. All eligible students must have approval from an in-school art educator for enrollment in this course, which is designed for serious art students. Students are required to demonstrate proven ability, self-discipline, and a knowledge of materials, techniques, procedures, and critique methods. Course content may include major areas of concentration each marking period (i.e., students may study/practice ceramics for an entire marking period). Choice of content determined by one or more areas of study at the discretion of the student. Students are required to demonstrate a willingness to practice and continue studies outside of the classroom experience, including exhibiting works and visiting museums. Introduction of careers in the arts is also included. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.

Prerequisite: Art I

CERAMICS I
A609 Grade Level 10, 11, 12 1 Credit
Ceramics is available to all upper class students (Art I is a required prerequisite for this course). The course is intended for those studying ceramics for the first time and is a comprehensive introduction to the craft of clay working. The primary emphasis is on studio work leading to a portfolio of finished pieces by the end of the semester. The main goal of this course is to be able to create as well as appreciate expressive, beautiful three dimensional clay forms. Students will gain an understanding of other cultures and periods of human expression in clay and begin to be proficient at forming clay objects. Evaluation (critique/grading) of student works are teacher-directed with participation from students. Students are responsible to learn and improve their artwork. Students also are held accountable for the respect of materials and other students in the class. A studio fee may be required.

Prerequisite: Art I

PHOTOGRAPHY I
A611 Grade Level 10, 11, 12 1 Credit
Photography I is available to all upperclass students (Art I is a required prerequisite for this course). This course is primarily designed to offer learning experience in still photography. Basic content includes technical learning of camera(s) and darkroom equipment and procedures, functional application of photography (personal, vocational, educational), aesthetic (artistic) use of camera, critique technique/procedure of personal/other students' work, basic history and theory related to photography, and the introduction of filmmaking. A studio/darkroom fee is required.

Prerequisite: Art I

PHOTOGRAPHY II
A613 Grade Level 11, 12 1 Credit
Photography II is a continuation of the study of techniques, procedures, history and criticism of still photography, cinema/video, and animation. Greater amounts of time are allotted to studio and field experiences. A studio/darkroom fee is required.

Prerequisite: Photography I
DIGITAL PHOTOGRAPHY
A614 Grade Level 10, 11, 12 1 Credit
Digital Photography is available to all upper class students (Art I is a required prerequisite for this course). This course is primarily designed to develop skills in pixel-based photographic design and printing. Printers, inks, and paper have evolved that are able not only to match traditional continuous tone photographic quality, but can also extend traditional possibilities. The goals of this course include extending the possibilities for photographic printmaking to the digital realm and to realize a mature “digital darkroom.” Students develop practice skills using Adobe Photoshop tools and the Internet. A studio fee may be required.
Prerequisite: Art I

STUDIO PRACTICE ART
A615 Grade Level 9, 10, 11, 12 1 Credit
Studio Practice Art may be taken as an additional course in conjunction with Art II, Art III, and/or Art IV with successful completion of Art I. This is a studio course designed for students to pursue interests in a maximum of four discrete areas of art with lessons designed by the teacher to meet specific student interests. Special permission may be granted by the art teacher for Art I students to take this course. Note: This course may be taken more than once by qualified and recommended students.
Prerequisite: Art I recommendation and Art I

HONORS STUDIO PRACTICE ART
A619H Grade Level 11, 12 1 Credit
Honors Studio Practice Art is designed to give students extended amounts of time to work in a studio environment in developing a portfolio. Honors Studio Practice Art consists of one area of art concentration. This area of investigation is developed in an individualized student plan designed by students and their teachers. Advanced Placement portfolio guidelines are considered in the development of an individualized student plan. Students are responsible to study the major aesthetic concepts of imitationalism, formalism, and emotionalism, then apply these concepts to their artworks created using objective, non-objective, and abstract methods of production. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: Art teacher recommendation and Studio Practice

HONORS PHOTOGRAPHY III
A627H Grade Level 11, 12 1 Credit
Honors Photography III is a continuation of Photography II with selected emphasis on aesthetic theories as applied through photography and the creative and dramatic use of design concepts. Skills developed in Photography II are practiced and demonstrated through more complex problem solving and artistic interpretation. A studio/darkroom fee is required. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: Photography II

HONORS PHOTOGRAPHY IV
A629H Grade Level 11, 12 1 Credit
Honors Photography IV takes the experiences of Photography III and advances students to a greater height of photographic expression and development. It is intended for the photography major but not solely limited to those students. This course requires students to do concentrated problem solving and camera/darkroom/computer manipulation. Both individual field and studio situations are experienced and student-initiated. Problem solving projects are initiated through research. Students individually prescribe their own situations, resolutions, assessment criteria, and evaluate their successes. A studio/darkroom fee is required. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: Art teacher recommendation and Honors Photography III

AP 2-D ART AND DESIGN
A620AP Grade Level 11, 12 1 AP Credit
Develop your skills in a two-dimensional medium such as graphic design, photography, collage, printmaking, and others as you learn the principles of 2-D design. You’ll create artwork that reflects your own ideas and skills and what you’ve learned.
Prerequisite: Art teacher recommendation and Honors Studio Practice

AP 3-D ART AND DESIGN
A621AP Grade Level 11, 12 1 AP Credit
Develop your skills in a three-dimensional medium such as sculpture, architectural models, metal work, ceramics, glass work, and others as you learn the principles of 3-D design. You’ll create artwork that reflects your own ideas and skills and what you’ve learned.
Prerequisite: Art teacher recommendation and Honors Studio Practice

AP ART HISTORY
A631AP Grade Level 11, 12 1 AP Credit
Explore the history of art across the globe from prehistory to the present. You’ll analyze works of art through observation, discussion, reading, and research.
Prerequisite: Previous fine arts credit
AP DRAWING
A881AP  1 Credit
Develop your skills in drawing as you explore different media and approaches. You'll create artwork that reflects your own ideas and skills and what you learned.

CONCEPTS OF FLORAL DESIGN
A1070  1 Credit
Concepts of Floral Design teaches students basic elements and principles of design while familiarizing them with the material and tools of floral design. Professionally designed floral arrangements or artwork incorporate the elements of floral design: line, form, space, texture, and color, and the principles of floral design: balance, proportion, rhythm, contrast, harmony, and unity. Proper use of the color wheel will be taught and used to select color schemes for construction of basic geometric arrangements, corsages, and boutonnieres. Students will learn to identify and care for flowers, while learning to select quality materials in design, construction, and marketing of floral products. Available at BHS, CSHS, WCTHS.

STUDIO PRACTICE PHOTOGRAPHY
A632  Grade Level 11, 12  1 Credit
Studio Practice Photography may be taken in conjunction with Art II through Art IV and/or Photography II through Photography IV. As with Studio Practice Art, this course is designed for students to pursue special visual art interests unique to the photomechanical art processes. Students must complete a maximum of four specialized tasks designed in consultation with their art teacher. Special permission may be granted by the art teacher for first year Art/Photography students to take this course. Note: This course may be taken more than once. A studio/darkroom fee is required.
Prerequisite: Art teacher recommendation and Art I or Photography I

IB VISUAL ARTS (PART 1) (HL, SL)
A633IB  Grade Level 11, 12  1 IB Credit
IB Visual Arts at North Hagerstown High School provides students with opportunities to make meaningful personal, sociocultural, and aesthetic experiences through the production and understanding of art. The course exemplifies and encourages an inquiring and integrated approach towards visual arts in their various historical and contemporary forms and promotes visual and contextual knowledge of art from various cultures. IB Visual Arts also encourages the pursuit of quality through experimentation and purposeful creative work in various expressive media and enables students to learn about themselves and others through individual and, where appropriate, collaborative engagement with the visual arts. IB Visual Arts (Part 1) provides students the opportunity to develop their creative and imaginative abilities.

IB VISUAL ARTS (PART 2) (HL)
A634IB  Grade Level 11, 12  1 IB Credit
IB Visual Arts (Part 2) at North Hagerstown High School continues the study of Part 1 for students wishing to pursue IB Visual Arts at the Higher Level (HL). This course is for students who have exceptional desires, ability, and commitment to art and who may want to pursue visual arts at the university or college level. Each student will choose a path of Standard Level A (SLA) or Standard Level B (SLB) to complete this course. The majority of SLA focuses on practical exploration and artistic production, and completion of the SLA Research Workbook (RWB) is a requirement. SLB is a course for students whose interest in art is mainly critical, cultural, and historical. The SLB Research Workbook (RWB) demonstrates independent critical research and analysis, visual and written, of more than one culture. The SLB student is expected to complete practical exploration of artistic techniques. Students will take the IB Visual Arts Standard Level exam at the conclusion of this course or continue into IB Visual Arts (Part 2). Students complete 168 hours of studio and 72 hours of Research Workbook work for the IB Visual Arts Higher Level and then take the IB Visual Arts Higher Level exam at the conclusion of the course. These courses will follow IB protocol for internal and external assessment. IB Visual Arts students formally present their art to the public in a gallery format. Students must complete all assessment requirements to receive IBO recognition for completing this course.

DANCE

DANCE I
A692  Grade Level 9, 10, 11, 12  1 Credit
Dance I is based on, but not limited to, traditional dance disciplines of ballet, modern dance, and jazz/hip hop. This course consists of rhythmic exercises to prepare the body for more advanced movements and foster good health through flexibility, strength, agility, breath control, coordination and proper alignment. The course also provides technical instruction using choreographed dance phrases and/or structured improvisations on various themes. Skills developed include poise, teamwork, design, and planning. The course culminates in the classes' production of their own original choreographed dances.

DANCE II
A693  Grade Level 9, 10, 11, 12  1 Credit
Dance II continues the instructional sequence of Dance I. Students pursue additional work into historical and technical aspects of dance. Students build on their skills as choreographers. Dance II students are able to gain additional skills in their chosen areas of expertise through the various curricular and extracurricular productions.
Prerequisite: Dance I
HONORS DANCE III*  
A694H  Grade Level 10, 11, 12  
1 Credit  
Honors Dance III reinforces the instructional sequence of Dance II. This course is offered to students who have successfully completed Dance I and II. Dance III is intended for students who are seriously considering a career in dance or dance education. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.  
Prerequisite: Dance I, II, and Dance teacher recommendation  

HONORS DANCE IV*  
A695H  Grade Level 11, 12  
1 Credit  
Honors Dance IV is offered to students who have successfully completed Dance I, II, and III. There is a required audition and teacher recommendation for this class. This course enhances the skills used in dance production and provides an opportunity for students to demonstrate mastery of all dance areas. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.  
Prerequisite: Dance I, II, III, audition, and Dance teacher recommendation  

THEATRE  

DRAMA I  
A641  Grade Level 9, 10, 11, 12  
1 Credit  
Drama I provides students with the opportunity to learn the fundamentals of stage acting and stage productions. In the process, students learn to become comfortable presenting in front of a “live” audience while developing presentational and personal understandings that build self-confidence. Students will also develop an understanding of the individuals, works, and historical influences that have shaped the 21st Century Theater.  

DRAMA II  
A642  Grade Level 9, 10, 11, 12  
1 Credit  
Drama II provides opportunities for the student to expand upon the ideas learned in Drama I. Theater II. Students are expected to develop skills in set design, lighting, stage management, writing, acting, and improvisational exercises. Students will also read and analyze theatrical works that span the history of Theater.  

DRAMA III  
A643H  Grade Level 10, 11, 12  
1 Credit  
Drama III provides students the opportunity to develop leadership skills and individual interests/pursuits. Students are expected to lead, present, act in, and direct theatrical productions. Students should begin developing group and individualistic goals and skills in the technical and artistic fields of theaters. Students will continue to read and study theatrical works that span the history of Theater, while establishing a written voice of their own.  

DRAMA IV  
A644H  Grade Level 11, 12  
1 Credit  
Drama IV provides students with the opportunity to pursue individual goals and program-based goals. Students are expected to design, lead, and direct peers in stage productions. Students will continue to develop individual acting skills and will guide acting novices through the acting process. Students will compose original script for stage production and/or film acting.  

DRAMA V  
A645H  Grade Level 12  
1 Credit  
Drama V provides students who are considering a career in Theater or Technical Theater the opportunity to pursue individual goals or projects as approved by the instructor. Students are expected to design, lead, direct, and implement stage productions and/or films. Students will also compose and implement original scripts for stage production or film acting.  

HONORS MUSICAL THEATRE/PIT ENSEMBLE  
A679H  Grade Level 9, 10, 11, 12  
1 Credit  
Honors Musical Theatre/Pit Ensemble is designed to promote interest and educational experience in the understanding and production of musical theatre while offering support by adding live music to the school productions. It incorporates the following aspects of theatre: 1) literature and history of music theatre, 2) theatre music performance techniques, and 3) sight reading and rehearsal through original musical arrangements. Auditions are required. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.  

GENERAL MUSIC  

GUITAR LAB I  
A662  Grade Level 9, 10, 11, 12  
1 Credit  
Guitar Lab I is a course for students interested in learning fundamentals of basic guitar playing. Students are expected to learn to read music, both by playing a chordal accompaniment to melodic lines and by reading appropriate guitar melodies.
GUITAR LAB II
A664  Grade Level 9, 10, 11, 12  1 Credit
Guitar Lab II is designed for students interested in furthering their development of guitar skills. Material covered in Guitar I are reviewed. Guitar II covers goals and objectives of Guitar I in greater depth.
Prerequisite: Guitar I or recognition from the teacher for previous experience.

HONORS GUITAR LAB III
A666H Grade Level 10, 11, 12  1 Credit
Honors Guitar Lab III is designed for advance study and is highly recommended for students interested in guitar performance.
Prerequisite: Guitar II or recognition from the teacher for previous experience. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class

CREATIVE SONGWRITING
A668 Grade Level 9, 10, 11, 12  1 Credit
Creative Songwriting is designed to promote interest and educational experience in the understanding and production of musical compositions. Students will become proficient in writing lyrics and understanding the musical form of a song. Students will focus on playing and utilizing basic chord patterns by means of guitar or piano. The course will cover the historical side of the art by studying famous songwriters, songwriting teams, and songs from the past decades. Students will perform their own creations.

RHYTHM LAB
A669 Grade Level 9, 10, 11, 12  1 Credit
Rhythm Lab is a course for students interested in learning fundamentals of basic rhythmic concepts. Students are expected to learn to read and perform music through the use of percussion and ethnic instruments.

STRING LAB
A670 Grade Level 9, 10, 11, 12  1 Credit
String Lab is for students interested in learning fundamentals of basic string instruments. Students will receive basic group instruction on the violin. Students are expected to learn to read and perform music by playing the violin. No formal experience is necessary. Class size is limited according to available instruments.

MUSIC FUNDAMENTALS I
A672 Grade Level 9, 10, 11, 12  1 Credit
Students will learn basic music theory to develop an understanding of fundamental melodic, harmonic and rhythmic notation. Students will learn oral skills using the solfege method. Included in the course of study will be sight- singing exercises, nulodic and harmonic analysis. The course will also provide basic piano instruction as needed.

ADVANCED PLACEMENT MUSIC THEORY
A672AP Grade Level 11, 12  1 AP Credit
Advanced Placement Music Theory involves concentration in aural, sight singing, written, compositional and analytical skills, mastery of notation, intervals, scales and keys, chords, metric organization, and rhythmic patterns. Progression/expectations include composition of a bass line for a given melody (implying appropriate harmony), realization of a figured bass, analysis of repertoire, study of motivic treatment, examination of rhythmic and melodic interaction between parts of a composition, modulation to closely related keys, and phrase structure. Performances/recitals are required. Students will have assigned reading and/or other course-related activities prior to the beginning of this course. Students are expected to take the Advanced Placement Music Theory exam.
Prerequisite: Band/orchestra/choral director recommendation

TWENTIETH CENTURY MUSIC
A677 Grade Level 9, 10, 11, 12  1 Credit
Twentieth Century Music is a study of 20th century music with an emphasis on American culture. It is recommended for non-performing students who enjoy studying and listening to all styles of music. Students complete written assignments and tests to earn credit. A scope and sequence is used to direct instruction.

PIANO LAB I
A682 Grade Level 9, 10, 11, 12  1 Credit
Piano Lab I is for students interested in learning fundamentals of basic keyboard. Students are expected to learn to read music, both by playing a chordal accompaniment to melodic lines and by reading appropriate piano melodies.

PIANO LAB II
A684 Grade Level 9, 10, 11, 12  1 Credit
Piano Lab II is designed for students interested in furthering their development of piano skills. Material covered in Piano Lab I are reviewed. Piano Lab II covers goals and objectives of Piano Lab I in greater depth.
Prerequisite: Piano Lab I or recognition from the piano teacher for previous experience
HONORS PIANO LAB III
A685H  Grade Level 10, 11, 12  1 Credit
Honors Piano Lab III is designed for students interested in advanced study of piano skills and repertoire. Piano Lab II skills are reviewed. An individualized course of study is developed for students enrolled in this class. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: Piano teacher recommendation

MUSIC STUDIO PRACTICE
A686  Grade Level 10, 11, 12  1 Credit
Music Studio Practice may be taken as an additional course or in conjunction with Guitar Lab, Piano Lab, and Music Theory. Teachers work with students individually or in small groups, utilizing an Independent Student Program (ISP) or contract, to accommodate the students’ needs and interests. Course content (ISP) requires production/skill development, research, exploration of educational/career options, and recital/performance in a chosen area of concentration and/or College Entrance Exam Board (CEEB) approved curriculum for Music Theory.
Prerequisite: Music teacher recommendation

HONORS MUSIC STUDIO PRACTICE
A688H  Grade Level 11, 12  1 Credit
Honors Music Studio Practice is for advanced students in either choral or instrumental music. This course involves concentrated study in a specific music area of interest (e.g., band, symphonic, ragtime, blues, jazz, choral, madrigal, etc.) Course content (ISP) requires production/skill development, research, exploration of educational/career options, and recital/performance in a chosen area of concentration and/or College Entrance Exam Board (CEEB) approved curriculum for Music Theory. Students use this course in preparation for AP Music Theory. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: One music credit and teacher recommendation

IB MUSIC (PART 1)
A691IB  Grade Level 11, 12  1 IB Credit
IB Music (Part 1), offered only at North Hagerstown High School, is the first course in the IB Music sequence in preparation for IB Music Standard Level – Creating, IB Music Standard Level – Solo Performing, IB Music Standard Level – Group Performing, or IB Music High Level exam. This course provides students with the appropriate musical terminology to describe and reflect their critical knowledge, understanding and perception of music in relation to time, place, and cultures. Students demonstrate their creative skills through exploration, control, and development of musical elements while enhancing critical-thinking skills through reflection. Students begin to explore music composition by arranging musical piece for performance.
Prerequisite: The ability to read music is required to enroll in this course

IB MUSIC (PART 2)
A692IB  Grade Level 11, 12  1 IB Credit
IB Music (Part 2), offered only at North Hagerstown High School, is the concluding course in the IB Music sequence in final preparation for IB Music Standard Level – Creating, IB Music Standard Level – Solo Performing, IB Music Standard Level – Group Performing, or IB Music High Level exam. This course continues the study of musical terminology to describe and reflect their critical knowledge, understanding and perception of music in relation to time, place, and cultures. Students demonstrate their creative skills through exploration, control, and development of musical elements while enhancing critical-thinking skills through reflection. Students must create and perform a music composition as well as perform as a soloist or with an ensemble. Student must complete all assessment requirements to receive IBO recognition for completing this course.
Prerequisite: IB Music (Part 1)

VOCAL MUSIC
(Vocal courses may be repeated for credit.)

HONORS ADVANCED CHORUS*
A657H  Grade Level 9, 10, 11, 12  1 Credit
Honors Advanced Chorus is designed for vocal development and choral performance. It is intended to make vocal music an integral part of the student’s daily experience. Students study a wide variety of musical literature of many periods of musical history, vocal styles, and develop more fully through active participation. Auditions may be required. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.

CHORUS
A659  Grade Level 9, 10, 11, 12  1 Credit
Chorus is designed to make vocal music an integral part of the student’s daily experience. It is a functional and creative approach, which develops a program of singing activities, and exploratory experiences through various ensembles, as well as provide a basis for developing a cultural background. It is intended to accommodate all students who wish to elect choral singing.
TREBLE ENSEMBLE
A673 Grade Level 9, 10, 11, 12 1 Credit
Women's ensemble allows students to refine their vocal skills in the highly demanding small ensemble treble setting. Students sing a variety of music written for female vocal ensembles, often without accompaniment. Students learn and practice advanced music reading skills and gain an increased understanding of music theory. They use critical listening skills to evaluate and refine their performances. The ensemble offers leadership opportunities for student conductors and soloists. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: Choral director recommendation

CREATIVE MUSIC TECHNOLOGY 1
A674 1 Credit
The course will introduce the student to professional-level computer music software and hardware. Students will gain experience using notation, sequencing, theory, and recording software. Students will create original works, as well as modeling real-world music technology applications.

HONORS SHOW CHOIR*
A687H Grade Level 9, 10, 11, 12 1 Credit
Honors Show Choir presents a positive, exciting, educational experience for both performers and audience in the following musical styles: Pop, Show, and Jazz. The students are required to develop a final performance, which incorporates singing, dancing, acting, costuming, and staging. Auditions required. Public performances during and after school may be required to meet course objectives. Juniors and seniors may earn Accelerated Credit for this course. Students will be expected to complete challenging assignments above grade level, both in and out of class.

HONORS CHAMBER CHOIR/ENSEMBLE*
A690H Grade Level 9, 10, 11, 12 1 Credit
Honors Chamber Choir/Ensemble allows exceptional choral students to refine their vocal skills in the highly demanding small ensemble setting. Students sing a variety of music written for small vocal ensembles, often without accompaniment. Students learn and practice advanced music reading skills and gain an increased understanding of music theory. They use critical listening skills to evaluate and refine their performances. The ensemble has a very active performing schedule and offers leadership opportunities for student conductors and soloists. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: Choral director recommendation

INSTRUMENTAL MUSIC
(Instrumental courses may be repeated for credit.)

BEGINNING BAND
A650 Grade Level 9, 10, 11, 12 1 Credit
Beginning Band offers students with no prior instrumental music experience an opportunity to participate in a school band. Students develop basic instrumental skills through the study of musical materials (from a variety of countries, melodies of master composers, and contemporary popular music). The cultural context of the music and its historical significance are studied as they relate to performance. The elements of musical form, terms and symbols, tone production, instrument care and maintenance, and the importance of effective and consistent practice habits are learned. The development of technical skills necessary to perform Grade I to II music is stressed.

HONORS BAND - ADVANCED*
A651H Grade Level 9, 10, 11, 12 1 Credit
Honors Advanced Band provides students with the opportunity to develop and refine technical skills that enable them to perform music at the Grade III to VI level of difficulty. Students continue to experience appropriate repertoire from all historical periods. Basic skills in transposition, melodic dictation, and the study and performance of triads are included. Written projects in the areas of music history, performance critiques, and musical composition may be used. The importance of consistent and effective practice habits continues to be stressed. Additional experiences may be offered in solo and chamber music performance, pep band, and marching band. Public performances during and after school hours may be required to meet course objectives. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.
Prerequisite: General Band, audition, and Band director recommendation

BAND
A655 Grade Level 9, 10, 11, 12 1 Credit
Band students develop and refine their technical skills that enable them to perform music at the Grade II to III level of difficulty. Students learn the social, cultural, and intellectual influences from the historical periods reflected in the musical works being studied. The study of music theory includes performance and recognition of major scales, diatonic and chromatic interval, and simple melodic dictation. The importance of consistent and effective practice habits continues to be stressed. Exploratory experiences may be offered in solo and ensemble performance. Public performances during and after school hours may be required to meet course objectives.
JAZZ ENSEMBLE
A667  Grade Level 9, 10, 11, 12  1 Credit

Jazz Ensemble gives students of demonstrated ability the opportunity and experience of performing the stage-jazz ensemble literature of the past and present. Students become acquainted with the various periods, performers, styles of jazz, and basic styles of jazz improvisation.

Prerequisite: Band director recommendation

HONORS JAZZ ENSEMBLE*
A667H  Grade Level 9, 10, 11, 12  1 Credit

Honors Jazz Ensemble gives students of demonstrated ability the opportunity and experience of performing the stage-jazz ensemble literature of the past and present. Students learn about the various periods, performers, styles of jazz, and basic styles of jazz improvisation. They extend their technical range and develop specialized skills of jazz phrasing, interpretation, and improvisation necessary to perform the literature for this ensemble. The importance of consistent and effective practice habits is stressed. Members of the jazz ensemble are some of the most proficient performers in their school and demonstrate a willingness to participate in other instrumental ensembles within the school. Public performances during and after school hours may be required to meet course objectives. This course is available for dual enrollment. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.

Prerequisite: Audition

VOCAL JAZZ ENSEMBLE
A676  Grade Level 9, 10, 11, 12  1 Credit

Vocal Jazz Ensemble gives students of demonstrated ability the opportunity and experience of performing a wide variety of jazz literature as soloists and ensemble members. Students become acquainted with the various periods, performers, styles of jazz, and basic styles of jazz improvisation. Auditions required. Public performances during and after school may be required to meet course objectives.

Prerequisite: Choral director recommendation

HONORS VOCAL JAZZ ENSEMBLE
A676H  Grade Level 9, 10, 11, 12  1 Credit

Honors Vocal Jazz Ensemble gives students of demonstrated ability the opportunity and experience of performing a wide variety of jazz literature as soloists and ensemble members. Students become acquainted with the various periods, performers, styles of jazz, and basic styles of jazz improvisation. They extend their technical range and develop specialized skills of jazz phrasing, interpretation, and improvisation necessary to perform the literature for this ensemble. The importance of consistent and effective practice habits is stressed. Members of the vocal jazz ensemble are some of the most proficient vocal performers in their school and must demonstrate a willingness to participate in other choral ensembles within the school. Public performances during and after school hours may be required to meet course objectives. This course is available for dual enrollment. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.

Prerequisite: Audition

BEGINNING ORCHESTRA
A678  Grade Level 9, 10, 11, 12  1 Credit

Beginning Orchestra offers students with no prior instrumental music experience an opportunity to enroll in a school orchestra. Students develop basic instrumental skills through musical materials from a variety of countries, melodies of master composers, and contemporary popular music. The cultural context of the music and its historical significance are discussed as they relate to performance. The elements of musical form, terms and symbols, tone production, instrument care and maintenance, and the importance of effective and consistent practice habits are presented. The development of technical skills necessary to perform Grade I and II music is stressed. Public performances during and after school hours may be required.

HONORS SYMPHONIC ORCHESTRA*
A680H  Grade Level 9, 10, 11, 12  1 Credit

Honors Symphonic Orchestra students develop and refine advanced technical skills that enables them to perform music at the Grade IV to VI level of difficulty. Analysis of the repertoire provides students with an understanding of contemporary musical forms and styles. More advanced harmonic dictation, transposition, and experiences at musical composition and/or arranging is included. The importance of consistent and effective practice habits continues to be stressed. Additional experiences may include conducting, full symphony orchestra, chamber and solo performance, and musical theatre orchestra. Public performances during and after school hours may be required to meet course objectives. Instruction in honors classes is at a rigorous pre-Advanced Placement level. Students will be expected to complete challenging assignments above grade level, both in and out of class.

Prerequisite: General Orchestra, audition, and Orchestra director recommendation
Orchestra students develop and refine their technical skills that enable them to perform music at the Grade II to IV level of difficulty. Students learn the social, cultural, and intellectual influences from the historical periods reflected in the musical works being discussed. The study of music theory includes performance and recognition of major scales, diatonic and chromatic intervals, and simple melodic dictation. The importance of consistent and effective practice habits continues to be stressed. Exploratory experiences may be offered in solo and ensemble performance. Public performances during and after school hours may be required to meet course objectives.
Health and Physical Education Course Descriptions

Health Education/Life Skills meets the Maryland Health Education graduation requirement and only Physical Education I meets the Maryland graduation requirement for Physical Education.
HEALTH

HEALTH EDUCATION/LIFE SKILLS/FINANCIAL LITERACY

A730  Grade Level 10  1 Health Credit

Topics covered within Health Education courses may vary widely but typically include personal health (nutrition mental health and stress management drug/alcohol abuse prevention disease prevention and first aid) and consumer health issues. The courses may also include brief studies of environmental health personal development and/or community resources.

The Life Skills component includes the topics of human growth and development, interpersonal relationships, career choices. The financial literacy component includes consumer decision-making, financial awareness, saving and investments, and loan and debt management. A student service learning (SSL) project is part of this course. Students must complete the SSL project to earn 15 hours toward the graduation requirement.

NUTRITION AND WELLNESS

A732SM  Grade Level 10, 11, 12  1 Elective Credit

Nutrition and Wellness is a one-semester elective course provides students with an overview of good nutrition principles that are necessary for overall wellness and a healthy life. Instructional strategies include discussions of digestion, basic nutrients, weight management, food safety, fitness and life-span nutrition. The Nutrition and Wellness course emphasizes an understanding of today’s food and eating trends and gives students the capacity to intelligently evaluation all available sources of nutrition information and make informed decisions. Unit topics include a course introduction, wellness and food choices in today’s world, digestion and major nutrients, and body size and weight management.

Topics covered within Health Education courses may vary widely but typically include personal health (nutrition mental health and stress management drug/alcohol abuse prevention disease prevention and first aid) and consumer health issues. The courses may also include brief studies of environmental health personal development and/or community resources.

Prerequisite: Health Education/Life Skills/Financial Literacy

PHYSICAL EDUCATION

MARYLAND STATE DEPARTMENT OF EDUCATION CLARIFICATION ON WAIVER OF THE PHYSICAL EDUCATION GRADUATION REQUIREMENT

The Maryland State Board of Education regulation on graduation requirements does not provide the ability to waive the physical education credit requirement. However, there are modifications one may need to make based on physical limitations or handicapping conditions.

Students may participate in a modified program of physical education based upon individual needs. This would require an individual program to be adapted to assist students with any modification necessary. This program would have to be approved by the physical education teacher or supervisor.

In Washington County Public Schools students with physical limitations or handicapping conditions will receive a physical education instructional program based on the medical information provided by the student’s attending physician and/or certifying medical agency/provider and in consultation with the student’s regular physical education teacher and/or the adaptive physical education teacher assigned to the student.

For additional information regarding the adaptive physical education program, please call the Supervisor of Physical Education at 301.766.2929.

Required Course: PHYSICAL EDUCATION I (A702)

Elective Courses: Team Sports Path
PHYSICAL EDUCATION II (A704)
PHYSICAL EDUCATION III (A706)
PHYSICAL EDUCATION IV (A708)

Elective Courses: Fitness Path
PHYSICAL EDUCATION - WEIGHT CONDITIONING (A712)
PERSONAL/LIFE FITNESS (A738)
AEROBICS/FITNESS (A740)
**PHYSICAL EDUCATION I**

A702  Grade Level 9  1 Physical Education Credit

Physical Education courses proved students with the knowledge experience and an opportunity to develop skills in more than one of the following sports or activities: team sports individual/dual sports recreational sports and fitness/conditioning activities.

Physical Education I, sometimes referred to as Introduction to Lifetime Sports and Fitness, is designed to provide students with experiences that they can use as lifetime recreational activities and as a continuing fitness program. The course allows student to experience lifetime activities and team sports, while incorporating fitness elements into class period. The course consists of activities such as: archery, badminton, basketball, bowling, cross country, flag football, golf, shuffleboard, soccer, softball, table tennis, track and field, volleyball, field hockey, flickerball, mass games, rhythms, speedball, and other fitness activities. This course is suggested for Grade 9 students and it meets the state graduation requirement.

**PHYSICAL EDUCATION II**

A704  Grade Level 9, 10  1 Elective Credit

Physical Education courses proved students with the knowledge experience and an opportunity to develop skills in more than one of the following sports or activities: team sports individual/dual sports recreational sports and fitness/conditioning activities.

Physical Education II is an elective physical education course that provides supplemental enrichment experiences which contribute to the total development of an individual. Students have an opportunity to engage in a wide variety of activities and skills that primarily are lifetime sports, team sports, and physical fitness. This course does not meet state graduation requirement.

**Prerequisite: Physical Education I**

**PHYSICAL EDUCATION III**

A706  Grade Level 10, 11, 12  1 Elective Credit

Physical Education courses proved students with the knowledge experience and an opportunity to develop skills in more than one of the following sports or activities: team sports individual/dual sports recreational sports and fitness/conditioning activities.

Physical Education III is an elective physical education course that expands the supplemental and enrichment experiences in Physical Education II. Activities included in this course are lifetime sports, team sports, and physical fitness. This course does not meet the state graduation requirement.

**Prerequisite: Physical Education II**

**PHYSICAL EDUCATION IV**

A708  Grade Level 10, 11, 12  1 Elective Credit

Physical Education courses proved students with the knowledge experience and an opportunity to develop skills in more than one of the following sports or activities: team sports individual/dual sports recreational sports and fitness/conditioning activities.

Physical Education IV expands the supplemental and enrichment experiences in Physical Education III that contribute to the students’ total physical development. Students have opportunities to engage in a wide variety of activities, knowledge, and skills related to exercise sports, that include lifetime sports, team sports, and physical fitness. This course does not meet the state graduation requirement.

**Prerequisite: Physical Education III**

**WEIGHT CONDITIONING**

A712  Grade Level 9, 10, 11, 12  1 Elective Credit

Weight Training courses help students develop knowledge and skills with free weights and universal stations while emphasizing safety and proper body positioning; they may include other components such as anatomy and conditioning. Enrollment in this course is limited as determined by each school’s facility and equipment. This course does not meet the state graduation requirement.

**Prerequisite: Physical Education I**

**ADAPTIVE PHYSICAL EDUCATION**

A720  Grade Level 9, 10, 11, 12  1 Elective Credit

Adaptive Physical Education is a physical education equivalent course which enables students with special needs to participate in physical education classes and other approved at school activities to meet the state graduation requirement. This course includes activities that develop and/or enhance gross and fine motor skill, locomotor movements, endurance, muscular strength, and coordination.

**PERSONAL/LIFE FITNESS**

A738  Grade Level 9, 10, 11, 12  1 Elective Credit

Lifetime Fitness Education courses emphasize acquiring knowledge and skills regarding lifetime physical fitness; content may include related topics such as nutrition stress management and consumer issues. Students may develop and implement a personal fitness plan. The goal of the course is to encourage students to acquire knowledge of physical fitness concepts, develop an individual optimum level of physical fitness, and understand the significance of life-style on one’s health, personal fitness and well-being. Students learn how to assess their own health and fitness levels, then design their own personal fitness programs by incorporating a variety of lifetime activities such as badminton, table tennis, tennis, as well as various forms of fitness activities such as aerobics, dancing, and strength training. Students also develop weekly fitness plans based on nutrition and exercise. Enrollment in this course is limited as determined by each school’s facility. This course does not meet the state graduation requirement.

**Prerequisite: Physical Education I**
AEROBICS/FITNESS
A740 Grade Level 9, 10, 11, 12 1 Elective Credit

Lifetime Fitness Education courses emphasize acquiring knowledge and skills regarding lifetime physical fitness; content may include related topics such as nutrition stress management and consumer issues. Students may develop and implement a personal fitness plan.

Prerequisite: Physical Education I
Career and Technology Education (CTE) prepares both youth and adults for a wide range of careers. These careers require varying levels of education, from high school and post-secondary certificates, to apprenticeships, or two- and four-year college degrees. Students add value to their overall education by completing CTE programs of study that provide opportunities to earn industry-recognized credentials and college credit while still in high school. Washington County Public Schools offers Career and Technology Completer programs in all ten (10) of the identified Maryland Career Clusters.
Comprehensive High School Completer Programs

(Students are required to complete requirements for University System of Maryland and/or a Career Technology Education Completer Program)

University System of Maryland
The Board of Education of Washington County certifies that the following courses meet the minimum requirements for students seeking admission to institutions in the University System of Maryland. Additional advanced courses are recommended.

Writing, Reading, and Literature - 4 credits
   English or Honors English I to IV (including AP/IB)

History, Social Science - 3 credits
   United States Studies II
   Local, State, National Government
   World History

Science (Lab-based) - 3 credits
   Biology
   Chemistry
   Integrated Physics & Chemistry
   Physics
   Anatomy and Physiology
   Earth and Space Science

World Languages - 2 credits of one language

Mathematics - 4 credits total - 3 of which must be the following: Algebra I, Geometry, Algebra II
   A senior level mathematics course is required and must include a course or courses that utilize non-trivial Algebra such as Introduction to AP Statistics, Honors Pre-Calculus/Trigonometry, Honors Calculus, AP Statistics and College Algebra.

Career Technology Education Completer Programs
The following Career Technology Education Completer Programs meet the Maryland graduation completer program requirement. The course sequences listed for each completer program must all be completed to earn completer program credit. Students on track to be a CTE completer are required to take identified program certification exam(s).

INTERACTIVE MEDIA PRODUCTION COMPLETER – 4 Credits
Available at Boonsboro High School, North Hagerstown High School, South Hagerstown High School, and Williamsport High School.

PRINCIPLES OF MULTIMEDIA
A1030/A1030SM Grade Level 9, 10, 11, 12 1 Credit
Principles of Multimedia provides students an understanding of all aspects of the Arts, Media and Communication industry. Students will examine the opportunities and requirements of the major career pathways in this industry including: Communication and Broadcast Technologies, Multimedia Production, Graphic Design and Print Communication. Throughout the course, students will have opportunities for career awareness and exploration activities. All students will be required to produce artifacts for inclusion in a design portfolio, including an AMC Career Exploration Research Paper and a Media Product (concept, storyboard and product).

INTERACTIVE MULTIMEDIA PRODUCTION
A1031/A1031SM Grade Level 10, 11, 12 1 Credit
Interactive Multimedia Production further develops student mastery of media design and the interactive media production process. Students will advance their knowledge and skills in media design and production through project planning and product development. Students will demonstrate the use of multiple tools and styles of expression in the production process. Emphasis will be placed on group project development and development of a layered portfolio. Students will update their IMP Portfolio with an Interactive Media Product Proposal, Specifications Document and Media Product.

ADVANCED INTERACTIVE MULTIMEDIA PRODUCTION
A1032 Grade Level 11, 12 2 Credits
In Advanced Interactive Multimedia Production students will advance their knowledge and skills in multimedia design and production through project planning and product development. Students will demonstrate the use of multiple tools and styles of expression in the production process. Emphasis will be placed on group project development and development of a layered portfolio. Students will update their IMP Portfolio with Advanced Media Product(s), including web pages; application for college-level program; and adobe Creative Suite Certification(s) or Web Design Certification (WOW).
COMPUTER DESIGN AND GAME ANIMATION COMPLETER – 8 Credits
Available at Barbara Ingram School for the Arts

COMPUTER DESIGN AND GAME ANIMATION DEVELOPMENT FUNDAMENTALS I
BICDGADF  Grade Level 9, 10  2 Credits
This course is designed to introduce students to the 16 components of computer game design through a team-centered, problem-solving instructional format. The 16 components include game concept development, business planning and finance, interactive storytelling, storyboard, writing documentation, developing characters, 2-D graphics, 3-D graphics, developing tools, designing user interfaces, learning about game engines, programming, recording audio and video, testing games, marketing and publishing.

COMPUTER DESIGN AND GAME ANIMATION DEVELOPMENT II
BICDGAD2  Grade Level 9, 10  2 Credits
This course is designed to expose students to the 3D Game Engines: Game Maker, Unity 3D, Unreal Engine and others. Course topics will include programming languages, copyright laws, motion mechanics, narration and script writing, interactive storytelling, storyboard, creating background music and game scores, graphic design for environment, graphic design for structures, graphic design for characters, Autodesk Maya and 3DS Max, and an introduction to the Foley Effect.

COMPUTER DESIGN AND GAME ANIMATION DEVELOPMENT III
BICDGAD3  Grade Level 11, 12  2 Credits
This course is designed to allow students to build on their previous knowledge of game design. Advanced topics covered will include Game Design Document II, Game Psychology Review, Advanced motion Mechanics, Advanced game programming and development (C#, C++), analysis game and animation technology trends, advanced game design (UI, Environment, Lighting), Sound score mastering, recording and staging live Foley effect, 3D particle effects and lighting, 2D and 3D rendering technologies review, video editing effects and rendering, plus Unity and Unreal game engine product development.

COMPUTER DESIGN AND GAME ANIMATION DEVELOPMENT CAPSTONE IV
BICDGADC  Grade Level 11, 12  2 Credits
This course is designed to allow students to refine knowledge of the industry, and students will work on CGDA presentation events and SkillsUSA events. Students will make connections and build bridges for future success. Students will continue and finalize capstone projects, which will demonstrate not only GDCA skills, but interdepartmental cooperation. Completed portfolios will be presented and submitted for review. Students will have the opportunity to test for the Digital Literacy IC3 (Course Completer Certification Exam).

DIGITAL COMMUNICATIONS COMPLETER – 8 Credits
Available at Barbara Ingram School for the Arts

PRINCIPLE OF ARTS, MEDIA, AND COMMUNICATION I
BIPAMC  Grade Level 9, 10  2 Credits
This foundation course focuses on the art of digital photography, and provides an overview of the digital communications industry. Students demonstrate competencies that include the importance of being a well-rounded artist and professional, creative thinking skills, introduction to Macintosh operating systems, camera mechanics and maintenance, principles of design, copyright, elements of art, plus numerous other topics related to the art of digital photography.

AUDIOVISUAL COMMUNICATIONS AND PRODUCTION LEVEL II
BIAACP1  Grade Level 9, 10  2 Credits
The advanced communications course is designed to immerse students in the field of cinematography. Topics reviewed are DSLR Video and camera equipment, exposure and frame rate for video, resolution and file types, copyright for music and stock footage, cord identification, camera operation and movement, recording and syncing audio, the moving image, art of the story, script writing. Students will be given real world experience in resolving conflict, workplace relationships, and personal values that are essential in communicating with customers and employees.

AUDIOVISUAL COMMUNICATIONS AND PRODUCTION LEVEL III
BIACP2  Grade Level 11, 12  2 Credits
This course allows students a more in depth exploration of digital photography. Students will learn the steps needed to prepare a client file or prepare a photograph for presentation, including file preparation for the production of a successful printing project, properly maintaining files as well as proper image resolution and color spaces, and providing a consistent color match and an efficient layout of pages for correct production to any output device. More photographic topics will be explored such as deconstructing the photograph, environmentally concerned photography, social documentary photography, creativity strategies, color photography, preparation to begin the student’s personal photographic work portfolio development to be completed by the end of the program pathway.
AUDIOVISUAL COMMUNICATIONS AND BROADCAST TECHNOLOGIES CAPSTONE IV  
BIACTC  Grade Level 11, 12  
2 Credits  
Students will complete a program-related capstone project by using personal video or photographic work for portfolio development. Other video topics include documentary and narrative filmmaking, creative lighting in cinematography, video as art, sound design for films, film marketing, and creating LUTS and color grades. The competencies for photographic work will include large scale photograph, contemporary use of photography, socially engaged photography, professional strategies as a photographer and printing and presenting photographic work. The Capstone project will be presented to a panel that will include industry personnel, administration, and post high school educators. Students will be made aware or the importance of workplace etiquette, proper use of social media, and networking.

SOFTWARE SPECIALIST COMPLETER  – 4 Credits  
Available at Boonsboro High School, Clear Spring High School, Hancock High School, South Hagerstown High School, Smithsburg High School and Williamsport High School

PRINCIPLES OF BUSINESS ADMINISTRATION AND MANAGEMENT  
A795  Grade Level 9, 10, 11, 12  
1 Credit  
This is one of two foundation courses required for all pathways in the Business Management and Finance career cluster and is essential to all pathways. This course provides a foundational understanding of the role of business by exploring fundamental business concepts and key terminology. Students will gain experience in oral and written communications as well as enhancing listening and questioning skills. Students will collaborate daily using teamwork for problem solving and developing decision-making skills. This course will give the student a solid understanding of business ownership, management concepts, and marketing.

PRINCIPLES OF ACCOUNTING AND FINANCE  
A773  Grade Level 10, 11, 12  
1 Credit  
Principles of Accounting and Finance is one of two foundation courses required for all programs of study in the Business Management and Finance Career Cluster and is essential to all pathways. This course provides students with the knowledge necessary to manage and maintain a company's financial resources in daily operating decisions. A mastery of fundamental accounting concepts, skills, and competencies is essential in making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner’s equity as they apply to various forms of manual and computerized accounting systems. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

OFFICE SYSTEMS - EXCEL  
A786  Grade Level 10, 11, 12  
1 Accelerated Credit  
Students will develop advanced skills using Microsoft’s leading business software and provided the opportunity to acquire the Microsoft Office Specialist (MOS) credential. Students will be expected to think analytically, manipulate information, and use the computer as a productivity tool through integrated application programs. Expertise in technology will contribute to students’ future career mobility, advancement potential, compensation and job satisfaction.

OFFICE SYSTEMS - WORD  
A789  Grade Level 9, 10, 11, 12  
1 Credit  
Office Systems - Word provides the student with a study of basic business practices, information systems and computer applications. Students develop managerial and technical skills for business support operations through applied learning. Problem-solving skills development is incorporated throughout the course to meet the recommendations made through the Maryland Skills for Success. Competencies include: applying emerging technologies in order to complete appropriate office operations; desktop publishing and/or word processing software in order to create business documents and professional presentations. Industry standard office equipment and the most current Microsoft Office software available will be used in this course.

BUSINESS MANAGEMENT COMPLETER – 4 Credits  
Available at Boonsboro High School, Hancock High School, Smithsburg High School, South Hagerstown High School, and Williamsport High School

PRINCIPLES OF BUSINESS ADMINISTRATION AND MANAGEMENT  
A796  Grade Level 9, 10, 11, 12  
1 Credit  
This is one of two foundation courses required for all pathways in the Business Management and Finance career cluster and is essential to all pathways. This course provides a foundational understanding of the role of business by exploring fundamental business concepts and key terminology. Students will gain experience in oral and written communications as well as enhancing listening and questioning skills. Students will collaborate daily using teamwork for problem solving and developing decision-making skills. This course will give the student a solid understanding of business ownership, management concepts, and marketing.
PRINCIPLES OF ACCOUNTING AND FINANCE
A773  Grade Level 10, 11, 12  1 Credit
Principles of Accounting and Finance is one of two foundation courses required for all programs of study in the Business Management and Finance Career Cluster and is essential to all pathways. This course provides students with the knowledge necessary to manage and maintain a company's financial resources in daily operating decisions. A mastery of fundamental accounting concepts, skills, and competencies is essential in making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner’s equity as they apply to various forms of manual and computerized accounting systems. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

ADVANCED BUSINESS MANAGEMENT
A897  1 Accelerated Credit
This course provides students with the knowledge that will prepare them for post-high school levels of education and entry-level positions in the work force. Focus will be on the role of business in society; the changing nature of contemporary business practices; major management concepts, theories, and theorists, the processes of management, business law and ethics, and business communications. Career pathways will be examined and the use of business management knowledge in a variety of career clusters is also explored. Students will understand the business world and be more prepared to meet their career goals and objectives. Upon completion, students will take the Principles of Management CLEP exam. Students will be able to earn college credit through articulation agreements with local colleges.

BUSINESS MANAGEMENT CAPSTONE
A898  1 Accelerated Credit
Students will apply the knowledge and skills acquired in the previous business management courses to settings through the business management capstone project that will involve intense problem-solving in business management. Students who have not yet passed the Business Management CLEP exam may use their capstone project to reinforce preparation for the CLEP exam.

FINANCE AND ACCOUNTING COMPLETER – 4 Credits
Available at Boonsboro High School, Hancock High School, Smithsburg High School, South Hagerstown High School, and Williamsport High School

PRINCIPLES OF BUSINESS ADMINISTRATION AND MANAGEMENT
A795  Grade Level 9, 10, 11, 12  1 Credit
This is one of two foundation courses required for all pathways in the Business Management and Finance career cluster and is essential to all pathways. This course provides a foundational understanding of the role of business by exploring fundamental business concepts and key terminology. Students will gain experience in oral and written communications as well as enhancing listening and questioning skills. Students will collaborate daily using teamwork for problem solving and developing decision-making skills. This course will give the student a solid understanding of business ownership, management concepts, and marketing.

PRINCIPLES OF ACCOUNTING AND FINANCE
A773  Grade Level 10, 11, 12  1 Credit
Principles of Accounting and Finance is one of two foundation courses required for all programs of study in the Business Management and Finance Career Cluster and is essential to all pathways. This course provides students with the knowledge necessary to manage and maintain a company's financial resources in daily operating decisions. A mastery of fundamental accounting concepts, skills, and competencies is essential in making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner’s equity as they apply to various forms of manual and computerized accounting systems. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

HONORS ACCOUNTING AND FINANCE II
A781H  Grade Level 10, 11, 12  1 Accelerated Credit
Accounting and Finance II is designed to be the second accounting course for students enrolled in the Financing and Accounting Program of Study. This course provides students with accounting knowledge that will prepare them for post-high school levels of education and entry-level positions in the work force. Focus will be on accounting procedures necessary to address long and short-term assets and investments, long and short-term liabilities, inventory management, payroll procedures, and accounting ratios used the decision-making process. A comprehensive study of the accounting procedures used in establishing corporations, declaring and paying dividends, the formation and dissolution of partnerships, and distribution of net income and owners’ equity statements is included in this course. Career pathways for accounting will be examined and the use of accounting knowledge in a variety of career clusters is also explored. Awareness of ethical issues and application of ethical decision-making models will be reinforced throughout the course. Students may earn college credit through an articulation agreement with Hagerstown Community College.
Prerequisite: Principles of Accounting and Finance
ACCOUNTING AND FINANCE III - CAPSTONE
A782H  Grade Level 11, 12  1 Credit
Students will apply the knowledge and skills acquired in previous accounting and finance courses to settings through the Accounting and Finance Final Capstone Project. Students will participate in an end-of-course final project that will involve comprehensive problem-solving in accounting and finance.
Prerequisite: Accounting and Finance II

MARKETING COMPLETER – 4 Credits
Available at Boonsboro High School, Clear Spring High School, Hancock High School, South Hagerstown High School, and Williamsport High School

PRINCIPLES OF BUSINESS ADMINISTRATION AND MANAGEMENT
A795  Grade Level 9, 10, 11, 12  1 Credit
This is one of two foundation courses required for all pathways in the Business Management and Finance career cluster and is essential to all pathways. This course provides a foundational understanding of the role of business by exploring fundamental business concepts and key terminology. Students will gain experience in oral and written communications as well as enhancing listening and questioning skills. Students will collaborate daily using teamwork for problem solving and developing decision-making skills. This course will give the student a solid understanding of business ownership, management concepts, and marketing.

PRINCIPLES OF ACCOUNTING AND FINANCE
A773  Grade Level 10, 11, 12  1 Credit
Principles of Accounting and Finance is one of two foundation courses required for all programs of study in the Business Management and Finance Career Cluster and is essential to all pathways. This course provides students with the knowledge necessary to manage and maintain a company's financial resources in daily operating decisions. A mastery of fundamental accounting concepts, skills, and competencies is essential in making informed business decisions. Students will learn to apply generally accepted accounting principles to determine the value of assets, liabilities, and owner’s equity as they apply to various forms of manual and computerized accounting systems. Students will identify positions and career paths in the field of accounting and will examine the role of ethics and social responsibility in decision making.

MARKETING I
A775  Grade Level 10, 11, 12  1 Credit
Marketing I introduces students to the processes and functions involved in transferring business products or services to a consumer. The study of marketing helps students gain a clearer picture of how key business functions are directly related to marketing activities. Classroom instruction is combined with the high school’s Future Business Leaders of America (FBLA) activities to enhance the student’s understanding of marketing and distribution.

MARKETING II
A776  Grade Level 10, 11, 12  1 Accelerated Credit
Marketing II gives students the opportunity to pursue in greater depth the development of marketing/management competencies necessary for full-time employment and job advancement in marketing and distribution businesses. Work-based learning is a strong component of this program and allows students to be involved in organized learning experiences in marketing, management, sales and merchandising. As with Marketing I, FBLA activities enhance the student’s understanding and application of marketing concepts. Students will take the Marketing CLEP exam.

THE ACADEMY OF FINANCE – 4 Credits
Available at Williamsport High School

PRINCIPLES AND APPLICATIONS OF FINANCE
A828  Grade Level 9, 10, 11, 12  1 Credit
This is the foundation course for the Academy of Finance career pathway. Through this introduction to the financial world of business, students develop financial literacy as they learn about the function of finance in society. They will study income and wealth; examine financial institutions; study the risks and rewards of borrowing and investing; learn to identify the legal forms of business organization; learn how businesses raise capital; study key investment-related terms and concepts; develop an understanding of profit; and learn about various financial analysis strategies. Students also have the chance to explore, in depth, topics of high interest in the field of finance, research how innovations have changed the financial services field, and explore the types of careers that exist in finance today. This is a required course for the Academy of Finance at WHS.
PRINCIPLES OF ACCOUNTING AND FINANCIAL REPORTING
A829  Grade Level 10, 11, 12  1 Credit
Principles of Accounting and Financial Reporting provides students with an understanding of the accounting process and how to facilitate decision making by providing data and information to internal and external stakeholders. Students learn that accounting is an integral part of all business activities. They learn how to apply technology to accounting by creating formulas and inputting data into spreadsheets. Students are also introduced to the fundamentals of management accounting, including manufacturing and cost accounting, budgeting, accounting for managerial decision-making, and financial statement analysis. Students learn how to use accounting information for internal decision-making and planning and control. Regardless of the career path they choose, this course gives students the financial acumen necessary to make informed personal and business decisions. Students also examine career opportunities and the professional certifications and designations earned by individuals in the accounting profession. This is a required course for the Academy of Finance at WHS.

FINANCIAL SERVICES
A830  Grade Level 10, 11, 12  1 Credit
This course offers an overview of banks and other financial services companies. It introduces students to the origins of money and banking and examines the early history of banking in the United States. Students study the financial services industry and the types of companies it includes; learn about the services offered by such companies and analyze the ways these companies earn profits. Students will look closely at the job of a financial planner, learning to consider how all aspects of financial planning might affect a potential client, and learn about the importance of financial planning in helping people reach their life goals. This course includes lessons on saving, borrowing, credit, and all types of insurance, and covers various types of investments. Students also examine careers in financial services and planning. This is a required course for the Academy of Finance at WHS.

ACADEMY OF FINANCE INTERNSHIP
A850  Grade Level 12  1 Credit
Academy of Finance Internship is a program in which students use the skills and information learned in the classroom while performing a finance related job in a local business. Lasting 4-6 weeks (180 hours) students work in this paid internship in the summer between their junior and senior year or during either semester of their senior year.

CAREER RESEARCH AND DEVELOPMENT COMPLETER – 4 Credits
Available at Boonsboro High School, Clear Spring High School, Evening High School, North Hagerstown High School, Smithsburg High School, South Hagerstown High School, and Williamsport High School

CAREER RESEARCH AND DEVELOPMENT
A802  Grade 11 or 12  1 Credit
The overall goals in this first in-school course are to teach students the process of self-awareness, career exploration, and setting academic and career-related goals

Students will demonstrate an understanding of how accurate, current and unbiased career information is necessary for successful career planning and management using Maryland’s career clusters and pathways. In addition, students will be introduced to basic concepts of financial literacy to help them manage their personal finances. Course content will integrate the development of student’s competency in business writing, as well as, the Skills for Success (communication, learning, interpersonal, technology, and critical thinking). Students will also be required to prepare for and participate in the interview process.

Students will begin to develop a portfolio and will contribute to it throughout the program. Teachers will continuously review and assist in the development of the portfolio as part of individual course and end of program assessments. Toward the end of this course, students will review their high school plan as part of the career development process to make appropriate adjustments. Continuous communication among the students, employers and the Work Based Learning coordinators will provide students with feedback and evaluation results from their placements.
CAREER DEVELOPMENT SEMINAR
A803 Grade 11, 12 1 Credit
In this course, students will either be (a) juniors enrolled in an in-school course or (b) seniors enrolled in an in-school seminar concurrently with their WBL experience. The Career Development Seminar will prepare students to:

- research career options
- increase workplace readiness skills proficiency
- demonstrate proficiency in use of a decision-making model
- describe the impact of their cultural beliefs and attitudes on their career decisions
- recognize that personal growth and change are integral parts of career development
- analyze authentic workplace issues
- develop problem-solving strategies
- apply financial literacy skills to life management
- assess personal and professional goals
- learn how to meet employer’s expectations
- use interpersonal skills on the job
- communicate effectively in the workplace
- demonstrate proficiency in job-seeking, finding and keeping skills such as completing a job search, writing a resume, obtaining references, practicing interview skills and follow-up techniques.

WORK-BASED LEARNING EXPERIENCE
A804 Grade 12 2 Credits
The work-based learning experience takes place at the work-site and must include a minimum of 270 hours. It may be a paid or unpaid experience. The experience must be directed by the Work Based Learning agreement and a plan must be developed by the student, WBL Coordinator, and the employer. The WBL plan must identify the appropriate competencies, duties, and tasks in academic, technical and work readiness areas that apply directly to the student’s goals for a specific work-site placement.

The WBL coordinator is responsible for monitoring student placements, documenting student progress and accounting for student completion of their plan and portfolio. The student’s portfolio will document proficiency in workplace readiness skills as indicated in the student WBL plan. A copy of the employer(s) assessment as well as documentation from the WBL coordinator will be included in the grading of the student. All aspects of the plan must be successfully completed in order for students to receive credit for this career pathway completer program.

Prerequisite or concurrent enrollment in: Career Research and Development, Career Development Seminar

CONSTRUCTION AND DEVELOPMENT
Barr Academy / Barr Construction Institute Plumbing or Heating, Ventilation, and Air Conditioning (HVAC)
Enrollment in this program is open to 11th and 12th grade students from all county high schools, however, classes are held at the Barr Construction Institute, 530 N. Locust Street, Hagerstown. Depending on the time of classes students may be required to provide their own transportation to and from the Barr Academy.

Required Courses:

Plumbing:
- NCCER Core Battery (1 credit)
- NCCER Level I (2 credits)
- NCCER Level II (3 credits)
- Optional: Internship (4 credits)

HVAC:
- NCCER Core Battery (1 credit)
- NCCER Level I (2 credits)
- NCCER Level II (3 credits)
- Optional: Internship (4 credits)
HEATING, VENTILATION AND AIR CONDITIONING COMPLETER – 8 Credits
*NEvening classes at Barr Construction Institute*

**NCCER HEATING, VENTILATION AND AIR CONDITIONING I (HVAC I)**
A959 4 Credits

**NCCER HEATING, VENTILATION AND AIR CONDITIONING II (HVAC II)**
A961 4 Accelerated Credits

Students must travel to the Barr Construction Institute for the HVAC classes. The introductory course for Heating, Ventilation, and Air Conditioning (HVAC) will introduce the students to basic HVAC principles; allow them to practice the mathematics required to calculate controls for HVAC equipment; develop skills in installing and maintaining plastic, copper, and ferrous metal piping systems; learn and practice basic soldering and brazing techniques; learn introductory electrical control operation; and review basic principles of air distribution, cooling, and heating systems operation. *The passing of the required end of Level I course testing is required for continuance in the program at the Barr Construction Institute.*

Level II of the HVAC curriculum continues student development in the skills students learn in the Level I program. Students will apply principles of air distribution systems; learn how to select and install vents, chimneys and flues for fossil-fuel burning heating systems; practice the basic maintenance skills required to maintain HVAC equipment; apply the principles of basic electronics to heating controls, circuits, meters, compressors and heat pumps; and practice skills in leak detection, evacuation, recovery, and charging of refrigerants. *The passing of the required end of course testing is required for continuance in an Apprenticeship Program at the Barr Construction Institute.*

NCCER PLUMBING COMPLETER – 8 Credits
*NEvening classes at Barr Construction Institute*

**NCCER PLUMBING LEVEL I**
A963 4 Credits

**NCCER PLUMBING LEVEL II**
A965 4 Accelerated Credits

Students must travel to the Barr Construction Institute for the Plumbing classes. NCCER Plumbing Level 1 is a course designed to teach students the principals and identification of plumbing and the various techniques of operations. Students will gain extensive training, apply daily operations and hands-on experience focusing on emphasis on the following topics: Introduction to the Plumbing Profession, Math, Drawings, Drain, Waste, and Vent (DWV) Systems, and to Water Distribution Systems; Plumbing Safety, Tools; Plastic, Cooper, Cast-Iron and Carbon Steel Pipe and Fittings; Corrugated Stainless Steel Tubing and Fixtures and Faucets.

The NCCER Plumbing Level II course consists of a combination of internet-based on-line training, textbook, and hands-on, practical lab exercises that expands on the content from the NCCER Plumbing Level I program, introducing the student to the next level of plumbing applications and practices. Topics covered include plumbing math two; reading commercial drawings; hangers, supports, structural penetrations, and fire stopping; installing and testing DWV piping; installing roof, floor, and area drains; types of valves; installing and testing water supply piping; installing fixtures, valves, and faucets; introduction to electricity; installing water heaters; fuel gas systems; and servicing of fixtures, valves, and faucets.

Carpentry Completer – 4 Credits
*Available at Boonsboro High School, Hancock High School, Smithsburg High School, and South Hagerstown High School*

**FOUNDATIONS OF BUILDING AND CONSTRUCTION TECHNOLOGY (CORE)**
A908 Grade Level 10 1 Credit

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

**Carpentry I**
A910 Grade Level 11 1 Credit

The course of study for Carpentry I (Level I) includes demonstration of student mastery of the following topics: wood building materials; fasteners and adhesives; hand and power Tools; floor systems; wall and ceiling framing; roof framing; windows and exterior doors.
Carpentry II
A911 Grade Level 12 2 Credits
The course of study for Carpentry II includes demonstration of student mastery of the following topics: reading plans and elevations; site layout one—distance measurement and leveling; introduction to concrete and reinforcing materials; foundations and flatwork; concrete forms; reinforcing concrete; handling and placing concrete; manufactured forms. To be a completer in this NCCER pathway students must take and pass the Core Battery exams and take all of the Level I exams.
Prerequisite: Carpentry I

Construction Design and Management Completer – 4 Credits
Available at Boonsboro High School, South Hagerstown High School, Smithsburg High School and Williamsport High School

Introduction to Construction and Design
A934 1 Credit
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 floor plans. In addition, students will begin to develop a better understanding of the fields’ interrelationships.

Principles of Construction Design
A935 1 Credit
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; surveying; and project planning. Students will use design software to generate site plans (topography) as well as detailed building plans. The use of portfolios is introduced as a means of showing the developmental stages of a design project. Students will use 3D computer software to complete projects. Students will prepare and test for AutoCAD Certification.

Advanced Design and 3-D Modeling
A936 1 Accelerated Credit
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.

Advanced Construction Management
A937 1 Accelerated Credit
This capstone 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. Students are prepared to take exams for AutoCAD credentialing.

Food and Beverage Management Completer – 4 Credits
Available at North Hagerstown High School and South Hagerstown High School

Becoming a Food Service Professional (Level 1)
A819 Grade Level 10, 11 1 Credit
This course provides an introduction to the food service and hospitality industry. Students develop and demonstrate skills in safe and sanitary food handling and preparation techniques while learning to prepare a variety of foods. They develop a broad understanding of the variety of career options available in the food service and hospitality industry. Emphasis on management distinguishes this course from Culinary Arts I. Students can begin to accrue hours to meet the 400-hour work-based learning experience requirement. One hundred and fifty (150) of the 400 hours can be earned through unpaid clinical experience. The course begins to prepare students to take the National Restaurant Association Level I exam at the end of the course.
BECOMING A FOOD SERVICE PROFESSIONAL (LEVEL 2)
A820 Grade Level 10, 11 1 Accelerated Credit
Students enrolled in this course continue to prepare a variety of foods. They create menus and demonstrate various types of restaurant service. They apply purchasing techniques and demonstrate an understanding of inventory monitoring and control. Students have the opportunity for an authentic, mentored work-based learning experience. Emphasis on management distinguishes this course from Culinary Arts II. Students can continue to accrue hours to meet the 400-hour work-based learning experience requirement. Two hundred (200) of the 400 hours can be earned through unpaid clinical experience. All students enrolled in this course must take the National Restaurant Association end-of course exam. Students have the opportunity to earn the ServSafe Credential.
Prerequisite: Becoming a Food Service Professional (Level 1).

PRACTICAL EXPERIENCE AS A FOOD SERVICE PROFESSIONAL
A821 Grade Level 12 2 Credits
This course provides students the opportunity to refine further and apply skills that support all aspects of the hospitality industry. It assists in preparing students for employment and advancement in the field of hospitality and food and beverage management. Students complete 400 hours in an industry-mentored, work-based learning experience. Students may begin accumulating hours from the beginning of the Level 1 Food Service Professional class.

HOSPITALITY AND TOURISM MANAGEMENT COMPLETER – 4 Credits
Available at North Hagerstown High School

PRINCIPLES OF HOSPITALITY AND TOURISM
A1040/A1040SM Grade Level 10, 11, 12 1 Credit
The content of the introductory course of the Hospitality and Tourism Management completer will provide students with broad-based learning on the tasks, knowledge, and skills required by anyone wishing to build a career within the hospitality and tourism industry, including information that is required for operational level employee positions and responsibilities.

MARKETING
A775 Grade Level 10, 11, 12 1 Credit
Marketing I introduces students to the processes and functions involved in transferring business products or services to a consumer. The study of marketing helps students gain a clearer picture of how key business functions are directly related to marketing activities. When taught at NHHS, emphasis will be placed on the application of marketing to Hospitality and Tourism Management.

HOSPITALITY AND TOURISM MANAGEMENT
A1041/A1041SM Grade Level 10, 11, 12 1 Credit
In this course of the Hospitality and Tourism Management completer students focus on the leadership and managerial knowledge, skills, and abilities required for advancement in a management track in the hospitality and tourism industry.

HOSPITALITY AND TOURISM INTERNSHIP
A1042/A1042SM Grade Level 11, 12 1 Credit
Students participating in an internship will be placed in a professional setting under the supervision of a Hospitality and Tourism Management Professional that allows students to apply the skills and knowledge acquired from their previous coursework while practicing leadership and managerial skills during the rotation among station within the professional facility. The internship includes a minimum of 100 hours, which may be paid or unpaid. Success will be documented by the use of a competencies checklist.

POWER MECHANICS COMPLETER – 4 Credits
Available at Boonsboro High School and Clear Spring High School

AGRICULTURE SCIENCE
A921 Grade Level 9, 10, 11, 12 1 Credit
Agriculture Science is designed to explore the basic theory and uses of biotechnology in modern agriculture sciences. Course content focuses on plant and animal improvement, disease and insect control, integrated pest management, aquaculture, genetic engineering, embryo transplants, and other modern veterinary practices. Students are expected to research new developments in life science.

POWER MECHANICS I
A865 Grade Level 9, 10, 11, 12 1 Credit
Power Mechanics I is designed to familiarize students with the basic theory and specialized skills relative to mechanics in the diverse field of agriculture. Skills are developed in the areas of safety, material planning, tool identification and use, carpentry, electricity, painting, small gasoline engines, welding, and leadership.
**POWER MECHANICS II**  
A866  Grade Level 10, 11, 12  
1 Credit  
Power Mechanics II is designed as an in-depth study of mechanics in agriculture. Students receive additional training in the areas studied in Power Mechanics I. Additional training is offered in tool fitting, metalworking and welding.  
**Prerequisite:** Power Mechanics I

**POWER MECHANICS CAPSTONE**  
A1085  
1 Credit  
Power Mechanics Capstone is designed as an in-depth study of mechanics in agriculture. Students receive additional training in the areas studied in Power Mechanics I and II. Students will design and complete projects based on interest in an agriculture related topic. Students will be required to present their Capstone project to an independent judging panel.

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**HORTICULTURE COMPLETER – 4 Credits**  
Available at Boonsboro High School and Clear Spring High School

**HORTICULTURE SCIENCE**  
A922  Grade Level 9, 10, 11, 12  
1 Credit  
Horticulture Science students study how plants grow and are used in daily life. This course includes greenhouse management, plant propagation, plant nutrition, plant reproduction, vegetable and fruit gardening, care of houseplants, insects, and disease control. Horticulture Science also includes a unit on small gas engines.

**GREENHOUSE**  
A1002  Grade Level 11, 12  
1 Credit  
In this course, students develop skills in the proper use of scientific procedures and critical thinking skills within the green industry. Emphasis is placed on the study of the types of plant growing structures, financing, location and sizing of greenhouse facilities, controlling the greenhouse environment and its effect on plant development. Growing medias, plant nutrition and watering, plant pest/pathology, plant propagation, and the growing and marketing of greenhouse crops are also addressed (plant pathway course).  
**Prerequisite:** Foundations of Environmental/Agricultural Science

**NURSERY LANDSCAPE/TURF MANAGEMENT**  
A923  Grade Level 10, 11, 12  
1 Credit  
Nursery Landscape/Turf Management acquaints students with the three major branches of the landscape industry: design, installation, and management. In the turf grass component of the course, students study the installation and maintenance of turf grass and the use and service of equipment.  
**Prerequisite:** Horticulture Science

**ADVANCED FLORAL DESIGN**  
A1071  
1 Credit  
Advanced Floral Design teaches students basic elements and principles of design while familiarizing them with the material and tools of floral design. Professionally designed floral designs, arrangements or artwork incorporate the elements of floral design: line, form, space, texture, and color, and the principles of floral design: balance, proportion, rhythm, contrast, harmony, and unity. Proper use of the color wheel will be taught and used to select color schemes for construction of basic geometric arrangements, corsages, and boutonnieres. Students will learn to identify and care for flowers, while learning to select quality materials in design, construction, and marketing of floral products.

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**CURRICULUM FOR AGRICULTURE SCIENCE EDUCATION (CASE) COMPLETER – 4 Credits**  
Available at Hancock High School, Smithsburg High School, and South Hagerstown High School

**INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES**  
A1020  
1 Credit  
Students’ experiences in AFNR will involve the study of communication, sciences of agriculture, plants, animals, natural resources, and agricultural mechanics. While surveying the opportunities available in agriculture and natural resources, students will learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions, and learning. For example, students will work in groups to determine the efficiency and environmental impacts of fuel sources in a practical learning exercise. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community. Students will connect their lessons and Supervised Agricultural Experience (SAE) and FFA.
PRINCIPLES OF AGRICULTURAL SCIENCE - PLANT SCIENCE
A1021  1 Credit
The course is structured to enable all students to have a variety of experiences that will provide an overview of the field of agricultural science with a foundation in plant science. Students will work in teams, exploring hands-on projects and activities, to learn the characteristics of plant science and work on major projects and problems similar to those that plant science specialists, such as horticulturists, agronomists, greenhouse and nursery managers and producers, and plant research specialists face in their respective careers. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community. In addition, students will connect the Plant Science lessons and Supervised Agricultural Experience (SAE) and FFA.

ANIMAL AND PLANT BIOTECHNOLOGY
A1022  1 Credit
The students study in biotechnology through biochemistry, safety and laboratory techniques, regulations, laws, and ethics, biotechnology research, DNA/gene transfer, emerging technology, microbial biotechnology, and transgenic material. The implications for agriculture will be learned through biofuels, embryo transfer, micropropagation, and biotechnology products and services. Students will also look to the future as they learn about careers and participate in Supervised Agricultural Experience programs (SAE).

AGRICULTURAL BUSINESS, RESEARCH, AND DEVELOPMENT
A1023  1 Accelerated Credit
The Agricultural Business, Research, and Development course will serve as the Curriculum in Agriculture Science Education (CASE™) capstone course. Instruction and continued inquiry-based projects are designed to integrate key learning from previous CASE™ courses and have students apply them to real-world career situations through Supervised Agricultural Experience (SAE) projects or other internship/ work-based learning opportunities.

CURRICULUM FOR AGRICULTURE SCIENCE EDUCATION (CASE)
AGRICULTURAL ENGINEERING COMPLETER – 4 Credits
Available at Smithsburg High School

INTRODUCTION TO AGRICULTURE, FOOD, AND NATURAL RESOURCES
A1020  1 Credit
Students’ experiences in AFNR will involve the study of communication, sciences of agriculture, plants, animals, natural resources, and agricultural mechanics. While surveying the opportunities available in agriculture and natural resources, students will learn to solve problems, conduct research, analyze data, work in teams, and take responsibility for their work, actions, and learning. For example, students will work in groups to determine the efficiency and environmental impacts of fuel sources in a practical learning exercise. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community. Students will connect their lessons and Supervised Agricultural Experience (SAE) and FFA.

AGRICULTURE POWER AND TECHNOLOGY
A1081  1 Credit
The focus of Agricultural Power and Technology (APT) is to expose to students to mechanics, power, technology, and career options in the world of agriculture. Students participating in the APT course will have experiences in various mechanical and engineering concepts with exciting hands-on activities, projects, and problems. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community.

MECHANICAL SYSTEMS IN AGRICULTURE
A1082  1 Credit
The Mechanical Systems in Agriculture course is designed to provide rigorous applications in the agricultural engineering field. Throughout the course, students apply technical and engineering skills while becoming competent in the processes used to operate, repair, engineer, and design agricultural tools and equipment and apply the engineering principles to the construction of machines and structures. Students will investigate, experiment, and learn about documenting a project, solving problems, and communicating their solutions to their peers and members of the professional community.
AGRICULTURAL BUSINESS, RESEARCH, AND DEVELOPMENT
A1023  1 Accelerated Credit
The Agricultural Business, Research, and Development course will serve as the Curriculum in Agriculture Science Education (CASE™) capstone course. Instruction and continued inquiry-based projects are designed to integrate key learning from previous CASE™ courses and have students apply them to real-world career situations through Supervised Agricultural Experience (SAE) projects or other internship/ work-based learning opportunities.

ENVIRONMENTAL RESOURCE MANAGEMENT COMPLETER – 4 Credits
Available at Boonsboro High School

AGRICULTURE SCIENCE
A921 Grade Level 9, 10, 11, 12  1 Credit
Agriculture Science is designed to explore the basic theory and uses of biotechnology in modern agriculture sciences. Course content focuses on plant and animal improvement, disease and insect control, integrated pest management, aquaculture, genetic engineering, embryo transplants, and other modern veterinary practices. Students are expected to research new developments in life science.

INTRODUCTION TO SUSTAINABLE AGRICULTURE
A1080  1 Credit
Introduction to Sustainable Agriculture is a one-semester course designed for students interested in exploring sustainable methods of agriculture to minimize the impacts of conventional agricultural practices on the natural environment. Students will research the diverse viewpoints associated with different aspects of agriculture, and agricultural sustainability, from various natural science perspectives, as well as other disciplines. In addition, students will critically examine some of the intended and unintended consequences of agriculture, and the various questions these raise about sustainability. Examples will be drawn from current and historical practices of agriculture. This course is a possible ESSENCE course. This course is designed to provide students with the opportunity to earn college credit.

FISH/WILDLIFE
A909 Grade Level 10, 11, 12  1 Credit
Fish/Wildlife introduces students to wildlife in the Eastern United States. Students learn identification, habits, habitat requirements, and ecosystem/food chain interactions. Students study the physical characteristics of the oceans, estuaries, and freshwater systems. The history of wildlife management practices and policies and the benefits gained from wildlife are also covered. Fish/Wildlife places emphasis on managing wildlife populations, habitat evaluation, and outdoor safety. Public policies and government laws pertaining to wildlife management are also covered. Career opportunities in wildlife management are explored. Prerequisite: Agriculture Science

FORESTRY/SOILS
A920 Grade Level 10, 11, 12  1 Credit
Forestry/Soils provides a broad, basic introduction to dendrology and silviculture from the earliest uses of forests to the latest methods in the field. Topics considered include: conservation, forest and wildlife management, energy and resources, tree harvesting, damage caused by fire, and control of weather, insects, animals, and diseases. Major emphasis is placed on tree identification, employment opportunities, forest products, wood characteristics, safety practices, and business methods relating to forestry. Students study the formation of soils, their capability classes, and series. Types of soil erosion and methods to control the erosion on agricultural and non-agricultural lands are also discussed. Career opportunities are explored. Prerequisite: Agriculture Science

ENVIRONMENTAL AGRICULTURAL SCIENCE ACADEMY – ANIMAL SCIENCE COMPLETER
Available at Clear Spring High School

FOUNDATIONS OF ENVIRONMENTAL AGRICULTURAL SCIENCE
A1000 Grade Level 9, 10, 11  1 Credit
This course provides an overview of animal, plant, and environmental sciences to facilitate student choice of pathway for further study. The environmental science portion of the course introduces students to the diverse areas of environmental resources management: its principles, practices, and career opportunities. Focus is on the policies and conversation management practices related to water, soil, air, forests, fish and wildlife, land use, and energy resources as well as recreational uses of those resources. The basic theory and uses of biotechnology in modern agriculture sciences focuses on plant and animal improvement, disease and insect control, integrated pest management, aquaculture, genetic engineering, embryo transplants and other modern veterinary practices. Students learn greenhouse management, plant propagation, nutrition, and reproduction, vegetable and fruit gardening, care of houseplants, insects, and disease control by studying how plants grow and are used in daily life.
BIOTECHNOLOGY
A868 Grade Level 9, 10, 11, 12 1 Credit
Biotechnology students study genetic engineering and how gene technology is transforming agriculture while making advances in medicine for humans, animals, and plants. Available at CSHS. This course is a prerequisite for the Environ/Ag Academy.
Prerequisite: Honors Biology

PRODUCTION AND COMPANION ANIMALS
A1013 Grade Level 10, 11, 12 1 Credit
This course is a general introduction to the industry associated with large production and small companion animals, its history, careers available, and the importance of safety and environment. Marketing and management of animal agriculture through selection, breeding, feeding and food safety, health, housing, and equipment are emphasized (animal pathway course). 
Prerequisite: Foundations of Environmental/Agricultural Science

VETERINARY TECHNOLOGY
A1007 Grade Level 10, 11, 12 1 Credit
In this course, the areas of study include comparative anatomy and physiology of body systems, identification and prevention of disease, nutrition, clinical examination of animals, and basic principles of animal surgery. Students study advanced work in animal health and reproduction, as well as immunology, public health, and environmental controls (animal pathway course).
Prerequisite: Foundations of Environmental/Agricultural Science

ENVIRONMENTAL AGRICULTURAL SCIENCE ACADEMY – ENVIRONMENTAL COMPLETER
Available at Clear Spring High School

FOUNDATIONS OF ENVIRONMENTAL AGRICULTURAL SCIENCE
A1000 Grade Level 9, 10, 11 1 Credit
This course provides an overview of animal, plant, and environmental sciences to facilitate student choice of pathway for further study. The environmental science portion of the course introduces students to the diverse areas of environmental resources management: its principles, practices, and career opportunities. Focus is on the policies and conversation management practices related to water, soil, air, forests, fish and wildlife, land use, and energy resources as well as recreational uses of those resources. The basic theory and uses of biotechnology in modern agriculture sciences focuses on plant and animal improvement, disease and insect control, integrated pest management, aquaculture, genetic engineering, embryo transplants and other modern veterinary practices. Students learn greenhouse management, plant propagation, nutrition, and reproduction, vegetable and fruit gardening, care of houseplants, insects, and disease control by studying how plants grow and are used in daily life.

AQUATICS AND WILDLIFE
A1014 Grade Level 11, 12 1 Credit
The Aquatics and Wildlife course introduces the student to wildlife, both aquatic and land-dwelling, in the eastern United States. Students learn identification, habits, habitat requirements, and ecosystem/food chain interactions in freshwater and marine ecosystems and wetlands. The course also covers the history of management practices and policies and the benefits gained from aquatics & wildlife as well as managing aquatic and wildlife populations, habitat evaluation, and outdoor safety. The course covers public policies and government laws pertaining to wildlife and aquatic management, aquaculture structure, and equipment. Students explore career opportunities in aquatic and wildlife management (Environmental-Natural Resources pathway course).
Prerequisite: Foundations of Environmental/Agricultural Science

FORESTRY, SOILS AND THE ENVIRONMENT
A1015 Grade Level 11, 12 1 Credit
In this course, students learn the basics of soils as a complex system of organic and inorganic substances. Topics include the roles of biogeochemical cycles and microbial habitat. Students also study the formation of soil, their capability classes, and series. Students study types of soil erosion and methods to control the erosion on agricultural and non-agricultural lands. The study of forests provides a broad, basic introduction to dendrology (botanical study of trees) and silviculture (study of forests) from the earliest uses of forests to the latest methods in the field. Topics include conservation, forest and wildlife management, energy and resources, tree harvesting, damage caused by fire, and control of weather, insects, animals, and diseases. Major emphasis is placed on tree identification, employment opportunities, forest products, wood characteristics, safety practices, and business methods relating to forestry. Students explore career opportunities (Environmental-Natural Resources pathway course).
Prerequisite: Foundations of Environmental/Agricultural Science
INTRODUCTION TO SUSTAINABLE AGRICULTURE
A1080  1 Credit
Introduction to Sustainable Agriculture is a one-semester course designed for students interested in exploring sustainable methods of agriculture to minimize the impacts of conventional agricultural practices on the natural environment. Students will research the diverse viewpoints associated with different aspects of agriculture, and agricultural sustainability, from various natural science perspectives, as well as other disciplines. In addition, students will critically examine some of the intended and unintended consequences of agriculture, and the various questions these raise about sustainability. Examples will be drawn from current and historical practices of agriculture. This course is a possible ESSENCE course. This course is designed to provide students with the opportunity to earn college credit.

HOMELAND SECURITY & EMERGENCY PREPAREDNESS COMPLETER – 4 Credits
Available at Boonsboro High School and South Hagerstown High School

FOUNDATIONS OF HOMELAND SECURITY AND EMERGENCY PREPAREDNESS
A1024  1 Credit
This is one of two foundation courses required in all pathways of the Homeland Security and Emergency Preparedness career program. Emphasis will be placed on unique aspects of public safety and public health. The course will explore the various methodologies for intelligence gathering and dissemination and will introduce students to various local, state, and federal assets. Students will prepare an action plan that includes initial notification, emergency response (on and off scene), and recovery.

HOMELAND SECURITY I
A1025  1 Credit
This is one of two foundation courses required in all pathways the Homeland Security and Emergency Preparedness career program. Students will be introduced to threats to public safety and health, decontamination, protection, detection and identification, and planning concepts. Emphasis will be placed on the utilization of science to protect the public against chemical and biological threats. The course will explore the various methodologies and capabilities and limitations for individual and collective protection, handheld and fixed detection, and field sampling and laboratory identification. Students will prepare a chemical and biological incident response plan as an end of course assessment.

HOMELAND SECURITY II--RESEARCH METHODS AND APPLICATIONS
A1026   1 Credit
This course will focus on developing the student's scientific research, problem solving and writing skills. Emphasis will be placed on research and analysis, technical writing, team dynamics, and laboratory analysis and skills. The course will actively engage the student in market survey techniques, technical publication layout and design, team building skills and role play, and proper implementation of laboratory instrumentation and equipment.
Prerequisite: Homeland Security I

INTERNSHIP/CAPSTONE EXPERIENCE
A1027  1 Credit
The Internship/Capstone Experience is the culminating course for all pathways in the Homeland Security and Emergency Preparedness Program. This course is designed to provide students with the opportunity to extend and apply their classroom learning in one of the career areas of Homeland Security Sciences. Students will have the option of completing an industry- mentored project, internship, or enrolling in a post-secondary course. They will play an integral part in determining which type of experience will be most beneficial and supportive of their individual goals. At the end of the course, students will compile a working portfolio which documents their academic and technical skill attainment and present it for critique.
Prerequisite: Homeland Security II--Research Methods and Applications

CHILDCARE GUIDANCE AND MANAGEMENT COMPLETER – 4 Credits
Available at Clear Spring High School, Hancock High School, North Hagerstown High School, South Hagerstown High School, and Williamsport High School

PARENTING AND FAMILY DYNAMICS
A834 Grade Level 9, 10, 11, 12  1 Credit
Parenting and Family Dynamics is a course in which students continue to study human behavior with the emphasis on the responsibilities and roles of parents in rearing children. Students study guidelines for selecting daycare and dealing with family crisis throughout the life cycle. Through their work with small children in a lab setting, students gain employability skills as well as life skills in designing a nursery school program. Students may earn 3 credits with Hagerstown Community College upon completion of “Child Development” and “Parenting and Family Dynamics.” A 90% course average and excellent recommendation from their classroom teacher is required to receive Hagerstown Community College credits.
**CHILD DEVELOPMENT**  
A836  Grade Level 9, 10, 11, 12  1 Credit  
Child Development is a course that develops skills and knowledge necessary to understand the growth and development of the young child. The course begins with the study of self awareness, decision making, and human growth and development which develops into a practical study of understanding and caring for preschool aged children in a child care setting. This course is a prerequisite for Child Care Services and is required for a completer program in Child Care.

**CHILD CARE SERVICES**  
A840  Grade Level 12  1 Credit  
Child Care Services is for seniors who are enrolled in a Child Care Completer Program. This course provides students with the skills and understanding of establishing a child care center. Child Care Services places emphasis on designing a learning center to accommodate the developmental needs of students in a child care facility. Students complete a portfolio, design learning activities, and are in charge of the instructional program under the direction of the teacher. Students may opt for an internship assignment with a teacher in the public school or child care center. Assignments are made by the child care teacher.

**CHILD CARE INTERNSHIP**  
A845  Grade Level 12  1 Credit  
Child Care Internship is the internship required for the Child Care Program Completer. Students are assigned to work with a Pre-K, a kindergarten, or elementary teacher and complete a daily journal. There is close supervision of the student by the course instructor and cooperating teacher. If this course is chosen as an Elective, it must be taken along with the Child Care Services course in order for the student to receive credit.  
**Prerequisite:** Child Care Services

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**ACADEMY OF TEACHING PROFESSIONS COMPLETER – 4 CREDITS**  
Available at North Hagerstown High School and South Hagerstown High School

**HUMAN GROWTH AND DEVELOPMENT THROUGH ADOLESCENCE**  
A841  Grade Level 10, 11  1 Credit  
This course focuses on human development from birth through adolescence. Emphasis is placed on theories of physical, cognitive, and psychosocial development, the effect of heredity and the environment, the role of caregivers and the family, health and safety concerns, and contemporary issues. Students explore special challenges to growth and development. Students have opportunities for guided observation of children from birth through adolescence in a variety of settings to help students further understand theories of human development. Students begin to develop the components of a working portfolio to be assembled upon completion of the internship.

**TEACHING AS A PROFESSION**  
A842  Grade Level 10, 11, 12  1 Credit  
This course focuses on the profession of teaching - its history, purposes, issues, ethics, laws and regulations, roles, and qualifications. Emphasis is placed on identifying the current, historical, philosophical and social perspectives of American education, including trends and issues. Students explore major approaches to human learning. Students participate in guided observations and field experiences in multiple settings to help them assess their personal interest in pursuing careers in this field and to identify effective learning environments. Students continue to develop the components of a working portfolio to be assembled upon completion of the internship.

**FOUNDATIONS OF CURRICULUM AND INSTRUCTION**  
A843  Grade Level 11, 12  1 Credit  
This course explores curriculum delivery models in response to the developmental needs of all children. Emphasis is placed on the development of varied instructional materials and activities to promote learning, classroom management strategies, and a supportive classroom environment. Students explore basic theories of motivation that increase learning. Students participate in guided observations and field experiences to critique classroom lessons in preparation for developing and implementing their own. Students continue to develop the components of a working portfolio to be assembled upon completion of the internship.

**EDUCATION ACADEMY INTERNSHIP**  
A1043  Grade 12  1 Accelerated Credit  
Education Academy Internship (the Academy capstone course) is styled for those interested in a career as a professional teacher or paraprofessional. Students explore the fundamentals of education which is a requisite for every professional teacher. These fundamental areas include the philosophical, historical, social, cultural, political, financial, and legal dimensions of the United States educational system. Students learn strategies for teaching reading, which are used in their internship. Students may have the opportunity to test for the ParaPro and Praxis 1 exams. This course is designed to provide students with the opportunity to earn college credit.
### FOUNDATIONS OF COMPUTER SCIENCE

**A350H**  
Grade Level 9, 10, 11, 12  
1 Elective Credit

Foundations of Computer Science, the first course in the computer science completer, 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 courses 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. The goal is to develop in students the computational thinking practices of algorithm development, problem solving and programming within the context of problems that are relevant. Students will also be introduced to topics such as interface design, limits of computers, and societal and ethical issues. This course includes a broad range of topics in computing, including robotics; programming in several languages such as Processing and Java; and cyber security.

### AP COMPUTER SCIENCE PRINCIPLES

**A352AP**  
Grade Level 10, 11, 12  
1 AP Credit

AP Computer Science Principles advances students’ understanding of the technical aspects of computing, including programming and algorithm design, computer system organization and operation, and data representation and information organization. This course includes the use of several programming languages, based on the specific project or problem students must solve. Students in this course are prepared to take the AP Computer Science Principles exam.

### AP COMPUTER SCIENCE A

**A358AP**  
Grade Level 11, 12  
Either 1 AP CTE Credit or 1 AP Mathematics Credit

AP Computer Science A offers students the opportunity to expand their knowledge in the field of computer science. The topics included in this course closely parallel those of an introductory course for computer science majors at most colleges and universities. This course is designed for the highly motivated learner. Exercises cover rigorous problem definition, program implementation strategies, and investigations into the current AP Case Study.

**Prerequisite:** Successful completion of Foundations of Computer Science and Advanced Placement Computer Science Principles, completion of or concurrent enrollment in Algebra II, and teacher recommendation

### ADVANCED C++

**A361**  
Grade Level 11, 12  
1 Advanced Credit

This college-level course continues to introduce students to object-oriented programming using C++ and Visual C++. Students learn OOP concepts such as classes, friends and templates and use these to build a program designed to run under a Microsoft Windows environment. Using a hands-on approach, students have the opportunity to design, code and test object-oriented applications. Additional time outside of class will be necessary to write programs. This course is the culminating capstone course for the Computer Science completer.

### THE ACADEMY OF SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM)

**Available at Williamsport High School**

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<thead>
<tr>
<th>Science</th>
<th>Tech Ed</th>
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<tr>
<td>Honors Biology</td>
<td>Introduction to Engineering Design (or grade 8)</td>
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<td>Honors Chemistry</td>
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<td>Honors Geometry</td>
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<td>Honors Algebra II</td>
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<td>Honors Pre-Calculus/Trigonometry</td>
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**STEM Science Pathway**

4 Honors/Advanced Placement Science Courses  
Principles of Engineering  
Engineering Design and Development

**STEM Math Pathway**

4 High School Honors/Advanced Placement Math Courses  
Principles of Engineering  
Engineering Design and Development
STEM Hybrid Pathway
1 Advanced Placement Science Course
1 Advanced Placement Math Course
Principles of Engineering
Engineering Design and Development

Aerospace Engineering PLTW
Principles of Engineering
Digital Electronics
Aerospace Engineering
Engineering Design and Development
Advanced Placement Calculus (recommended)
Advanced Placement Physics (recommended)

Mechanical Engineering PLTW
Principles of Engineering
Digital Electronics
Computer Integrated Manufacturing
Engineering Design and Development
Advanced Placement Calculus (recommended)
Advanced Placement Physics (recommended)

Possible Electives for any pathway (unless required)
Advanced Placement Calculus
Advanced Placement Statistics
Advanced Placement Chemistry
Advanced Placement Biology
Advanced Placement Physics
Advanced Placement Environmental Science
Any PLTW Course

*Programs available at the middle school result in some students arriving with math credits while others will need to take additional math at the high school to prepare them for the rigor of college programs in science, technology, engineering and mathematics. Students should be enrolled in Honors math and science courses whenever possible.

THE ACADEMY OF SCIENCE, TECHNOLOGY ENGINEERING, AND MATHEMATICS
Available at Williamsport High School

INTRODUCTION TO ENGINEERING DESIGN
A855 Grade Level 10, 11, 12 1 Credit
Introduction to Engineering Design is an introductory course that develops students’ problem-solving skills, with emphasis on visualization and communication skills using a computer and a 3-D solid modeling software. This class fulfills the graduation requirement for Technology Literacy. However, if used to fulfill this requirement, it may not be applied as a course for the Academy of Manufacturing and Engineering Technology (PLTW) completer.

PRINCIPLES OF ENGINEERING
A854 Grade Level 9, 10 1 Credit
Principles of Engineering is a broad-based survey course to help students understand engineering and engineering technology and identify career possibilities. Theoretical and hands-on problem-solving activities are emphasized.

AEROSPACE
A863 Grade Level 11, 12 1 Accelerated Credit
The major focus of this course is to expose students to the world of aeronautics, flight, and engineering through the fields of aeronautics, aerospace engineering, and related areas of study. Lessons engage students in engineering design problems related to aerospace information systems, astronautics, rocketry, propulsion, the physics of space science, space life sciences, the biology of space science, principles of aeronautics, structures and materials, and systems engineering. Students work in teams utilizing hands-on activities, projects, and problems and are exposed to various situations faced by aerospace engineers. In addition, students use 3D design software to help design solutions to proposed problems. Students design intelligent vehicles to learn about documenting their project, solving problems, and communicating their solutions to their peers and members of the professional community.
DIGITAL ELECTRONICS
A856 Grade Level 11, 12 1 Accelerated Credit
Digital Electronics is a course of study in applied digital logic, using electronic logic circuits that first are designed and then tested using the latest computer digital-logic modeling technology.

ENGINEERING DESIGN AND DEVELOPMENT
A858 Grade Level 12 1 Accelerated Credit
Engineering Design and Development involves two-to-four-person teams that research an open-ended problem and then design and construct a solution to it. Each team must submit progress reports and a final research paper. The team members then defend the solution with an oral presentation before an outside review panel.
WASHINGTON COUNTY TECHNICAL HIGH SCHOOL

KEY INFORMATION

• Washington County Technical High School, one of Washington County’s nine high schools, has a career and technology focus. Juniors and seniors complete all their academic and technology studies at Washington County Technical High School. **To be eligible to attend students must complete their 9th and 10th grade required courses and have earned the following 12 credits:** 2-English, 1-Algebra 1-Geometry, 2-Science, 2-Social Studies (US Studies II and Government), 1-Health/Life Skills, 1-Fine Arts, 1-Physical Education credit, and Foundations of Technology. Students must be selected from the competitive application process. Administration has the final decision for acceptance.

• Graduates will participate in Washington County Technical High School graduation exercises and may also choose to participate with their community school. Students participating in graduation ceremonies at Washington County Technical High School and their community schools will receive their Washington County Technical High School diplomas at their community schools.


• Honors and Advanced Placement courses are available.

• Students will have the opportunity to participate in athletics at their community schools.

• Senior cosmetology students must attend summer school or Evening High School to receive their fourth English credit and/or other academic credits needed for graduation.

• Juniors and seniors are permitted to drive to Washington County Technical High School. Seniors participating in internships have priority on parking spaces.

• Students may attend activities at their community schools as long as participation does not conflict with their Washington County Technical High School commitments and permission has been received from the community school administration.

• Senior Options: In addition to their academics and career and technology programs, students may choose courses from Hagerstown Community College or participate in work-based learning. Special online Internet courses will also be available.

• Students who successfully complete identified Washington County Technical High School programs are eligible for college credits. Colleges grant articulated college credits for the courses completed in high school.

• Washington County Technical High School graduates are eligible for college entrance and other post-secondary educational opportunities.

• Hardworking, successful students position themselves for excellent salaries, apprenticeships, scholarships, and excellent career opportunities.

• Support staff is available to assist in the success of all students.
University System of Maryland
The Board of Education of Washington County certifies that the following courses meet the minimum requirements for students seeking admission to institutions in the University System of Maryland. Additional advanced courses are recommended.

Writing, Reading, and Literature - 4 credits
- English or Honors English I to IV (including AP/IB)

History, Social Science - 3 credits
- United States Studies II
- Local, State, National Government
- World History

Science (Lab-based) - 3 credits
- Biology
- Chemistry
- Integrated Physics & Chemistry
- Physics
- Anatomy and Physiology
- Earth and Space Science

World Languages - 2 credits of one language

Mathematics - 4 credits total - 3 of which must be the following: Algebra I, Geometry, Algebra II
A senior level mathematics course is required and must include a course or courses that utilize non-trivial Algebra such as Introduction to AP Statistics, Honors Pre-Calculus/Trigonometry, Honors Calculus, AP Statistics and College Algebra.

Career Technology Education Completer Programs
The following Career Technology Education Completer Programs meet the Maryland graduation completer program requirement. The course sequences listed for each completer program must all be completed to earn completer program credit. Students on track to be a CTE completer are required to take identified program certification exam(s).

CARPENTRY COMPLETER – 8 Credits

INTRODUCTION TO CONSTRUCTION DESIGN AND MANAGEMENT AND CONSTRUCTION SAFETY I
A2004 Grade 11 2 Credits
This course is an introduction to the construction industry, with a focus on residential and commercial building systems. Students will practice basic carpentry skills, including proper tool use, power and hand, and proper safety. Students will have the opportunity to be on an active build site and practice their introductory skills. Students will also develop an understanding of the design and construction process. Students will have the opportunity to test for OSHA 10 Certification.

CIVIL ARCHITECTURE SITE DEVELOPMENT AND INTRODUCTION TO ACTIVE BUILDING SITES II
A2005 Grade 11 2 Credits
This class will introduce students to surveying and the site development process. Students will also be introduced to the equipment that is used on an active work site, including power tools and other construction and carpentry equipment. This class also allows students to further their carpentry skills as they work on an active build site or house project that is provided by the program. Students will have the opportunity to test for NCEER Carpentry 1 Certification.

CONSTRUCTION PLAN READING AND DEVELOPMENT AND PRINCIPLES OF CONSTRUCTION DESIGN III
A2006 Grade 12 2 Credits
This class will introduce students to plan reading and plan development. This class will examine the materials, codes and the engineering that is used in construction. These task will be completed as students are able to work at an active build site. Instructional topics include the development of carpentry and related construction skills, material selection, computer-related skills in construction planning, material take-off and estimating, and blueprint reading. Students will continue to participate in a school-based business “house project” where they experience building a complete house from start to finish. Students may have the opportunity to test for Forklift Certification.
This class focuses on the advanced design necessary to work within the Carpentry and Construction field. Advanced architectural design skills are developed through lab-based instruction using Autodesk software tools (AutoCAD and Revit Architecture). This class will begin with AutoCAD and transition into Revit Architecture. Primary focus will be to design and develop drawings that are used in the construction industry. This class will be the capstone that pulls everything together from the conception to the final product. Students will be on an active work site and/or a co-op experience. Student will have the opportunity to test for NCEER Carpentry 2 Certification, AutoCad User Certification, and/or Revit User certification. Co-op/apprenticeship may be available to qualifying students. This course is designed to provide students with the opportunity to earn college credit.

### ELECTRICAL CONSTRUCTION COMPLETER – 8 Credits

#### FOUNDATIONS OF BUILDING AND CONSTRUCTION I
A2000 Grade 11 2 Credits

This course is designed to introduce basic construction safety. Students will gain introductory knowledge of hand tools used by all trades, and power tools, including pneumatic, hydraulic, and electric-powered tools. Basic job site communications are covered and the skills expected from employers. Students are exposed to an introduction to materials handling. Students will be instructed in wiring diagrams, schematics, and blueprint reading. In-depth coverage of electrical symbols and electrical drawings are included. Students will learn to use various types of electrical test equipment. Students will have the opportunity to test for NCCER Core Certification.

#### ELECTRICAL I: SAFETY TRAINING/ELECTRICAL THEORY II
A2001 Grade 11 2 Credits

This course is designed to introduce basic construction safety. Students will gain introductory knowledge of hand tools used by all trades, and power tools, including pneumatic, hydraulic, and electric-powered tools. Basic job site communications are covered and the skills expected from employers. Students are exposed to an introduction to materials handling. Students will be instructed in wiring diagrams, schematics, and blueprint reading. In-depth coverage of electrical symbols and electrical drawings are included. Students will learn to use various types of electrical test equipment. Students will have the opportunity to test for NCCER Core Certification.

#### ELECTRICAL II: DEVICE BOXES, RACEWAYS, AND CONDUIT III
A2002 Grade 12 2 Credits

This course is designed to further a student’s electrical knowledge, including device boxes, pull and junction boxes, conductors and cable, conductor installations, conductor terminations and splices, and electric lighting. Students begin learning about the different types of conduits, raceways, and cable trays. Different methods of bending conduit are explored to include hand bending and mechanical bending. Students have the opportunity to earn the first year of a four-year apprenticeship with the Associated Builders and Contractors Apprenticeship Program.

#### CO-OP/ON-SITE WORK EXPERIENCE IV
A2003 Grade 12 2 Credits

through the Co-op program. Students remaining in class will have the opportunity to assist in the construction and wiring of a single-family home, including the installation of a solar array. Both opportunities are intended to give students real-world work experience in their chosen trade. Students must maintain at least a 70% in all classes while fulfilling all other school obligations in order to be, and stay, eligible for the co-op program.

### COSMETOLOGY COMPLETER – 8 Credits

#### INTRODUCTION TO COSMETOLOGY I
A2014 Grade 11 2 Credits

This course introduces students to the history and professional skills necessary to be successful in a career in cosmetology. Students will cover the sciences relative to the cosmetology industry including infection control, anatomy, chemistry, electricity, as well as the structures disorders and diseases of the integumentary system. Students are instructed in the art and science of cosmetology, as well as all aspects of the industry. Emphasis is placed on hygiene, safety, and sanitation as well as state Board of Cosmetologists’ rules and regulations.

#### COSMETOLOGY - THEORY AND APPLICATION II
A2015 Grade 11 2 Credits

Students will be introduced to the fundamentals of hair design including scalp care, haircutting, hairstyling, hair coloring, and chemical texture services. They will also practice nail care for cosmetology including manicuring, pedicuring, and artificial nail enhancements. Students will have the opportunity to practice hands on skills with a variety of opportunities. They will also be introduced to the fundamentals of applying cosmetology skills in a salon environment.
SALON ENVIRONMENT/PRACTICUM III  
A2016 Grade 12 4 Credits  
Students will have the opportunity to work in a real-life salon setting (Future Stars Salon) while using all the skills learned throughout their cosmetology course work. These skills include scalp care, haircutting, hairstyling, hair coloring, and chemical texture services, as well as nail care for cosmetology including manicuring, pedicuring, and artificial nail enhancements, makeup artistry, hair removal, skin care, and facial services. Salon management, varying business models, employment options, and job requirements. Students will have the opportunity to review Maryland State Board of Cosmetology Laws and the opportunity to test for the Maryland State Board of Cosmetology Certification in both the practical and theory licensing exams.

CULINARY ARTS COMPLETER – 8 Credits

KITCHEN BASICS AND FUNDAMENTALS OF BAKING I  
A2010 Grade 11 2 Credits  
The course is designed to introduce students to proper kitchen safety, safe food handling, kitchen equipment, and work flow in an industrial kitchen. Students will be safely introduced to knife skills and small wares. Students will watch demonstrations and also practice the fundamentals of baking, including cookies, quick breads, cakes, seasonal pastries, and decorating skills.

CULINARY BASICS AND SERVSAFE SANITATION CERTIFICATION II  
A2011 Grade 11 2 Credits  
This course focuses on breakfast, learning about banquets, and preparing for the ServSafe Certification. The students will have the opportunity to season and flavor foods, learn cooking fundamentals while exploring different methods. By the end of the course, students will prepare for and have the opportunity to test for ServSafe certification.

CULINARY APPLICATION, BAKING AND PAstry III  
A2012 Grade 12 2 Credits  
The course is designed to cover topics including baking terminology, tool and equipment use, formula conversion, and functions of ingredients. Students will also work to prepare a variety of menus, such as Farm-to-table, and garde manger. Students will create composed salads, dressings, and work on cold food presentation. Another focus is the development of baking skills through labs that include doughs, quick breads, tarts, and doughnuts.

CULINARY APPLICATION, CULINARY MANAGEMENT IV  
A2013 Grade 12 2 Credits  
This course builds on the knowledge of the previous courses, and includes students making sandwiches, appetizers & Hor d’oeuvres, creating stocks, sauces, and soups. Students will continue with menu planning, nutrition and working in a live setting restaurant. Students will have the opportunity to earn the American Culinary Federation (ACF) Certified Fundamental Cook certification. Because this course is aligned with a college credit, students may have the opportunity to earn college credit.

HORTICULTURE COMPLETER – 4 Credits

HORTICULTURE SCIENCE  
A922 Grade Level 9, 10, 11, 12 1 Credit  
Horticulture Science students study how plants grow and are used in daily life. This course includes greenhouse management, plant propagation, plant nutrition, plant reproduction, vegetable and fruit gardening, care of houseplants, insects, and disease control. Horticulture Science also includes a unit on small gas engines.

GREENHOUSE  
A1002 Grade Level 11, 12 1 Credit  
In this course, students develop skills in the proper use of scientific procedures and critical thinking skills within the green industry. Emphasis is placed on the study of the types of plant growing structures, financing, location and sizing of greenhouse facilities, controlling the greenhouse environment and its effect on plant development. Growing medias, plant nutrition and watering, plant pest/pathology, plant propagation, and the growing and marketing of greenhouse crops are also addressed (plant pathway course).

NURSERY LANDSCAPE/TURF MANAGEMENT  
A923 Grade Level 10, 11, 12 1 Credit  
Nursery Landscape/Turf Management acquaints students with the three major branches of the landscape industry: design, installation, and management. In the turf grass component of the course, students study the installation and maintenance of turf grass and the use and service of equipment.
ADVANCED FLORAL DESIGN
A1071 1 Credit
Advanced Floral Design teaches students basic elements and principles of design while familiarizing them with the material and tools of floral design. Professionally designed floral designs, arrangements or artwork incorporate the elements of floral design: line, form, space, texture, and color, and the principles of floral design: balance, proportion, rhythm, contrast, harmony, and unity. Proper use of the color wheel will be taught and used to select color schemes for construction of basic geometric arrangements, corsages, and boutonnieres. Students will learn to identify and care for flowers, while learning to select quality materials in design, construction, and marketing of floral products.

FIRE AND RESCUE ACADEMY

Maryland Fire and Rescue Institute of the University of Maryland Courses for the Fire and Rescue Academy

Fire and Rescue Academy is a 2-year program of the Maryland Fire Science Academy/University of Maryland. This program is sponsored by the Washington County Commissioners and the Washington County Fire and Rescue Association (WCVFRA) and administered by the Washington County Public Schools through the CTE office.

High school juniors who are 16 years old before the start of school and a member of a local fire or rescue company or mutual aid company can enroll in the program for 2 years. Interested students need to apply with their school counseling department for enrollment at WCTHS.

FIRE EMERGENCY MEDICAL TRAINING/HIGH SCHOOL CADET LEVEL I
A2070 Grades 11, 12 4 Credits
Emergency Medical Technician: (Includes a Minimum of 165 Hours of Instruction and Related Work-Based Learning) This is the study of anatomy and physiology in a comprehensive examination of the knowledge, skills and abilities required to operate as a licensed Emergency Medical Technician in the State of Maryland. In addition to the classroom hours, the student is required to complete a significant volume of out of class (homework) assignments and assessments using the virtual classroom My Brady Lab and text reading assignments. My Brady Lab is a web-based course resource package that enhances and reinforces material from the course that is provided to students. It provides feedback to students so they can track their performance prior to the formalized testing included in this subject. This series of modules provide students with the necessary knowledge and skills to perform emergency medical care in a pre-hospital environment at the basic life support level.

FIRE EMERGENCY MEDICAL TRAINING/HIGH SCHOOL CADET LEVEL II
A2071 Grades 11, 12 2 Credits
Firefighter I: (Includes a Minimum of 108 Hours of Instruction and Related Work-Based Learning) This provides students with the knowledge and skills to safely and effectively perform basic firefighting operations as part of a firefighting team. The major topics covered are: the fire department organization, communications, incident command system, ropes and knots, fire behavior, safety, fire prevention, personal protective equipment, fire extinguishers, respiratory protection, ventilation, hose lines, forcible entry, search and rescue procedures, and ladder and sprinkler systems. Methods of instruction include lecture, discussion classroom exercises, audio/visual material, graded practical exercises, midterm and final examinations, series of practical examinations, and skills check off and homework assignments.

FIRE EMERGENCY MEDICAL TRAINING/HIGH SCHOOL CADET LEVEL III
A2072 Grades 11, 12 2 Credits
This series of subjects/topics must equate to two credits and satisfy the minimum hours listed per subject/topic. This is designated as the concentrator course and includes: Firefighter II, Rescue Technician – Site Operations, and Rescue Technician – Vehicle and Machinery Extrication. Students will gain a deeper understanding and application of the principles of fire behavior, building construction, water distribution systems, fixed fire protection systems, ventilation, water pressure and hose streams, fire prevention and Fire Fighter Professional qualifications. Students will also be provided with the knowledge and skills to perform site operations, victim management, maintenance of equipment, and the selection and use of specific ropes and rigging rescue skills. Site operations include identification of support resources required for specific rescue incidents, size up of a rescue incident, management of rescue incident hazards, management of resources in a rescue incident, conducting searches, performance of ground support for helicopter activities, and termination of a technical rescue operation.
The Academy of Biomedical Sciences at Washington County Technical High School  
(Career Technology Education Completer)

The Project Lead the Way® Biomedical Sciences™ program is a dynamic program using hands-on, real-world problems to engage and challenge students interested in math, science, and the human body. This program is appropriate for students interested in pursuing a career in biological sciences, emergency services, health care or medicine creating an exciting environment of biomedical techniques, anatomy and physiology, interventions to support life and treat disease as well as research. Additionally, students solve problems, participate as part of a team, lead team, conduct research, understand real-world problems, analyze data, and learn outside the classroom. Students enrolled in this academy must also be enrolled in college-preparatory mathematics and science courses. The Biomedical Sciences are not designed to replace the traditional science course, but are designed to enhance them and to focus on the concepts directly related to the field of Biomedical Sciences. This program is available at the Washington County Technical High School.

Required Courses:
- Biomedical Science I: PLTW Principles of Biomedical Science and PLTW Human Body Systems
- Biomedical Science II: PLTW Medical Interventions and PLTW Biomedical Innovations
- Advanced Placement Chemistry (recommended)
- Advanced Placement Physics (recommended)
- Advanced Placement Calculus (recommended)
- Honors Pre-Calculus/Trigonometry

PRINCIPLES OF BIOMEDICAL SCIENCES I  
A2020 Grade 11 2 Credits
This course is designed as an introduction to the various areas of biomedical science and provides the scientific foundation necessary for success in subsequent Project Lead the Way (PLTW) Biomedical Science courses. The course is an exploration of biological concepts including pathways of infection, genetics, and physiology is guided by the project-based approach. Students investigate the human body systems and various health conditions including heart disease, diabetes, sickle-cell disease, hypercholesterolemia, and infectious diseases. Coursework is project-based and includes development of fundamental biotechnology laboratory skills including gel electrophoresis, micropipetting, bacteria culturing, and aseptic technique.

HUMAN BODY SYSTEMS II  
A2021 Grade 11 2 Credits
This course is designed to explore human body systems and their interactions, including identity, power, movement, protection, and homeostasis. Student engage in scientific investigation as they build models of organs and tissues, analyze patterns in physiological systems and processes, and use data acquisition software to monitor body functions, such as muscle movement, reflex and voluntary action, and respiration. Students work through real world medical cases and assume the role of various biomedical professionals to solve medical mysteries. Coursework is project-based and includes development of biotechnology laboratory skills including use of selection and use of restriction enzymes, tissue and organ dissection, and the collection and analysis of vital signs and physiological data.

MEDICAL INTERVENTIONS III  
A2022 Grade 12 2 Accelerated Credits
This course is designed to study interventions involved in the prevention, diagnosis, and treatment of disease. Students are exposed to a wide range of scenarios and laboratory research related to immunology, surgery, genetics, pharmacology, medical devices, and diagnostics. Critical thinking and bioethical reasoning is used in the analysis of medical data, interpretation of the various physiological processes involved, and proposal of appropriate treatment protocols. Coursework is project-based and includes development of biotechnology laboratory skills including polymerase chain reactions, tissue pathology, enzyme-linked immunosorbent assay (ELISA), bacterial conjugation and transformation, and laparoscopic technique. Students prepare for an external assessment of developed biotechnology laboratory skills through the Biotechnician Assistant Credentialing Exam (BACE).

BIOMEDICAL INNOVATION IV  
A2023 Grade 12 2 Accelerated Credits
This capstone course is designed for students to synthesize and apply learned content to design and conduct experiments related to the diagnosis, treatment, and prevention of disease or illness. Students complete investigative missions that require them to propose and model innovations for solving real-world medical problems. The culmination of the work is an independent research project which addresses a particular medical problem and proposes a solution. Students are expected to present their research results to science researchers and representatives from the local healthcare and business communities.
ACADEMY OF HEALTH PROFESSIONS COMPLETER – 8 Credits

FOUNDATIONS IN MEDICINE AND HEALTH SCIENCE I
A2024  Grade 11  2 Credits
This course is designed to provide students with an overview of the therapeutic, diagnostic, environmental, and informational systems in the healthcare industry. Students will learn about ethical and legal responsibilities, as well as the history and economics of healthcare. Students will engage in processes and procedures that are used in the delivery of essential healthcare services. It is recommended that students have completed biology and chemistry or be concurrently enrolled in chemistry. This course is required for the Academy of Health Professions.

STRUCTURE AND FUNCTIONS OF THE HUMAN BODY II
A2025  Grade 11  2 Credits
This course builds on prior knowledge from Foundations in Medicine and Health Science. Students also study the structure and functions of the human body, including cellular biology and histology. Students will conduct laboratory investigations and fieldwork, use scientific methods during investigations to solve problems and make informed decisions. Case studies, based on actual events, will include genetics, immune system disorders, and the health and aging of the human body. Students will have real world experiences in preparation for their clinical experience during their senior year. This course is required for the Academy of Health Professions. It is recommended that students have completed biology and chemistry or be concurrently enrolled in chemistry.

CERTIFIED NURSING ASSISTANT III
A2026  Grade 12  2 Credits
This course is designed to provide students with the knowledge and skills necessary to perform basic care services for patients and residents in a variety of settings. Students will complete at least 40 hours of clinical experience. This course is designed to meet the curriculum requirements of the Maryland Board of Nursing (MBON). After successful completion of the written and practical Nursing Assistant Certification Exam, students will have the opportunity to apply for certification as a CNA through the MBON, as well as the Maryland Geriatric Nursing Assistant certification, First Aid, and CPR certifications. This course is required for the Academy of Health Professions.

CERTIFIED CLINICAL MEDICAL ASSISTANT IV
A2027  Grade 12  2 Credits
This course is designed to prepare students with the knowledge and skills necessary to perform general, administrative, clinical and laboratory duties in various medical office settings. Skills such as electronic medical records, phlebotomy, electrocardiography and medication administration are included in this course. After successful completion of required components, students will have the opportunity to take the Certified Clinical Medical Assistant Certification exam through the National Healthcareer Association. This course is required for the Academy of Health Professions.

ACADEMY OF TEACHING PROFESSIONS COMPLETER – 8 Credits

HUMAN GROWTH AND DEVELOPMENT THROUGH ADOLESCENCE I
A2043  Grade 11  2 Credits
This course is designed for students to learn about human development from birth through adolescence. Emphasis is placed on theories of physical, cognitive, and psychosocial development, the effect of heredity and the environment, the role of caregivers and the family, health and safety concerns, and contemporary issues. Students explore special challenges to growth and development. Students have opportunities for guided observation of children from birth through adolescence in a variety of settings.

TEACHING AS A PROFESSION II
A2044  Grade 11  2 Credits
This course is designed to allow students to focus on the profession of teaching - its history, purposes, issues, ethics, laws and regulations, roles, and qualifications. Emphasis is placed on identifying the current, historical, philosophical and social perspectives of American education, including trends and issues. Students explore major approaches to human learning Students participate in guided observations and field experiences in multiple settings to help them assess their personal interests.

FOUNDATIONS OF CURRICULUM AND INSTRUCTION III
A2045  Grade 12  2 Credits
This course is designed to explore curriculum delivery models in response to the developmental needs of all children. Emphasis is placed on the development of varied instructional materials and activities to promote learning, classroom management strategies, and a supportive classroom environment. Students explore basic theories of motivation that increase learning. Students participate in guided observations and field experiences to critique classroom lessons in preparation for developing and implementing their own.
EDUCATION ACADEMY INTERNSHIP IV
A2046  Grade 12  2 Credits
Education Academy Internship (the Academy capstone course) is styled for those interested in a career as a professional teacher or paraprofessional. Students explore the fundamentals of education which is a requisite for every professional teacher. These fundamental areas include the philosophical, historical, social, cultural, political, financial, and legal dimensions of the United States educational system. Students learn strategies for teaching reading, which are used in their internship. Students may have the opportunity to test for the ParaPro and Praxis 1 exams. Because this course is aligned with a college credit, students may have the opportunity to earn college credit.

HOMELAND SECURITY GLOBAL IMAGING AND COMMUNICATION TECHNOLOGY COMPLETER – 8 Credits

FOUNDATIONS OF HOMELAND SECURITY AND EMERGENCY PREPAREDNESS I
A2039  Grade 11  2 Credits
This course introduces students to the fields of Homeland Security, Cybersecurity and Emergency Management. The foundations course introduces and covers the organization, framework, and roles of the federal, state, and local governments, and the phases of homeland security. Emergency Communications is an essential part of this program and consists of a series of units produced by the National Academies of Emergency Dispatch. Core security topics such as vulnerability assessment, virus attacks, hacking, spyware, network defense, passwords, firewalls, VPNs and intrusion detection are covered. Crucial issues from industrial espionage to cyberbullying are discussed. Additionally, students are expected to learn the latest computer attacks and countermeasures.

INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS II
A2040  Grade 11  2 Credits
This course introduces students to Geographic Information System (GIS) and geospatial technology. Students will develop an understanding of the fundamental concepts and applications of GIS, spatial data, and GIS software packages, including ESRI's ArcGIS Desktop Suite. Students will also be exposed to Computer Forensics, which is an introduction to electronic evidence, including legal, technical, investigative, intrusive attacks and ethical issues relating to GIS and safety.

ADVANCED GEOGRAPHIC INFORMATION SYSTEMS AND REMOTE SENSING III
A2041  Grade 12  2 Credits
This course is designed to provide students with advanced Geospatial Information Systems (GIS) experience and familiarity with geospatial concepts and tools. Students will learn the skills for map development and cartographic design; perform spatial and statistical analyses; identify geodatabase concepts; participate in 3-dimensional data and visualization; develop an understanding of geoprocessing tools and models. Students will have the opportunity to test for the ESRIArcGIS Desktop entry exam certification.

CAPSTONE EXPERIENCE IV
A2042  Grade 12  2 Credits
The Capstone Experience is the culminating course for the Homeland Security and Emergency Preparedness Program. This course is designed to provide students with the opportunity to extend and apply their classroom learning in one of the career areas of Homeland Security Sciences, Criminal Justice/Law Enforcement, or Information/Communications Technology. Students will have the option of completing an industry-mentored project or enrolling in a post-secondary course. Students will be expected to create a portfolio, during which they will produce writings, conduct interviews, and deliver presentations.

EARLY CHILDHOOD PROFESSIONS COMPLETER – 8 Credits

HUMAN GROWTH AND DEVELOPMENT THROUGH ADOLESCENCE I
A2030  Grade 11  2 Credits
This course is designed to allow students to focus on the profession of teaching - its history, purposes, issues, ethics, laws and regulations, roles, and qualifications. Emphasis is placed on identifying the current, historical, philosophical and social perspectives of American education, including trends and issues. Students explore major approaches to human learning. Students participate in guided observations and field experiences in multiple settings to help them assess their personal interests.

CHILD DEVELOPMENT II
A2031  Grade 11  2 Credits
Child Development is a course that develops skills and knowledge necessary to understand the growth and development of the young child. The course begins with the study of self awareness, decision making, and human growth and development which develops into a practical study of understanding and caring for preschool aged children in a child care setting.
CHILD CARE SERVICES III  
A2032  Grade 12  2 Credits  
The Child Care Services course provides students with the skills and understanding of establishing a child care center. Child Care Services places emphasis on designing a learning center to accommodate the developmental needs of students in a child care facility. Students complete a portfolio, design learning activities, and are in charge of the instructional program under the direction of the teacher. Students may opt for an internship assignment with a teacher in the public school or child care center. Assignments are made by the child care teacher.

FOUNDATIONS OF CURRICULUM AND INSTRUCTION IV  
A2033  Grade 12  2 Credits  
This course is designed to explore curriculum delivery models in response to the developmental needs of all children. Emphasis is placed on the development of varied instructional materials and activities to promote learning, classroom management strategies, and a supportive classroom environment. Students explore basic theories of motivation that increase learning. Students participate in guided observations and field experiences to critique classroom lessons in preparation for developing and implementing their own.

INTRODUCTION TO CRIMINAL JUSTICE I  
A2035  Grade 11  2 Credits  
Physical training is a major part of this program, and consists of group and personal workouts with the goal of personal improvement. Students will take the Cooper Test every marking period. Instructors from DPSCS SOG Team (Special Ops Group) instruct students throughout, and students can earn a Level I & II Ground Combative Certification, if enough hours are obtained and the skill level is obtained.

This course provides an overview of the American criminal justice system, including theories of justice, criminal law, policing, courts and the associated pre and post-trial legal processes, punishment and corrections, and juvenile justice. Students will study Emergency Communications consists of a series of courses produced by the National Academies of Emergency Dispatch. The first course, Emergency Telecommunicator, is designed to train students unfamiliar with emergency communication centers, emergency telecommunication technology, interpersonal communication, legal issues, and job stress factors. Students are also exposed to fingerprinting, lifting latent prints, crime scene photography, crime scene sketches, logs, evidence collection, interviewing, traffic stops and direction, drill, traffic direction, radio procedures, ethics in policing, use of force, handcuffing, officer safety, patrol procedures, making an arrest, report writing and searches. Because this course is aligned with a Hagerstown Community College course, college credit may be available.

CORRECTIONS IN AMERICA II  
A2036  Grade 11  2 Credits  
This course focuses on the current issues facing corrections in contemporary American society. In this course, students will critically examine the various theories underlying in corrections and correctional policy. Students also examine the history of corrections in the United States, and study several current issues facing corrections: racial/economic inequality and mass incarceration; prison violence, treatment, and rehabilitation; women in prison; punitive sentencing; juveniles, the elderly, and the mentally ill in prison; and prisoner reentry and recidivism. Because this course is aligned with a Hagerstown Community College course, college credit may be available.

INTRODUCTION TO HOMELAND SECURITY III  
A2037  Grade 12  2 Credits  
This course presents a framework for understanding the role of government and the private sector in protecting the homeland from terrorist attack. This course examines terrorism from a historical and global perspective, discusses specific strategies, operations and tactics that can be used to prevent and protect against future attacks. This is a dual-enrollment course delivered in partnership with Hagerstown Community College.

CRIMINAL JUSTICE CAPSTONE AND INTERNSHIPS IV  
A2038  Grade 12  2 Credits  
Students will be expected to produce writings, conduct interviews, and deliver presentations. This is a step-by-step process designed to be a culmination of a student’s two years in the program. Students can intern at many law enforcement agencies around the county where they apply academic and technical skills to real-life applications in order to develop employability. Various Law Enforcement Agencies around the County assist in completing these tasks.
ARTIFICIAL INTELLIGENCE (AI) AND CLOUD COMPUTING COMPLETER – 8 Credits

INTRODUCTION TO ARTIFICIAL INTELLIGENCE DEVICES AND CLOUD COMPUTING I
A1095 Grade 11 2 Credits
This course is an introduction to the basic Internet of Things (IoT) Intelligent devices and programming these remote or sensory devices with Python. Students will look at the interconnectedness of the IoT and spend time understanding the field of both AI and Cloud Computing, which will allow students to gain a certification in Cisco PCAP, in Python.

IMPLEMENTING ARTIFICIAL INTELLIGENCE DEVICES AND CLOUD BASED TECHNOLOGY II
A1096 Grade 11 2 Credits
This class will expand the scope and understanding of the IoT while also having students explore both the cloud and network security concepts. The course will focus on an Introduction to Cybersecurity, and also expand a student’s understanding of the IoT Fundamentals (Connecting Things), which will allow students to gain a certification in Cisco IoT.

SECURING ARTIFICIAL INTELLIGENCE DEVICES AND CLOUD BASED TECHNOLOGY III
A1097 Grade 12 2 Credits
This class will focus on the implementation of security concepts to AI devices and allow students to practice hardening an enterprise network. Through a look at both Cybersecurity Essentials, and IoT Security, students will expand the skills gathered in the first 2 courses which will allow students to gain a certification in Cisco CompTIA Cloud.

OPTIMIZING ARTIFICIAL INTELLIGENCE DEVICES AND CLOUD BASED TECHNOLOGY IV
A1098 Grade 12 2 Credits
This class focuses on the understanding of data analytics and creating more complex functionality of sensory devices. Through the exploration of the IoT Fundamentals of both Big Data and Analytics, and Hackathon Playbook, students will work to create a Capstone Project, which will allow students to gain a certification in Cisco Networking Technologies.

CISCO IT ACADEMY COMPLETER – 8 Credits

IT ESSENTIALS (Computer Repair) I
A1090 Grade 11 2 Credits
This course is designed to give students an entry level understanding of the essentials of IT. Students will have the opportunity to work on Cisco’s Networking Academy’s advanced simulation tools in order to have multiple hands-on labs. These experiences will allow students to hone troubleshooting skills and build a strong foundation in Information Technology. Students may have the opportunity to test for CompTIA A+ Certification.

NETWORKING II
A1091 Grade 11 2 Credits
This course is designed to allow students and develop an understanding of cybercrime, security principles, technologies, and procedures used to defend networks. Then decide whether you want to pursue an entry-level networking or security role professionally. Recommended for students planning to study for the Cisco CCNA R&S, CCNA Cyber Ops or Cisco CCNA Security Certifications.

LINUX ESSENTIALS III
A1092 Grade 12 2 Credits
This course is designed to give students knowledge of the Linux systems. Students will explore the intricacies of the operating systems embedded in almost every supercomputer, and have the opportunity for hands on experiences with Linux systems. NDG Linux Essentials quickly builds the Linux knowledge. Students may have the opportunity to test for the LPI Linux Essentials Professional Development Certificate (PDC).

ROUTING AND SWITCHING ESSENTIALS IV
A1093 Grade 12 2 Credits
This course is designed to allow students to delve further into the world of networking. Students will have the opportunity to gain practical and usable skills, such as configuring a router and a switch to enable the functionality of a network. Students will also gain knowledge on what it takes to work with LANs, WANs and other network designs. Students may have the opportunity to test for the Cisco CCENT Certification or the Cisco CCNA R&S Certification.
APPLIED MANUFACTURING ENGINEERING COMPLETER – 8 Credits

SMART MANUFACTURING AND QUALITY CONTROL I
A2050 Grade 11 2 Credits
This course introduces students to entry-level operations and assembly of modern production environments that use Industry 4.0 automation technologies, factory floor automation equipment and processes. Included in this foundations class are basic safety, hand tools, concepts & terminology of SMART Manufacturing, reading blueprints, and schematic reading. In preparation for the application of manufacturing theory, students will study precision measurement, basic setup, adjustment and operation of manual and automated machines, combined with basic robot operation and terminology. The class will explore how electric, pneumatics, and sensor systems are essential to manufacturing. This is basic preparation to demonstrate the manufacturing side of industry and how to monitor production via HMI, Internet, Ethernet, and Smartphones. Students may have the opportunity to test for both CPT and CPT+ certifications.

ADVANCED OPERATIONS PROGRAMMING II
A2051 Grade 11 2 Credits
This course introduces students to modern production environments that use Industry 4.0 automation technologies, factory floor automation and programming. These automated technology systems include SMART Manufacturing System Metrics, computer controlled machines, Ethernet Network Operations Mechatronic Systems Programming, Mechanical systems, Hydraulic Systems Programmable Controller, HMI Interface, robotics, CNC Programming, and the set-up and operation of these systems in the production and manufacturing of an industry product.

ROBOTIC SYSTEMS AND INDUSTRY 4.0 APPLICATIONS III
A2052 Grade 12 2 Credits
This course teaches students robotic systems operation which include concepts and terminology of robots, robot setup and adjustment, robot operations & basic programming, and robot fixtures/end of arm tooling types & selection. This course integrates the robotic side of manufacturing by using robot smart manufacturing concepts, robot-Ethernet network communications, Robot I/O Device & PLC System Interfacing, and Robot Monitoring & Cycle Time Optimization.

DATA ANALYTICS; ADVANCED TURNING AND MILLING IV
A2053 Grade 12 2 Credits
This course exposes students to manufacturing concepts including: the Concepts of Industrial Internet of Things (IIoT), PLC Ethernet Messaging Communications, PLC Ethernet Messaging Communications, and Operation Barcode & RFID Programming. Manufacturing and production will be monitored using Smart Sensor Programming & Operation, Managed Ethernet Switch Configuration & Operation, Variable Frequency Drive Programming, SQL Database Systems, Data Analytics & Manufacturing Execution Systems (MES), and Lean Manufacturing & System Optimization. Students will be able to successfully machine parts by operating a computer numerical control (CNC) machine; maintaining quality and safety standards; keeping records; maintaining equipment and supplies; and perform routine preventative maintenance. Students have the opportunity to earn NIMS (National Institute for Metalworking Skills) Machining Level I certification.

ENGINEERING ACADEMY PLTW – 8 Credits

INTRODUCTION TO ENGINEERING DESIGN (IED) I
A855 Grade 11 2 Credits
This course is designed to introduce the computer software used to produce, analyze and evaluate models of projects solutions within. Students study the design concepts of form and function, and then use state-of-the-art technology to translate conceptual design into reproducible products. Students will also be able to apply the design process to solve various problems in a team setting and explore career opportunities in design engineering and understand what skills and education these jobs require.

CIVIL ENGINEERING AND ARCHITECTURE (CEA) II
A884 Grade 11 2 Credits
This course provides an overview and understanding of the history, influence, and impact in the fields of Civil Engineering and Architecture, while allowing students use state of the art software to solve real world problems and communicate solutions to hands-on projects and activities. Students will often work in teams to apply various Engineering concepts (Site Discovery, Regulations, and a Generic Viability Analysis). Students will also understand the basics of structural engineering, and prepare presentations and have peer reviews of team and individual work. I put a strikethrough and highlighted them.

COMPUTER INTEGRATED MANUFACTURING (CIM) III
A857 Grade 12 2 Credits
This pathway course teaches the fundamentals of computerized manufacturing technology. It builds on the solid-modeling skills developed in the Introduction to Engineering Design course. Students use 3-D computer software to solve design problems. They assess their solutions through mass propriety analysis (the relationship of design, function and materials), modify their designs, and use prototyping equipment to produce 3-D models. Students will also have the chance to program robots to handle materials in assembly-line operations.
ENGINEERING DESIGN AND DEVELOPMENT (EDD) IV
A858       Grade 12  2 Credits
This capstone course enables students to apply what they have learned in academic and pre-engineering courses as they complete challenging, self-directed projects. Students work in teams to design and build solutions to authentic engineering problems, while having an engineer from the school’s partnership team mentor each student team. Student teams work to report progress to their peers, mentor and instructor and exchange constructive criticism and consultation. At the end of the course, teams present their research paper and defend their projects to a panel of engineers, business leaders and engineering college educators for professional review and feedback. This course equips students with the skills that they will need in postsecondary education and careers in Engineering and Engineering technology.

AUTOMOTIVE TECHNOLOGY COMPLETER – 8 CREDITS

ELECTRICAL/ELECTRONICS AND HVAC I
A2060       Grade 11  2 Credits
This course is an introduction to safety practices in Automotive Technology, and introduces students to several units of study. Through a combination of classroom instruction and hands-on experience in a lab setting, students will explore steering and suspension technology, electronics and vehicle computer systems, brakes and braking technology, and safety and navigation systems. Students will be taught the function and application of an engine coolant and describe the uses of the scan equipment in communicating with body HVAC computers. Students will have the opportunity to test for several ASE certifications.

SUSPENSION, STEERING AND BRAKES II
A2061       Grade 11  2 Credits
This course allows for students to have an in depth exploration of advanced steering and suspension systems technology, diagnosis and repair, in addition to advanced electronic diagnosis and final preparation for remaining ASE certifications. Students will have the opportunity to test for various ASE certifications.

POWERTRAIN ENGINE REPAIR AND PERFORMANCE III
A2062       Grade 12  2 Credits
This course is designed to teach the principles of automotive engine operation and ASE MLR level service. It also covers general engine design and operation, cylinder head/valve train, cylinder block, lubrication, and cooling systems, in addition to automatic and manual transmissions. Coursework will further cover the operation, diagnosis, and service of drive shafts, constant velocity (CV) joints, four-wheel-drive bearings, differentials and four-wheel-drive systems. The student is taught to verify customer concerns, proper operation, and perform tests. Students will have the opportunity to test for various ASE certifications.

AUTOMOTIVE TECHNOLOGY CAPSTONE IV
A2063       Grade 12  2 Credits
The Capstone Experience is the culminating course for the Automotive Technology Pathway. This course is designed to provide students with the opportunity to extend and apply their classroom learning in the career areas of Automotive Technology. Students will have the option of completing an industry-mentored project or internship/apprenticeship. They will play an integral part in determining which type of experience will be most beneficial and supportive of their individual goals. At the end of the course, students will have the opportunity to compile industry related certifications in the field of Automotive Technology to include in their resume.

COLLISION REPAIR COMPLETER – 8 Credits

NON-STRUCTURAL ANALYSIS AND DAMAGE REPAIR I
A2064       Grade 11  2 Credits
This course will help students develop diagnostic, technical and academic skills through classroom instruction and hands-on non-structural analysis and damage repair applications. This course will address an introduction to welding; personal and environmental safety practices associated with clothing; respiratory protection, eye protection; entry level automotive service technology principles and practices; hand tools; power tools/equipment; proper ventilation; and the handling, storage, measuring and mixing procedures, raising and supporting vehicles, damage report principles and disposal of chemicals/materials in accordance with local, state, and federal safety and environmental regulations. Students will also use I-CAR Live Curriculum and ASET Task List mastery to learn to formulate accurate estimates of cost of repairs.

PAINTING AND REFINISHING II
A2065       Grade 11  2 Credits
This course allows students to develop diagnostic, technical and academic skills through their participation in classroom instruction and hands-on applications in the areas of surface preparation; paint mixing, matching, application and paint equipment preparation; identification and correction of defects; final detailing and the ability to identify and perform other necessary Painting and Refinishing tasks. Students may have the opportunity to test for ASE Painting and Refinishing Certification.
STRUCTURAL ANALYSIS AND DAMAGE REPAIR III
A2066  Grade 12  2 Credits
This course allows students to develop diagnostic, technical and academic skills through classroom instruction and hands-on structural analysis and damage repair applications. The course emphasizes the proper procedures for measuring; analyzing and developing correct repair procedures for unibody and body-over-frame vehicles. Student technicians develop repair plans and discuss their implementation. The course also emphasizes the restoring of vehicles to their pre-accident condition using manufacturers’ and industry recommendations. This course equips the student with the knowledge, skills and abilities necessary for immediate employment in the Transportation Equipment Pathway and/or continuing postsecondary education. Students will have the opportunity to test for ASE Structural Analysis and Damage Repair Certification.

MECHANICAL AND ELECTRICAL COMPONENTS IV
A2067  Grade 12  2 Credits
This course allows the students to use the I-CAR Live Curriculum to develop diagnostic, technical and academic skills. The focus is in the areas of steering and suspension; electrical, brakes, heating and air conditioning; cooling systems; drive train; fuel intake and exhaust systems; restraint systems and the ability to identify and perform other necessary Mechanical and Electrical tasks. Students will have the opportunity to test for the ASE Mechanical and Electrical Components Certification.
DESKTOP PUBLISHING/WEB DESIGN
A794 Grade Level 10, 11, 12 1 Credit
Desktop Publishing/Web Design teaches students to produce documents in a professional, effective manner. Students learn to communicate ideas to readers. These skills help students produce effective documents with any software program. Basic working knowledge of desktop publishing software is required. This course is not a requirement in any CTE Completer course sequence.

COOPERATIVE AGRICULTURE WORK EXPERIENCE
A800 Grade Level 12 Up to 4 Credits
Cooperative Work Experience students may earn up to four credits for their work experience in an agriculturally related business. The work experience in a business setting is an extension of the classroom program and provides students with on-the-job experiences. The business must be pre-approved by the program coordinator. Agreement detailing the cooperative work experiences to be gained by students is agreed upon and signed by the employer, student, student’s parents, and the program coordinator. Experiences gained in this course are valuable as the student transitions from school to the world of work. Cooperative Work Experience students must be in an agricultural program and in their senior year to be eligible for Cooperative Agriculture Work Experience. Available at BHS, SHS, and CSHS.

ADVANCED INDEPENDENT STUDY (Agriculture)
A040 Grade Level 12 1 Credit
Advanced Independent Study students are allowed to pursue an individualized course of study in agriculture or horticulture. Each student is assigned to an Agriculture Science teacher for one period and works with that teacher in meeting individual career preparatory goals and course objectives. Students must be a program completer prior to registering for this class.

VETERINARY INTERNSHIP
A1008 Grade Level 11, 12 1 Credit
The Academy Internship is a program in which students use the skills and knowledge learned in the classroom while performing an animal-related job or a research project in a local business or agency. Each student is assigned to an Agriculture Science teacher for one period and works with that teacher in meeting individual career preparatory goals. Student must be an academy completer in the animal pathway to qualify for this course (animal pathway course).
Prerequisite: Foundations of Environmental/Agricultural Science

INTRODUCTION TO EDUCATION
A846 Grade Level 12 1 Accelerated Credit
Introduction to Education (the Academy capstone course) is styled for those interested in a career as a professional teacher or paraprofessional. Students explore the fundamentals of education which is a requisite for every professional teacher. These fundamental areas include the philosophical, historical, social, cultural, political, financial, and legal dimensions of the United States educational system. Students learn strategies for teaching reading, which are used in their internship. Students will sit for the ParaPro and Praxis I exams. This course is offered at NHHS and SHHS with dual credit earned at Hagerstown Community College. This course is required for the Academy of Teaching Professions at NHHS.

MANUFACTURING INTERNSHIP
A851 Grade Level 12 1 Credit
The Academy of Manufacturing/Engineering Technology Student Internship/Mentorship Program is a direct product of the Maryland Career Connections Initiative and strives to link related manufacturing/engineering workplace skills to classroom knowledge. Internships with one of our manufacturing/engineering business partners provide first hand experiences that enable students to clarify if a career in a manufacturing/engineering related field is compatible with their personal interests, skills/aptitudes and life goals. Students observe and participate in real-world work activities, apply classroom knowledge to real-world problems and apply the internship experience to classroom endeavors. Students develop and network of business community contacts and experience “All Aspects of Industry.” Students may be paid by the manufacturing/engineering business partners to participate in the internship experience.

APPRENTICESHIP MARYLAND PROGRAM
A1045 Grade Level 11, 12 Up to 4 Credits
The work-based learning apprenticeship experience takes place at the work-site and must be a paid experience (at least minimum wage) with a minimum of 450 hours. This experience is guided by a formal agreement provided by the school system and a student work. The student work plan identifies the appropriate competencies, duties, tasks and outcomes in academic, technical, and workplace readiness areas that apply directly to the student's goals for a specific work-related placement. The Apprenticeship experience focuses on the student's interests in manufacturing and STEM-related pathways documented through various types of career-related assessments and also based on Maryland’s career clusters/pathways and employer demand. Students are required to have CTE Concentrator completion or one year work related instruction, evaluated as needed by CTE office, prior to graduation.
ADVANCED TECHNICAL RESEARCH
A1052 Grade Level 12 1 Elective Credit
Advanced Technical Research students pursue an individualized course of study in the pertinent content area of their completed program at Washington County Technical High School (WCTHS). Each student is assigned to a teacher in their related area of content for one period and works with that teacher in meeting individual career preparatory goals and course objectives. Available only at WCTHS.

WORK BASED LEARNING EXPERIENCE
A1044 Grade Level 12 1 Elective Credit
Work Based Learning Experience students may earn one credit for their work experience at a business in their related content area. The work experience in a business setting is an extension of the classroom program and provides students with on-the-job experience. The business must be pre-approved by the program coordinator. An agreement detailing the work based learning experiences to be gained by students is agreed upon and signed by the employer, student, student’s parents, and the program coordinator. Experiences gained in this course are valuable as the student transitions from school to work. Available only at WCTHS.

TECHNOLOGY LITERACY GRADUATION REQUIREMENT
One credit in Technology Literacy is required to earn a high school diploma. Technology literacy is important to all students in order for them to understand why technology and its use is such an important force in our economy. All people will be able to perform their jobs better if they are technologically literate. Technology literacy benefits students who will choose technological careers - future engineers, aspiring architects, and students from any other fields. Students have a head start on their future with an education in technology.

INTRODUCTION TO ENGINEERING DESIGN (PROJECT LEAD THE WAY)
A855 1 Credit
If Introduction to Engineering Design is used to meet the graduation requirement, it may not be counted as a course in the 4 credits of the Academy of Manufacturing and Engineering Technology. This course is offered for the Technology Literacy credit only at Williamsport High School.

FOUNDATIONS OF TECHNOLOGY
A870 Grade Level 9, 10, 11, 12 1 Credit
Foundations of Technology will focus on the three dimensions of technological literacy: knowledge, ways of thinking and acting, and capabilities with the goal of students developing the characteristics of a technologically literate citizen. The course is designed to engage students in exploring and deepening their understanding of “big ideas” regarding technology and makes use of a variety of assessment instruments to reveal the extent of understanding.

Students will develop and understanding of the influence of technology on history by learning how people have increased their capability by using their skills to innovate, improvise and invent. They will gain an understanding of how technology innovation results when ideas, knowledge, or skills are shared within a technology, among technologies or across other fields of study. Students will develop an understanding of engineering design, the formal process that transforms ideas into products or systems of the designed world. They will select and use manufacturing technologies and understand that modern manufacturing technologies influence a peoples’ quality of life. Students will select and use construction technologies impact the design of structures. Students will select and use energy and power technologies and to explore the processing and controlling of energy resources. They will become familiar with information and communications technologies and their role in maintaining competitive economic growth. The course will conclude with the synthesizing of major ideas through an understanding of the core concepts of technology with an emphasis on systems-thinking and related principles. This course fulfills the graduation requirement for Technology Literacy.

SPECIAL EDUCATION
WORK PREPARATION I
A778 Grade Level 11, 12 Up to 3 Credits
Work Preparation I offers 11th and 12th grade students with special needs the opportunity to gain work experience in a wide variety of areas. Students are urged to develop a positive attitude toward employment and to prepare themselves with desirable work habits before leaving the educational environment. Selected students may participate in the work experience component in the 11th grade, but all students are eligible to work in the 12th grade. Course content includes researching various careers and the study of job improving skills in English, math, money management, and successful job attitudes. Students with disabilities follow the guidelines of the IEP process. All students are governed by the regulations and training plans of the Special Education Program in Washington County.
WORK PREPARATION II  
A779 Grade Level 11, 12  
Up to 3 Credits  
Work Preparation II is designed to prepare special needs students for the world of work through work experience. 
**Prerequisite:** Work Preparation I

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**INTERNATIONAL BACCALAUREATE CAREER-RELATED PROGRAM (IBCP)**  
*(Offered to North Hagerstown High School Juniors, only, during 2017-2018; external applicants will be considered during 2018-2019.)*

University of Maryland Completer  
MSDE CTE Completer  
The Career-related Programme is the most recent addition to the IB. Its key aim is to provide a choice of different pathways for students in Grades 11 and 12. Modern life places complex demands on graduates entering further/higher education or employment. An integral part of the Career-related Programme is enabling students to become self-confident, skilled and career-ready learners. To prepare students to succeed in a rapidly changing world, schools must not only equip them with the necessary skills and the learning dispositions, but also the ability to manage and influence change. The Career-related Programme helps students to:

- develop a range of broad work-related competencies and deepen their understanding in specific areas of knowledge through their Diploma Programme courses.
- develop flexible strategies for knowledge acquisition and enhancement in varied contexts
- prepare for effective participation in the changing world of work
- foster attitudes and habits of mind that allow them to become lifelong learners willing to consider new perspectives
- become involved in learning that develops their capacity and will to make a positive difference.

**Required Courses:**
At least 2 IBDP courses at standard or higher level with one as a 2-year course; corresponding course exams (minimum score of 3) must be taken; completion of career-related studies pathway; completion of the IBCP Core, which includes Personal and Professional Skills Course, Reflective Project, Language Development, and service Learning

**IBCP PERSONAL AND PROFESSIONAL SKILLS I**  
A295IB (old TOK1#) Grade Level 11  
1 IB Credit  
Personal and Professional Skills, a capstone course of the IBCP, provides a nexus for the learner to synthesize the approaches to understanding gained over the course of IB study. The course is designed to help students acquire transferable skills needed to successfully navigate the 21st century. This course engages students in the development of communication, critical thinking, intercultural understanding, and personal development. These components encourage self-reflection and cross-cultural connections through the themes of communities, technology, environment and workplace. Additionally, this two-year course will develop and utilize research skills necessary for the Reflective Project, initiate Service learning, create an original Language Development Portfolio related to their career-related study. Enrollment is limited to students who are International Baccalaureate Career-related Programme Candidates.  
**Prerequisite:** International Baccalaureate Career-related Program Candidate.

**PERSONAL AND PROFESSIONAL SKILLS II (FOR IBCP STUDENTS ONLY)**  
A296IB Grade Level 12  
1 IB Credit  
Personal and Professional Skills II is the second part of the capstone course required for the IBCP. PPS II builds upon the IB Approaches to Learning in the senior year, focusing heavily on the completion of the Career-Related Program’s Core, which includes the Service Learning portfolio, the Language Development portfolio, and the Reflective Project. Specifically, the critical thinking skills, intercultural understanding, and self-reflection aspects of these activities will help students to prepare for college or career. Successful completion of this course and the Core components of the IBCP are required to earn the IBCP certificate.  
**Prerequisite:** PPS I, Candidate for the IBCP
Additional Educational Opportunities
PEER HELPER
A018  Grade Level 11, 12  1 Elective Credit
The peer helper program offers adolescent students an opportunity to speak with another student who has received training in communication/listening skills, who is aware of the various agencies and services available to help youth, and who recognizes potentially serious problems and can refer students to the professional school counselor. Peer helpers are familiar with the use of the career materials available in the Counseling Center. They are scheduled one period each day to work in the Counseling Center. During that time, they should be available to meet with individual students who have concerns they wish to discuss, show students how to access the available career information, provide tutorial assistance when able, assist new students to become oriented to the school building and school procedures, and meet with the school counselor to share concerns about the students with whom they are working. This course is graded as Pass/Fail.

STUDY HALL
A030  Grade Level 9, 10, 11, 12  Non-Credit
Study Hall is designed to provide students with time to complete additional assignments.

PEER TUTOR
A035  Grade Level 11, 12  1 Elective Credit
Peer tutors are scheduled daily to tutor high school students individually or in groups. A teacher monitors the tutors’ instructional skills regularly for effectiveness. This course is graded as Pass/Fail.

ADVANCED STUDY SKILLS
A037 Grade Level 11, 12  1 Credit (Pass/Fail)
Advanced Study Skills is a course specifically designed for students taking Advanced Placement courses for the first time or students with extensive Advanced Placement schedules. This course is designed to provide skills that improve capacity to manage increased scholastic responsibilities and improve academic performance. Course content includes study and organizational skills, short- and long-range planning for projects, test-taking skills, and monitoring of assignments. Teaching staff monitors progress in all AP courses and designs an individualized program of success as needed.

COLLEGE PREPARATION
A043 Grade Level 10, 11  1 Elective Credit
College Preparation is designed to assist students in preparing for entrance to college and to build the skills for college readiness. Curriculum includes exploring options for college study, developing critical math, reading, and writing skills necessary for college entrance exams and researching scholarship and financial aid options. Students develop study habits and organizational skills to prepare for a successful college experience.

AVID I
A044 Grade Level 9  1 Elective Credit
AVID I is open only to students who have been selected for the AVID program via the application and interview process. In this yearlong course, students learn organizational and study skills, work on critical thinking and asking probing questions, receive academic help from peers and college tutors, and participate in enrichment and motivational activities that make college seem attainable. The AVID curriculum is driven by the WICOR method: writing, inquiry, organization, collaboration, and reading.

AVID II
A044II Grade Level 10  1 Elective Credit
The course is for newly selected or continuing students in the second year of the AVID program. In this yearlong course, students continue to learn and practice organizational skills, study skills, and WICOR skills: writing, inquiry, organization, collaboration, and reading. They continue to develop inquiry skills and critical thinking skills as they improve their reading and writing in the content areas. Students are provided support for their honors or Advanced Placement level courses through the AVID tutoring process.

INSTRUCTIONAL HELP
A045 Grade Level 9, 10, 11, 12  1 Elective Credit
Instructional Help is designed to provide skills that improve a student’s capability to manage school tasks and improve academic performance. Course content includes study skills, organizational tasks, short and long range planning for projects, test-taking skills, monitoring of assignment. Specific skills may include but are not limited to scanning, outlining, proofreading, editing, checking work for accuracy, identifying problems, and appropriate techniques to seek assistance. Instruction and support in specific academic or social skills to enhance academic success may also be provided as needed. Skills for independence are the focus of this class. Teaching staff monitors progress in academic courses and designs an individualized program as needed. Instructional help may be offered as a general or special education option.

ACADEMIC SKILLS AND CONCEPTS
A046 Grade Level 10, 11, 12  1 Elective Credit
Academic Skills and Concepts courses are intended to improve a student’s capability to manage school tasks and improve academic performance. Instruction and support in specific academic, social, and/or self-management skills may be provided. Areas of focus include: pre-teaching, re-teaching and individualized academic intervention, study skills, organizational tasks, long-range planning for projects, test-taking skills, and self-advocacy.
AVID TUTOR
A049  Grade Level 10, 11, 12  1 Elective Credit (Pass/Fail)
AVID (Advancement Via Individual Determination) Tutors collaborate with the AVID Elective Teacher to help prepare students for success in advanced-level coursework and to plan for the four-year university experience. Becoming an AVID tutor affords potential education majors the opportunity to begin preparing for the field. AVID tutors receive 16 hours of AVID Tutorology with tutor trainings both in and out of the classroom. Experiences may include work with middle school AVID students. The responsibilities of running a Socratic Seminar with small groups of students and learning the Cornell note-taking format will greatly benefit AVID tutors during their own college experience, even if they ultimately select a field other than education.

Prerequisite: Success in Advanced Placement coursework.

TEACHER AIDE
A050  Grade Level 12  1-4 Elective Credits
Teacher Aide is open to seniors who are interested in a career in teaching or some area related to working with children. Students may register for no more than two periods per semester. They must act as role models to younger students. Students are afforded opportunities to observe a variety of teaching and learning styles. They are assigned a cooperative teacher in an elementary, middle, or high school who evaluates their quality of work. Students work directly in the classroom by instructing students. This program is designed to provide students an opportunity to explore, discover, and evaluate their own aspirations and potential. A journal may be required.

Prerequisite: 3.0 average, counselor’s recommendation, and principal’s permission from both schools.

AIDE
A055  Grade Level 12  Non-Credit
Aides are students who provide assistance to teachers, offices and the media center (library). Duties include developing bulletin board displays, working with individual students who need remedial help, answering telephones, running messages, escorting visitors, aiding secretaries and other duties as they may develop. Aides assigned to specific areas in the building are to remain in those areas.

AVID III
A058  Grade Level 11  1 Elective Credit
AVID III focuses on the college application process, including college admissions tests, financial aid, college entrance requirements, and career planning. Students engage in higher levels of WICOR (writing, inquiry, organization, collaboration, and reading)以及 build analytical writing skills. Through self-reflection in AVID III, students will research and identify those colleges that best fit their academic and career profiles and goals.

AVID IV
A059  Grade Level 12  1 Elective Credit
The AVID IV class refines those critical thinking, reading, and writing courses—advanced level WICOR (writing, inquiry, organization, collaboration, and reading) necessary for success in Advanced Placement coursework and optimal performance on AP exams. College preparedness is the chief focus of AVID IV as students are now fully aware of their academic strengths and personal interests and must plan their post-secondary learning experiences accordingly. Students complete the college application process during this final year of AVID and engage in additional research to better understand the variety of financial aid resources that may be available to them.

YEARBOOK
A070  Grade Level 11, 12  1 Elective Credit
Yearbook is a course designed to produce the student annual. Skills in artistic design, photography, graphics, marketing and entrepreneurship are developed.

EDUCATIONAL RELEASED - TIME PROGRAM
A085  Grade Level 12  Non-Credit
Educational Release - Time Program is for students attending an educational institution, such as Hagerstown Community College, outside the scope of the regular high school during their senior year or that are on a work based learning educational experience.

READING INTERVENTION
A100  Grade Level 9, 10, 11, 12  1 Elective Credit
Strategic Reading courses are intended to improve a student’s vocabulary, critical thinking, reading rate, and/or comprehension level through targeted intensive specially-designed or intentionally-designed instruction. Each student who requires this level of instruction is assessed through a variety of measures to determine specific needs and a plan is developed and implemented by the instructional team to meet those needs.
READING
A100R   Grade Level 9, 10, 11, 12  1 Elective Credit
Reading is a course for students who require more targeted reading instruction and time to access the high school English
curriculum. Students in this class read high-interest texts that are at their independent reading level for sustained periods under the
direction of the reading teacher or a reading specialist. Students also receive small-group targeted instruction based on periodic
assessments of their specific reading gaps. Reading intervention programs may be delivered through this class as appropriate.

IB PROGRAMME ENRICHMENT
A048IB   Grade Level 11, 12  1 Elective Credit (Pass/Fail)
IB Programme Enrichment is a course for IB Diploma, anticipated, and course students at North Hagerstown High School designed
to provide skills that improve capacity to manage increased scholastic responsibilities and improve academic performance. Course
content includes study and organizational skills, short- and long-range planning for projects, test-taking skills, and monitoring of
assignments. Teaching staff monitors progress in all IB courses and designs an individualized program of success as needed.

AP SEMINAR
A998AP   Grade Level 10  1 AP Elective Credit
AP Seminar is only offered at Clear Spring High School. This first course is part of the AP Capstone and is designed by the
College Board to parallel college-level courses in critical thinking and communications. AP Seminar provides students with the
opportunity to explore complex, real-world issues through cross-curricular lenses. Course topics vary and may include local, civic,
or global issues and interdisciplinary subject areas. Courses typically emphasize research, communication, and critical-thinking
skills to explore the issues addressed. Students may also examine source materials such as articles and other texts; speeches
and personal accounts; and relevant artistic and literary works. Successful AP Research students, ones who have completed the
course and passed all required assessment components, will be permitted to take the second course of the AP Capstone: AP
Research.

AP RESEARCH
A999AP   Grade Level 11  1 AP Elective Credit
AP Research is only offered at Clear Spring High School. This is the second required course in the AP Capstone. AP Research
allows students to deeply explore an academic topic, problem issue, or idea of individual interest. Students design, plan, and
implement a yearlong investigation to address a research question. Through this inquiry, participants further the skills they acquired
in the AP Seminar course by learning research methodology, employing ethical research practices, and accessing, analyzing, and
synthesizing information. Student reflect on their skill development, document their processes, and curate the artifacts of their
scholarly work through a process and reflection portfolio. The course culminates in an academic paper of 4,000 to 5,000 words,
(accompanied by a performance, exhibit, or product where applicable) and a presentation with an oral defense. (Source: The
College Board, 2017)
Prerequisite: Successful completion of AP Seminar.

MATH INTERVENTION
A095/A095SM   Grade Level 9, 10, 11, 12  1 Elective Credit
Students who require specialized instruction and other supports are provided math interventions for the development of calculation
or problem solving skills. Each student who requires this level of intervention is assessed through a variety of measures to
determine the specific needs, and then a plan is developed and implemented by the instructional team to meet those needs. This
can be addressed through a customized instructional plan and/or a structured intervention program. For students with disabilities
in the area of math, math intervention will specifically target the goals that have been developed to address the identified disability-
related area(s) of need.
MARYLAND STATE CERTIFICATE PROGRAM

DESCRIPTION AND REQUIREMENTS OF THE CERTIFICATE PROGRAM

The decision to award a student with disabilities a Maryland High School Certificate of Program Achievement 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 Participation in the alternate assessments and alternate instruction, however, will not prepare a student to meet Maryland’s High School Diploma requirements. Therefore, students who participate in the alternate instruction and assessments over a continued period of time will be progressing toward a Maryland High School Certificate of Program Completion. The Maryland High School Certificate of Program Achievement Completion shall be awarded only to students with disabilities who cannot meet the requirements for a diploma.

1. The student is enrolled in an education program for at least four 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 four 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]

If a student retakes the same class they already have credit for or for a student who is participating in the Multi-State Alternative Assessment when enrolled in a class aligned with the Maryland College Career-Ready Standards.
   a. Student will not receive a grade %, passing or failing marks.
   b. Student will receive a narrative description of the progress made for each class they are enrolled by the assigned teacher.

COURSE DESCRIPTIONS

ESSENTIALS OF ENGLISH
A741 Grade Level 9 Non-credit
A742 Grade Level 10 Non-credit
A743 Grade Level 11 Non-credit
A744 Grade Level 12 Non-credit
This course is individually structured to improve each student’s listening, speaking, reading, and writing skills. Instruction considers the learning style of each student and addresses the goals and objectives in the student’s IEP. The instructional standards are aligned with the Maryland College and Career Ready Standards (MCCRS), however, do not cover the breadth and the depth of the general education curriculum.

ESSENTIALS OF SOCIAL STUDIES
A745 Grade Level 9 Non-credit
A746 Grade Level 10 Non-credit
A747 Grade Level 11 Non-credit
A748 Grade Level 12 Non-credit
This course is individually structured to improve each student’s vocational skills, real-world learning skills, social communication, adaptive behavior skills, and home and community safety. Students study the human experience of different cultural groups in various settings and at different times in history to gain insight into the human experience. The instructional standards are aligned with the Maryland College and Career Ready Standards (MCCRS), however, do not cover the breadth and the depth of the general education curriculum.

ESSENTIALS OF MATHEMATICS
A749 Grade Level 9 Non-credit
A750 Grade Level 10 Non-credit
A751 Grade Level 11 Non-credit
A752 Grade Level 12 Non-credit
This course is individually structured to provide a real-world learning application approach to understanding mathematical concepts. Core concepts in counting, cardinality, base ten numbers and operations, geometry, ratios, and the math practices associated with problem-solving are a focus of instruction. The instructional standards are aligned with the Maryland College and Career Ready Standards, however, do not cover the breadth and the depth of the general education curriculum.
ESSENTIALS OF SCIENCE
A753 Grade Level 9 Non-credit
A754 Grade Level 10 Non-credit
A755 Grade Level 11 Non-credit
A756 Grade Level 12 Non-credit
This course is individually structured to build on foundational knowledge from the mathematics and English/language arts content areas. Instruction is clustered into domains or themes that include Physical, Life, and Earth and Space Science. The instructional standards are aligned with the Next Generation Science Standards but do not represent the breadth and the depth covered by the general education curriculum.

LIFE SKILLS
A765 Grade Level 9, 10, 11, 12 Non-credit
This course is individually structured to improve each student's skills in the areas of independent living, adaptive skills, communication, self management, leisure and social skills. It emphasizes specially designed instruction and functional skills to promote community integration and independence for adulthood. Instruction takes into account the learning style of each student and addresses the goals and objectives in the student's IEP. Sub-skills are congruent with Maryland College and Career-Ready Standards.
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<td>Physical Education-Weight Conditioning</td>
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<td>Piano Lab I</td>
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<td>Piano Lab II</td>
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<tr>
<td>PLTW Advanced Placement Computer Science A</td>
<td>A358AP</td>
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<tr>
<td>PLTW Advanced Placement Computer Science Principles</td>
<td>A352AP</td>
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125
PLTW Computer Science Essentials  A362  46
PLTW Cyber Security  A363  47
Power Mechanics Capstone  A1085  88
Power Mechanics I  A865  87
Power Mechanics II  A866  88
Powertrain Engine Repair and Performance III  A2062  108
Practical Experience as a Food Service Professional  A821  87
Principle of Arts, Media, and Communication I  BIPAMC  79
Principles and Applications of Finance  A828  82
Principles of Accounting and Finance  A773  80
Principles of Accounting and Finance  A773  81
Principles of Accounting and Finance  A773  81
Principles of Accounting and Finance  A773  82
Principles of Accounting and Financial Reporting  A829  83
Principles of Agricultural Science - Plant Science  A1021  89
Principles of Biomedical Sciences I  A2020  102
Principles of Business Administration and Management  A795  80
Principles of Business Administration and Management  A795  80
Principles of Business Administration and Management  A795  81
Principles of Business Administration and Management  A795  82
Principles of Construction Design  A935  86
Principles of Engineering  A854  95
Principles of Hospitality and Tourism  A1040/A1040SM  87
Principles of Multimedia  A1030/A1030SM  78
Production and Companion Animals  A1013  91
Psychology  A215  33
Public Speaking and Forensics  A152  25
Reading  A100R  116
Reading Intervention  A100  115
Rhythm Lab  A669  68
Robotic Systems and Industry 4.0 Applications III  A2052  107
Robotics, Microprocessors and Microcontrollers  A877  47
Routing and Switching Essentials IV  A1093  106
Salon Environment/Practicum III  A2016  100
Science Intern Program  A400  51
Securing Artificial Intelligence Devices and Cloud Based Technology III  A1097  106
Smart Manufacturing and Quality Control I  A2050  107
Sociology  A217  34
Spanish I  A532  59
Spanish II  A534  59
String Lab  A670  68
Structural Analysis and Damage Repair III  A2066  109
Structure and Functions of the Human Body II  A2025  103
Studio Practice Art  A615  65
Studio Practice Photography  A632  66
Study Hall  A030  114
Suspension, Steering and Brakes II  A2061  108
Taking Informed Action: A Project-Based Exploration of Civic and Social Issues  A270  34
Teacher Aide  A050  115
Teaching as a Profession  A842  93
Teaching as a Profession II  A2044  103
Treble Ensemble  A673  70
Twentieth Century Music  A677  68
United States Studies II  A204  33
Veterinary Internship  A1008  110
Veterinary Technology  A1007  91
Vocal Jazz Ensemble  A676  71
Work Based Learning Experience  A1044  111
Work Preparation I  A778  111
Work Preparation II  A779  112
Work-Based Learning Experience  A804  84
World History  A208  33
Yearbook  A070  115
Appendix
**WCPS Sample Honors/AP Courses for College Bound Students**

*In building their 4-year high school plan, students should challenge themselves to the best of their abilities. Students intending to apply to colleges should be aware that a strong transcript (including the highest level courses offered) is one of the top criteria for admissions decisions.*

<table>
<thead>
<tr>
<th>Grade 9</th>
<th>Grade 10</th>
<th>Grade 11</th>
<th>Grade 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honors English 9</td>
<td>Honors English 10</td>
<td>Honors English 11, AP Language or AP Literature</td>
<td>Honors English 12, AP Language or AP Literature</td>
</tr>
<tr>
<td>Algebra 1, or Honors Geometry</td>
<td>Honors Geometry, Honors Algebra II</td>
<td>Honors Algebra II, Honors Precalculus/Trigonometry, AP Statistics</td>
<td>Essence College Algebra, Honors Precalculus/Trigonometry, AP Statistics or AP Calculus</td>
</tr>
<tr>
<td>Honors U.S. Studies II</td>
<td>Honors Government</td>
<td>Honors or AP World History</td>
<td>AP Psychology, AP History course, Honors/ESSENCE Sociology, or AP Human Geography</td>
</tr>
<tr>
<td>Honors Biology</td>
<td>Honors Chemistry</td>
<td>Honors Physics or AP Physics I</td>
<td>AP Sciences</td>
</tr>
<tr>
<td>Honors World Language II</td>
<td>Honors World Language III</td>
<td>World Language IV</td>
<td>AP World Language</td>
</tr>
<tr>
<td>Physical Education</td>
<td>Health/Life Skills</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Foundations of Technology</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
<tr>
<td>Arts/Music Class</td>
<td>Elective</td>
<td>Elective</td>
<td>Elective</td>
</tr>
</tbody>
</table>

- Electives can be courses that lead to a Career & Technology completer or that focus on student academic interests in one or more areas (additional arts classes, academic electives, a second world language, or an approved HCC ESSENCE class).
## Sample Pathway for a Student Focused on World Languages and AP Classes

*(Course offerings daily and schedules vary at each school based on student demand and site-based programs.)*

<table>
<thead>
<tr>
<th>PD</th>
<th>9th Grade Student 7 Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F.O.T.</td>
</tr>
<tr>
<td>2</td>
<td>Honors English 9</td>
</tr>
<tr>
<td>3</td>
<td>Honors Geometry</td>
</tr>
<tr>
<td>4</td>
<td>Honors Biology</td>
</tr>
<tr>
<td>5</td>
<td>Honors U.S. Studies</td>
</tr>
<tr>
<td>6</td>
<td>Honors Spanish 2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PD</th>
<th>10th Grade Student 7 Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Art 1</td>
</tr>
<tr>
<td>2</td>
<td>Honors English 10</td>
</tr>
<tr>
<td>3</td>
<td>Honors Algebra II</td>
</tr>
<tr>
<td>4</td>
<td>Honors Chemistry</td>
</tr>
<tr>
<td>5</td>
<td>Honors Government</td>
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<tr>
<td>6</td>
<td>Honors Spanish 3</td>
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<table>
<thead>
<tr>
<th>PD</th>
<th>11th Grade Student 6 Credits</th>
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</thead>
<tbody>
<tr>
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<td>Honors Pre-Calculus/Trig</td>
</tr>
<tr>
<td>2</td>
<td>AP English Language</td>
</tr>
<tr>
<td>3</td>
<td>AP Physics I</td>
</tr>
<tr>
<td>4</td>
<td>AP World History</td>
</tr>
<tr>
<td>5</td>
<td>Honors Spanish IV</td>
</tr>
<tr>
<td>6</td>
<td>AP Psychology</td>
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<table>
<thead>
<tr>
<th>PD</th>
<th>12th Grade Courses 7 Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AP Calculus</td>
</tr>
<tr>
<td>2</td>
<td>AP Sci. Lab</td>
</tr>
<tr>
<td></td>
<td>College Prep</td>
</tr>
<tr>
<td></td>
<td>A-Day</td>
</tr>
<tr>
<td></td>
<td>B-Day</td>
</tr>
<tr>
<td>3</td>
<td>AP Biology or Chemistry</td>
</tr>
<tr>
<td>4</td>
<td>AP English Literature</td>
</tr>
<tr>
<td>5</td>
<td>AP U.S. History</td>
</tr>
<tr>
<td>6</td>
<td>AP Environmental Science or AP Physics 2</td>
</tr>
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</table>
Sample Pathway for a Student Focused on Band and AP Classes

*(Course offerings vary at each school based on student demand and site-based programs.)*

<table>
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<tr>
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<td>Band</td>
</tr>
<tr>
<td>2</td>
<td>Honors English 9</td>
</tr>
<tr>
<td>3</td>
<td>Honors Geometry</td>
</tr>
<tr>
<td>4</td>
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<td>5</td>
<td>Honors U.S. Studies</td>
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<tr>
<td>6</td>
<td>Honors Spanish 2</td>
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</table>

<table>
<thead>
<tr>
<th>PD</th>
<th>10th Grade Student 6 Credits</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Band</td>
</tr>
<tr>
<td>2</td>
<td>Honors English 10</td>
</tr>
<tr>
<td>3</td>
<td>Honors Algebra II</td>
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<tr>
<td>4</td>
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<tr>
<td>2</td>
<td>AP English Language</td>
</tr>
<tr>
<td>3</td>
<td>AP Physics I</td>
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<td>AP World History</td>
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<td>PE 1</td>
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<table>
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<tr>
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<td>AP Sci. Lab</td>
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<td>A-Day</td>
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<td>B-Day</td>
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<td>3</td>
<td>AP Science</td>
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<td>4</td>
<td>AP English Literature</td>
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**Sample Pathway for a Student with Reading Courses and a Dual Completer**

*(Course offerings vary at each school based on student demand and site-based programs.)*

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<table>
<thead>
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<tbody>
<tr>
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<tr>
<td>2</td>
<td>English 10</td>
</tr>
<tr>
<td>3</td>
<td>Geometry</td>
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<td>4</td>
<td>Biology</td>
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<td>Government</td>
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<td>Reading</td>
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<td>Psychology</td>
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<td>Forestry &amp; Soils</td>
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<td>6</td>
<td>Spanish 2</td>
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</table>
Please complete this form for students to be granted articulated credit. Students should submit the completed form to the Office of Admissions, Records and Registration during the first semester of enrollment at Hagerstown Community College. **Application for articulated credit must be submitted within twelve months of high school graduation.**

This is the certify that: ___________________________________________ Social Security # ______________________
(Student Name)

Year of Graduation: ______________________

has successfully completed the following courses based upon the Articulation Agreement between Washington County Public Schools and Hagerstown Community College, and it is recommended that credit be awarded within time limits set by the college.

List applicable course(s) and grades:

<table>
<thead>
<tr>
<th>Secondary Courses Certified</th>
<th>College Courses Articulated</th>
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</tr>
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</tr>
</tbody>
</table>

Other Comments:

____________________________________________________________________________________________

____________________________________________________________________________________________

The undersigned certify that the student has met the criteria as defined in the Articulation Agreement (Year of _____), signed by representatives from Washington County Public Schools and Hagerstown Community College.

Instructor (Print Name)    Date  School Counselor (Print Name)  Date

Instructor (Signature)    Date  School Counselor (Signature)  Date