Stafford County Public Schools continuously conducts program evaluations to determine the feasibility of programming which could result in the potential alteration or discontinuation of some programs in the future. Courses may be cancelled as a result of low enrollment, staffing and/or budget limitations.
INTRODUCTION

VISION
Stafford County Public Schools is a dynamic, goal-oriented learning community committed to preparing our students for success in further education, work, and citizenship.

MISSION
Inspire and empower all learners to thrive.

WHAT WE VALUE

Learners: We believe in the power of teaching and learning to develop and advance individuals and communities.

Community: We work together in a safe, nurturing environment where everyone is valued and supported.

Excellence: We cultivate and challenge each individual to excel through a wide range of experiences.

Respect: We recognize and value diversity of culture and thought, treating ourselves and others with honor and dignity.

Integrity: We are honest, open, and principled.

C5W

Communication
All Century Learners express and exchange our thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of contexts. We engage in discussion and debate, ask thoughtful, respectful questions, and listen actively to others.

Collaboration
All Century Learners engage positively with others to achieve common goals. We actively participate in this process through deliberation, encouragement, flexibility, reflection, responding to constructive criticism, and honoring the strengths in others and in ourselves.

Critical Thinking
All Century Learners engage in inquiry, experimentation, and problem solving. We research and use credible sources and methods to evaluate, justify our thinking, and develop solutions for real world challenges.

Creativity
All Century Learners develop and use inventive and imaginative processes to construct innovative ideas and original work. We consider issues from a variety of perspectives and look for solutions that demonstrate improvement, new understandings, and divergent thinking.

Citizenship
All Century Learners strive to make a positive impact in our community and the world through acts of service and by demonstrating compassion, empathy, respect, and integrity. We celebrate diversity, honor our environment, and participate in our democracy.

Wellness
All Century Learners seek balance in a safe environment by attending to physical, emotional, and intellectual needs. We strive to be resilient and self-aware, and to make healthy, conscious choices in the best interest of ourselves and others.

NOTICE
The Stafford County School Board does not unlawfully discriminate against any person on the basis of race, sex, age, color, religion, national origin, political affiliation, or disability. This policy covers all programs, services, policies, and procedures of Stafford County Public Schools, including all educational programs, admission to such programs, activities, and employment. Inquiries regarding non-discrimination should be directed to the Title IX Coordinator/Executive Director of Human Resources, Stafford County Public Schools, 31 Stafford Avenue, Stafford, VA 22554. Phone: (540) 658-6560 Fax: (540) 658-5970. Reasonable accommodation upon request.
ACKNOWLEDGEMENTS

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Superintendent

DEPARTMENT OF INSTRUCTIONAL SERVICES

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Associate Superintendent of Instructional Services

Thomas M. Nichols
Chief Secondary Officer

Carrie B. Neeley
Chief Elementary Officer

Jan S. Streich, Ph.D.
Executive Director of Learning & Organizational Development

Wendy D. Martin–Johnson
Executive Director of Student Services

Elaina N. Parrish, Ed.D.
Supervisor of Assessment, Accountability and Program Evaluation

HIGH SCHOOL CONTACT INFORMATION

<table>
<thead>
<tr>
<th>HIGH SCHOOL</th>
<th>PRINCIPAL</th>
<th>COUNSELING CONTACT</th>
<th>TELEPHONE</th>
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<tbody>
<tr>
<td>Brooke Point High School</td>
<td>Tammy Houk</td>
<td>Marialena Bridges, Ed.D.</td>
<td>540-658-6080</td>
</tr>
<tr>
<td>Colonial Forge High School</td>
<td>Gregory Daniel</td>
<td>Rebecca Shay</td>
<td>540-658-6115</td>
</tr>
<tr>
<td>Mountain View High School</td>
<td>James Stemple, Jr., Ed.D.</td>
<td>Sarah Hodges</td>
<td>540-658-6840</td>
</tr>
<tr>
<td>North Stafford High School</td>
<td>Daniel Hornick</td>
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<td>540-658-6150</td>
</tr>
<tr>
<td>Stafford High School</td>
<td>Joseph Lewis</td>
<td>Susan Biggs</td>
<td>540-371-7200</td>
</tr>
<tr>
<td>Turning Point</td>
<td>Rita Cavataio</td>
<td>Frank Stello</td>
<td>540-899-6000</td>
</tr>
<tr>
<td>Position</td>
<td>Name</td>
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<tr>
<td>--------------------------------------------------------</td>
<td>-----------------------------</td>
<td>----------------------</td>
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</tr>
<tr>
<td>Executive Director of Learning and Organizational Development</td>
<td>Jan Streich, Ph.D.</td>
<td>540-658-6696</td>
<td></td>
</tr>
<tr>
<td>CTE and Workforce Preparedness Lead</td>
<td>Dinah Robinson, M.Ed.</td>
<td>540-658-6697</td>
<td></td>
</tr>
<tr>
<td>Facilitator of CTE</td>
<td>Lisa White-Murrill, M.Ed.</td>
<td>540-658-6672</td>
<td></td>
</tr>
<tr>
<td>CTE/STEM Support</td>
<td>Sherry Denny</td>
<td>540-658-6695</td>
<td></td>
</tr>
<tr>
<td>CTE/STEM Support</td>
<td>Tracey Chestnut</td>
<td>540-658-6679</td>
<td></td>
</tr>
<tr>
<td>Facilitator of ESOL</td>
<td>Alissa Fraser, M.Ed.</td>
<td>540-658-6686</td>
<td></td>
</tr>
<tr>
<td>Facilitator of World Language and Culture</td>
<td>Liesl Yeskey, M.A.</td>
<td>540-658-6753</td>
<td></td>
</tr>
<tr>
<td>Facilitator of K-12 Gifted Education &amp; Secondary Programs</td>
<td>Stephenie Fellinger, Ed.D.</td>
<td>540-658-6689</td>
<td></td>
</tr>
<tr>
<td>Facilitator of Fine &amp; Performing Arts</td>
<td>Annamarie Bollino</td>
<td>540-658-6684</td>
<td></td>
</tr>
<tr>
<td>Facilitator of Secondary English</td>
<td>Sarah Crain, M.Ed.</td>
<td>540-658-6690</td>
<td></td>
</tr>
<tr>
<td>Facilitator of Secondary Mathematics</td>
<td>Kathleen Stoebe, M.Ed.</td>
<td>540-658-6701</td>
<td></td>
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<tr>
<td>Facilitator of Science</td>
<td>Michael Pratte</td>
<td>540-658-6692</td>
<td></td>
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<tr>
<td>Facilitator of History and Social Sciences</td>
<td>Eric Powell, M.A., M.Ed.</td>
<td>540-658-6670</td>
<td></td>
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<tr>
<td>Facilitator of Health, Physical Education, Athletics and Wellness</td>
<td>Michael Justice</td>
<td>540-658-6694</td>
<td></td>
</tr>
<tr>
<td>Specialist of Assessment and Accountability</td>
<td>Marcus Zinger</td>
<td>540-658-6662</td>
<td></td>
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<tr>
<td>Specialist of Accountability</td>
<td>Rebecca Towery, Ed.D.</td>
<td>540-658-6723</td>
<td></td>
</tr>
<tr>
<td>Federal Grant and Accountability Specialist</td>
<td>Roxana McCarthy</td>
<td>540-658-6660</td>
<td></td>
</tr>
<tr>
<td>Supervisor of Student Services</td>
<td>Melanie Daniel</td>
<td>540-658-6507</td>
<td></td>
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<tr>
<td>Supervisor of Student Services</td>
<td>Robert Colucci</td>
<td>540-658-6530</td>
<td></td>
</tr>
<tr>
<td>Supervisor of Student Services</td>
<td>George Hummer</td>
<td>540-658-6510</td>
<td></td>
</tr>
</tbody>
</table>
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Many of your choices in the future depend upon your selection of high school courses. This booklet has been assembled to inform you of which courses are required and in what sequence they must be taken. Furthermore, the booklet will also describe electives that are available. Take the booklet home or access it online and discuss the courses with your parents or guardians. Give very serious consideration to your choices. Consider your own abilities, interests, and goals. Then, choose a program of studies that will help you reach those goals. You will be required to take Standards of Learning tests in English, mathematics, science, and history. Additionally, you will be required to earn a Board-approved career and technical education industry credential to graduate with a Standard Diploma and one virtual course or blended learning experience, which may be non-credit bearing. You are also required to complete emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillator training.

The Virginia State Board of Education implemented rigorous instructional standards by refining and strengthening core skills, concepts, and knowledge in English, mathematics, science, and history. All courses reflect these standards. Please note that all students in grades 9-12 must take Standards of Learning (SOL) tests in English, mathematics, science and history. Additionally, students will be required to earn a board-approved career and technical education industry credential to graduate with a Standard Diploma, and successfully complete one virtual course, or blended learning experience, which may be non-credit bearing. Students are also required to complete emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillator training. All students must meet the graduation requirements included in this catalog.

During the winter and spring, counselors in each middle and high school will meet with students and/or parents/guardians to aid students in the selection of appropriate courses. Certain courses are required, but many courses may be selected according to a student’s interests. Generally, elective courses must have an enrollment of 15 in order to be offered; staffing limitations may also impact the ability for a course to be offered. Therefore, alternates for elective courses should be chosen in case a scheduled conflict or low enrollment forces cancellation of a course.

The Regulations for Establishing Standards for Accrediting Public Schools in Virginia specifies the standards that all students must meet in order to earn a diploma. These standards can change from one year to another, and each student must meet the requirements that are in place the year he or she first entered ninth grade.

Students entering the ninth grade for the first time in the fall of 2011 and beyond will be required to satisfy graduation requirements for one of three diplomas: (1) a 22-credit Standard Diploma; (2) a 26-credit Advanced Studies Diploma; and (3) an Applied Studies Diploma.
The Applied Studies Diploma is established for certain students who have a disability and who are not able to meet the credit requirements for a Standard Diploma. Student eligibility for this diploma is determined by the Individualized Education Plan (IEP) team, the student, and the parent/guardian. The Applied Studies Diploma is for students whose disabilities require a unique program of study.

What are a “standard unit of credit” and a “verified unit of credit”?

A standard unit of credit is awarded for a course in which the student successfully completes 140 clock hours of instruction and the objectives of the course. A verified unit of credit is awarded for a course in which the student earns a standard unit of credit and achieves a passing score on a corresponding end-of-course SOL test or a substitute assessment approved by the Board of Education.

SEQUENTIAL ELECTIVES REQUIREMENT

Students earning the Standard Diploma must successfully complete two sequential electives to satisfy graduation requirements. Courses used to satisfy this requirement may be in any discipline as long as the courses are not specifically required for graduation. Courses used to satisfy the one-credit requirement in the fine arts or career and technical education may also be used to partially satisfy this requirement. For example, if a student selects Art Foundation to satisfy the fine arts or career and technical education requirement, then Art Foundation and a second course in the art sequence may also be used to satisfy the sequential electives requirement. The second course could then also count toward the six other required elective credits. Courses to satisfy the sequential elective requirement do not have to be completed in consecutive years, and they may be semester or year-long courses. Please refer to the VDOE sequence requirements at http://www.cteresource.org/apg/introduction for more information.

NOTE: This program of studies contains accurate graduation requirements as of the publish date. Graduation requirements for each diploma are available on the Virginia Department of Education website at: http://www.doe.virginia.gov/instruction/graduation/index.shtml

STANDARDS OF LEARNING TESTING

The Virginia State Board of Education requires that all students enrolled in English, mathematics, science, and history take the applicable Standards of Learning test for that course. This means that a student enrolled in Earth Science must take the Standards of Learning test for Earth Science; if the student is enrolled in Geometry, he/she must take the Standards of Learning test for Geometry. As a state requirement, there are no exemptions to taking Standards of Learning tests. High school students have multiple opportunities to take Standards of Learning tests. Once a student earns a passing score, the student may not re-take the test to achieve a higher score.
High School Standards of Learning Tests
Graduating Classes Prior to 2022

Standards of Learning tests are given upon completion of the courses listed in the following tables for Standard and Advanced Studies Diplomas:

<table>
<thead>
<tr>
<th>English 11</th>
<th>All Diplomas</th>
<th>History</th>
<th>Standard</th>
<th>Advanced Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading, Literature/Research</td>
<td>Grade 11</td>
<td>World History to 1500 AD; World Geography</td>
<td>Grade 9*</td>
<td>Grade 9*</td>
</tr>
<tr>
<td>Writing</td>
<td>Grade 11</td>
<td>World History from 1500 AD; World Geography</td>
<td>Grade 10*</td>
<td>Grade 10*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Virginia and US History</td>
<td>Grade 11</td>
<td>Grade 11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Science</th>
<th>All Diplomas</th>
<th>Mathematics</th>
<th>Standard</th>
<th>Advanced Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Science</td>
<td>Grade 9</td>
<td>Algebra I; Algebra I Part II</td>
<td>Grade 9 or 10</td>
<td>Grade 7, 8, or 9</td>
</tr>
<tr>
<td>Biology</td>
<td>Grade 9 or 10</td>
<td>Geometry; Geometry Part II</td>
<td>Grade 10 or 11</td>
<td>Grade 8, 9, or 10</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Grade 10 or 11</td>
<td>Algebra II</td>
<td>Grade 11</td>
<td>Grade 9, 10, or 11</td>
</tr>
</tbody>
</table>

* Standard Diploma students are required to take World History to 1500/World Geography or World History from 1500/World Geography. Advanced Studies Diploma students will take both World History/Geography courses.

** Students taking Algebra I Part I and Part II will take the Algebra I test upon completion of Algebra I Part II. Students taking Geometry Part I and Part II will take the Geometry test upon completion Geometry Part II.

High School Standards of Learning Tests
Graduating Class of 2022 and Beyond

Standards of Learning tests are given upon completion of the courses listed in the following tables for Standard and Advanced Studies Diplomas:

<table>
<thead>
<tr>
<th>English 11</th>
<th>All Diplomas</th>
<th>History</th>
<th>All Diplomas</th>
<th>Must obtain required verified credit from choice of one history/social science course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading, Literature/Research</td>
<td>Grade 11</td>
<td>World History to 1500 AD; World Geography</td>
<td>Grade 9 or 10</td>
<td>Must obtain required verified credit from choice of one history/social science course</td>
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<tr>
<td>Writing</td>
<td>Grade 11</td>
<td>World History from 1500 AD; World Geography</td>
<td>Grade 10 or 11</td>
<td>Must obtain required verified credit from choice of one history/social science course</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Virginia and US History</td>
<td>Grade 11</td>
<td>Must obtain required verified credit from choice of one history/social science course</td>
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<table>
<thead>
<tr>
<th>Science</th>
<th>All Diplomas</th>
<th>Mathematics</th>
<th>All Diplomas</th>
<th>Must obtain required verified credit from choice of one mathematics course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earth Science</td>
<td>Grade 9 or 10 or 11</td>
<td>Algebra I; Algebra I Part II</td>
<td>Grade 7, 8, 9 or 10</td>
<td>Must obtain required verified credit from choice of one mathematics course</td>
</tr>
<tr>
<td>Biology</td>
<td>Grade 9 or 10</td>
<td>Geometry; Geometry Part II</td>
<td>Grade 8, 9, 10 or 11</td>
<td>Must obtain required verified credit from choice of one mathematics course</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Grade 10 or 11</td>
<td>Algebra II</td>
<td>Grade 9, 10, 11 or 12</td>
<td>Must obtain required verified credit from choice of one mathematics course</td>
</tr>
</tbody>
</table>

** Students taking Algebra I Part I and Part II will take the Algebra I test upon completion of Algebra I Part II. Students taking Geometry Part I and Part II will take the Geometry test upon completion Geometry Part II.
GRADUATION REQUIREMENTS

STANDARD DIPLOMA

Students seeking a Standard Diploma must also:

- earn a board-approved career and technical education credential to graduate with a Standard Diploma;
- successfully complete a virtual learning course. This course can be fully online or a blended online learning experience. In SCPS this requirement is included in Economics and Personal Finance curriculum in grades 10-12; and
- be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillator, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. In SCPS this requirement is included in the Health and Physical Education curriculum in grades 9 and 10.

<table>
<thead>
<tr>
<th>Course Area</th>
<th>Standard Credits: 9th Graders Beginning Fall of 2011 – Spring of 2018</th>
<th>Standard Credits: 9th Graders Beginning Fall of 2018 and Beyond</th>
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<td>Mathematics¹</td>
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</tr>
<tr>
<td>Lab Science a, b – Earth Science, Biology, one additional Science course</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>History a, b – World History to 1500 A.D./World Geography or World History after 1500 A.D./World Geography, Virginia/United States History, and Virginia/United States Government</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>World Language, Fine and Performing Arts or Career &amp; Technical Education¹</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Economics and Personal Finance</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives¹</td>
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<td></td>
</tr>
<tr>
<td>Student Selected Test¹</td>
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<td>TOTAL</td>
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<td>6</td>
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¹Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I; Geometry; Algebra, Functions and Data Analysis; Algebra II or other mathematics courses above the level of Algebra II. The Board shall approve courses to satisfy this requirement.

²Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. The Board shall approve courses to satisfy this requirement.

³Courses completed to satisfy this requirement shall include US and Virginia History, US and Virginia Government, and one course in either world history or geography or both. The Board shall approve courses to satisfy this requirement.

⁴Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.

⁵Students may utilize additional tests for earning verified credit in computer science, technology, career and technical education, economics or other areas as prescribed by the Board in 8 VAC 20-131-110.

⁶Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association or acquires a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (1) the student selected verified credit and (2) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board of Education as an additional test to verify student achievement.

⁷Pursuant to Section 22.1-253.13:4, Code of Virginia, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education.
**ADVANCED STUDIES DIPLOMA**

*Students seeking an Advanced Studies Diploma must also:*

- successfully complete a virtual learning course. This course can be fully online or a blended online learning experience. In SCPS this requirement is included in Economics and Personal Finance curriculum in grades 10-12; and
- be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillator, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. In SCPS this requirement is included in the Health and Physical Education curriculum in grades 9 and 10.

<table>
<thead>
<tr>
<th>Course Area</th>
<th>Advanced Studies Credits: 9th Graders Beginning Fall of 2011 – Spring of 2018</th>
<th>Advanced Studies Credits: 9th Graders Beginning Fall of 2018 and Beyond</th>
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<tbody>
<tr>
<td></td>
<td>26 Credits</td>
<td># of Verified</td>
</tr>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Lab Science</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>History</td>
<td>4</td>
<td>2</td>
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<tr>
<td>Health and Physical Education</td>
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<td>3 (or 4)</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Electives (depending on language option)</td>
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<tr>
<td>Fine Arts or Career and Technical Education</td>
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<tr>
<td>Student Selected Test</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>26</td>
<td>9</td>
</tr>
</tbody>
</table>

1Courses completed to satisfy this requirement shall include at least three different course selections from among: Algebra I; Geometry; Algebra, Functions and Data Analysis; Algebra II or other mathematics courses above the level of Algebra II. The Board shall approve courses to satisfy this requirement.

2Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines: earth sciences, biology, chemistry or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. The Board shall approve courses to satisfy this requirement.

3Courses completed to satisfy this requirement shall include US and Virginia History, US and Virginia Government, and one course in either world history or geography or both. The Board shall approve courses to satisfy this requirement.

4Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.

5Students may utilize additional tests for earning verified credit in computer science, technology, career and technical education, economics or other areas as prescribed by the Board in 8 VAC 20-131-110.

6Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association or acquires a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (1) the student selected verified credit and (2) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board of Education as an additional test to verify student achievement.

7Pursuant to Section 22.1-253.13:4, Code of Virginia, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education.
APPLIED STUDIES DIPLOMA

This diploma is intended for students with an Individualized Education Plan (IEP) who require a unique educational program and do not meet the requirements of other diplomas. The student’s Individualized Education Plan (IEP) team and parents determine eligibility and participation in this diploma program. For a student to earn an Applied Studies Diploma, he/she must complete the requirements of his/her Individualized Education Plan.

The Virginia Standards of Accreditation (SOA) are currently under revision by the Virginia Board of Education. The graduation requirements listed herein represent the current SOA. Changes in the SOA may result in graduation requirements different than those listed above, which may require changes in courses for some students. Updates to the course catalog will be posted on the SCPS website as more information becomes available. Graduation requirements and additional VDOE information is available at: http://www.doe.virginia.gov/instruction/graduation/index.shtml
AWARDS FOR EXEMPLARY PERFORMANCE

Students who demonstrate outstanding achievement may be eligible for one of the following awards:

1. The Board of Education's Governor's Seal will be awarded to students who complete the requirements for an Advanced Studies Diploma, with an average grade of "B" or better, and successfully complete college-level coursework that earn the student at least nine transferable college credits in Advanced Placement (AP), International Baccalaureate (IB), or dual enrollment courses.

2. The Board of Education's seal will be awarded to students who complete the requirements for a Standard Diploma or Advanced Studies Diploma with an average grade of "A."

3. The Board of Education's Career and Technical Education Seal will be awarded to students who earn a Standard Diploma, Advanced Studies Diploma or complete a prescribed sequence of courses in a Career and Technical Education concentration or specialization that they choose and maintain a "B" or better average in those courses; or (i) pass an examination or an occupational competency assessment in a Career and Technical Education concentration or specialization that confers certification or occupational competency credential from a recognized industry, trade or professional association or (ii) acquire a professional license in that Career and Technical Education field from the Commonwealth of Virginia. The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements.

4. The Board of Education's Seal of Advanced Mathematics and Technology will be awarded to students who earn either a Standard Diploma or an Advanced Studies Diploma and (i) satisfy all Virginia Board of Education mathematics requirements for the Advanced Studies Diploma (four units of credit including Algebra II; two verified units of credit) with a "B" average or better; and (ii) either (a) pass an examination in a Career and Technical Education field that confers certification from a recognized industry, trade, or professional association; (b) acquire a professional license in a Career and Technical Education field from the Commonwealth of Virginia; or (c) pass an examination approved by the board that confers college-level credit in a technology or computer science area. The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements.

5. Governors School Diploma Seal is for students who successfully complete The Commonwealth Governor's School program.

6. Governor's STEM Academies Seal is awarded to students who successfully complete Stafford Academy for Technology.

7. IB Seals are awarded to students who successfully complete course requirements for the International Baccalaureate Programme.

8. APPX Seals are awarded to students who successfully complete course requirements for the Advanced Program of Excellence Signature Program.

9. The Board of Education's Seal of Biliteracy certifies attainment of a high level of proficiency by a graduating high school student in one or more languages in addition to English and certifies that the graduate meets of the following criteria: The Board of Education's Seal of Biliteracy is awarded to students who earn either a Board of Education-approved diploma and (i) pass all required End-of-Course Assessments in English reading and writing at the proficient or higher level; and (ii) are proficient at the intermediate mid-level or higher in one or more languages other than English, as demonstrated through an assessment from a list to be approved by the Superintendent of Public Instruction. For purposes of this article, "foreign language" means a language other than English and includes American Sign Language.
COURSES/CREDIT EARNED PRIOR TO THE 9TH GRADE

When students complete credit-bearing high school subjects through an accredited institution before entering ninth grade, credit(s) will be counted toward meeting the units required for graduation. Students are encouraged to take advantage of this option and may earn credit for Algebra I, Geometry, world language or other high school courses as appropriate to their needs. It is possible to enter high school with one or more units of credit toward graduation requirements. If applicable, the student must take the Standards of Learning test for the credit-bearing course.

DELETING COURSES TAKEN PRIOR TO THE 9TH GRADE FROM THE ACADEMIC TRANSCRIPT

Students have the opportunity to pursue credit-bearing courses prior to high school. Stafford County Public Schools makes available selected mathematics, world language, and business courses. Occasionally, students may not demonstrate a desired degree of success in advanced courses taken prior to high school. Parents may request, in writing, no more than thirty (30) days following the posting of final year-end grades, that a credit-bearing course taken before entering high school be removed from their child’s academic high school transcript.

Students for whom a credit-bearing course is deleted must repeat the course in its entirety if the course is a requirement for graduation. If an end-of-course Standards of Learning test is applicable, the student will not be required to retake the end-of-course test if a passing score was achieved. Please consult your child’s counselor for additional information.

This provision does not apply to courses taken while enrolled in grades 9-12.
NCAA INITIAL ELIGIBILITY AND ACADEMIC REQUIREMENTS

Division I Academic Eligibility - To be eligible to compete in NCAA sports during your first year at a Division I school, you must graduate high school and meet ALL the following requirements:

- Complete **16 core courses**:
  - Four years of English
  - Three years of math (Algebra I or higher)
  - Two years of natural/physical science (including one year of lab science if your high school offers it)
  - One additional year of English, math or natural/physical science
  - Two years of social science
  - Four additional years of English, math, natural/physical science, social science, foreign language, comparative religion or philosophy
- Complete **10 core courses**, including seven in English, math or natural/physical science, before your seventh semester. Once you begin your seventh semester, you may not repeat or replace any of those 10 courses to improve your core-course GPA.
- Earn at least a **2.3 GPA** in your core courses.
- Earn an SAT combined score or ACT sum score matching your core-course GPA on the Division I sliding scale, which balances your test score and core-course GPA. If you have a low test score, you need a higher core-course GPA to be eligible. If you have a low core-course GPA, you need a higher test score to be eligible.

Division II Academic Eligibility - To be eligible to compete in NCAA sports during your first year at a Division II school, you must meet academic requirements for your core courses, grade-point average (GPA) and test scores. The requirements are changing for students who enroll full-time at a Division II school after August 1, 2018.

If you enroll BEFORE August 1, 2018

You must graduate high school and meet **ALL** the following requirements:

- Complete **16 core courses**:
  - Three years of English.
  - Two years of math (Algebra I or higher).
  - Two years of natural or physical science (including one year of lab science if your high school offers it).
  - Three additional years of English, math or natural or physical science
  - Two years of social science
  - Four additional years of English, math, natural or physical science, social science, foreign language, comparative religion or philosophy
- Earn at least a **2.0 GPA** in your core courses.
- Earn a SAT combined score of 820 or an ACT sum score of 68. Remember, if you took the SAT on or after March 2016 you need to compare your score on the College Board concordance table. The 820 score is after the concordance table is applied.

AFTER August 1, 2018

You must graduate high school and meet **ALL** the following requirements:

- Complete **16 core courses**:
  - Three years of English.
  - Two years of math (Algebra I or higher).
  - Two years of natural or physical science (including one year of lab science if your high school offers it).
- Three additional years of English, math or natural or physical science
- Two years of social science
- Four additional years of English, math, natural or physical science, social science, foreign language, comparative religion or philosophy

- Earn at least a 2.2 GPA in your core courses.
- Earn an SAT combined score or ACT sum score matching your core-course GPA on the Division II sliding scale, which balances your test score and core-course GPA. If you have a low test score, you need a higher core-course GPA to be eligible. If you have a low core-course GPA, you need a higher test score to be eligible.

**Play Division III sports**

Division III schools provide an integrated environment focusing on academic success while offering a competitive athletics environment. Division III rules minimize potential conflicts between athletics and academics and focus on regional in-season and conference play.

While Division III schools do not offer athletics scholarships, 75 percent of Division III student-athletes receive some form of merit or need-based financial aid.

If you are planning to attend a Division III school, you do not need to register with the NCAA Eligibility Center. Division III schools set their own admissions standards.

**OTHER IMPORTANT INFORMATION:**

Students enrolling at an NCAA Division I or II institution for the first time also need to complete the amateurism questionnaire through the Eligibility Center website. Students need to request final amateurism certification prior to enrollment.

For more information regarding the rules, please go to www.ncaa.org. Click on “Academics and Athletes,” then “Eligibility and Recruiting” or visit the Eligibility Center website at www.eligibilitycenter.org.

Please call the NCAA Eligibility Center if you have questions: Toll-free number: 877-262-1492
SCPS uses a ten-point grading scale.

<table>
<thead>
<tr>
<th>Range</th>
<th>Quality Pts.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>98-100</td>
</tr>
<tr>
<td>A</td>
<td>93-97</td>
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<tr>
<td>A−</td>
<td>90-92</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
</tr>
<tr>
<td>B</td>
<td>83-86</td>
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<tr>
<td>B−</td>
<td>80-82</td>
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<tr>
<td>C+</td>
<td>77-79</td>
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<tr>
<td>C</td>
<td>73-76</td>
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<tr>
<td>C−</td>
<td>70-72</td>
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<tr>
<td>D+</td>
<td>67-69</td>
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<tr>
<td>D</td>
<td>63-66</td>
</tr>
<tr>
<td>D−</td>
<td>60-62</td>
</tr>
<tr>
<td>F</td>
<td>0-59</td>
</tr>
</tbody>
</table>

Stafford County Public Schools recognizes that different school districts and states utilize various grading scales. As students transfer into the division, official transcripts are requested from the sending school. Grades are transcribed for incoming students based on the letter grade earned at the previous school. This letter grade is used to calculate the grade point average based on the SCPS quality point scale. It should be noted that SCPS does not weight all courses. Transfer students will receive weighted credit for only those Advanced Placement, Dual Enrollment, or International Baccalaureate courses previously taken for which an equivalent weighted course is offered in our schools.

Students may request to audit a course on a space available basis and at the sole discretion of the principal. Students who are approved to audit a course are expected to complete all assignments and tests. Audited courses will not be computed into the student's grade point average. Commonwealth Governor's School courses may not be audited unless approved by the CGS Director and the principal. No Dual Enrollment, Advanced Placement, International Baccalaureate or Project Lead the Way courses may be audited.

High school students who have failed an academic core course can take a SCPS adopted/approved online course that is self-paced and based on mastery of individual units. Participation requires approval by the principal. The purpose of credit recovery is to provide an opportunity for each student who failed a course to accelerate and to complete courses based on individual needs and to meet specific graduation requirements. Students must pass the online examination to earn credit and a final grade.

Note: Credit recovery courses do not meet the NCAA eligibility requirements. If you plan to participate in collegiate athletics, the NCAA Eligibility Center has not approved credit recovery courses to count towards the NCAA eligibility standards.
## WEIGHTED GRADES (#)

Students electing to take Advanced Placement (AP), college Dual Enrollment (DE)*, or International Baccalaureate (IB) courses receive credit for successfully completing these courses. Weighted grades will be designated by a (#) and do not apply to honors-level courses. Please note the following:

- In AP, DE, or IB courses, a grade “A+” is awarded 5.5 grade quality points.
- All other courses, including honors-level courses, are awarded 4.5 grade quality points for an “A+”.
- Students who wish to concurrently enroll in a college or university and receive high school credit for the course will receive a weighted grade for only those courses which are equivalent to those weighted courses listed in this catalog. Prior approval by the principal is required for any concurrent enrollment in a college or university. Certain student eligibility requirements apply.

* NOTE: Any Dual Enrollment (DE) course that earns less than six (6) college credits shall be assigned a .5 weight (not 1.0). This criterion would apply to CGS DE Chemistry, all CTE DE, and designated Project Lead The Way Engineering courses.

Students transferring into Stafford County Public Schools will receive weighted grades for only those Advanced Placement, Dual Enrollment, Project Lead the Way, or International Baccalaureate courses previously taken for which an equivalent weighted course is offered in our schools. All students will have their grade point averages computed using the same weighted grade criteria.

## ADVANCED PLACEMENT COURSES

Advanced Placement (AP) courses are offered in Stafford County to provide students an opportunity to study at the college level. AP courses are approved by the College Board. Teachers of AP courses are required to develop and submit a course syllabus to the College Board. Course offerings vary at each school depending on demand and teacher availability. AP courses require extensive reading, writing, and lab assignments, as well as the completion of summer work. Students who wish to take an AP course will need to discuss AP enrollment criteria with their high school counselors. Students enrolled in AP courses will receive weighted credit for successful completion of the course. Students taking AP courses are strongly encouraged to take all AP assessments. Students who earn equivalency scores on the AP exam may earn college credit, and each college or university determines its own policies on acceptance of AP credits. Students and/or parents are responsible for the AP exam fee by the appropriate date.

More information on the AP courses is available at: [http://apcentral.collegeboard.com/apc/Controller.jsp](http://apcentral.collegeboard.com/apc/Controller.jsp).

## VIRTUAL VIRGINIA ADVANCED PLACEMENT COURSES

A complete list of courses can be found at [http://www.virtualvirginia.org/](http://www.virtualvirginia.org/). Courses must be selected by August 1. Students may be required to purchase books and/or materials. Students are responsible for test fees. See your school counselor for the current list of courses available at your school. If a student drops after twenty-one (21) calendar days the student may be responsible for withdrawal fees.
DUAL ENROLLMENT COURSES

Dual Enrollment (DE) courses provide high school juniors and seniors an opportunity to take college courses while completing their high school requirements. Courses are taught by high school instructors who have the qualifications to teach at the college level. DE courses are offered through multiple post-secondary providers; each provider may have unique requirements for courses and grading practices. Interested students should discuss DE options with their high school counselors.

Prospective students may be required to complete an application for admission, provide qualifying SAT scores, or take a placement test. Qualifying students will register through their high school in the spring. Tuition is the responsibility of the parents. In determining whether to drop a DE course, the student must follow drop/add procedures and timelines established by the college, not those of the school division.

INTERNATIONAL BACCALAUREATE COURSES

International Baccalaureate (IB) courses are offered at Brooke Point High School and Mountain View High School to provide students an opportunity to study at the college level during their last 2 years of high school. IB courses are approved by the International Baccalaureate Organization (IBO). Course offerings vary at each school, depending on demand and teacher availability. Students may work toward the IB Diploma or they may take individual IB courses. Students taking IB courses are expected to remain in the courses for the entire school year and take all IB assessments. It is the responsibility of the student and/or parent to pay the IB subject fee by the appropriate date. Students who earn equivalency scores on IB exams may earn college credit. Each college or university determines its own policies on acceptance of IB credits.

SIGNATURE PROGRAMS

Signature Programs are application-based and specialty program opportunities available to high school students. The programs vary in nature and scope as they relate to the academic and career interest of the student. Every high school provides opportunities for their students to select challenging and interesting Signature Programs based on their learning needs, styles, and preferences. These programs include the following: Advanced Placement Programs of Excellence; Commonwealth Governor's School; Career and Technical Education (application based only); International Baccalaureate; Junior Reserve Officer Training Corps; and Stafford Academy for Technology.

EARLY COLLEGE SCHOLARS

The Early College Scholars program recognizes eligible high school students who earn at least 15 hours of transferable college credit while completing the requirements for an Advanced Studies Diploma. To qualify for the Early College Scholars program, a student must meet the following requirements:

- have a “B” average or better,
- pursue an Advanced Studies Diploma,
- take and complete college-level course work (i.e. – Advanced Placement, International Baccalaureate, or Dual Enrollment) that will earn at least 15 transferable college credits, and
- sign an Early College Scholars Agreement.

Students receive a certificate upon completion of the Early College Scholar Program at graduation. The Virginia
Department of Education pays the cost of Virtual AP tuition and test fees for students who sign an Early College Scholars Agreement. Textbooks are provided by Stafford County Public Schools. Students may access additional information at http://www.doe.virginia.gov/instruction/graduation/early_college_scholars/index.shtml.

ONLINE AND BLENDED LEARNING

Recognizing that students sometimes run into difficulty earning required credits or accessing courses desired to fulfill their academic/career goals, Stafford County Public Schools utilizes technology and VDOE approved digital curriculum to offer high school courses online as needed. This includes online initial credit and credit recovery courses (see Credit Recovery section of the Program of Studies for additional information). In addition, online course offerings through Virtual Virginia may be available to students. Please see your high school counselor for more information on SCPS online and blended learning opportunities.

COURSE CHANGES

Course sections are filled and balanced using student course selections made in the spring as a basis for efficient administrative planning and scheduling. While we ask that all students and parents select appropriate courses, we know that sometimes students do not succeed in all courses and must re-take a class. We will honor requests for a change if an error on the schedule is identified, otherwise changes will only be considered under the following conditions:

1. Course changes will be considered only with parental request and administrator approval.
2. A student may only drop and add a course until the 5th scheduled class meeting. No student may add a course after the 5th class meeting.
3. After the 5th scheduled class meeting, a student may only drop a course, if a suitable alternative placement is found.

Students should see their counselor to determine the potential impact on the grade-point average and diploma type should they drop a course. The following grade reporting policies will be followed when dropping a course:

1. If a student drops a course after the 5th scheduled class meeting and prior to the 10th scheduled class meeting the course will not be recorded on the student’s permanent record.
2. If the student drops the course after the 10th scheduled class meeting and prior to the 15th scheduled class meeting the course will be shown on the permanent record as a drop-pass or a drop-fail. This will not be computed into the grade-point average.
3. If a student drops the course after the 15th scheduled class meeting, a grade of “F” will be recorded for that course on the permanent record. This will be computed into the grade-point average.
4. Level changes, for example, from honors to regular, will be considered until five days past the first interim period. The principal may review and approve level changes beyond this deadline.
5. The drop/add date for DE courses will be determined by the sponsoring college. If a student drops after the drop date, the student is responsible for the tuition fee.
CANCELLED COURSES

Certain courses may be cancelled as a result of the following:

- Low enrollment
- Staffing limitations
- Budget limitations

While every effort is made to provide educational opportunities to meet the needs of all students, on occasion, courses must be cancelled. Generally, a minimum of 10 students must be enrolled in an Advanced Placement, International Baccalaureate, or Dual Enrollment course in order for the course to be offered; however, the course may be cancelled and a suitable alternative will be found. Generally, other elective courses will be offered with a minimum enrollment of 15, unless state regulations require an enrollment of fewer than 15 students. Staffing limitations may also impact the ability for a course to be offered.

Freshman and sophomore students may not be afforded the opportunity to enroll in a course if all seats in all sections of the course are taken and a junior or senior student must enroll in that course in order to complete graduation requirements.
Preparing Your High School Plan

Below are sample four-year plans to assist with scheduling your courses. Boxes marked “Required Elective” indicate the minimum electives required for graduation. Students should consult their counselor when selecting these courses. Boxes marked “Student Choice” are those you may select for additional courses. The blank sample four-year plan is for you and your parents to prepare a customized plan to meet your educational and career objectives. The blank plan contains ten class spaces to provide for alternatives, if your first choice cannot be scheduled. Remember that you cannot sign up for your exact period-by-period schedule.

**SAMPLE STANDARD DIPLOMA FOUR-YEAR PLAN**

<table>
<thead>
<tr>
<th>CLASS</th>
<th>GRADE 9</th>
<th>GRADE 10</th>
<th>GRADE 11</th>
<th>GRADE 12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>English 9</td>
<td>English 10</td>
<td>English 11</td>
<td>English 12</td>
</tr>
<tr>
<td>2</td>
<td>World History to 1500 AD/World Geography</td>
<td>Required Elective</td>
<td>VA/US History</td>
<td>VA/US Government</td>
</tr>
<tr>
<td>3</td>
<td>Earth Science</td>
<td>Biology</td>
<td>Ecology or Geology</td>
<td>Student Choice</td>
</tr>
<tr>
<td>4</td>
<td>Algebra I</td>
<td>Geometry</td>
<td>Algebra, Functions and Data Analysis</td>
<td>Student Choice</td>
</tr>
<tr>
<td>5</td>
<td>Health and PE 9</td>
<td>Health and PE 10</td>
<td>Required Elective*</td>
<td>Required Elective*</td>
</tr>
<tr>
<td>6</td>
<td>Fine Arts or Career and Technical Education</td>
<td>Required Elective</td>
<td>Economics &amp; Personal Finance</td>
<td>Required Elective</td>
</tr>
<tr>
<td>7</td>
<td>Student Choice</td>
<td>Student Choice</td>
<td>Student Choice</td>
<td>Student Choice</td>
</tr>
<tr>
<td>8</td>
<td>Student Choice</td>
<td>Student Choice</td>
<td>Student Choice</td>
<td>Student Choice</td>
</tr>
</tbody>
</table>

*Students are required to complete a sequence of elective courses which leads to completing a career and technical program or continued education.

**SAMPLE ADVANCED STUDIES DIPLOMA FOUR-YEAR PLAN**

<table>
<thead>
<tr>
<th>CLASS</th>
<th>GRADE 9</th>
<th>GRADE 10</th>
<th>GRADE 11</th>
<th>GRADE 12</th>
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</thead>
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<td>English 12</td>
</tr>
<tr>
<td>2</td>
<td>World History to 1500 AD/World Geography</td>
<td>World History from 1500 AD/World Geography</td>
<td>VA/US History</td>
<td>VA/US Government</td>
</tr>
<tr>
<td>3</td>
<td>Earth Science</td>
<td>Biology</td>
<td>Chemistry or Physics</td>
<td>Upper Level Science</td>
</tr>
<tr>
<td>4</td>
<td>Algebra I</td>
<td>Geometry</td>
<td>Algebra II</td>
<td>Algebra III/Statistics</td>
</tr>
<tr>
<td>5</td>
<td>Health and PE 9</td>
<td>Health and PE 10</td>
<td>Fine Arts or Career and Technical Education</td>
<td>Required Elective</td>
</tr>
<tr>
<td>6</td>
<td>World Language</td>
<td>World Language</td>
<td>World Language</td>
<td>Required Elective</td>
</tr>
<tr>
<td>7</td>
<td>Student Choice</td>
<td>Student Choice</td>
<td>Economics &amp; Personal Finance</td>
<td>Student Choice</td>
</tr>
<tr>
<td>8</td>
<td>Student Choice</td>
<td>Student Choice</td>
<td>Student Choice</td>
<td>Student Choice</td>
</tr>
</tbody>
</table>

**Samples only—consult your counselor.
(Select appropriate courses from the descriptions contained in this catalog.)

<table>
<thead>
<tr>
<th>CLASS</th>
<th>GRADE 9</th>
<th>GRADE 10</th>
<th>GRADE 11</th>
<th>GRADE 12</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>9</td>
<td>Alternates</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>10</td>
<td>Alternates</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
ACADEMIC PROGRAMS

Students should select courses with the guidance of school counselors, teachers, and parents to align with their academic and career plans. Many of the courses offered are sequential and may recommend successful completion of related coursework. Successful completion is generally defined as a grade of “C” (score of 70 or better); however, each student’s motivation, interests, and circumstances should be considered when selecting courses. It is important to note that some courses and programs may have specific requirements or prerequisites.

Courses included in this document are offered at all schools unless otherwise noted.

ENGLISH

The English curriculum prepares individuals to read with comprehension, think critically, and communicate effectively. To provide for individual differences, instructional grouping is offered at each grade level. Students will take the EOC Reading and EOC Writing Standards of Learning tests in selected courses. Weighted grades are designated by a # for AP, DE, and IB courses. All classes may not be offered at all schools, due to enrollment and availability.

GENERAL COURSE SEQUENCE FOR ENGLISH

ENGLISH 9, 10, 11, 12
1130-1160
1 Credit

A series of sequential courses designed to prepare students for continuing education and careers beyond high school. Instructional activities are based on the Virginia Standards of Learning and develop students' proficiency in oral and written communication, reading, research, and critical thinking and analysis skills. Students will explore a variety of text genres and make comparisons between diverse texts.

HONORS ENGLISH 9, 10, 11
1130H-1150H
1 Credit

A series of sequential courses, designed by SCPS to prepare students for college and Advanced Placement English, Dual Enrollment English Composition, or IB (International Baccalaureate) English courses. The instruction develops fundamental skills in inquiry (research), rhetorical analysis, argument, and synthesis above and beyond the scope of the Virginia Standards of Learning.

AP/DE COURSE SEQUENCE

AP ENGLISH: LANGUAGE and COMPOSITION 1196
Grade 11
1 Credit#

This course is designed to enable students to write effectively for college courses across the curriculum as well as in their personal and professional lives. Students are provided with opportunities to write about a variety of subjects, with emphasis on expository analytical, and argumentative forms of writing. Additionally, students learn to read primary and secondary sources carefully, to synthesize material from texts in their own compositions, and to cite sources using conventions recommended by professional organizations. Although the course focus is primarily writing, students are also engaged in reading complex texts with understanding and examining the rhetorical strategies and stylistic choices made by writers. Students will be prepared to take the year-end AP English Language and Composition exam for possible college credit. Summer assignments may be provided.

Schools offering course: CFHS, NSHS, SHS

SCHOOL KEY; BPHS=Brooke Point  CFHS=Colonial Forge  MVHS=Mountain View  NSHS= North Stafford  SHS= Stafford
AP ENGLISH: LITERATURE and COMPOSITION
Grade 12
1 Credit#

AP English is a year-long course designed to be taken during a student's senior year, engender advanced study of literature, and prepare students for college. The course will include literary analysis and composition components. Students will practice interpreting an evaluating literature. Essays will be expository, analytical, and argumentative. Students will be prepared to take the year-end AP English Literature and Composition exam for possible college credit. Summer assignments may be provided.

Schools offering course: BPHS, CFHS, NSHS, SHS

DE ENGLISH COMPOSITION 1177D
Grade 12
1 Credit#

DE English introduces students to critical thinking and the fundamentals of academic writing. 80% of the work in this class will involve writing assignments. Through the writing process, students refine topics; develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay per semester. Second semester of the course requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. The course will prepare students for all other expected college writing and for writing in the workplace by engaging the writing process, rhetoric, critical thinking, and research.

Schools offering course: BPHS, MVHS

ELECTIVE COURSES

ADVANCED COMPOSITION 1177
Grade 11-12
1 Credit

Advanced Composition provides an in-depth study of the writing process while enhancing a student's critical reading and analytical thinking skills. In addition, this course will expose the student to the study of writing in the academic disciplines and advanced grammar, vocabulary, and composition techniques. Students will also learn practical tutoring methods that will provide him or her with the necessary knowledge and skill base to serve as a peer writing tutor in the writing center.

Schools offering course: CFHS

ADVANCED COMPOSITION 2 1517
Grade 11-12
1 Credit

Successful completion of Advanced Composition 1

Advanced Composition 2 provides an in-depth study of the writing process while further enhancing a student's critical reading and analytical thinking skills. This course will further expose the student to published and professional material and allow the student a platform to work on material to present at relevant conferences. The student will also serve as a senior tutor in the Writing Center and will be expected to mentor new tutors.

Schools offering course: CFHS

IB COURSE SEQUENCE

IB LANGUAGE and LITERATURE (HL) IB1151 & IB1161
Grades 11 & 12
1 Credit per Year#

Recommended Background: “B” or higher in previous Honors English courses for IB year one. “C” or higher in IB year one to go on to IB year two.

In this 2-year course, students will be challenged to think critically about the role of language and interactions between text, context, audience, and purpose. Students must earn a “C” or higher in IB year one to go on to IB year two. They can expect to develop college-level writing skills. In addition, students will engage in analysis of literary works such as short stories, poetry, plays, non-fiction, and novels. In 11th grade, students focus on language in cultural context and language in mass media. In the 12th grade, students focus on analysis of poetry, memoir, and plays, as well as a critical and comparative study of the novel as a literary genre. Students who take this course should be prepared to think critically and take an active role in class discussions. Required IB assessments include oral activities, written tasks, an oral commentary, and course-end exams that call upon the student to analyze and compare previously unseen texts as well as literary works that have been read during the course. The course provides the possibility of college credit.
ADVANCED COMPOSITION 3 1518
Grade 11-12 1 Credit
Successful completion of Advanced Composition 2

Advanced Composition 3 allows students who have completed Advanced Composition 1 and 2 to continue their study of writing and peer tutoring and to continue tutoring during the school day. The class provides students the opportunity to critique the written word at an advanced level, paying attention to rhetorical techniques, and to use those texts as models for their own writing. Students will also serve as lead tutors.

Schools offering course: CFHS

ORAL COMMUNICATION 1300
Grades 10-12 1 Credit

Since communication is a lifelong process, oral communication focuses on necessary skills to help students communicate more effectively in their personal, social, and professional lives. To accomplish this goal, students will receive instruction in prepared speeches, impromptu speeches, personal communication, and oral interpretation.

JOURNALISM I 1200
Grades 9-12 1 Credit

This elective course teaches the skills of managing, editing, and publishing a product in the journalistic writing style. Students write news, editorials, features, and sports articles and publish school and community news in the school magazine. This is a publication course and may involve participation outside of class.

JOURNALISM II 1210
Grades 10-12 1 Credit
Successful completion of Journalism I and service on the school’s publication staff

This sequential elective course is specifically designed for students serving on the school’s publication staff. This is a publication course and may involve participation outside of class.

JOURNALISM III 1211
Grades 11-12 1 Credit
Successful completion of Journalism II and service on the school’s publication staff

This sequential elective course provides students with the opportunity to learn editorial leadership and professionalism. Students will function as productive members of the publication staff. This is a publication course and may involve participation outside of class.

JOURNALISM IV 1212
Grade 12 1 Credit
Successful completion of Journalism III and service on the school’s publication staff

This sequential elective course will train students to serve as publication leaders who participate in peer tutoring, plan newspaper content, and help determine the news and editorial foci of the school newspaper. This is a publication course and may involve participation outside of class.

PHOTOJOURNALISM I 1215
Grades 9-12 1 Credit

In this course, students study photography and layout of publications as well as the writing styles appropriate for those publications. Generally, this course is designed for members of the school’s yearbook staff. This is a publication course and will involve participation outside of class.

PHOTOJOURNALISM II 1216
Grades 10-12 1 Credit
Successful completion of Photojournalism I and service on the school’s publication staff

This sequential elective course is specifically designed for students serving in key roles on the school’s yearbook staff. This is a publication course and will involve participation outside of class.

PHOTOJOURNALISM III 1217
Grades 11-12 1 Credit
Successful completion of Photojournalism II and service on the school’s publication staff

This sequential elective course produces the school yearbook. Students prepare photographs, layout, and writing appropriate to the yearbook. Students also serve in leadership and supervisory roles to the yearbook staff. This is a publication course and will involve participation outside of class.

PHOTOJOURNALISM IV 1218
Grade 12  1 Credit  
Successful completion of Photojournalism III and service on the school's publication staff

This sequential elective course produces the school yearbook. Students prepare photographs, layout, and writing appropriate to the yearbook. Students also serve in leadership and supervisory roles to the yearbook staff. This is a publication course and will involve participation outside of class.

CREATIVE WRITING I  1171  
Grade 10–12  1 Credit

This course develops a community of writers who share their work in the classroom and in the school literary magazine. Considerable emphasis is placed on developing an effective critique and on providing a climate that enhances enjoyment of creative expression. The course is a learn-by-doing course where students learn both to discipline and to free themselves through language. Students will experiment with literary genres and with various techniques and forms. Students will publish the school's literary magazine. This is a publication course and may involve participation outside of class.

CREATIVE WRITING II  1165  
Grades 11–12  1 Credit  
Successful completion of Creative Writing I and service on the school's publication staff

This sequential elective course is a writing intensive class designed for students in grades 11 and 12 who have completed an introductory course in creative writing and have demonstrated a proclivity toward writing. The course builds upon and refines the skills and concepts developed in the introductory course and will feature self-directed projects and student-led discussions with a strong emphasis on the professional writer's life and craft. Students are required to submit work for publication both within and outside the school. This is a publication production course which involves participation outside of class. Creative Writing II students will assume the staff leadership roles for the school literacy magazine.

READING ACROSS THE CONTENT AREAS I–IV  
Grades 9–12  1 Credit

Reading Across the Content Areas is designed for students requiring specific instruction in reading secondary content material; texts that often are compactly written and contain specialized vocabulary. Instruction will focus on student engagement, reading fluency, vocabulary, graphics (maps, charts, tables), and reading on the Internet. Strategies for questioning, visualizing, connecting, predicting, summarizing, and monitoring ones understanding will be covered. This course is recommended for students who did not pass the eighth-grade literacy SOL or are at risk in many of their subject-area courses in the upper grades.

DEVELOPMENTAL READING I–IV  9491–9494  
Grades 9–12  1 Credit

These classes are designed for students requiring differentiated instruction in reading, and may qualify as 1 elective credit per course, up to 4 credits. This program provides an academically based opportunity for students to achieve a degree of mastery in phonemic awareness, phonics, fluency, vocabulary, and comprehension. Teachers support students’ reading through continued assessment, the provision of instructional-level materials, planned interventions that reflect the student’s Individualized Education Program, and the developmental nature of reading. Enrollment is based on the recommendation of the IEP team.

ENGLISH REVIEW  1515–1516  
Grades 11–12  1 Elective Credit

This course is designed for students who need reading and writing remediation. Students learn and practice reading comprehension and writing strategies in a small group setting. An opportunity to retake the End-of-Course English assessments will be offered. Enrollment is determined based on prior English coursework or SOL scores.
The Standard Diploma requires three courses in history. Standard Diploma students must take either World History I or II plus Virginia and United States History, and Virginia and United States Government. The Advanced Studies Diploma requires that students complete four courses in history. Students may substitute Advanced Placement courses for selected courses, except for elective AP courses. Weighted grades are designated by a # for AP, DE, and IB courses. All classes may not be offered at all schools due to enrollment and availability.

### GENERAL COURSE SEQUENCE

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<thead>
<tr>
<th>Course</th>
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<th>Credit</th>
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<td><strong>VIRGINIA AND UNITED STATES GOVERNMENT</strong></td>
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**WORLD HISTORY AND GEOGRAPHY I (2215)**

Grade 9

1 Credit

This in-depth course explores the historical development of people, places, and patterns of life from ancient times to 1500 CE (AD) in preparation for college or university study. World History and Geography I or II is required for the Standard Diploma. Students will take the SOL test or a local alternative assessment.

**HONORS WORLD HISTORY AND GEOGRAPHY I (2215H)**

Grade 9

1 Credit

This advanced course, designed by SCPS as a pre-AP course, explores the historical development of people, places, and patterns of life from 1500 CE (AD) to the present in preparation for entrance into college, AP, and/or IB courses. Students are expected to be independent learners with good written and oral communication skills. The instruction provides additional expectations requiring students to conduct independent research including significant time dedicated outside the classroom. Students will take the SOL test or a local alternative assessment.

**WORLD HISTORY AND GEOGRAPHY II (2216)**

Grade 10

1 Credit

This in-depth course explores the historical development of people, places, and patterns of life from 1500 CE (AD) to the present in preparation for college or university study. Students will take the SOL test.

**HONORS WORLD HISTORY AND GEOGRAPHY II (2216H)**

Grade 10

1 Credit

This advanced course, designed by SCPS as a pre-AP and IB course, explores the historical development of people, places, and patterns of life from 1500 CE (AD) to the present in preparation for entrance into college, AP, and/or IB courses. Students are expected to be independent learners with good written and oral communication skills. The instruction provides additional expectations requiring students to conduct independent research including significant time dedicated outside the classroom. Students will take the SOL test.

**VIRGINIA AND UNITED STATES HISTORY (2360)**

Grade 11

1 Credit

This in-depth required course will explore the political, economic, and cultural growth of the Virginia and the United States in preparation for college or university study. Skills in historical analysis, perspective, interpretation, and historical writing will be emphasized. Students will take the SOL test.

**VIRGINIA AND UNITED STATES GOVERNMENT (2440)**

Grade 12

1 Credit

This required, in-depth course will explore structure and function of the American Government at the national and state levels with emphasis on Virginia’s Standards of Learning. Students will also study the government of Stafford County and the student’s role as a citizen.
AP COURSE SEQUENCE

AP HUMAN GEOGRAPHY  2212
Grades 9-12  1 Credit#

This course provides students with the opportunity to identify and analyze contemporary concerns and problems from local, national, and global perspectives. Using geographical tools and skills, students consider issues pertaining to population distribution and composition, cultural patterns and processes, political organization, land use, industrialization and economic development, and urbanization. Students will take the World Geography Standards of Learning test and will be prepared to take the Advanced Placement Human Geography exam. AP social studies courses require students to use solid reading, writing, and time-management skills. Students enrolling in AP social studies courses should have successfully completed prior English and social studies coursework.

Schools offering course:  BPHS, CFHS, NSHS, SHS

AP WORLD HISTORY  2380
Grade 10  1 Credit#

This course may be substituted for World History II. Students will explore the historical development of people, places, and patterns of life. Historical topics and spatial concepts of geography will be linked to form a framework for studying modern human interaction. There will be a special emphasis on thinking historically, historical perspectives and using primary source documents to analyze and write about significant events. Students will take the World History/Geography from 1500 AD SOL test and be prepared to take the year-end AP World History exam for possible college credit. AP social studies courses require students to use solid reading, writing, and time-management skills. Students enrolling in AP social studies courses should have successfully completed prior English and social studies coursework.

Schools offering course:  BPHS, CFHS, NSHS, SHS

AP UNITED STATES HISTORY  2319
Grades 11-12  1 Credit#

This course may be substituted for Virginia and U.S. History. It will provide the knowledge and analytical skills necessary to deal with the achievements, issues and problems of American history emphasizing in-depth analysis of major political, social, cultural, and economic developments. Students will take the Virginia and U.S. History SOL test and be prepared to take the year-end AP United States History exam for possible college credit. AP social studies courses require students to use solid reading, writing, and time-management skills. Students enrolling in AP social studies courses should have successfully completed prior English and social studies coursework. For more information, contact the head of the Social Studies department. Summer assignments may be provided.

AP UNITED STATES GOVERNMENT AND POLITICS/AP COMPARATIVE GOVERNMENT AND POLITICS  2450
Grade 12  1 Credit#

This course may be substituted for U.S. and Virginia Government. It will provide an intense study of the structures and functions of American government and an examination of other governmental forms in the world. Students may take both the AP United States Government and Politics and the AP Comparative Government exams. Depending on the student’s scores on the AP exams, up to six college credits may be earned for this course. AP social studies courses require students to use solid reading, writing, and time-management skills. Students enrolling in AP social studies courses should have successfully completed prior English and social studies coursework.

For more information, contact the head of the Social Studies department. Summer assignments may be provided.
AP UNITED STATES GOVERNMENT/POLITICS
Grade 12 2445 1 Credit#

This course may be substituted for U.S. and Virginia Government. It will provide an intense study of the structures and functions of the United States government and political system. Students will be prepared to take the year-end AP United States Government and Politics exam for possible college credit. AP social studies courses require students to use solid reading, writing, and time-management skills. Students enrolling in AP social studies courses should have successfully completed prior English and social studies coursework. For more information, contact the head of the Social Studies Department.

Summer assignments may be provided.
Schools offering course: BPHS, CFHS, NSHS, SHS

AP PSYCHOLOGY 2902 Grades 11-12 1 Credit#

Advanced Placement Psychology provides an overview of current psychological theory and practice. Students will explore the systematic and scientific study of the behavior and mental processes of humans and other animals. Students will be exposed to the principles, concepts, and phenomena associated with major subfields within psychology, including biological bases of behaviors, cognitive and emotional processes, and diagnosis and treatment of psychological disorders. In accordance with the driving principals of current psychological practice, this course will emphasize scientific method and critical thinking skills. AP social studies courses require students to use solid reading, writing, and time-management skills. Students enrolling in AP social studies courses should have successfully completed prior English and social studies coursework. Students will be prepared to take the year-end AP Psychology exam for possible college credit. Throughout the course, students will have ample opportunity to improve their writing, speaking, critical thinking, and consensus building skills. Summer assignments may be provided.
Schools offering course: CFHS, NSHS, SHS

AP MACROECONOMICS 2803 Grades 11-12 1 Credit#

Advanced Placement Macroeconomics is a challenging course that is meant to be the equivalent of a freshman college course. This course is a foundation for possible future study in economics or business. It is a year-long course in microeconomics designed to give students a thorough understanding of the principles of economics that apply to an economic system as a whole. This course places particular emphasis on the study of national income and price level determination, and also familiarizes students with economic performance measures, the financial sector, stabilization policies, economic growth and international economics. AP social studies courses require students to use solid reading, writing, and time-management skills. Students enrolling in AP social studies courses should have successfully completed prior English and social studies coursework. Students will be prepared to take the year-end AP Macroeconomics exam for possible college credit. Throughout the course, students will have ample opportunity to improve their writing, speaking, critical thinking, and consensus building skills. Summer assignments may be provided.
Note: BOTH AP Microeconomics and AP Macroeconomics must be successfully completed
in order to satisfy the Economics and Personal Finance graduation requirement.
Schools offering course: CFHS

AP EUROPEAN HISTORY
Grades 10–12
1 Credit#

AP European History is a world history and geography survey course designed to emphasize higher cognitive and critical thinking skills. Problem-solving strategies are utilized to teach basic social science skills such as map reading, research, comparison-making, and assessing cause and effect. AP social studies courses require students to use solid reading, writing, and time-management skills. Students enrolling in AP social studies courses should have successfully completed prior English and social studies coursework. Students should have completed the Standards of Learning World History from 1500 AD to present or if enrolled concurrently with AP World History will be prepared for the Standards of Learning World History from 1500 AD to the Present test and the World Geography test. Students will have met the requirements for World History and be prepared to take the year-end AP European History exam for possible college credit. Summer assignments may be provided.
Schools offering course: CFHS, MVHS, NSHS, SHS

IB COURSE SEQUENCE

IB ECONOMICS (SL) with PERSONAL FINANCE
Grades 11 or 12
1 Credit#

This 1-year course covers microeconomics, macroeconomics, international economics and development economics in addition to personal finance. The ethical dimensions involved in the application of economic theories and practices permeate the course, and economics are investigated with a global perspective. Students apply economic theories to a range of circumstances, analyzing information and evaluating theories from a range of different economic perspectives. In addition to the IB Economics SL curriculum, students complete Personal Finance curriculum through an online platform. This course fulfills the Economics & Personal Finance requirement for graduation. Students will complete IB Economics SL internal and external assessments, including end-of-course SL exams, which may lead to college credit.
Schools offering course: BPHS, MVHS

IB THEORY of KNOWLEDGE
Grades 11 & 12
1 Credit per Year#
Recommended Background: “C” or higher in IB year one to go on to IB year two.

IB Theory of Knowledge (ToK) is a two-year course required for IB Diploma. It includes embedded instruction and guided practice regarding the other two elements of the IB Core—the Extended Essay and Creativity, Action, and Service. The ToK course is designed to foster in students a habit of mind that reflects on human ways and limits of knowing as well as on the human ability to communicate these ways of knowing. Students will explore fundamental questions of epistemology by reflecting upon and questioning the basis of knowledge and experience, examining cultural and ideological bias, and by formulating rational arguments and value judgments of their own. Academic disciplines examined include language, history, logic, science, mathematics, ethics and aesthetics. The course includes an externally assessed paper and internally assessed oral presentation.
Schools offering course: BPHS, MVHS

IB HISTORY (HL)
Grades 11 & 12
1 Credit per Year#
Recommended Background: Successful completion of Honors World History with a “B” or higher and preferably AP US Government with a “C” or higher. “C” or higher in IB year one to go on to IB year two.

This is a two-year course of study. During the first year, students will study “History of the Americas,” a survey of U.S., Canadian, and Latin American history from early European contacts with American Indians and the people of the First Nation through the 20th Century including analysis of the U.S. Civil War, industrialization, expansion, and the Latin American dictatorships. The first year focuses on the American region’s historical experience, as well as political, economic, and social systems. Students will demonstrate historical analysis by discussion, presentation, and written work including an internally assessed research paper. During the second year, students study “Twentieth Century Topics” of World History with emphasis on causes, practices and effects of war; the rise and rule of single-party states; East-West relations after 1945; nationalists and independence movements; and case studies on conflict and intervention in Rwanda and
Kosovo. The second year continues to stress political, economic, and social systems as well as requiring students to further develop their skills of interpretation and analysis through historiography. The course culminates in a series of external assessments that include document-based questions, short essay response and an internally assessed research paper which provide the possibility of college credit.

**Schools offering course:** BPHS, MVHS

**IB SOCIAL AND CULTURAL ANTHROPOLOGY (SL)**

*IB2847*

*Grade 11 or 12*

1 Credit#

**Recommended Background:** Interest in the subject and completion of previous social studies course with a “B” or better.

IB Social and Cultural Anthropology is a one-year college level comparative study of human societies and culture. It explores both the universal principles of social and cultural life and characteristics of specific societies and cultures. Topics include small groups, as well as kinship relations, symbolism, exchange, political organizations, social control and gender. The course examines society from the small scale to the complex industrial scale, as well as modern nation states. The course culminates with an IB external assessment that provides the possibility of college credit. **Note:** This course can be used to satisfy the Group 6 “art or elective” requirement for full IB Diploma Program students.

**Schools offering course:** BPHS, MVHS

**IB PSYCHOLOGY (SL)**

*IB2903*

*Grade 11 or 12*

1 Credit#

**Recommended Background:** Interest in the subject and completion of previous social studies course with a “B” or better.

The IB Psychology is a one-year course most appropriately defined as the systematic study of human experience and behavior; physical, economic and social environments; and the history and development of social and cultural institutions. Students will collect, describe and analyze data used in studies of society, to test hypotheses and interpret complex data and source material. One of the aims is for students to develop awareness that human attitudes and opinions are widely diverse and that a study of society requires an appreciation of such diversity. At the standard level students are required to study the biological, cognitive, learning and humanistic perspectives, to use qualitative and quantitative research methodology, and to complete an experimental study. The course culminates with an IB external assessment that provides the possibility of college credit. **Note:** This course can be used to satisfy the Group 6 “art or elective” requirement for full IB Diploma Program students.

**Schools offering course:** BPHS, MVHS

**IB BUSINESS MANAGEMENT (SL)**

*IB6135*

*Grade 11 or 12*

1 Credit#

**Recommended Background:** “B” or higher in prior business math courses recommended

Business and Management is a one-year course designed to provide a broad introduction to the principles and practices of organizations, set in a scene of international markets, exchange, and production. A wide range of activities is designed to manage efficiently the production, distribution, and exchange of goods and services, at minimum cost and within the framework of a personnel-oriented employment policy. A written assessment based on the application of tools, techniques, and theory to a real business situation or problem is internally assessed by the classroom teacher. The course culminates with an IB external assessment that provides the possibility of college credit. **Note:** This course can be used to satisfy the Group 6 “art or elective” requirement for full IB Diploma Program students.

**Schools offering course:** BPHS, MVHS
EXEMPLARY COURSES

EXPLORING LOCAL HISTORY 2998
Grades 11-12 1 Credit

This year-long elective course will furnish students with an opportunity for an in-depth study of the abundant local history of Stafford County and the greater Fredericksburg region. The focus of the course will be a multi-perspective examination of the people and places of the greater Fredericksburg region and the affect they had on Virginia, U.S., and world history. The course will emphasize 21st Century learning skills of information literacy, communication, critical thinking, citizenship, and independent and collaborative learning. Key to successful completion of this course will be ability to conduct research and complete projects. Students enrolling in the course should have an interest in United States history and have taken or are currently taking US/VA History.

GLOBAL ISSUES 2996
Grades 11-12 1 Credit

This course will provide an opportunity for in-depth study of current world events. Present day news stories will determine topics with constant reference to weekly magazines and daily newspapers. In addition, students will investigate the geographic, economic, social, and cultural background of current world events. Students should have a strong intellectual curiosity concerning world affairs and successfully completed prior social studies coursework.

SOCIOLOGY 2500
Grades 10-12 1 Credit

This introductory Social Science course will include studies in social change, social status, group behavior, and adjustment to personal problems and situations throughout life and society. Students should have successfully completed prior coursework in English and social studies.

PSYCHOLOGY 2900
Grades 10-12 1 Credit

This course is designed to introduce students to the systemic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principals, and phenomena associated with each of the major subfields (Research and methods; biopsychology; growth and development; learning and memory; and individual and group behavior.) They also learn about the ethics and methods psychologists use in their science and practice.
Students learn mathematics content necessary for continued study after high school and for success in the world of work. Three (3) math credits are required for students seeking a Standard Diploma; students seeking an Advanced Studies Diploma must earn four (4) math credits. Weighted grades are designated by a # for AP, DE, and IB courses. All classes may not be offered at all schools due to enrollment and availability.

**MATHEMATICS**

Students will use algebra as a tool for representing and solving a variety of practical problems. Students will take the Standards of Learning Algebra I test.

**Schools offering course: CFHS, NSHS, SHS**

**GENERAL COURSE SEQUENCE**

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<th>Course</th>
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<td><strong>ALGEBRA I, PART I</strong></td>
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<td><strong>ALGEBRA I, PART II</strong></td>
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<td><strong>ALGEBRA I</strong></td>
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<tr>
<td><strong>HONORS ALGEBRA I</strong></td>
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**ALGEBRA I, PART I**

Algebra I Part I is the first course of the two-course equivalent of Algebra I. Course topics may include classes of numbers, expressions, equations, inequalities, linear equations, direct variation functions, and operations with polynomials. Students must successfully complete both parts in order to meet the state requirements for Algebra I under the Standards of Learning. There is no Standards of Learning test at the end of this course.

**ALGEBRA I, PART II**

Algebra I Part II completes the Algebra I requirement. Course topics include matrices, functions, systems of equations, quadratic equations, and statistics. In order to receive one credit for Algebra I, the student must successfully complete, in sequential order, both Part I and Part II. Students will take the Standards of Learning Algebra I test at the end of the course.

**ALGEBRA I**

Algebra I includes the use of technology in Algebra, Linear Equations and Functions, using Algebra to analyze data, and problem solving using Algebraic concepts. Students will take the Standards of Learning Algebra I test.

**HONORS ALGEBRA I**

This advanced course, designed by SCPS as a pre-AP and IB course, allows students to make connections and build relationships between algebra and arithmetic, geometry, and probability and statistics.
HONORS GEOMETRY 3143H
Grade 9-10 1 Credit
Successful completion of Algebra I

This advanced course, designed by SCPS as a pre-AP and IB course, is an enriched Geometry curriculum with greater emphasis on proofs, logical reasoning and the application of theorems than is covered in Geometry. This course is taught in a more rigorous manner and at an accelerated pace. Students who complete this course will take the Standards of Learning Geometry test.

ALGEBRA, FUNCTIONS, AND DATA ANALYSIS 3134
Grades 10-12 1 Credit
Successful completion of Algebra I and/or Geometry.
Course must be taken before Algebra II

Through the investigation of mathematical models and interpretation/analysis of data from real life situations, students will strengthen conceptual understandings of mathematics and further develop connections between algebra and statistics. The infusion of technology in the course will assist in modeling and investigating functions and data analysis.

ALGEBRA II 3135
Grades 10-12 1 Credit
Successful completion of Geometry or Algebra
Functions, and Data Analysis

Algebra II expands and clarifies the concepts introduced in Algebra I. Emphasis is on algebraic processes and their use in problem solving. The course will enhance students understanding of the function concept. Students will take the Standards of Learning Algebra II test.

HONORS ALGEBRA II 3135H
Grades 9-12 1 Credit
Successful completion of Geometry

This advanced course, designed by SCPS as a pre-AP and IB course, is an enriched Algebra II curriculum with an in-depth study of equations and functions. It is designed for students who have completed Grade 8 Algebra I and Honors Geometry. This course is taught in a more mathematically rigorous manner and at an accelerated pace. Students will take the Standards of Learning Algebra II test.

ALGEBRA III WITH TRIGONOMETRY 3160
Grades 11-12 1 Credit
Successful completion of Algebra II

Algebra III with Trigonometry reviews and extends the concepts taught in Algebra II and Geometry in preparation for the SAT and Math Achievement tests. It includes topics on triangular and circular trigonometric functions, study of polynomials, exponential and logarithmic functions.

MATH ANALYSIS WITH TRIGONOMETRY 3162
Grades 10-12 1 Credit
Successful completion of Algebra II

Math Analysis is a pre-AP/pre-IB honors course. Math Analysis with Trigonometry is designed to cover the trigonometric functions and their relationships by the circular approach and by the triangular approach. Students will also work with the exponential and logarithmic functions, sequences and series, vectors, parametric and polar coordinates, and limits.

STATISTICS/PROBABILITY WITH DISCRETE TOPICS 3190
Grades 11-12 1 Credit
Successful completion of Algebra II

This course is designed for students who plan to enter such fields as business, education, economics, computers, psychology, sociology, medicine, etc., which require the organization and the interpretation of data to be successful in their jobs. This course will also provide a fundamental background for those students who plan careers in engineering, mathematics, or the sciences.

AP/DE COURSE SEQUENCE

AP STATISTICS 3192
Grades 11-12 1 Credit
Successful completion of Algebra II

The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to exploring data, sampling and experimentation of data, anticipating patterns, and statistical inference. Students will be prepared to take the year-end AP Statistics exam for possible college credit. For further information, please see
your math department chairperson. Summer assignments may be provided.

**AP CALCULUS AB** 3177
*Grades 11-12 1 Credit#*

*Successful completion of Math Analysis with Trigonometry*

AP Calculus AB addresses the theory and practice of differential and integral calculus of a function of one variable. Topics include functional analysis, limits, continuity, the derivative and applications, and solving problems which deal with the rate of change. The content of this course is equivalent to one semester of college calculus. Students will be prepared to take the year-end AP Calculus AB exam for possible college credit.

**AP CALCULUS BC** 3178
*Grades 11-12 1 Credit#*

*Successful completion of Math Analysis with Trigonometry*

AP Calculus BC covers the same topics as that covered in AB Calculus. In addition, students in Calculus BC will apply calculus techniques to polar curves, parametric equations, vector function sequences and series, and slope fields. The content of this course is equivalent to two semesters of college calculus. Students will be prepared to take the year-end AP Calculus BC exam for possible college credit.

**DE CALCULUS** 3178D
*Grade 12 1 Credit#*

*Successful completion of Math Analysis with Trigonometry*

Dual Enrollment Calculus is a year-long course which consists of two five-credit college courses offered by Germanna Community College. MTH173, Calculus with Analytic Geometry I, is taught first semester and MTH174, Calculus with Analytic Geometry II is taught second semester.  

*Note: Students must pass the first semester (MTH173) in order to remain enrolled for the second semester (MTH174). Auditing of this course is not permitted.*

Schools offering course: TBD

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**AP COMPUTER SCIENCE A** 3185
*Grades 10-12 1 Credit#*

*Successful completion of prior coursework*

The focus of this course is to provide students with a conceptual background in computer science. The major emphasis is on programming methodology, algorithms, and non-dynamic data structure in the JAVA language. Students will be prepared to take the year-end AP Computer Science A exam for possible college credit. Summer assignments may be provided.

**IB COURSE SEQUENCE**

**IB COMPUTER SCIENCE (SL)** IB3185
*Grades 11 -12 1 Credit#*

The content of this 1-year course includes software development, computer systems, system design, social significance, number systems and Boolean Logic, advanced data structures and algorithms, objects and their use in problem solutions, the system life cycle, and file organization. The understanding of a case study will be included. Students will complete an in-depth project that demonstrates mastery of all required Standard Level aspects. Students take the IB Standard Level exam.

Schools offering course: BPHS, MVHS

**IB MATH STUDIES (SL)** IB3163 & IB3196
*Grades 11 & 12 1 Credit per Year#*

*Recommended Background: “B” or higher in Algebra I, Geometry and Algebra II courses for IB year one. “C” or higher in IB year one to go on to IB year two.*

This is a 2-year IB math course for students with varied backgrounds and abilities. Skills needed for the demands of a technological society are developed, but specific technical expertise is not required. The course enables students to appreciate varied cultural and historical perspectives of mathematics. Topics: Numbers and Algebra, Sets, Logic and Probability, Functions, Geometry and Trigonometry, Statistics, Introductory Differential Calculus, and Financial Mathematics. The course culminates with an IB exam that may lead to college credit. Note: Students who are likely to need mathematics in pursuit of a science or mathematics career are advised to consider IB Mathematics SL or HL.

Schools offering course: BPHS, MVHS
IB MATHEMATICS 11 (SL)  IB3162
Grades 11  1 Credit#
Recommended Background: “B” or higher in Algebra I, Honors Geometry, and Honors Algebra II

This is the first year of a 2-year course designed for strong math students who are preparing for studies in subjects such as science, engineering, economics, psychology, and architecture. The goal of this course is to provide students with a solid foundation of vectors, matrices, statistics and probability, leading to expansion in the second year to the concepts, techniques, and applications of calculus. An important aim of this course is to enable students to appreciate the multiplicity of cultural and historical perspectives of mathematics.

Schools offering course: BPHS, MVHS

IB MATHEMATICS 12 (SL)  IB3198
Grade 12  1 Credit#
Recommended Background: “C” or higher in IB Mathematics 11

This is the second year of a 2-year course designed for strong math students who are preparing for studies in subjects such as science, engineering, economics, psychology, and architecture. Course content includes integral calculus, the study of the theory and application of probability, random variables, both descriptive and inferential statistics, three-dimensional vectors, infinite series and differential equations. Students will complete Higher Level (HL) IB internal and external assessments, including exams in May, and may lead to the possibility of college credit.

Schools offering course: MVHS

IB MATHEMATICS 11 (HL)  IB3170
Grades 11  1 Credit#
Recommended Background: “B” or higher in Algebra I, Honors Geometry, Honors Algebra II, and Math Analysis with Trigonometry

The first year of a 2-year course designed for strong math students who are preparing for careers in the sciences, engineering, or mathematics. Students in this course study vectors, matrices, statistics and probability in greater depth and at a faster pace than IB Mathematics SL II. An important aim of this course is to enable students to appreciate the multiplicity of cultural and historical perspectives of mathematics. Students also take IB Mathematics 12 SL or HL as the 2nd year of this course to earn an IB score in this subject.

Schools offering course: BPHS, MVHS

IB MATHEMATICS 12 (HL)  IB3197
Grades 12  1 Credit#
Recommended Background: “C” or higher in IB Mathematics 11 and teacher recommendation

This is the second year of a 2-year course designed for strong math students who are preparing for studies in subjects such as science, engineering, economics, psychology, and architecture. Course content includes integral calculus, the study of the theory and application of probability, random variables, both descriptive and inferential statistics, three-dimensional vectors, infinite series and differential equations. Students will complete Higher Level (HL) IB internal and external assessments, including exams in May, and may lead to the possibility of college credit.

Schools offering course: MVHS

ELECTIVE COURSES

ALGEBRA READINESS  3200-3201
Grades 9-10  1 Elective Credit
Recommended Background: Assigned based on SOL Mathematics scores

This course is designed for students who need serious mathematics intervention in a focused group setting. Students may be required to participate in this remedial program which does not replace any required math courses. Basic math concepts such as place value and meanings of operations will be taught. Emphasis will be on developing understanding in areas of weakness. An opportunity to retake the eighth grade SOLs will be offered. Upon successful completion of this course, the student will receive one elective credit.

Schools offering course: BPHS, CFHS, NSHS, SHS
AP COMPUTER SCIENCE PRINCIPLES 3199
Grades 9-12 1 Credit

This course is designed to focus on computational thinking practices, which enables students to engage with the course content by developing computational artifacts and analyzing data, information, or knowledge represented for computational use. The course will emphasize the following elements: connecting computing (to include creative computing), creating computational artifacts, abstracting, communicating, and collaborating. The course was created to be equivalent to a first-semester introductory college computing course. Students will be prepared to take the year-end AP Computer Science Principles exam for possible college credit.

MATHEMATICS CAPSTONE COURSE 3136
Grade 12 1 Credit

Recommended Background: Successful completion of mathematics requirements for a standard diploma

The focus of this course is to provide students with a high-interest contextualized content designed as an additional boost for successful entry into college and careers. The course will add to students' preparation for college and the workplace by enhancing skills in number and quantity, functions and algebra, geometry, statistics and probability; and simultaneously reinforcing readiness skills and dispositions in adaptability and flexibility, creativity and innovation, leadership, teamwork, collaboration, and work ethic.

Schools offering course: TBD
### Stafford County Public Schools - Example of Possible Math Pathways

The following are examples for planning academic pathways and are not intended to be absolute models.

#### Advanced Diploma Example Pathways

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>6 Extended OR 7 Extended</td>
<td>7 Extended</td>
<td>6 Extended</td>
<td>Math 6</td>
<td>Math 6</td>
</tr>
<tr>
<td>7 Extended OR Honors Algebra 1</td>
<td>Honors Algebra 1</td>
<td>7 Extended</td>
<td>Math 7</td>
<td>Math 7</td>
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<tr>
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</tr>
<tr>
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<td>Honors Algebra 2 OR Honors Geometry</td>
<td>Honors Algebra 1</td>
<td>Algebra 1</td>
<td>Algebra Part 1/Part 2</td>
</tr>
<tr>
<td>Honors Algebra 2 OR Math Analysis</td>
<td>Math Analysis</td>
<td>Honors Algebra 2 OR Honors Geometry</td>
<td>Geometry</td>
<td>Geometry Part 1/Part 2</td>
</tr>
<tr>
<td>Year 1: IB Math Studies OR IB Math</td>
<td>AP Statistics</td>
<td>Math Analysis</td>
<td>Honors Algebra 2 OR Algebra 2 OR AFDA**</td>
<td></td>
</tr>
<tr>
<td>Year 2: IB Math Studies OR IB Math</td>
<td>AP Calculus (AB or BC) OR AP Statistics</td>
<td>AP Calculus (AB or BC) OR AP Statistics</td>
<td>Algebra 3 OR AP Statistics OR Probability/Statistics</td>
<td>Algebra 2*</td>
</tr>
</tbody>
</table>

*Recommended but not required for Standard Diploma

** Algebra, Functions, and Data Analysis
SCIENCE

High school science courses play an important, unique and essential role in today's ever-changing world. Students' knowledge of earth, space, life and physical sciences is critical to becoming scientifically literate citizens. All science courses are laboratory and activity-oriented to develop these important skills. One verified credit must also be obtained by passing an End of Course Standards of Learning test in Earth Science, Biology or Chemistry.

GENERAL COURSE SEQUENCE

**EARTH SCIENCE**

**4210**

Grades 9-10  
1 Credit

This in-depth course explores physical and historical geology, meteorology, astronomy, and oceanography. There is strong emphasis on lab work. Students will take the SOL test. This course may be taken concurrently with Biology.

**HONORS EARTH SCIENCE**

**4210H**

Grade 9  
1 Credit

This advanced course, designed by SCPS as a pre-AP course, explores physical and historical geology, meteorology, astronomy, and oceanography in preparation for entrance into college, AP, and/or IB courses. There is strong emphasis on lab work. The instruction will provide more detailed labs and projects. Information from scientific journals and current events will also be explored. Students will take the SOL test. This course may be taken concurrently with Biology.

**BIOLOGY**

**4310**

Grades 9-10  
1 Credit

This in-depth course explores cell structure and function, genetics, and the diversity of life. There is strong emphasis on lab work. Students will take the SOL test. This course may be taken concurrently with Earth Science.

**HONORS BIOLOGY**

**4310H**

Grades 9-10  
1 Credit

This advanced course, designed by SCPS as a pre-AP and IB course, explores cell structure and function, genetics, and the diversity of life in preparation for entrance into college, AP, and/or IB courses. There is strong emphasis on lab work and independent research. The instruction will provide more detailed labs and projects. Information from scientific journals and current events will also be explored. Students will take the SOL test. This course may be taken concurrently with Earth Science.

**CHEMISTRY**

**4410**

Grades 10-12  
1 Credit

This course is designed to introduce the student to the basic theory of chemistry. Algebra II must either be completed or taken concurrently for enrollment in this course. Topics include formula writing, balancing equations, solutions, acids and bases, dimensional analysis, reactions, electron theory, atomic theory, molar concept, gas laws, and basic organic chemistry. Lab work is an integral part of this course. Students will take the SOL test during this course.

**HONORS CHEMISTRY**

**4410H**

Grades 10-11  
1 Credit

The advanced chemistry course, designed by SCPS as a pre-AP and IB course, is a fast-paced course that explores, in depth, chemistry concepts and the scientific process. Algebra II must either be completed or taken concurrently for enrollment in this course. The major concepts of modern chemistry including atomic structure and bonding, oxidation-reduction reactions, thermodynamics, chemical equilibrium, and simple organic chemistry are explored. Students are expected to be independent learners with good written and oral communication skills. Students are required to complete extensive laboratory work, which include written lab reports and short papers. Students might be required to design and conduct an independent research project. The major skills used by practicing chemists are emphasized. This course will prepare students for AP, DE, or IB Chemistry course. Students will take the SOL test during this course.
PHYSICS 4510 Grades 11-12 1 Credit

This course covers the laws of mechanics, electricity and magnetism, electro-magnetic wave theory, elementary nuclear physics and relativity. Algebra II must either be completed or taken concurrently for enrollment in this course. It requires competence in the metric system and conversions, scientific notation, and manipulation of algebraic equations.

HONORS PHYSICS 4510H Grades 11-12 1 Credit

This advanced physics class is a fast-paced course, designed by SCPS as a pre-AP and IB course that explores the following topics in depth: mechanics, waves, thermal, electricity and magnetism. Algebra II must either be completed or taken concurrently for enrollment in this course. Students are expected to use the scientific method to design labs. A formal lab report will be required each quarter to help prepare for college labs. Students must be able to solve an equation for an unknown, perform metric conversions, and be comfortable with use of a graphing calculator. Students are expected to be independent learners with good written and oral skills. The language of mathematics is important in this course. Students should be able to analyze a situation and apply knowledge from different concepts simultaneously. This course is strongly recommended for those who wish to pursue a degree in engineering or science.

Schools offering course: All

AP/DE COURSE SEQUENCE

AP BIOLOGY 4370 Grades 10-12 1 Credit#

This course is the equivalent of a college introductory biology course. The course follows the AP College Board criteria addressing three general areas of study: molecules and cells, heredity and evolution, and organism and populations. The two main goals of AP Biology are to help students develop a conceptual framework for modern biology and to help students gain an appreciation of science as a process. Primary emphasis in an AP Biology course will be on developing an understanding of concepts rather than on memorizing terms and technical details. Essential to this conceptual understanding are the following: a grasp of science as a process rather than as an accumulation of facts; personal experience in scientific inquiry; recognition of unifying themes that integrate the major topics of biology; and application of biological knowledge and critical thinking to environmental and social concerns.

This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. Summer assignments may be provided. Students will be prepared to take the year-end AP Biology exam for possible college credit. Note: This course may not be audited.

Schools offering course: CFHS, NSHS, SHS

AP BIOLOGY LAB 4370L Grades 11-12 1 Lab Credit

This AP Science course may be offered with a separate lab period. Students will not receive weighted grade for the lab and will count as an elective credit.

Schools offering course: CFHS, SHS

AP CHEMISTRY 4470 Grades 11-12 1 Credit#

This course is the equivalent of a college introductory Chemistry course. Emphasis will be placed on chemical calculations, the mathematical formulations of principles, and laboratory work. The time spent in the course, the number and variety of topics treated and labs performed will be different from other courses in the science curriculum. Students will attain a depth of understanding of fundamentals and a reasonable competence in dealing with chemical problems. Students will be prepared to take the year-end AP Chemistry exam for possible college credit. Summer assignments may be provided. Note: This course may not be audited.

Schools offering course: CFHS, NSHS, SHS

AP CHEMISTRY LAB 4470L Grades 11-12 1 Lab Credit

This AP Science course may be offered with a separate lab period. Students will not receive weighted grade for the lab and will count as an elective credit.

Schools offering course: CFHS, SHS
AP PHYSICS 1 4573
Grades 11-12 1 Credit#

This course is an algebra-based, introductory college-level physics course that explores topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. This course requires that 25% of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. Students will be prepared to take the year-end AP Physics exam for possible college credit.

Note: This course may not be audited.
Schools offering course: CFHS, NSHS, SHS

AP PHYSICS LAB 4573L
Grades 11-12 1 Lab Credit

This AP Science course may be offered with a separate lab period. Students will not receive weighted grade for the lab and will count as an elective credit.

Schools offering course: CFHS, SHS

AP PHYSICS 2 4574
Grade 12 1 Credit#

This course is an algebra-based, introductory college-level physics course that explores topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields, electromagnetism; physical and geometric optics; and quantum atomic, and nuclear physics. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices. Students will be prepared to take the year-end AP Physics 2 exam for possible college credit. Note: This course may not be audited.

Schools offering course: TBD

AP PHYSICS 2 LAB 4574L
Grades 12 1 Lab Credit

This AP Science course may be offered with a separate lab period. Students will not receive weighted grade for the lab and will count as an elective credit.

Schools offering course: TBD

AP ENVIRONMENTAL SCIENCE 4270
Grades 10-12 1 Credit#

The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science. Geometry or higher must either be completed or taken concurrently for enrollment in this course. Scientific principles and analysis are stressed and a laboratory component is included. AP Environmental Science is designed to provide students with the methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving, and/or preventing them. This course is intended to enable students to undertake, as first year college students, a more advanced study of topics in environmental science. Students will be prepared to take the year-end AP Environmental Science exam for possible college credit.

Note: This course may not be audited.

DE BIOLOGY 4320D
Grades 11-12 1 Credit#

This is an accelerated course that explores fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on biological principles. The course provides lab experiences in handling, constructing, and manipulating materials in a safe manner and develops abilities to measure, organize, and communicate scientific information. The Biology SOL test will be required unless the student has previously passed this test. Students who successfully complete the course will receive two semesters of college credit through Germanna Community College as well as one year of high school credit.

Note: This course may not be audited.
Schools offering course: MVHS, TBD
DE CHEMISTRY 4420D
Grades 11-12 1 Credit#

Dual Enrollment Chemistry is a college level course that explores the fundamental laws, theories, and mathematical concepts of chemistry. It is designed primarily for science and engineering majors. Students who successfully complete the course will receive two semesters of college credit through Germanna Community College as well as one year of high school credit. Students will take the Chemistry SOL test during the course unless they have previously passed this test. Students who have received a high school Chemistry credit may also receive credit for successful completion of Dual Enrollment Chemistry.

Note: This course may not be audited.
Schools offering course: TBD

IB COURSE SEQUENCE

IB BIOLOGY (HL) IB4390 & IB4391
Grade 11&12 1 Credit per Course#
Recommended Background: “B” or higher in Honors Biology, Chemistry, Algebra I and II courses for IB year one. “C” or higher in IB year one to go on to IB year two.

IB Biology is a two-year course that provides an overview of the major principles and processes in the areas of molecular and cellular biology, genetics, ecology, and organisms. Laboratory work is an integral part of this course and students are required to submit written laboratory reports. Key points of the first year are structure and function, universality versus diversity, and equilibrium within systems. Students will design and implement their own laboratory investigations and participate in the interdisciplinary Group 4 science research project. The second year provides a focus on ecology, neurobiology, biotechnology, and physiology. Laboratory work continues to be an integral part of the course and students are required to submit written laboratory reports that will be internally assessed by the classroom teacher as well as externally assessed by trained IB examiners. The course culminates in IB examinations that provide the possibility of college credit.

Schools offering course: BPHS, MVHS

IB BIOLOGY 11 (SL) IB4380
Grade 11 1 Credit#
Recommended Background: “B” or higher in Honors Biology, Chemistry*, Algebra I and II courses for IB year one. “C” or higher in IB year one to go on to IB year two. *May be taken concurrently

This is the first year in a two-year course that provides an overview of the major principles and processes in the areas of molecular and cellular biology, genetics, ecology, and organisms. Laboratory work is an integral part of this course and students are required to submit written laboratory reports, some of which may be internally assessed by the classroom teacher as well as externally assessed by trained IB examiners. Key points of the first year are structure and function, universality versus diversity, and equilibrium within systems. Students will design and implement their own laboratory investigations and will prepare for the interdisciplinary Group 4 science research project. The course culminates in IB examinations that provide the possibility of college credit.

Schools offering course: BPHS, MVHS

IB BIOLOGY 12 (SL) IB4381
Grade 12 1 Credit#
Recommended Background: “C” or higher in IB year one.

This is the second year in a two-year course that continues from the overview of major principles and processes in the areas of molecular and cellular biology, genetics, ecology, and organisms. Students will design and implement their own laboratory investigations and participate in the interdisciplinary Group 4 science research project. The second year provides a focus on ecology, neurobiology, biotechnology, and physiology. Laboratory work continues to be an integral part of the course and students are required to submit written laboratory reports that will be internally assessed by the classroom teacher as well as externally assessed by trained IB examiners. The course culminates in IB examinations that provide the possibility of college credit.

Schools offering course: BPHS, MVHS

IB BIOLOGY 12 (HL) IB4391
Grade 12 1 Credit#
Recommended Background: “C” or higher in IB year one.

This is the second year in a two-year course; this higher level (HL) covers the content in the standard
level (SL) as well as delving into advanced topics including physiology, genetics, and plant biology and an additional advanced option from a choice of four: neurobiology, biotechnology, ecology, or physiology. Laboratory work continues to be an integral part of the course and students are required to submit written laboratory reports that will be internally assessed by the classroom teacher as well as externally assessed by trained IB examiners. The course culminates in IB examinations that provide the possibility of college credit.

**Schools offering course: BPHS, MVHS**

**IB CHEMISTRY (HL)**

IB4490
Grade 11 & 12

1 Credit per Course#

Recommended Background: “B” or higher in Honors Biology, Chemistry, Algebra I and II courses for IB year one. “C” or higher in IB year one to go on to IB year two.

IB Chemistry is a two-year course that provides an overview of the major principles and processes in the areas of stoichiometric relationships, atomic structure, periodicity, chemical bonding and structure, energetics/thermochemistry, chemical kinetics, equilibrium, acids and bases, redox processes, organic chemistry, measurement, and data processing.

Students will design and implement their own laboratory investigations and participate in the interdisciplinary Group 4 science research project. The second year provides atomic structure, the periodic table—the transition metals, chemical bonding and structure, energetics/thermochemistry, chemical kinetics, equilibrium, acids and bases, redox processes, organic chemistry, measurement, and analysis. Laboratory work continues to be an integral part of the course and students are required to submit written laboratory reports that will be internally assessed by the classroom teacher as well as externally assessed by trained IB examiners. The course culminates in IB examinations that provide the possibility of college credit.

**Schools offering course: BPHS, MVHS**

**IB CHEMISTRY 11 (SL)**

IB4480
Grade 11

1 Credit#

Recommended Background: “B” or higher in Honors Chemistry, Biology, Algebra I and Algebra II

This is the first year in a two-year course that provides a survey of the major principles of chemistry, including the structure of matter, kinetic theory of gases, chemical equilibrium, chemical kinetics, thermodynamics, acid-base theory, and organic chemistry. This course emphasizes problem-solving, proficiency in mathematical usage, and improvement & expansion of laboratory techniques as related to contemporary chemistry, to include experiment design. In this course, laboratory work is integral, and students are required to submit written lab investigations. Students in this course continue to the second year of IB Chemistry (SL) or IB Chemistry (HL), based on grade achieved and teacher recommendation.

**Schools Offering Course: BPHS**

**IB CHEMISTRY 12 (HL)**

IB4491
Grade 12

1 Credit#

Recommended Background: “C” or higher in IB Chemistry 11

This is the second year in a two-year course that provides a survey of the major principles of chemistry, including the structure of matter, kinetic theory of gases, chemical equilibrium, chemical kinetics, thermodynamics, acid-base theory, and organic chemistry. This course emphasizes problem-solving, proficiency in mathematical usage, and improvement & expansion of laboratory techniques as related to contemporary chemistry, to include experiment design. In this course, laboratory work is integral, and students are required to submit written lab investigations. Students will complete independent investigations that will be internally assessed by the teacher and also moderated by IB examiners. Students will sit for the IB Chemistry SL exams in May. Completion of this 2-year course may provide the possibility of college credit.

**Schools Offering Course: BPHS**

**IB CHEMISTRY 12 (SL)**

IB4491
Grade 12

1 Credit#

Recommended Background: “C” or higher in IB Chemistry 11

This is the second year in a two-year course. This Higher Level (HL) course emphasizes research techniques, advanced laboratory techniques, advanced problem solving and synthesis of prior knowledge to investigate IB topics. Laboratory work continues to be integral and students are required to write lab reports. Students design and implement their own laboratory investigations, which are internally assessed by the teacher and also externally moderated by IB examiners. Students will sit for the IB Chemistry HL exams in May. Completion of this 2-year course may provide the possibility of college credit.
IB PHYSICS (HL)  IB4590  
Grade 11-12  & IB4591  
1 Credit#  
Recommended Background: “B” or higher in Honors Physics, Algebra I and Algebra II. “C” or higher in IB year one to go on to IB year two.

This two-year course includes the study of mechanics, heat, electromagnetism, light, sound, and modern physics. Emphasis is on problem solving, proficiency in mathematical usage, and improvement and expansion of laboratory techniques as related to contemporary physics to include experimental design. Laboratory work is an integral part of this course and students are required to submit written laboratory reports. Students will design and implement their own laboratory investigations and participate in the interdisciplinary Group 4 science research project. Student work will be both internally assessed by the classroom teacher as well as externally assessed by trained IB examiners. The end of course IB examinations provide the possibility of college credit.

Schools offering course: BPHS, MVHS

IB PHYSICS 1 (SL)  IB4380  
Grade 11  1 Credit#  
Recommended Background: “B” or higher in Algebra I and Algebra II

This is the first year in a two-year course sequence that covers a core of physics topics, such as measurements and uncertainties, mechanics, circular motion and gravity, electromagnetism, and waves. Emphasis is on problem-solving, proficiency in mathematical usage, and improvement and expansion of laboratory techniques as related to contemporary physics, including experimental design. Laboratory work is an integral part of this course and students are required to submit written laboratory reports. Students will design and implement their own laboratory investigations and prepare to participate in the interdisciplinary Group 4 science research project. Some student work will be externally assessed by trained IB examiners in addition to the teacher's internal assessment. Students in this course continue to the second year of IB Physics either SL or HL, based on student choice, grade achieved, and teacher recommendation.

Schools offering course: BPHS, MVHS

IB PHYSICS 2 (SL)  IB4581  
Grade 12  1 Credit#  
Recommended Background: “C” or higher in IB Physics 1

This second year of the two-year course includes review of first-year topics and continuation to further physics topics such as thermal physics, energy production, atomic, nuclear, and particle physics, and at least one of the following optional topics: relativity, engineering physics, imaging, or astrophysics. Emphasis is on problem-solving, proficiency in mathematical usage, and improvement and expansion of laboratory techniques as related to contemporary physics, including experimental design. Laboratory work is an integral part of this course and students are required to submit written laboratory reports. Students will design and implement their own laboratory investigations and participate in the interdisciplinary Group 4 science research project. Some student work will be externally assessed by trained IB examiners in addition to the teacher's internal assessment. Students will sit for end-of-course IB examinations in May, which provide the possibility of college credit.

Schools offering course: BPHS, MVHS

IB PHYSICS 2 (HL)  IB4591  
Grade 12  1 Credit#  
Recommended Background: “C” or higher in IB Physics 1

This second year of the two-year course covers all topics listed for the SL course; this higher level (HL) course delves more deeply into advanced levels of the topics covered in SL and includes additional study of wave phenomena, fields, electromagnetic induction, and quantum and nuclear physics. This Higher Level (HL) course also emphasizes research techniques, advanced laboratory techniques, advanced problem solving and synthesis of prior knowledge to investigate IB topics. Laboratory work continues to be integral and students are required to write lab reports. Students will design and implement their own laboratory investigations and participate in the interdisciplinary Group 4 science research project. Some student work will be externally assessed by trained IB examiners in addition to the teacher's internal assessment. Students will sit for end-of-course IB examinations in May, which provide the possibility of college credit.

Schools offering course: BPHS, MVHS
IB ENVIRONMENTAL SYSTEMS AND SOCIETIES (SL) IB4281
Grades 11-12 1 Credit
Recommended Background: Completion of Honors Biology or Honors Chemistry with a grade of “B” or higher

This one-year course enables students to develop a coherent perspective on the environment. This course uses the concepts and terminology associated with a system approach to study. These principles are subsequently applied to the study of natural ecosystems, their component parts, along with functional relationships that maintain their dynamic integrity. Topics include global cycles and physical systems, human population, fresh water ecosystems, conversation and biodiversity, and pollution. The course culminates with IB examinations that provide the possibility of college credit.

Schools offering course: BPHS, MVHS

ELECTIVE COURSES

BIOLOGY II: ECOLOGY 4340
Grades 11-12 1 Credit
Successful completion of Earth Science and Biology

This course is designed to help the student understand environmental principles, the consequences of human activities, and the impact of these activities on Earth. All students who will make future environmental decisions through their actions as citizens could benefit from this class. Laboratory experiments and field investigation are used to teach conceptual themes through process skills. Students are required to submit written laboratory reports and to design and conduct an investigation whether in small groups or as an individual.

BIOLOGY II: ANATOMY AND PHYSIOLOGY 4330
Grades 11-12 1 Credit
(Grade 10, if background is met)
Successful completion of Biology

This is an advanced course which covers anatomy, physiology, and the pathology of humans. Chemistry must either be completed or taken concurrently for enrollment in this course. It is designed primarily for the student anticipating a medical career or life science major in college. Lab emphasis is on dissection and microscope usage.

EARTH SCIENCE II: GEOLOGY 4240
Grades 10-12 1 Credit
Successful completion of Earth Science

This is an in-depth course dealing with the physical and historical aspects of the Earth most suited for students who have a strong interest in science. Biology may be taken concurrently. Emphasis will be placed on those geological processes and features that govern the Earth. Extensive laboratory experiences and occasional field excursions are provided to enhance the students understanding and application of the course material.

EARTH SCIENCE II: OCEANOGRAPHY 4250
Grades 11-12 1 Credit
Successful completion of Earth Science

In this course the theories of Earth’s structure and plate tectonics will be presented as a base on which to build the explanation of the physical features of the ocean floor. Chemistry must either be completed or taken concurrently for enrollment in this course. Both historical and physical geology of the ocean floor will be investigated. Students will study the physical properties of sea water, marine chemistry, marine organisms, salinity and density, circulation with the oceans, waves, currents, tides, and oceanographic instruments and research. Emphasis will be placed on the major skills of practicing oceanographers and scientists. Students will be required to submit written laboratory reports and to design and conduct investigations in small groups, as an individual, or as a class.
**WORLD LANGUAGE**

World language study is recommended for the college-bound and career-minded students for whom the knowledge of a world language is a valuable asset. World language study helps to develop respect for cultural diversity as well as confidence in basic skills of communication. World languages count as elective credit in the Standard Diploma. For the Advanced Studies Diploma, a student must take three years of one language or two years each of two different languages (2+2 option). All classes may not be offered at all schools due to enrollment and availability. AP French, AP German, AP Latin and AP Spanish are not offered at all schools.

**GENERAL COURSE SEQUENCE**

**AMERICAN SIGN LANGUAGE**

**AMERICAN SIGN LANGUAGE I**  
Grades 10-12  
1 Credit  

This course is designed to take students who have no knowledge of sign language to the point where they can function comfortably in a wide range of situations in the deaf community. Students will learn appropriate behaviors, showing awareness of and respect for deaf culture. Deaf culture is taught through discussions, activities, reading, and videotape presentations. This is a performance-based course and the emphasis is on vocabulary and grammatical skills using the language. The course and new instruction are done entirely in ASL with total immersion.

**AMERICAN SIGN LANGUAGE II**  
Grades 10-12  
1 Credit  
Successful completion of prior level

Students continue to increase their skills in American Sign Language. They will add to their vocabulary and increase proficiency in grammatical features and conversational skills. Knowledge of and sensitivity to the deaf culture and the community of deaf people will continue to be emphasized. Students will be encouraged to interact with deaf people in social contexts.

**AMERICAN SIGN LANGUAGE III**  
Grades 10-12  
1 Credit  
Successful completion of prior level

The course includes vocabulary-building and mastery of grammar through rigorous receptive and expressive language activities. ASL skills development with application to complex grammatical structures continues. Course includes receptive and expressive readiness activities, sign vocabulary, ASL grammatical structure, receptive and expressive finger spelling, conversational behaviors and various aspects of deaf culture.  
**Schools offering course:** CFHS, MVHS, NSHS, SHS

**FRENCH**

**FRENCH LEVEL I**  
Grades 8-12  
1 Credit  

In the beginning course, students gain an understanding of the components of a world language and of the study skills necessary to learn a world language. As students begin to develop skills in listening, speaking, reading, and writing, they engage in active practice in real-life situations and in a variety of cultural contexts.

**FRENCH LEVEL II**  
Grades 9-12  
1 Credit  
Successful completion of prior level

In the second year, students continue to develop skills in listening, speaking, reading, and writing and to engage in active practice in real-life situations. Cultural study of the areas of the world where the language is spoken is expanded.

**FRENCH LEVEL III**  
Grades 9-12  
1 Credit  
Successful completion of prior level

In the third year, students complete their study of basic grammar of the language and continue to learn to communicate in real-life situations with increasing precision and accuracy. Students explore the use of the language in a wide range of cultural contexts.
FRENCH LEVEL IV
Grades 10-12
1 Credit
Successful completion of prior level

In the advanced levels of world language, students use the language to engage in a variety of activities which require the students to seek information and to produce language to communicate with each other. Students are expected to make oral and written presentations in the target language on a variety of more complex cultural topics. Students are expected to use the target language on a daily basis in everyday classroom conversation.

GERMAN

GERMAN LEVEL I
Grades 8-12
1 Credit

In the beginning course, students gain an understanding of the components of a world language and of the study skills necessary to learn a world language. As students begin to develop skills in listening, speaking, reading, and writing, they engage in active practice in real-life situations and in a variety of cultural contexts.

GERMAN LEVEL II
Grades 9-12
1 Credit
Successful completion of prior level

In the second year, students continue to develop skills in listening, speaking, reading, and writing and to engage in active practice in real-life situations. Cultural study of the areas of the world where the language is spoken is expanded.

GERMAN LEVEL III
Grades 9-12
1 Credit
Successful completion of prior level

In the third year, students complete their study of basic grammar of the language and continue to learn to communicate in real-life situations with increasing precision and accuracy. Students explore the use of the language in a wide range of cultural contexts.

LATIN

LATIN I
Grades 8-12
1 Credit

Students are introduced to the basic vocabulary and grammar system of the language. Roman life, history, mythology, and English derivations are integral parts of the course.

LATIN II
Grades 9-12
1 Credit
Successful completion of prior level

Latin II continues the study of language skills, grammar, Roman culture, and etymology. A major objective is to have students successfully read and understand increasingly difficult Latin passages.

LATIN III
Grades 9-12
1 Credit
Successful completion of prior level

The third level reviews and completes the study of Latin grammar. Students continue to develop competency in reading selections from classical authors.

LATIN IV
Grades 10-12
1 Credit
Successful completion of prior level

Students are introduced to Latin poetry and specifically the epic and lyric genres. Selections from Virgil, Horace, and Catullus are emphasized. Grammatical forms common to poetry are reviewed.
SPANISH

SPANISH LEVEL I
Grades 8-12
1 Credit

In the beginning course, students gain an understanding of the components of a world language and of the study skills necessary to learn a world language. As students begin to develop skills in listening, speaking, reading, and writing, they engage in active practice in real-life situations and in a variety of cultural contexts.

SPANISH LEVEL II
Grades 9-12
1 Credit
Successful completion of prior level

In the second year, students continue to develop skills in listening, speaking, reading, and writing and to engage in active practice in real-life situations. Cultural study of the areas of the world where the language is spoken is expanded.

SPANISH LEVEL III
Grades 9-12
1 Credit
Successful completion of prior level

In the third year, students complete their study of basic grammar of the language and continue to learn to communicate in real-life situations with increasing precision and accuracy. Students explore the use of the language in a wide range of cultural contexts.

SPANISH LEVEL IV
Grades 10-12
1 Credit
Successful completion of prior level

In the advanced levels of world language, students use the language to engage in a variety of activities which require the student to seek information and to produce language to communicate with each other. Students are expected to make oral and written presentations in the target language on a variety of more complex cultural topics. Students are expected to use the target language on a daily basis in everyday classroom conversation.

SPANISH FOR FLUENT SPEAKERS I
Grades 9, 10, 11, or 12
1 Credit

Spanish for Fluent Speakers is intended for heritage and native speakers of Spanish and will be taught entirely in Spanish. The goal of the course is to provide students who have grown up hearing and/or speaking Spanish the opportunity to develop the academic skills necessary for correct reading and writing in Spanish and to therefore be one step closer toward being bilingual, in both oral and written communication. Students will acquire skills to improve their knowledge of the oral and written language and broaden their awareness of Hispanic culture and history.

Note: Students will take an assessment to ensure proper placement according to prior knowledge and study of Spanish.

SPANISH FOR FLUENT SPEAKERS II
Grades 10, 11, or 12
1 Credit

Spanish for Fluent Speakers II offers second level Spanish-speaking students additional opportunities to study Spanish formally in an academic setting in the same way native English-speaking students study English Language Arts. This course provides students more advanced instruction to continue improvement of more advanced Spanish literacy skills. Students will learn more about their language and cultural heritage while focusing on grammar, reading and writing, vocabulary development, and consciousness-raising activities about Spanish language and identity. After successful completion, students may be placed in Spanish for Fluent Speakers IB Level I, Spanish IV or V, or Advanced Placement Spanish, according to teacher recommendation.

Note: Students will take an assessment to ensure proper placement according to prior knowledge and study of Spanish.

Schools offering course: CFHS, MVHS, NSHS

AP COURSE SEQUENCE

AP FRENCH
Grades 11-12
1 Credit#
Successful completion of level 4

Advanced Placement French is an advanced, sequential course designed to develop proficiency in the language for highly motivated students. Students will be expected to master all of the objectives of the advanced curriculum course objectives in a more rigorous and accelerated manner. The course is comparable to the fifth and sixth semester or third year of college or university language course and emphasizes language for communication using authentic materials in preparation for the Advanced Placement Language
Students will be prepared to take the year-end AP Language Exam for possible college credit. Summer assignments may be provided.

**Schools offering course:** CFHS, NSHS, SHS

**AP GERMAN** 5270
Grades 11-12 1 Credit#
Successful completion of level 4

Advanced Placement German is an advanced, sequential course designed to develop proficiency in the language for highly motivated students. Students will be expected to master all of the objectives of the advanced curriculum course objectives in a more rigorous and accelerated manner. The course is comparable to the fifth and sixth semester or third year of college or university language course and emphasizes language for communication using authentic materials in preparation for the Advanced Placement Language Exam. Students will be prepared to take the year-end AP Language Exam for possible college credit. Summer assignments may be provided.

**Schools offering course:** CFHS, NSHS, SHS

**AP LATIN VIRGIL** 5370
Grades 11-12 1 Credit#
Successful completion of level 4

Advanced Placement Latin Virgil is an advanced, sequential course that includes an in-depth study of the Aeneid. Emphasis is placed upon Books I, II, IV, VI, X, and XII as prescribed by the AP syllabus. If not enough students desire AP Latin, students will be placed in the regular Latin IV or V section. Students will be prepared to take the year-end AP Language Exam for possible college credit. Summer assignments may be provided.

**Schools offering course:** CFHS, NSHS, SHS

**AP SPANISH LANGUAGE** 5570
Grades 11-12 1 Credit#
Successful completion of level 4

Advanced Placement Spanish is an advanced, sequential course that will emphasize contemporary spoken and written Spanish. The course will be conducted entirely in Spanish. Students will prepare to take the AP Spanish Language Exam by completing an intensive grammar review and by extensive practice of listening, speaking, reading, and writing skills on both assigned and spontaneous topics. For more information, contact the World Language Department chairperson. Students will be prepared to take the year-end AP Language Exam for possible college credit. Summer assignments may be provided.

**Schools offering course:** CFHS, NSHS, SHS

### IB COURSE SEQUENCE

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB5542</td>
<td>IB SPANISH B IV (SL)</td>
</tr>
<tr>
<td>IB5142</td>
<td>IB FRENCH B IV (SL)</td>
</tr>
<tr>
<td>IB5242</td>
<td>IB GERMAN B IV (SL)</td>
</tr>
<tr>
<td>IB5252</td>
<td>IB SPANISH B V (SL)</td>
</tr>
<tr>
<td>IB5552</td>
<td>IB FRENCH B V (SL)</td>
</tr>
<tr>
<td>IB5152</td>
<td>IB GERMAN B V (SL)</td>
</tr>
</tbody>
</table>

**Recommended Background:** “C” or higher in three sequential levels of the target language

The first year of advanced-level two-year course designed to strengthen fluency and proficiency in both oral and written world languages to prepare student for the end of course IB Exams. Internally assessed oral exams are a required part of the course. The aim is for students to be able to speak the language with sufficient accuracy and fluency to participate in formal and informal conversations with ease. Student will work toward appreciating discussing, and commenting both orally, and in writing, on various literary forms. The courses include an in-depth study of literary works and contemporary articles. Written essays will be on literary and issue-oriented themes. Through oral presentation, individual and group projects, and written assignments, self-expression will be encouraged. These courses provide the possibility of college credit.

**Schools offering course:** BPHS, MVHS

**IB SPANISH B V (SL)** IB5252
**IB FRENCH B V (SL)** IB5152
**IB GERMAN B V (SL)** IB5242
Grades 10 or 11 1 Credit per Course#

**Recommended Background:** “C” or higher in previous IB target language B course

The second year of advanced-level two-year course designed to strengthen fluency and proficiency in both oral and written world languages to prepare student for the end of course IB Standard Level examination. Students must earn a “C” or higher in previous IB target language B course. Internally assessed oral exams are a required part of the course. The aim is for students to be able to speak the language with sufficient accuracy and fluency to participate in formal and informal conversations with ease. Student will work toward appreciating
discussing, and commenting both orally, and in writing, on various literary forms. The courses include an in-depth study of literary works and contemporary articles. Written essays will be on literary and issue-oriented themes. Through oral presentation, individual and group projects, and written assignments, self-expression will be encouraged. These courses provide the possibility of college credit.

Schools offering course: BPHS, MVHS

IB SPANISH B V (HL)  IB5562
IB FRENCH B V (HL)  IB5162
IB GERMAN B V (HL)  IB5262
Grade 12  1 Credit per Course#
Recommended Background: “B+” or higher in previous IB target language B course and Teacher Recommendation

The second year of advanced-level two-year course designed to strengthen fluency and proficiency in both oral and written world languages to prepare student for the end of course IB Higher Level examination. Students must earn a “B+” or higher in previous IB target language B course and obtain Teacher Recommendation. Internally assessed oral exams are a required part of the course. The aim is for students to be able to speak the language with sufficient accuracy and fluency to participate in formal and informal conversations with ease. Student will work toward appreciating discussing, and commenting both orally, and in writing, on various literary forms. The courses include an in-depth study of literary works and contemporary articles. Written essays will be on literary and issue-oriented themes. Through oral presentation, individual and group projects, and written assignments, self-expression will be encouraged. These courses provide the possibility of college credit.

Schools offering course: BPHS, MVHS

IB SPANISH A (SL)  IB5541 & IB5551
Grades 11 & 12  1 Credit per Year#
Required Background: Students will take an assessment to ensure proper placement according to prior knowledge and study of Spanish. A recommendation form from the students 10th grade English teacher will also be required.

This is a two-year intensive study of language and literature in Spanish, designed for students who have achieved native-level fluency in speaking, reading, and writing Spanish. Over these two years, students engage in close reading of literary texts, focusing on the relationship between literature and broader societal issues while analyzing the rich complexities and intricacies of the works. They explore how language develops in specific cultural contexts, and how it impacts the world and our understanding of world issues. They also closely examine the ways language is used in the media. This course prepares students for the standard level IB Spanish A Language and Literature internal assessments exam. This course provides the possibility of college credit.

Schools offering course: MVHS

IB LATIN (SL)  IB5340 & IB5350
Grades 11 & 12  1 Credit per Year#
Recommended Background: “B” or higher in three sequential levels of Latin courses for IB year one. “C” or higher in IB year one to go on to IB year two.

In this two-year course, selected passages from prescribed authors and topics in Latin will be read. Students must earn a “C” or higher in IB year one to go on to IB year two. Students will be expected to speak and/or read orally with appropriate expression and emphasis. Written assessments will include externally assessed translations of particular passages demonstrating an understanding of the author’s intent and style, as well as student-chosen topics that reflect an awareness of context and connections within and with other literature and cultures. This course culminates in IB examinations and provides the possibility of college credit.
FINE AND PERFORMING ARTS

These courses count toward the “Fine and Practical Arts” graduation credit. All courses may not be offered at all schools due to enrollment and availability.

The Fine and Performing Arts programs provide students with a sequential, comprehensive curriculum in the arts. These courses teach students the skills and concepts needed for success in the classroom as well as practical application in the real world. The arts help students learn to creatively solve problems, make decisions, build self-confidence, and develop informed perceptions, while exploring a means for self-expression. Emphasis is placed on the artistic process including performing, presenting, producing, responding, and creating. Students gain an appreciation and awareness of different cultures and styles throughout history. Visual arts courses may require the purchase of supplies.

VISUAL ART

GENERAL COURSE SEQUENCE

<table>
<thead>
<tr>
<th>ART FOUNDATION</th>
<th>9120</th>
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<tbody>
<tr>
<td>Grades 9-12</td>
<td>1 Credit</td>
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</tbody>
</table>
In this foundation course, emphasis is placed on the elements and principles of design. Students use the elements and principles to demonstrate their understanding of art concepts through a variety of media. Drawing, painting, graphics, and 3-D activities comprise the curriculum with an emphasis on design and composition in each area.

<table>
<thead>
<tr>
<th>INTERMEDIATE ART</th>
<th>9130</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 10-12</td>
<td>1 Credit</td>
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<tr>
<td>Successful completion of Art Foundation</td>
<td></td>
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</tbody>
</table>
In this intermediate course, students continue to pursue and perfect their skills in depth with emphasis on individual problem solving. New skills and techniques are introduced and students are encouraged to begin to develop a portfolio for review, display, and assessment.

<table>
<thead>
<tr>
<th>HONORS ART II</th>
<th>9130H</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 10-12</td>
<td>1 Credit</td>
</tr>
<tr>
<td>Successful completion of Art Foundation, instructor’s recommendation; identified or eligible for identification as gifted in visual arts or portfolio review by high school staff</td>
<td></td>
</tr>
</tbody>
</table>

Designed by SCPS as a pre-AP and pre-IB course, students are provided with the opportunity to pursue advanced visual arts topics and nurture strengths in visual communication. Honors Art II is designed to stimulate higher level and complex thinking skills, which are used to solve visual problems. The individual portfolio is used to determine the students’ strengths and needs and to assist in the development of individualized learning opportunities.

Schools offering course: NSHS, SHS

<table>
<thead>
<tr>
<th>ART III: 2-D DESIGN</th>
<th>9194</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 11-12</td>
<td>1 Credit</td>
</tr>
<tr>
<td>Successful completion of Intermediate Art or teacher recommendation</td>
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</tr>
</tbody>
</table>
In 2-D design, students develop skills in a variety of two-dimensional media. The course refines established skills through the use of these media and places high emphasis on composition through organization of the elements of art and use of the principles of design. A variety of media are utilized which could include drawing, painting, printmaking, graphic design, typography, collage and photography. Students document their growth through the construction of a portfolio (traditional or digital).

<table>
<thead>
<tr>
<th>ART III: 3-D DESIGN</th>
<th>9196</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grades 11-12</td>
<td>1 Credit</td>
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<tr>
<td>Successful completion of Intermediate Art or teacher recommendation</td>
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</tbody>
</table>
3-D design is an advanced art course designed for students with an interest in creating three-dimensional works of art. The student develops personal style in approach to media as it relates to sculptural forms. Students explore a variety of three-dimensional materials to solve sculptural problems through the construction methods of: fabrication, assemblage, carving, casting, and modeling. The focus of this course is on pre-
visualization, process, and production of three-dimensional forms. Students document their growth through the construction of a portfolio (traditional or digital).

**Schools offering course:** BPHS, CFHS, NSHS, SHS

**ART IV**
9145
**Grades 11-12**
1 Credit

**Successful completion of Art III**

Art IV is a course designed to increase and develop skills in selected subject areas for the visually mature and advanced art student. Students develop personal styles in approach and media and are encouraged to experiment creatively with materials and techniques. Those students applying for advanced studies maintain and present a progressive portfolio.

**ART HISTORY (NON-STUDIO ELECTIVE)**
9170
**Grades 10-12**
1 Credit

This course is designed for students interested in learning to understand, evaluate, and appreciate art and its history in a non-studio setting. A broad range of artistic styles, media, and ideas from the past and present are used to examine the relationship and meaningful contribution of art to society. Students view significant artworks from around the world through readings, research, slides, videos, and museum visits, while also participating in course discussions, visual presentations, research, and problem solving. Writing skills are important in the description, analysis, and comparison of these works. This course complements courses in the humanities, providing multicultural and interdisciplinary connections.

**PHOTOGRAPHY & GRAPHIC DESIGN I**
9190
**Grades 9-12**
1 Credit

**Successful Completion of Art Foundation or teacher recommendation**

This course allows students to think creatively and solve visual problems while using technology to create expressive artworks. Students explore and practice standard black and white photographic processes through the use of cameras, films, lighting effects, and the application of basic darkroom techniques. They are introduced to digital photographic processes and develop proficiency in the use of computers, scanners, and digital cameras for art making. Use of Adobe Creative Suite in the areas of layout design, graphic design, and digital imaging is also taught, along with the history of photography. Students learn to address ethical issues concerning computer-generated imagery. The development of a beginning portfolio that showcases meaningful designs and photographs is a part of this course. (Students are required to have access to a digital camera of 8mp or more, a film camera, and purchase necessary film and photographic paper for the year).

**Schools offering course:** SHS

**PHOTOGRAPHY & GRAPHIC DESIGN II**
9191
**Grades 10-12**
1 Credit

**Successful Completion of Photography & Graphic Design I**

This course expands knowledge on the study of black and white photography, alternative processes, and the digital process. Students acquire and apply an in-depth understanding of photographic equipment, films, and specialized practices to include digital applications, hardware, and software. Students are asked to solve complex visual problems within the areas of publication design, multimedia presentations, graphic design, and digital imaging using Adobe software. Working with others to design, package, and promote a publication that emphasizes strong photography, design, and typography is an important element in this course. Students also learn to critique and evaluate portfolios that demonstrate a high quality of craftsmanship and content in both digital and traditional media. (Students are required to have access to a digital camera of 8mp or more, a film camera, and purchase necessary film and photographic paper for the year).

**Schools offering course:** SHS

**PHOTOGRAPHY & GRAPHIC DESIGN III**
9192
**Grades 11-12**
1 Credit

**Successful Completion of Photography & Graphic Design II**

This course engages students in the advanced study of photographic and technology based design processes while developing the approach and discipline of a working artist. Students expand their understanding and capability in the application of hardware and software to craft expressive original art. Students are asked to generate visual solutions to objective based problems by using a variety of media and creative thinking skills. A final required portfolio, which shows evidence of technical proficiency, quality, and experience, demonstrates students' commitment to the communication of ideas through digital and photographic media. Students are asked to apply professional exhibition techniques to display personal work. Various career
paths in the photography and graphic design industries are also studied (i.e. Photo Journalism, Print Design, and Commercial and Fine Art Photography).

**Schools offering course: SHS**

### MUSIC

#### BAND

<table>
<thead>
<tr>
<th>Course</th>
<th>Grades</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>CONCERT BAND</strong></td>
<td>9232</td>
<td>1</td>
</tr>
<tr>
<td>Grades 9-12</td>
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<tr>
<td>Recommended Background:</td>
<td>Previous band experience at the middle school level required</td>
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</tbody>
</table>

Emphasis in this course is on mastering the skills necessary to meet the intermediate level for the performance of Grade III-IV band literature. Students participate in Virginia Band and Orchestra Directors Association (VBODA) sponsored events such as All-District Band auditions, Solo & Ensemble Festival, and All-District Concert Band Assessment, as well as All-County Band auditions. Concerts of traditional and contemporary band works at the Grade III and IV level are prepared and performed. Small ensemble and solo work as well as music theory and history are components of this course. Students are expected to practice an average of 30 minutes per day.

**Note:** This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

<table>
<thead>
<tr>
<th>Course</th>
<th>Grades</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>SYMPHONIC BAND</strong></td>
<td>9233</td>
<td>1</td>
</tr>
<tr>
<td>Grades 9-12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommended Background:</td>
<td>One or more years of previous band experience; by audition</td>
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</tr>
</tbody>
</table>

Emphasis in this course is on mastering the skills necessary to meet the advanced level for the performance of Grade IV-V band literature. Students participate in Virginia Band and Orchestra Directors Association (VBODA) sponsored events such as All-District Band auditions, Solo & Ensemble Festival, and All-District Concert Band Assessment, as well as All-County Band auditions. Concerts of traditional and contemporary band works at the Grade IV and V level are prepared and performed. Small ensemble and solo work as well as music theory and history are components of this course. Students are expected to practice an average of 30 minutes per day.

**Note:** This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

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<thead>
<tr>
<th>Course</th>
<th>Grades</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>WIND ENSEMBLE</strong></td>
<td>9234</td>
<td>1</td>
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<tr>
<td>Grades 9-12</td>
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</tbody>
</table>

This course functions at the artist level in accordance with the Virginia Standards of Learning. Emphasis in this course is on traditional and contemporary works for concert band and wind ensemble at the Grade V-VI level. Students participate in Virginia Band and Orchestra Directors Association (VBODA) sponsored events such as All-District Band auditions, Solo & Ensemble Festival, and All-District Concert Band Assessment, as well as All-County Band auditions. Small ensemble and solo work as well as scales, etudes, music theory, ear training, sight-singing/reading, and music history are components of this course. The course is based on the size of a traditional Wind Ensemble and is limited in size to the instrumentation needs of the group. This course is for students who are serious about the study of instrumental music. Private lessons, while not required, are strongly encouraged for members of this ensemble. Students are expected to practice 30 minutes per day.

**Note:** This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time.
JAZZ ENSEMBLE  9297
Grades 10-12  1 Credit
Recommended Background: One or more years of high school band experience; by audition

An advanced-level course, emphasis is on performance techniques unique to jazz music and the history of jazz through the study of traditional and contemporary works of jazz music. Students participate in Virginia Band and Orchestra Directors Association (VBODA) sponsored events such as All-District Band auditions, Solo & Ensemble Festival and the All-District Jazz Festival. Some emphasis is given to music theory as it relates to improvisation. Students are involved in solo work and small ensembles. This course is based on the traditional size of a jazz band, or “Big Band”, and is limited in size to the instrumentation needs of the group. Private lessons, while not required, are strongly encouraged for members of this ensemble.

Note: This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time.

JAZZ WORKSHOP  9296
Grades 10-12  1 Credit
Recommended Background: One or more years of high school band experience; by audition

Jazz workshop is a theory-based lecture/lab that explores compositional techniques and their application in improvisation and music literature based in an improvisatory tradition. Students approach this compositional style through aural theory, written theory, music history, and technical development of their individual instrument. Students study song forms, motivic development, phrase structure, chord construction, and voice leading. These compositional elements will be applied to important historical and stylistic musical vehicles that may include: Blues, Swing, Bebop, Modal, and Funk/Fusion. This course requires students to perform scales, scale patterns, memorized phrases and melodies, and improvised melodies over given chord progressions and song forms. Students are responsible for attending one performance per semester outside of the normal school day.

Schools offering course: CFHS

CHORUS

Chorus directors may place students in specially-designed and appropriate sections of chorus.

VOCAL ENSEMBLE  9280
Grades 9-12  1 Credit
This course is open to all interested students in grades 9-12 whose voices are within the tenor-bass range. It covers Levels 1 and 2 of the Stafford County Choral Music curriculum.

Note: This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

TREBLE CHORUS  9260
Grades 9-12  1 Credit
This course is open to all interested students in grades 9-12 whose voices are within the treble range. It covers Levels 1 and 2 of the Stafford County Choral Music curriculum.

Note: This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

CHORALE  9285
Grades 9-12  1 Credit
This course is a choir open to students in grades 9-12. The course covers Levels 2 and 3 of the Stafford County Choral Music curriculum.

Note: This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program. Auditions may be required.

MADRIGALS  9289
Grades 10-12  1 Credit
By audition only

This course is an auditioned choir open to students in grades 10-12. The course covers Levels 2, 3, and 4 of the Stafford County Choral Music curriculum.

Note: This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program. Auditions may be required.
performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

**JAZZ CHOIR** 9290
Grades 9-12 1 Credit
Auditions may be required

This course is a performance-based choir course open to students in grades 9-12. Emphasis is on contemporary literature and performance. Auditions may be required. The course covers Levels 2, 3, and 4 of the Stafford County Choral Music curriculum.

Note: This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

**CHAMBER CHOIR** 9292
Grades 10-12 1 Credit
By audition only

This course is an auditioned-choir open to students in grades 10-12. The course covers Levels 2, 3, and 4 of the Stafford County Choral Music curriculum.

Note: This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

**SYMPHONIC ORCHESTRA** 9238
Grades 9-12 1 Credit
Recommended Background: One or more years of previous orchestra experience; by audition

In this course, emphasis is on mastering the skills necessary for the performance of Grade IV-V string orchestra literature. Students participate in Virginia Band and Orchestra Directors Association (VBODA) sponsored events such as All-Region Orchestra auditions, Solo & Ensemble Festival, and All-District Orchestra Assessment, as well as All-County Orchestra auditions. Concerts of traditional and contemporary string orchestra works at Grade IV and V level are prepared and performed. Small ensemble and solo work as well as music theory and history are components of this course. Students are expected to practice an average of 30 minutes per day.

Note: This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

**CHAMBER SINFONIA** 9239
Grades 10-12 1 Credit
By audition only

This is an advanced-level course functioning at the artist level in accordance with the Virginia Standards of Learning. Emphasis is on traditional and contemporary works for string orchestra at the Grade IV-VI level. Students participate in Virginia Band and Orchestra Directors Association (VBODA) sponsored events such as All-Regional Orchestra auditions, Solo & Ensemble Festival, All-District Orchestra Assessment, as well as All-County Orchestra auditions. Concerts of traditional and contemporary string orchestra works at the Grade III and IV level are prepared and performed. Small ensemble and solo work as well as scales, etudes, music theory, ear training, sight-singing/reading, and music history are components of this course. The course is based on the size of a traditional Chamber Orchestra and is limited in size to the instrumentation needs of the group. This course is for students who are serious about the study of
instrumental music. Private lessons, while not required, are strongly encouraged for members of this ensemble. Students are expected to practice an average of 30 minutes per day.

**Note:** This is a performance-based course and involves participation in concerts and other performances and rehearsals outside of class time. There is a requisite uniform fee for students in the program.

### GENERAL COURSES FOR MUSIC

**MUSIC THEORY** 9225

**Grades 10-12** 1 Credit

**Recommended Background:** Previous music experience required. Students should have a fundamental understanding of music notation.

The course is designed to develop a student’s ability to recognize, understand and describe the basic processes and materials used in music. Emphasis is on the basic components of music and musical notation and the function of these components in the creation of what is heard or presented in a musical score. Students will be required to read, notate, compose, perform, and listen to music of varied periods and cultures. Aural, analytical and compositional skills will be emphasized using both listening and written exercises and through the use of the piano keyboard. In addition, some emphasis will be given to music history and the relationship of the history of music to the other arts, historical perspectives of music and world events, the study of basic compositional techniques and an exploration of career possibilities in music.

**GUITAR I** 9245

**Grades 9-12** 1 Credit

This course is designed to introduce students to the fundamentals of guitar. Guitar instruction emphasizes basic technique, music reading, progressions, and music theory. Music literature is selected from classical and contemporary repertoire. This course offers a comprehensive study of all musical styles. Guest artists and field trips to performances and/or seminars may also be part of the curriculum.

**Note:** Rehearsals and performances may be required of students outside of the school day.

**Schools offering course:** BPHS, CFHS, MVHS

**GUITAR II** 9247

**Grades 10-12** 1 Credit

Successful completion of Guitar I or teacher recommendation

Students continue to develop their skills on the guitar in this course. Guitar instruction emphasizes intermediate technique, music reading, progressions, and music theory. Music literature is selected from jazz, rock, blues, classical, and contemporary repertoire. Students build a repertoire of solo literature and begin the study of improvisation. Guest artists and field trips to performances and/or seminars may also be part of the curriculum.

**Note:** Rehearsals and performances may be required of students outside of the school day.

**Schools offering course:** BPHS, CFHS, MVHS

**MUSIC TECHNOLOGY I** 9214

**Grades 9-12** 1 Credit

This course offers students the opportunity to develop an understanding of music composition through the use of digital keyboard, MIDI technology, synthesizers, music notation software, and other software. Students also develop skills that assist them in their creative and technical expression. A portfolio of compositions, arrangements, and recordings representing a variety of styles and compositional situations are developed throughout the course.

**Schools offering course:** SHS

**MUSIC TECHNOLOGY II** 9298

**Grades 10-12** 1 Credit

Successful Completion of Music Technology I or teacher recommendation

This Level II course offers students the opportunity to develop a deeper understanding of music composition through the use of digital keyboard, MIDI technology, synthesizers, music notation software, and other software. Students continue to develop skills to further their creative and technical expression. A portfolio of compositions, arrangements, and recordings representing a variety of styles and compositional situations is developed throughout the course.

**Schools offering course:** SHS
# THEATRE ARTS

<table>
<thead>
<tr>
<th>THEATRE ARTS I</th>
<th>1410</th>
<th>Grades 9-12</th>
<th>1 Credit</th>
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</thead>
<tbody>
<tr>
<td>This course introduces students to dramatic and theatrical expression through such methods as storytelling, play writing, puppetry, and adaptation. Students work on assignments which help them to organize their thoughts, ideas, and responses to stimuli into modes of communicable theatrical forms. Emphasis is placed on performance for beginners, play study, and audition techniques, to include memorization and performance of monologues and scene work. This course is performance-based and students are expected to perform in front of an audience of their peers.</td>
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<thead>
<tr>
<th>THEATRE ARTS II</th>
<th>1420</th>
<th>Grades 10-12</th>
<th>1 Credit</th>
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<tbody>
<tr>
<td>Successful Completion of Theatre Arts I</td>
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<tr>
<td>An in-depth study of acting techniques, styles, and approaches in performance are explored in this course. Theater history is examined by performing scenes and plays from different time periods and cultures. Students begin to develop a critical eye. Note: Students in this course are highly encouraged to participate in school productions.</td>
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<thead>
<tr>
<th>THEATRE ARTS III</th>
<th>1423</th>
<th>Grades 11-12</th>
<th>1 Credit</th>
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<tbody>
<tr>
<td>Successful Completion of Theatre Arts II</td>
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<tr>
<td>Students study theater and drama as an educational force in this course. Links are forged between drama and other areas of the curriculum as well as between different kinds of audiences and community groups. Note: Students in this course are highly encouraged to participate in school productions.</td>
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<thead>
<tr>
<th>THEATRE ARTS IV</th>
<th>1426</th>
<th>Grades 11-12 or audition by teacher</th>
<th>1 Credit</th>
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<tbody>
<tr>
<td>Successful Completion of Theatre Arts III</td>
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<tr>
<td>This is exclusively a performing and directing course. Advanced work develops acting skills and styles through a festival of one-act plays and through in-depth study of plays performed at school. Note: Students in this course are expected to participate in school productions.</td>
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<thead>
<tr>
<th>TECHNICAL THEATRE I</th>
<th>1435</th>
<th>Grades 9-12</th>
<th>1 Credit</th>
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<tbody>
<tr>
<td>Successful Completion of Technical Theatre I</td>
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<tr>
<td>This course serves as an introduction to the technical aspects of the theatrical experience. Students explore the various physical needs of theatrical productions, including scenic Construction, lighting, sound, costuming, and make up. Smaller projects focus on stage management and production design.</td>
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<tr>
<th>TECHNICAL THEATRE II</th>
<th>1448</th>
<th>Grades 10-12</th>
<th>1 Credit</th>
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<tbody>
<tr>
<td>Successful Completion of Technical Theatre II</td>
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<tr>
<td>This course utilizes what students have learned in Technical Theatre I in order to build theatrical productions throughout the year. Students serve as the technical crews to assemble the various technical aspects for two major productions, including scenery, lighting, sound, costuming, and make up. Individual projects focus on stage management and production design. Participation in school productions is expected.</td>
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<tr>
<th>TECHNICAL THEATRE III</th>
<th>1450</th>
<th>Grades 10-12</th>
<th>1 Credit</th>
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<tbody>
<tr>
<td>Successful Completion of Technical Theatre II</td>
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<tr>
<td>This course utilizes what students have learned in Technical Theatre I and II in order to serve as student designers and production managers for theatrical productions throughout the year. These students design and oversee the construction of the scenery, lighting, sound, costumes, and make up for two major productions. Individual projects focus on theatre management and technical direction. Participation in school productions is expected.</td>
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### AP COURSES FOR ART

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>AP STUDIO ART</td>
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<tr>
<td>Studio Art (Drawing Portfolio)</td>
<td>9150</td>
</tr>
<tr>
<td>Studio Art (2-D Design Portfolio)</td>
<td>9148</td>
</tr>
<tr>
<td>Studio Art (3-D Design Portfolio)</td>
<td>9149</td>
</tr>
</tbody>
</table>

**Grades 11-12** 1 Credit#

**Successful Completion of Art III 2-D or 3-D, Art III and teacher recommendation**

Advanced Placement Art is designed for highly motivated art students who plan to major in art in college. Following a highly prescribed curriculum set by the College Board, students prepare one of three portfolios of artwork (drawing, 2-D design, or 3-D design). Students will be prepared to submit the AP Studio Art portfolio for possible college credit. Summer assignments may be provided. **Note:** Students enrolled in this course must be willing to work independently and meet portfolio submission deadlines as established by the instructor.

<table>
<thead>
<tr>
<th>Course Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>AP ART HISTORY (NON-STUDIO ELECTIVE)</td>
<td>9151</td>
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</tbody>
</table>

**Grades 11-12** 1 Credit#

**Successful Completion of Art History or teacher recommendation**

This course is designed for students interested in learning to understand, evaluate, and appreciate art and its history in a non-studio setting. A broad range of artistic styles, medias, and ideas from the past and present are used to examine the relationship and meaningful contribution of art to society. Students view significant artworks from around the world through readings, research, slides, videos, and museum visits, while also participating in course discussions, visual presentations, research, and problem solving. Writing skills are important in the description, analysis, and comparison of these works. In this course, students learn to look at works of art with intelligence and sensitivity, examining the major forms of artistic expression of the past and of distant cultures, as well as those of our own time and environment. Students will be prepared to take the year-end AP Art History exam for possible college credit.

### AP COURSES FOR MUSIC

<table>
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<tr>
<th>Course Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>AP MUSIC THEORY</td>
<td>9226</td>
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</table>

**Grades 11-12** 1 Credit#

**Successful Completion of Music Theory or teacher recommendation**

The ultimate goal of the AP Music Theory course is to develop a student’s ability to recognize, understand, and describe the basic materials and processes of music that are heard or presented in a score. The achievement of these goals may best be approached by initially addressing fundamental aural, analytical, and compositional skills using both listening and written exercises. Building on this foundation, the course progresses to include more creative tasks, such as the harmonization of a melody by selecting appropriate chords, composing a musical bass line to provide two-voice counterpoint, or the realization of figured-bass notation. Students will be prepared to take the year-end AP Music Theory exam for possible college credit. Summer assignments may be provided.

### IB COURSES FOR FINE ARTS

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<tr>
<th>Course Description</th>
<th>Code</th>
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<tbody>
<tr>
<td>IB VISUAL ARTS (SL)</td>
<td>IB9194</td>
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</table>

**Grades 11 or 12** 1 Credit#

**Recommended Background: “B” or higher in Art Foundation, Intermediate Art**

This one-year course is intended for highly motivated students committed to serious study of art. The aim is to provide opportunities to develop the aesthetic, imaginative, and creative faculties as well as train visual, perceptual, and critical awareness of arts of various cultures. Students create a portfolio that demonstrates intensive concentration in studio work and/or research in preparation for the external assessment. A trained IB examiner visits the art studio for each student’s art show and interview; this culminating IB assessment provides the possibility of college credit. **Schools offering course:** BPHS, MVHS
IB VISUAL ARTS (HL)  
IB9195
Grades 12  
1 Credit #
Recommended Background: “B” or higher in Art Foundation, Intermediate Art course for IB year one.
“C” or higher in IB year one to go on to IB year two.

This is a second year of a two-year sequence for IB Visual Arts (HL) intended for highly motivated students committed to serious study of art. The aim of the course is to provide opportunities to develop the aesthetic, imaginative, and creative faculties as well as train visual, perceptual, and critical awareness of arts of various cultures. Students create a portfolio that which demonstrates intensive concentration in studio work and/or research in preparation for the external assessment. This course culminates with an IB external assessment that provides the possibility of college credit.

Schools offering course: BPHS, MVHS

IB THEATRE ARTS (SL or HL)  
IB1432 & IB1433
Grade 11-12  
1 Credit per Course #
Recommended Background: “B” or higher in Theatre Arts I, Theatre Arts II, and Theatre Arts III courses for IB year one. “C” or higher in IB year one to go on to IB year two.

In this two-year IB Theatre course, students engage in the in-depth study of the nature, theories, and processes of theatre and theatrical production through time and across cultures by participating in both practical and theoretical applications of the art form. Students will collaborate closely with other members of the class to create original theatre and staging, and will conduct significant research into and written analysis of the theory of theatre, including specific theorists and exploration and practical applications of theory. HL students also explore and perform a solo theatre piece based on theory. These courses culminate in IB external assessments that provides the possibility of college credit.

Note: Students in this course are encouraged to participate in school productions.

Schools offering course: BPHS, MVHS

IB MUSIC (SL or HL)  
IB9294 & IB9295
Grades 11-12  
1 Credit per Course #
Recommended Background: “B” or higher in previous music courses for IB year one. “C” or higher in IB year one to go on to IB year two and/or music teacher recommendation. Completion in Music Theory course preferred. Students must be concurrently enrolled in a performance class.

These two-year courses include the study of all music, including western and world music, and explores the material needed in an entry-level college music theory, appreciation, or history course. Students study examples of representative scores from each period. Students write musical compositions with the Sibelius or Finale Software Program to clarify musical concepts taught. (Part of the requirement for the course is a solo or group performance recording, in a variety of ensembles.) This course prepares students for the standard and/or higher level IB Music Exam, which includes listening, written, performance, and composition (for HL) components.

Schools offering course: BPHS, MVHS
Physical Education is an academic discipline that involves the study of human movement and its impact on health and quality of life. Physical Education provides all students access to standards-based instruction that promotes health literacy and the motivation to engage in the health-enhancing physical activity needed to achieve and maintain a balanced healthy life.

Health Education increases Health Literacy, helps students understand how to achieve and maintain a healthy life style, and fosters the motivation, skills, and self-efficacy necessary to make informed and healthy choices, avoid risky behaviors, and build healthy families, relationships, schools and communities.

Driver Education programs in Virginia schools focus on safe driving attitudes, skill development and appropriate responses to hazards. The Commonwealth’s standards for Driver Education require extended, supervised practice with a licensed parent or guardian to develop precision in the application of skills and processes to effectively manage risks.

Two (2) Health and Physical Education credits are required for both the Standard and Advanced Studies diplomas and may be obtained in the 9th and 10th grades.

### HEALTH AND PHYSICAL EDUCATION 9 7300

**Grade 9**

1 Credit

Physical Education instruction is required and emphasizes the participation of lifetime fitness activities and how it relates to personal wellness. Activities include badminton, volleyball, tennis, speed ball, dance, flag football, aerobics, soccer, recreational games, basketball, golf, running, and fitness stations. During the health portion of this course, students will study alcohol, tobacco, and drugs, diseases of the body, mental and emotional health, family life, safety and injury prevention and violence prevention.

### HEALTH AND PHYSICAL EDUCATION 10 7400/7405

**Grade 10**

1 Credit

Physical Education instruction is required and emphasizes the participation of lifetime fitness activities and how it relates to personal wellness. Activities include archery, badminton, tennis, golf, bowling, speed ball, soccer, volleyball, dance aerobics, basketball, running, and other fitness activities. Classroom Driver’s Education is a part of the health requirement. Other health instruction includes: family life; and a wellness and healthy living component. In addition, “Behind the Wheel” instruction is offered as an optional program if certain age and licensing requirements are met. The “Behind the Wheel” fee for 2018-2019 is $225.00.

### STRENGTH AND BODY I 7640

**Grades 11-12**

1 Credit

This elective is offered for motivated students seeking daily participation in weight training and cardiovascular fitness. This course will provide the student with the opportunity to design and implement individual fitness routines specific to his or her needs. Participants will gain a working knowledge of muscle groups and the exercises that complement them, along with an understanding of how the human body benefits from cardiovascular activity. The course will be held in the weight room while enjoying a variety of additional fitness based activities such as plyometric, speed, and agility drills.

### STRENGTH AND BODY II 7650

**Grade 11-12**

1 Credit

Upon successful completion of Strength and Body I, this elective is offered for motivated students seeking daily participation in weight training and cardiovascular fitness. This course will provide the student with the opportunity to design and implement individual fitness routines specific to his or her needs. Participants will gain a working knowledge of muscle groups and the exercises that complement them, along with an understanding of how the human body benefits from cardiovascular activity. The course will be held in the weight room while enjoying a variety of additional fitness based activities such as plyometric, speed, and agility drills.
This course is for students wanting to experience higher level game play in a controlled setting; students interested in coaching team sports at various age levels; and/or students interested in becoming physical education teachers. Students taking this course will develop strategies for game play, experience conditioning specific to various team sports, and participate in game play in several team sports throughout the year. Sports may include, but are not limited to, football, basketball, volleyball, lacrosse, baseball/softball, floor hockey, soccer, field hockey, team handball, Ultimate Frisbee and tchoukball. In addition, students will participate in the development of tournaments for game play as well as coaching peers for the tournaments. Students may also be required to participate in observation hours of any organized team sport activity in the community.

This course is for students wanting to experience higher level game play in a controlled setting; students interested in coaching individual sports at various age levels; and/or students interested in becoming physical education teachers. Students taking this course will develop strategies for game play, experience conditioning specific to various individual sports, and participate in individual sports throughout the year. Sports may include track and field, distance running, golf, tennis, wrestling, gymnastics, badminton, bowling, archery, and disk golf. Students will participate in the development of tournaments for competition as well as coaching peers for these tournaments. Students may also be required to participate in observation hours of any organized individual sport in the community.

This course is a basic introduction into the field of athletic training and sports medicine. Students study the anatomy and physiology of the skeletal and muscular systems, and kinesiology as they relate to the prevention, evaluation and care of athletic injuries. Students learn and practice CPR, emergency medical care for athletes, and taping techniques.

The focus of this course is the application of knowledge and understanding gained in Sports Medicine I. Course enrollment requires an application and interview; students must also be available five hours a week after school. Students will have hands on experience in preventing, recognizing, evaluating, and providing emergency care for athletic inquiries to sports team members under the supervision of a certified athletic trainer. A requirement of this course is that the student must serve as a student assistant of an athletic team for at least one sport season after school. Note: The work in this course requires that students be willing and able to devote time outside the scheduled class period to activities occurring in the evening and weekends.
ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL)

Students identified as English Learners (ELs) may take English for Speakers of Other Languages (ESOL) courses. These courses are designed to develop their speaking, listening, reading, and writing skills in English. These courses also serve to develop academic vocabulary for content specific classes.

**Elective Credit Requirements in ESOL**
- Sequential Elective Credit
- World Language Credit(s): Up to 2 ESOL course credits can count toward World Language credits.
- English Language Arts (English 9, 10, or 12): Any ESOL course may count for one of the above required English credits, if not used for elective, sequential elective or World Language Credits.

**NOTE:** All English Learners (ELs) must pass the English 11 course and the corresponding English 11 SOLs in order to graduate.

**ESOL I: CONCEPTS OF SCIENCE**
Grades 9–12 1 Elective Credit

This course is designed to develop reading, writing, listening, and speaking skills of ESOL Level I or II students. This course prepares students for enrollment in Earth Science and Biology while developing academic literacy. The WIDA ELD Standards for the language of science are aligned to the VA Standards of Learning for the sciences. The course includes nonfiction reading and scientific writing. An elective credit is earned for successful completion of this course. Students generally enroll in either Biology or Earth Science the following year.

**ESOL II: FOUNDATIONS OF SCIENCE**
Grades 9–12 1 Elective Credit

Using English Language Development strategies, this course is based on the standard Earth Science or Biology curriculum and will assist students in expanding their academic vocabulary and content reading strategies that are essential for success in their concurrently enrolled Earth Science or Biology course and the corresponding SOLs they will need to graduate.

**ESOL III: ENGLISH FOR ACADEMIC PURPOSES**
Grades 9–12 1 Elective Credit

This course is designed to develop reading, writing, listening, and speaking skills of ESOL Level I or II students. This optional language development course promotes emerging print literacy while building content knowledge and skills for the language arts standards of learning for English 9. Students use English for purposeful reading, writing, speaking and listening tasks essential to foundations of literacy. Students enrolled in this course generally take English 9 the following year.
**ESOL IV: READING & WRITING STRATEGIES  5731**
Grades 9-12  1 Elective Credit

Designed for ESOL WIDA Level II and III students, this course should be taken concurrently with English 9, 10, or 11. The course is designed to further assist students in the acquisition of English language, especially focusing on reading, writing, and research skills to help students be successful in their English Language Arts course. The curriculum parallels the standard English Language Arts course and prepares them for the English II SOLs, necessary for graduation.

**ESOL V: ALGEBRA READINESS  5732**
Grades 9-12  1 Elective Credit

This course prepares students for enrollment in Algebra I while developing academic literacy. The WIDA ELD Standard for the language of mathematics supports the VA standards of learning for mathematics. Students will focus on number, number sense, computation, estimation, patterns, functions, and algebra. An elective credit is earned for successful completion of this course. Students generally take the Algebra sequence starting the following year.
High School students can earn additional high school or college credits through a variety of independent study, distance learning, off-site courses, and work-study programs, after an application and review process. Generally, no independent study or alternative credit class can be arranged for classes already in the master course list. These programs work best for students who work well independently or who have a particular vocational interest or ability. For specific information, students should see school counselors. All courses may not be offered at all schools due to enrollment and availability.

**ALL CENTURY INDEPENDENT LEARNERS 9826**

_**Grades 9-12  1 Independent Study Credit**_

_(Does not count toward graduation requirements)_

Students may propose a year-long study of a topic of interest, working primarily under the supervision of the Gifted and Secondary Program (GSP) Resource Teacher or certified Learn and Serve Teacher; additional teachers or community mentors may be identified and utilized as resources. To earn credit, students must have their proposal approved, document hours, and must complete and present a substantive product. Assessment is on a pass/fail basis.

**LEARN AND SERVE I 9828**

**LEARN AND SERVE II 9840**

_**Grades 10-12  1 Credit**_

These courses develop an appreciation of the concept of service to the community and develop skills necessary to evaluate the impact of service to others. These courses have discussions with public officials and community leaders. Students are introduced to the concept of service-learning and design individual and group projects as a part of the class curriculum. Service projects will require time outside of the classroom.

**LEADERSHIP 9097**

_**Grades 9-12  1 Credit**_

An interdisciplinary course designed to introduce students to the tasks, strategies, and skills of effective leadership. Course activities will move students from theory to the practical processes of leadership. Basic concepts essential to personal development and organizational leadership behavior are included. This includes the concepts of: team-building, teamwork, and team leading. In addition, this course provides students with an awareness and understanding of current issues relating to the nature and tasks of collaborative leadership behavior. Students will be asked to identify an issue or problem and will practice leadership by developing and implementing a community project.

**DUAL ENROLLMENT PROGRAM**

The dual enrollment program is designed to permit qualified students to concurrently enroll in courses with a post-secondary provider and Stafford County Public Schools. Students who successfully complete dual enrollment classes will receive two semesters of college credit and one year of high school credit from Stafford County Public Schools. Additional information is available through the counseling offices in each high school. See special section on page 13 regarding dual enrollment courses.

**GIFTED AND SECONDARY PROGRAMS (GSP)**

**INDEPENDENT STUDY 0115**

_**Grades 11-12  1 Credit**_

_(Does not count toward graduation requirements)_

Students may propose a year-long study of a topic of interest, working under the supervision of the GSP Resource Teacher and other teacher or community mentors. To earn credit, students must document hours and must complete and present a substantive product. Assessment is on a pass/fail basis.
ADVANCED PLACEMENT PROGRAM

Through Advanced Placement (AP) courses, students can do college-level work while still in high school. The courses are available to students who are qualified and meet the background requirements. Upon completion of the AP course, students may take the nationally administered AP examination. Based on their score, students **may** receive college credit or advanced standing for each course taken. Additional information is available through counseling offices in each high school. Summer assignments may be provided.

ADVANCED PLACEMENT CAPSTONE PROGRAM

The AP Capstone Program is a two-year seminar and research course that explores real-world issues while focusing on developing critical analysis, communication, and investigative skills. AP Capstone, developed by College Board, is built on the foundation of two courses – AP Seminar and AP Research – and is designed to complement and enhance the in-depth, discipline-specific study provided through AP courses. It cultivates curious, independent, and collaborative scholars and prepares them to make logical, evidence-based decisions.

AP Seminar and Research Certificate

Students who earn scores of 3 or higher in both of the AP Capstone courses but not on the four additional AP Exams will receive the AP Seminar and Research Certificate, signifying successful performance in those courses.

**AP CAPSTONE – AP SEMINAR** 22110
**Grades 10-12** 1 Credit#

AP Seminar is the first of two courses in the AP Capstone program, and it is designed to further develop inquiry and research skills as applied to topics and issues of global and/or cultural relevance presented by an AP Capstone trained teacher. With this topic or issue as the centerpiece of class discourse, students learn to employ critical thinking skills such as analysis, synthesis, differentiation, and interpretation; students engage in collaborative teamwork and service-learning experiences. Students participating in this program have required tasks that include a team project, an individual presentation, and a written exam. This course may be included in the requirements for academic programs such as, but not limited to, APPX , CGS, and Learn and Serve.

**Schools offering course:** CFHS, NSHS, SHS

**AP CAPSTONE – AP RESEARCH** 22111
**Grades 11-12** 1 Credit#

AP Research is the second of two courses in the AP Capstone program, and it allows students to put the skills acquired in the AP Seminar course to practice in a Capstone Research Project. The course offers an opportunity for students to explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan and conduct a yearlong mentored, research-based investigation to address a research question. This independent study, executed under the mentorship of an AP Capstone trained teacher, culminates in a scholarly academic thesis which the student defends and articulates his/her position on his/her chosen subject. This course may be included in the requirements for academic programs such as, but not limited to, APPX , CGS, and Learn and Serve.

**Schools offering course:** CFHS, NSHS, SHS

AP Capstone Diploma

Students who earn scores of 3 or higher in both of the AP Capstone courses and on four additional AP Exams of their choosing will receive the AP Capstone Diploma.
It has been recognized and acknowledged by universities alike that AP courses challenge students with a rigorous academic focus on content knowledge, analytical reasoning skills, and disciplined study habits. Focusing on this commitment to excellence and equity, APPX provides highly motivated students the opportunity to create a challenging and interdisciplinary program of study geared to the student's strengths and interests. The Advanced Placement International Diploma (APID) program and the Advanced Placement Distinguished Scholars (APDS) program are designed to give students multiple Advanced Placement (AP) course offerings by teachers who are specially trained through the College Board. Each program offers a wide variety of AP courses relating to the student's personal interests and their individual academic strengths.

Ninth-grade APPX students enter the program and are enrolled in a slate of Pre-AP (Honors) courses within the core academic areas to assist in preparing them academically before they enter formal Advanced Placement courses. This academic approach will provide additional preparation and support for our students as they pursue the AP curricula.

The AP preparation will continue in tenth grade, as students enroll in AP World History and continue with the specially-formulated English, math, science, and elective courses which prepare them for a larger slate of AP courses in both the eleventh and twelfth grades. With the assistance of parents, the site coordinator and the faculty, students' programs of studies will be individualized. Students will not necessarily have a prescribed required curriculum, but rather an individualized learning plan which capitalizes on each student's unique interests, abilities, and future goals.

**APPX - Specific Program - Overviews**

The Advanced Placement International Diploma (APID) is a globally recognized certificate for students with an international outlook. The APID challenges a student to display exceptional achievement on AP Exams across several disciplines. Universities worldwide utilize the APID as a criterion for consideration in admissions. The APID is available to students attending secondary schools outside the United States and for U.S. resident students applying to universities outside the country. In addition to the requirements for a high school diploma, the APID will provide students with an additional certification of their outstanding academic excellence and an international exposure.

Advanced Placement Distinguished Scholars (APDS) is aligned with the nationwide Advanced Placement Program, which is a part of the College Board's partnership with high schools, colleges and universities. The program is designed to provide students with instruction in a variety of college level courses that are organized in a coherent sequence, taught by College Board trained instructors, ensuring that every student has the opportunity to achieve at an advanced level.

**Key Features and Advantages of the AP Programs of Excellence (APPX) Signature Program:**

- A collegial college-preparatory learning community
- College Board approved and trained instructors, both at AP and Pre-AP level, ensuring high expectations and rigorous and creative instruction across the program levels
- A wide variety of AP course offerings to meet the strengths and interests of the individual student
- Special preparation for achievement and success on AP exams (tutoring programs, extended lab experiences, Saturday programs, problem solving sessions)
- A strong community support group composed of teachers (by content), counselors, and the AP Programs of Excellence (APPX) coordinator for the students in APDS and APID
- Unique opportunities and activities
- Special recognition, notation, cords and diploma seal for postsecondary education
- Technology rich environment
- Extended Opportunities to earn college credits through successful completion of AP courses and adequate test scores on the AP tests
- Participation in the AP Capstone Diploma Program to include AP Capstone Diploma or AP Seminar and Research Certificate (see APPX Coordinator for program availability annually)

The APPX program will be offered at Colonial Forge High School, North Stafford High School and Stafford High School. For more Information on the APPX Signature Program, please the school counselor.
APPX Program Specifics: **AP International Diploma (APID) Program**

Students successfully completing 6 or more AP courses and the corresponding AP Test and earning grades of 3 or higher on at least five AP Exams in the following content areas:

- **Two** AP Exams from two different languages selected from English and/or World Languages
- **One** AP Exam designated as offering a global perspective (World History, Human Geography, and/or United States Government and Politics: Comparative Government)
- **One** exam from the sciences or mathematics content areas
- **One** (or two) additional exam(s) from among any content areas except English and World Languages – or – **both** AP Seminar and AP Research (AP Capstone Program); and

Indicates on at least **one AP Exam** answer sheet that the results should be sent to a university outside the United States can earn the recognition of the AP International Diploma Scholar. Successful completion of a service-learning portfolio/project, C.L.A.S.S., will be also a required component of the program and completed through the AP Capstone Diploma courses – AP Seminar in 11th grade and AP Research in 12th grade. Participants will be recognized at graduation with an approved board designation AP Distinguished Scholars Diploma Seal and cord distinction.

**Content Related - Concentration Areas**

- **James Farmer Global Studies Scholar** – A concentration in Social Studies courses with an AP Capstone research project that reflects a theme/concept of that nature. AP exam scores in Social Studies and AP Capstone courses must be 3 or higher.

- **Sir Isaac Newton Science/Mathematics (STEM) Scholar** – A concentration in the areas of Science and Mathematics (STEM) with an AP Capstone research project that reflects a theme/concept of that nature. AP exam scores in Science, Mathematics, and AP Capstone courses must be 3 or higher.

- **Thomas Jefferson Renaissance Scholar** – A concentration in the areas of English, World Language and Humanities courses with an AP Capstone research project that reflects a theme/concept of that nature. AP exam scores in English, World Language, Humanities, and AP Capstone courses must be 3 or higher.

- **Palmer Hayden Arts, Humanities, and Linguistic Scholar** – A concentration in Fine and Performing Arts courses with an AP Capstone research project that reflects a theme/concept of that nature. AP exam scores in the Fine and Performing Arts and AP Capstone courses must be 3 or higher.

**COMMUNITY LEADERSHIP AND SERVICE ABOVE SELF (C.L.A.S.S.) - The AP Capstone Diploma Program**

The **C.L.A.S.S.** service-learning project is a requirement for all APPX Signature Program students and is fulfilled through the successful completion of the AP Capstone Diploma Program. The AP Capstone Program is a two-year seminar and research course that explores real-world issues while focusing on developing critical analysis, communication and investigative skills. AP Capstone, developed by CollegeBoard, is built on the
foundation of two courses – AP Seminar (II) and AP Research (I2) – and is designed to complement and enhance the in-depth, discipline-specific study provided through AP courses. It cultivates curious, independent, and collaborative scholars and prepares them to make logical, evidence-based decisions.

**C.L.A.S.S.** is intended to assist students in demonstrating leadership potential, aid in making a difference on a local and/or global level, and facilitate growth for the student as an individual. **C.L.A.S.S.** will also help to meet the community service requirements for the Virginia Board of Education’s Excellence in Civics Education Seal and will qualify the students for consideration of the President’s Volunteer Service Award. Students who earn scores of 3 or higher in both of the AP Capstone courses and on four additional AP Exams of their choosing will receive the AP Capstone Diploma™. Students who earn scores of 3 or higher in both of the AP Capstone courses but not on the four additional AP Exams will receive the AP Seminar and Research Certificate™, signifying successful performance in those courses.
**SCPS – AP Program of Excellence (APPX):**

<table>
<thead>
<tr>
<th>Courses for APPX Concentration Areas</th>
<th>James Farmer Global Studies</th>
<th>Sir Isaac Newton Math/Science (STEM)</th>
<th>Palmer Hayden Arts, Humanities, and Linguistic Scholar</th>
<th>Thomas Jefferson Renaissance Scholar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses Specific Content</td>
<td>AP World History</td>
<td>AP Statistics</td>
<td>AP English II</td>
<td>AP Core Subject Area** (English)</td>
</tr>
<tr>
<td></td>
<td>AP US History</td>
<td>AP Calculus (AB or BC)</td>
<td>AP English II</td>
<td>-OR-</td>
</tr>
<tr>
<td></td>
<td>AP Government/AP Comparative Government</td>
<td>AP Physics -OR-</td>
<td>AP Art History</td>
<td>-OR-</td>
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<tr>
<td></td>
<td>-OR-</td>
<td>[Physics and AP Science Choice]</td>
<td>AP Music Theory</td>
<td>-OR-</td>
</tr>
<tr>
<td></td>
<td>AP US Government</td>
<td></td>
<td>AP World Language</td>
<td></td>
</tr>
<tr>
<td>Required for students</td>
<td>[AP Seminar and AP Research]*</td>
<td>[AP Seminar and AP Research]*</td>
<td>[AP Seminar and AP Research]*</td>
<td>[AP Seminar and AP Research]*</td>
</tr>
<tr>
<td>Select 2 (For students in program prior to 2016-2017)</td>
<td>Two AP Core Subject Areas (English, Math, Science)</td>
<td>Two AP Core Subject Areas (English or Social Studies)</td>
<td>Two AP Core Subject Areas (Social Studies, Science, Math)</td>
<td>AP Course Selection of Interest</td>
</tr>
<tr>
<td>Select at least 1</td>
<td>AP English II</td>
<td>AP English II</td>
<td>AP Math Choice</td>
<td>AP Course Selection of Interest</td>
</tr>
<tr>
<td></td>
<td>AP English I2</td>
<td>AP English II</td>
<td>AP Science Choice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AP Statistics</td>
<td>AP Social Studies Choice</td>
<td>AP Social Studies Choice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AP Math Choice</td>
<td>AP Biology</td>
<td>AP Biology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AP Science Choice</td>
<td>AP Chemistry</td>
<td>AP Chemistry</td>
<td></td>
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<tr>
<td></td>
<td>AP Psychology</td>
<td>AP Environmental Science</td>
<td>AP Environmental Science</td>
<td></td>
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<tr>
<td></td>
<td>AP European History</td>
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<tr>
<td></td>
<td>AP Human Geography</td>
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</tbody>
</table>
| *Successful completion of the AP Capstone Diploma Program courses, AP Seminar and AP Research, is required to fulfill the C.L.A.S.S. requirement for the APPX distinction.*

**Thomas Jefferson Renaissance Scholars must select 3 different subject areas to fulfill the AP required courses specific content component.**

**Please Note:** Students beginning the APPX program during the school year 2016-2017 will be required to complete both the AP Seminar and AP Research courses. Students currently enrolled in the APPX program may elect to complete the C.L.A.S.S. requirement through the traditional track of a 50 hour independent service-learning project.
The Commonwealth Governor’s School (CGS) curriculum is designed to challenge students in four major academic content areas, through problem-based instruction appropriate for gifted and highly motivated learners and to focus on the community issues of environment, development, and service. Students who successfully go through the CGS application process and are selected to participate in the program become eligible for gifted services and programming in SCPS. High-speed Internet access, desktop videoconferencing, and e-mail enable students to reach worldwide resources for special interest projects and intensive research. Advanced Placement options are available. Students participate in foreign language, health/PE, electives, and activities at their home-based high school. The CGS faculty is determined to provide the kind of coaching, mentoring, and individualization gifted and highly motivated learners need to achieve their fullest potential.

Students attending CGS will pursue a yearlong independent research (culminating) project of an interest, topic, question, or initiative they would like to develop. The student will work with an advisor, project expert, and other CGS faculty members on research skills, statistical analysis, project development, and presentation skills.

Course work in the Commonwealth Governor’s School curriculum includes Honors, Dual Enrollment, and Advanced Placement opportunities. Students as early as 9th grade can take advantage of these advanced classes. Students are expected to sign the Early College Scholars Agreement and complete coursework and assessments that will earn at least 15 transferable college credits.

The Commonwealth Governor’s School believes in the need for students to learn outside of a traditional classroom setting. As a result, CGS students participate in five to six field experiences per year. These hands-on learning opportunities enable students to pursue real life applications of curriculum content as well as work with experts in a variety of career fields.

Students wishing to apply should contact their school’s counselors or gifted education resource teachers. The applications for the Commonwealth Governor’s School are due in February, and students are notified of their status in May.

For more information, please visit: [www.cgsva.org](http://www.cgsva.org) or see your gifted resource teacher (FOCUS) at your school.

Below is the CGS Program of Study:

<table>
<thead>
<tr>
<th></th>
<th>Ninth Grade</th>
<th>Tenth Grade</th>
<th>Eleventh Grade</th>
<th>Twelfth Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
<td>Honors English 9</td>
<td>Honors English 10</td>
<td>AP English Language &amp; Composition #</td>
<td>AP English Literature &amp; Composition #</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Honors Algebra II</td>
<td></td>
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<tr>
<td><em>Must have successfully completed the Algebra I course.</em></td>
<td></td>
<td>Honors Geometry with Trigonometry or Honors Math Analysis with Discrete Topics</td>
<td>Honors Math Analysis with Discrete Topics or AP Calculus BC #</td>
<td>AP Calculus BC # or AP Statistics #</td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td>AP Environmental Science*/#</td>
<td>AP Biology #</td>
<td>Dual Enrollment Chemistry ◊ # (Virtual Virginia AP Chemistry may be assigned by CGS Director)</td>
<td>AP Physics 1 #</td>
</tr>
<tr>
<td><em>Class of 2013 and beyond</em></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Studies</strong></td>
<td>AP European History #</td>
<td>AP U.S. Government #</td>
<td>AP U.S. History #</td>
<td>AP Human Geography #</td>
</tr>
</tbody>
</table>

*Students entering the CGS program must have completed Algebra I prior to the 9th grade.

# Weighted Classes. ◊ College credit is available through a dual-enrollment option. DE Chemistry earns a .5 weight.

Note: Additional fees may be required for courses included in the CGS program. All efforts will be made to keep fees to a maximum of $75 or less. In the case that required fees present a hardship to the student or family, it is encouraged that the need for assistance be communicated to the school counselor.
ENGLISH

ENGLISH 9: HONORS ENGLISH 9  1130G
Grade 9  1 Credit

Honors English 9 introduces students to the critical analysis of literature through challenging reading, writing, and discussion. Students study the defining characteristics of the forms and levels of discourse, both imaginative and expository. Students apply their skills to timeless problems of communities, their environment, and their development. In addition, students study the fictional representation as well as the historical facts surrounding key events in European history.
Schools offering course: CGS Sites

ENGLISH 10: HONORS ENGLISH 10  1140G
Grade 10  1 Credit

Basic concepts learned in the 9th grade course are applied to literary works of increasing complexity. Special attention is given to the relationship between and among individuals, their society, and their environment. Written and oral work increasingly emphasizes persuasive forms appropriate to public discourses and to problem-solving in human communities.
Schools offering course: CGS Sites

ENGLISH 11: AP ENGLISH LANGUAGE and COMPOSITION  1196G
Grade 11  1 Credit#

Students extend and refine their skills in critical reading and writing and will prepare for the 11th grade Standards of Learning test. These skills are applied to examining the American cultural experience and its connections to the world. English and Social Studies content will thus reinforce each other. Reading and writing assignments will be challenging and designed to expand student sophistication in exploring aesthetic and cultural issues, as well as to prepare them for college writing and for the opportunity to take the Advanced Placement English Language and Composition exam.
Schools offering course: CGS Sites

ENGLISH 12: AP ENGLISH LITERATURE and COMPOSITION  1195G
Grade 12  1 Credit#

In this course, students will apply their critical English skills to European and American literature, analyzing the development of cultural trends, including changing views of the protagonist and the surrounding social climate. Students will develop an understanding of major cultural developments of the nineteenth and twentieth centuries. In addition, students will examine the cultural landscape through both its fictional representation and through an examination of factual information presented in CGS Human Geography. Students will also have the opportunity to take the Advanced Placement English Literature and Composition Exam.
Schools offering course: CGS Sites

SOCIAL STUDIES

SOCIAL STUDIES 9: AP EUROPEAN HISTORY  2399G
Grade 9  1 Credit#

AP European History is a world history and geography survey course designed to emphasize higher cognitive and critical thinking skills. Problem-solving strategies are utilized to teach basic social science skills such as map reading, research, comparison-making, and assessing cause and effect. Students will be prepared for the Standards of Learning World History from 1500 AD to the Present and World Geography test. Students will have met the requirements for World History and will be eligible to take the Advanced Placement European History exam.
Schools offering course: CGS Sites
SOCIAL STUDIES 10: AP U.S. GOVERNMENT
Grade 10
2445G
1 Credit#

This government course is designed to enable students to identify and analyze political theory while examining the institutions, political processes, and practices of local, state, and national governments. Students identify topics of community, national, and international concern, gather data and research possible solutions. Students will have met the requirements for U.S. Government and will be eligible to take the Advanced Placement U.S. Government exam.

Schools offering course: CGS Sites

SOCIAL STUDIES 11: AP U.S. HISTORY
Grades 11-12
2319G
1 Credit#

This U.S. History course is designed to present U.S. History within a global perspective. Emphasis will be on critical reading and writing. Students will interpret and utilize factual data to construct historical arguments and develop a deeper understanding of contemporary American society. Students will take the Standards of Learning U.S. History test and will be eligible to take the Advanced Placement U.S. History exam.

Schools offering course: CGS Sites

SOCIAL STUDIES 12: AP HUMAN GEOGRAPHY
Grade 12
2212G
1 Credit#

This course provides students with the opportunity to identify and analyze contemporary concerns and problems from local, national, and global perspectives. Using geographical tools and skills, students consider issues pertaining to population distribution and composition, cultural patterns and processes, political organization, land use, industrialization and economic development, and urbanization. Students will take the World Geography Standards of Learning test and will be eligible to take the Advanced Placement Human Geography exam.

Schools offering course: CGS Sites

MATHEMATICS

MATHEMATICS 9: HONORS ALGEBRA II
Grade 9
3135G
1 Credit

This course presents an in-depth study of algebra topics, including the study of linear and quadratic equations, functions and systems; irrational and complex numbers, matrix theory, conic sections, and polynomials; sequences and series; and probability. Students will take the Standards of Learning Algebra II test.

Schools offering course: CGS Sites

MATHEMATICS 10: HONORS GEOMETRY WITH TRIGONOMETRY
Grade 10
3143G
1 Credit

This course will consist of a range of geometry and trigonometry topics, including logic and deductive reasoning, angles, parallel lines, congruence and similarity, triangles, quadrilaterals, polygons, circles, trigonometric functions (triangular and circular), trigonometric identities, and applications of trigonometry. Students will take the Standards of Learning Geometry test.

Schools offering course: CGS Sites

HONORS MATH ANALYSIS WITH DISCRETE TOPICS
Grades 10-11
3162G
1 Credit

This course will study functions and their properties, including exponential and logarithmic, rational, and trigonometric functions (triangular and circular). Trigonometric identities, applications of trigonometry, parametric equations, vectors, sequences, and series will also be explored. Discrete topics will include the mathematics of choice, management science, and growth and symmetry.

Schools offering course: CGS Sites
**SCIENCE**

**SCIENCE 9: AP ENVIRONMENTAL SCIENCE 4270G**

*Grade 9 1 Credit#

The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science. Scientific principles and analysis are stressed and a laboratory component is included. AP Environmental Science is designed to provide students with the methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving, and/or preventing them. This course is intended to enable students to undertake, as first year college students, a more advanced study of topics in environmental science.

*Schools offering course: CGS Sites*

**SCIENCE 10: AP BIOLOGY 4370G**

*Grade 10 1 Credit#

This course is the equivalent of a two-semester college introductory biology course. The course follows the AP College Board criteria by exploring fundamental characteristics of living matter through three general areas of study: molecules and cells, heredity and evolution, and organism and populations. The two main goals of AP Biology are to help students develop a conceptual framework for modern biology and to help students gain an appreciation of science as a process. Primary emphasis in an AP Biology course will be on developing an understanding of concepts rather than on memorizing terms and technical details. Essential to this conceptual understanding are the following: a grasp of science as a process rather than as an accumulation of facts; personal experience in scientific inquiry; recognition of unifying themes that integrate the major topics of biology; and application of biological knowledge and critical thinking to environmental and social concerns.

*Schools offering course: CGS Sites*

**SCIENCE 11: DE CHEMISTRY 4420G**

*Grade 11 1 Credit#

This course will be a college-level Chemistry course with a dual enrollment option. Students electing the dual enrollment option will be expected to complete college level course work with academic standards equivalent to other community college courses. Summer assignments may be required.

*Schools offering course: CGS Sites*

**SCIENCE 12: AP PHYSICS 1 4573G**

*Grade 12 1 Credit#

Students will explore mechanical concepts, electricity and magnetism, and modern physics required by most colleges in an introductory physics course. An analytical approach will provide students with a rich laboratory and problem-solving experience while preparing students to take the AP Physics B exam. Summer assignments may be required.

*Schools offering course: CGS Sites*
THE INTERNATIONAL BACCALAUREATE DIPLOMA PROGRAMME

The International Baccalaureate (IB) Diploma Programme is a rigorous pre-university course of studies (leading to examinations) that meets the needs of highly motivated secondary school students in the last two years of high school. When combined with the MVHS or BPHS ‘pre-IB’ preparatory courses in grades 9-10, the IB Diploma Programme is a coordinated four-year sequence of college preparatory study.

Students who are self-motivated and high-achieving may choose to enroll in one or more IB subject courses in an area of particular strength and interest or they may enroll in the full IB Diploma Programme. Students who choose to pursue individual IB subjects earn an IB Certificate for each IB course successfully completed. Students who choose to pursue the full IB Diploma Programme work toward earning the IB Diploma (while simultaneously earning the Advanced Studies Diploma).

Students must fill out an application before enrolling in the full IB Diploma Programme. Students wishing to transfer from one SCPS school zone to MVHS or BPHS for the IB Diploma Program must apply for the full IB Diploma Program (may not transfer for individual IB courses).

Students pursuing the full IB Diploma must complete one subject from each of the six subject groups. In addition, the full IB Diploma student will write an independent 4000-word Extended Essay and complete the Theory of Knowledge (ToK) course as well as Creativity, Activity, and Service (CAS) requirements. Full IB Diploma students must take at least three HL (higher level) IB courses during the junior and senior years; the remaining three IB courses will be SL (standard level).

It is strongly recommended that students interested in the IB Diploma Programme visit the IB page at the BPHS or MVHS website for more information and attend an IB Information Night at one of the two schools.

For Further Information:

MVHS – Theresa Gaddy, IB Coordinator (540) 658-6840 or gaddytm@staffordschools.net
BPHS – Julie Stemple-Hoover, IB Coordinator (540) 658-6080 or stemplehooverje@staffordschools.net
## Sequence of Pre IB/Honors and IB Courses for Grades 9-12

The following sequence of courses is a suggested program of study for students interested in pursuing the IB Diploma or individual IB subject certificates. **Some scheduling modifications to the sequence below are available at both schools.** Individual student schedules should be developed with the help of parents, counselors, and the IBN coordinator.

<table>
<thead>
<tr>
<th>IB HEXAGON GROUP</th>
<th>9th grade ‘pre-IB’</th>
<th>10th grade ‘pre-IB’</th>
<th>11th grade IB</th>
<th>12th grade IB</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group 1 Language A</strong></td>
<td>Honors English 9</td>
<td>Honors English 10</td>
<td>IB Language and Literature</td>
<td></td>
</tr>
<tr>
<td><strong>Group 2 Language B</strong></td>
<td>French Level 2</td>
<td>French Level 3</td>
<td>IB French</td>
<td></td>
</tr>
<tr>
<td></td>
<td>German Level 2</td>
<td>German Level 3</td>
<td>IB German</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spanish Level 2</td>
<td>Spanish Level 3</td>
<td>IB Spanish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Latin Level 2</td>
<td>Latin Level 3</td>
<td>IB Latin</td>
<td></td>
</tr>
<tr>
<td><strong>Group 3 Ind. And Societies</strong></td>
<td>Honors World Hist. II (MV)</td>
<td>AP Comp. Gov.</td>
<td>IB History</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Honors World Hist. II OR AP World History (BP)</td>
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<tr>
<td><strong>Group 4 Experimental Science</strong></td>
<td>Honors Biology</td>
<td>Honors Chemistry</td>
<td>IB Biology, IB Chemistry, or IB Physics</td>
<td></td>
</tr>
<tr>
<td><strong>Group 5 Mathematics</strong></td>
<td>Honors Geometry</td>
<td>Honors Algebra II</td>
<td>IB Math Studies</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Honors Algebra II</td>
<td>Math Analysis</td>
<td>IB Mathematics</td>
<td></td>
</tr>
<tr>
<td><strong>Group 6 IB Art or IB Elective</strong></td>
<td>Art 1</td>
<td>Art 2</td>
<td>IB Art (1-year) or IB Art (2-year)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Drama 1</td>
<td>Drama 2</td>
<td>IB Theater</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Band or Chorus</td>
<td>Band or Chorus</td>
<td>IB Music (BPHS ONLY)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Elective</td>
<td>Elective</td>
<td>Free Elective or IB Elective (1-year)</td>
<td>Free Elective or IB Elective (1-year)</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Health/PE 9</td>
<td>Health/PE 10</td>
<td>Elective or Personal Finance</td>
<td>Elective or Personal Finance</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Elective</td>
<td>Elective or Personal Finance</td>
<td>Theory of Knowledge</td>
<td>Theory of Knowledge</td>
</tr>
</tbody>
</table>

### 9th and 10th grade “pre-IB” Note:
IB Full Diploma students do not need to take Earth Science or World History I in ninth grade. Taking an IB Higher Level Science Course and the IB Higher Level History Course fulfills the VA requirements for graduation, respectively. However, if a student should decide not to pursue the full IB Diploma in the junior year, he or she may then be required to go back and take those courses.

### IB Diploma Program Notes:
Most IB courses are two-year courses that begin in the 11th grade and finish at the end of the 12th grade. Some IB courses (mostly electives) are year-long courses. IB electives include: Social and Cultural Anthropology, Computer Science, Psychology, Environmental Systems and Societies, and Business Management.

Course offerings at MVHS and BPHS may differ slightly. Call ahead or make an appointment to verify with a counselor or the IB Coordinator before making final course decisions.

Also note that it is assumed all students pursuing the Full IB Diploma have taken at least one level of world language and Algebra I in eighth grade. If the student has not, he or she may still pursue the IB diploma, but the course sequence may be somewhat different.

Students enrolling in IB courses must complete all IB assessments, including the IB exam, to earn IB course credit.

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**IB courses are offered at both the higher level (HL) and standard level (SL), both of which are college-level. HLs cover more material at a faster pace and greater depth.**
**IB GROUP 1: LANGUAGE & LITERATURE**

The IB Language A courses in English are designed to support future academic study by developing high levels of language competence and communication skills as well as social, aesthetic and cultural literacy. Literature plays a central role in the courses, which aim to support lifelong learning through engaging students as actively as possible with the texts they study. The study of texts, both literary and non-literary, provides a focus for developing an understanding of how language works to create meanings in a culture, as well as in particular texts. All texts may be understood according to their form, content, purpose, and audience, and through the social, historical, cultural and workplace contexts that produce and value them. Responding to and producing texts promotes an understanding of how language sustains or challenges ways of thinking and being. All IB Language A courses in English at SCPS are two-year courses, with external examinations at the end of the second year. Students interested in earning an IB certificate in Language A must complete both classes in the two-year sequence and successfully complete all IB assessments. Students interested in earning the full IB Diploma must successfully complete one of the two-year IB Language A courses as a required component of the program.

**IB GROUP 2: LANGUAGE ACQUISITION**

**WORLD LANGUAGES**

These courses are designed for world language learners and focus primarily on the interaction between speakers and writers of the target language. The aim of each course is to prepare students to use the language appropriately in a range of situations and contexts for a variety of purposes. An awareness and appreciation of the cultures of the countries in which the target language is spoken is also an important component of these courses.

**IB GROUP 3: INDIVIDUALS AND SOCIETIES**

Courses in Group 3 span the humanities and social sciences. Subject matter in Group 3 courses is contestable and requires students to tolerate some uncertainty. Studies of global perspectives and local situations foster an appreciation of change and continuity as well as of similarity and difference. Students evaluate major theories, research findings and concepts, and learn each subject's methodology.

**IB GROUP 4: EXPERIMENTAL SCIENCES**

Experimental science subjects promote an understanding of the concepts, principles, and applications of the respective disciplines, together with an appreciation of the methodology of the experimental sciences. Students develop practical laboratory skills as well as the ability to work collaboratively through participating in an interdisciplinary group project. A common curriculum model offers a parallel structure at both higher and standard levels whereby all students study a core of material which is supplemented by various options. A study of local and international examples helps students develop an awareness of moral and ethical issues and promotes social responsibility.

**IB GROUP 5: MATHEMATICS**

Each course in Group 5 aims to deepen a student's understanding of mathematics as a discipline and to promote confidence and facility in the use of mathematical language. Each math course is designed to cater to different abilities and levels of student interest. IB math courses are inclusive, meaning they encompass all typical high school math topics: algebra, geometry, trigonometry, math analysis, statistics, probability, and calculus.

**IB GROUP 6: THE ARTS**

Each course in Group 6 places emphasis on practical production by the student and exploration of a range of creative work in a global context. Many approaches to learning are emphasized and embrace a wide variety of expressive forms from a range of cultural contexts. Connections are made between areas of study and human experiences through collaborative, as well as individual production and interpretation. Engagement in the arts promotes a sense of identity and makes a unique contribution to the development of each student. Study of the arts provides students with the opportunity to develop a critical and intensely personal view of themselves in relation to the world. These courses also promote knowledge of art from various cultures.
Stafford Academy for Technology (STAT): A Governor's STEM Academy is only one of 23 state-approved Governor's STEM Academies in Virginia. STAT is a four-year program of study utilizing a hands-on, project-based model of instruction focused on the career pathways described below. The STAT instructional team includes teachers from the Career and Technical (specialty) area, as well as science, English and mathematics teachers. STAT is open to rising 9th graders on an application basis and to 10th graders who have taken the first Career and Technical course in that sequence. Bus transportation from the base school is provided. Students are required to use bus service for all classes requiring transportation from a base school to a different high school.

STAT offers students the advantage of learning in a “cohort” of like-minded students during 9th–12th grade in both academic and CTE courses. Course content is integrated to create a more coherent learning experience. Courses are integrated with Project Lead the Way (PLTW) applications and taught at an honors level that prepares students for college-level courses in grades 11-12. At the end of 10th grade, students will be asked to reassess their academic plans -- they can stay in the STAT academic cohort class for 11th/12th grade OR they can opt out of their STAT academic cohort and take higher level courses at their base school. In order to avoid scheduling problems between the base school and program school, students must opt out of all STAT academic classes, not just one. Students that opt out of the academic cohort would remain in the STAT CTE Cohort and travel to the program school for half of the day and then return to their base school. Students will undertake long-term projects and partner with mentors in the business community to build a stronger sense of purpose and a firm commitment to success in post-secondary education. A service-learning experience will be infused into CTE coursework.

**INFORMATION TECHNOLOGY (BPHS)**

The curriculum design is focused on a general computer science course of study. Brooke Point High School's program encompasses two blocks every day.

**ENGINEERING AND TECHNOLOGY (NSHS)**

The curriculum design is focused on a general engineering and technology course of study utilizing the Project Lead the Way (www.pltw.org) framework. The North Stafford High School program encompasses two blocks every day. Five of the PLTW Engineering courses will be assigned a .5 weight -- course #’s 8439, 8440, 8441, 8430 and 8442. In order to receive a weighted credit, students must complete the course and the appropriate PLTW end-of-course exam.

**BIOMEDICAL SCIENCES (NSHS)**

The curriculum design is focused on the exploration of a wide variety of health care and science career options utilizing the Project Lead the Way Biomedical Sciences (www.pltw.org) framework. North Stafford High School's program encompasses two blocks every day.
### Information Technology Curriculum (Brooke Point High School)

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade (Two Technical Courses)</th>
<th>12th Grade (Two Technical Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information Technology Course(s)</strong></td>
<td>Cybersecurity 6302S</td>
<td>Advanced Programming 6641S</td>
<td>AP Computer Science 3185S</td>
<td>CLASS OF 2019–21: IB Computer Science IB3185S AND Cybersecurity 6302</td>
</tr>
<tr>
<td><strong>Mathematics 4 credits</strong></td>
<td>Algebra 1 3130S or Honors Algebra 1 3130SH or Geometry 3143S or Honors Geometry 3143SH or Algebra II 3135S or Honors Algebra II 3135SH</td>
<td>Geometry 3143S or Honors Geometry 3143SH or Algebra II 3135S or Honors Algebra II 3135SH</td>
<td>Students follow next course in sequence at base school based on teacher recommendation: Algebra II, Honors Algebra II, Algebra III, Math Analysis, Calculus, AP Calculus**</td>
<td></td>
</tr>
<tr>
<td><strong>Science 4 credits</strong></td>
<td>Honors Earth Science 4210SH</td>
<td>Honors Biology 4310SH</td>
<td>Honors Chemistry 4410 SH***</td>
<td>Honors Physics 4510 SH***</td>
</tr>
<tr>
<td><strong>English 4 credits</strong></td>
<td>Honors English 9 1130SH</td>
<td>Honors English 10 1140SH</td>
<td>Honors English 11 1150 SH***</td>
<td>DE English Composition 1177SD***</td>
</tr>
</tbody>
</table>

### Engineering and Technology Program at North Stafford High School

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade (Two technical electives)</th>
<th>12th Grade (Two technical electives)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engineering and Technology course(s)</strong></td>
<td>Introduction to Engineering Design 8439S#</td>
<td>Aerospace Engineering 8428S or Digital Electronics 8440S#</td>
<td>Principles of Engineering 8441S# AND</td>
<td>Engineering Design &amp; Development (EDD) Capstone Course 8443S AND</td>
</tr>
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<td></td>
<td></td>
<td>Civil Engineering &amp; Architecture 8430S# or Computer Integrated Manufacturing 8442S#</td>
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<td></td>
<td></td>
<td></td>
<td>Engineering Practicum to align with EDD 8453S</td>
</tr>
<tr>
<td><strong>Mathematics 4 credits</strong></td>
<td>Algebra 1 3130S or Honors Algebra 1 3130SH</td>
<td>Geometry 3143S or Honors Geometry 3143SH</td>
<td>Students follow next course in sequence at base school based on teacher recommendation: Algebra II, Honors Algebra II, Algebra III, Math Analysis, Calculus, AP Calculus**</td>
<td></td>
</tr>
</tbody>
</table>
### Information Technology Curriculum (Brooke Point High School)

<table>
<thead>
<tr>
<th>Grade</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade (Two Technical Courses)</th>
<th>12th Grade (Two Technical Courses)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Science</strong></td>
<td>Geometry 3143S or Honors Geometry</td>
<td>or Algebra II 3135S or Honors Algebra II 3135SH *</td>
<td>Calculus**</td>
<td></td>
</tr>
<tr>
<td><strong>4 credits</strong></td>
<td>3143SH or Algebra II 3135S or Honors Algebra II 3135SH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>English</strong></td>
<td>Honors Earth Science 4210SH</td>
<td>Honors Biology 4310SH</td>
<td>Honors Chemistry 4410SH ***</td>
<td>Honors Physics 4573S</td>
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<tr>
<td><strong>4 credits</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

*Students taking Algebra II in 9th grade will be offered schedule adjustments which allow them to remain on their advanced mathematics track.**

**Math is highly recommended at base school during 11th and 12th grade years. Students who intend to pursue STEM college majors and careers should choose four courses of algebra-based math (as shown) to fulfill four required credits of math. Statistics should be added as an elective. Social Studies, Physical Education, World Language and electives should be based on student preference and availability. Students are required to earn an Advanced Studies Diploma.

*** During the 11th and 12th grades, students will have the option to "opt up" from the STAT academic cohort to take any higher-level course, based on availability at base school. College-level credit may be available in some academic and CTE courses.

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### Biomedical Sciences Program at North Stafford High School

<table>
<thead>
<tr>
<th>Grade</th>
<th>9th Grade</th>
<th>10th Grade</th>
<th>11th Grade (one technical elective, two credits)</th>
<th>12th Grade (one technical elective, two credits)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biomedical Sciences course(s)</strong></td>
<td>Principles of Biomedical Sciences 8379S</td>
<td>Human Body Systems 8380S</td>
<td>Medical Interventions 8381S</td>
<td>Biomedical Innovation (BI) Capstone Course 8382S</td>
</tr>
<tr>
<td><strong>Mathematics</strong></td>
<td>Algebra I 3130S or Honors Algebra I 3130SH or Geometry 3143S or Honors Geometry 3143SH or Algebra II 3135S or Honors Algebra II 3135SH</td>
<td>Geometry 3143S Honors Geometry 3143SH or Algebra II 3135S or Honors Algebra II 3135SH *</td>
<td>Students follow next course in sequence at base school based on teacher recommendation: Algebra II, Honors Algebra II, Algebra III, Math Analysis, Calculus, AP Calculus**</td>
<td></td>
</tr>
<tr>
<td><strong>4 credits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Science</strong></td>
<td>Honors Biology 4310SH</td>
<td>Anatomy &amp; Physiology 4330S</td>
<td>Honors Chemistry 4410SH ***</td>
<td>Honors Physics 4510SH ***</td>
</tr>
<tr>
<td><strong>4 credits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>English</strong></td>
<td>Honors English 9 1130SH</td>
<td>Honors English 10 1140SH</td>
<td>Honors English 11 1150SH ***</td>
<td>Dual Enrollment English Composition 1177SD ***</td>
</tr>
<tr>
<td><strong>4 credits</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Students taking Algebra II in 9th grade will be offered schedule adjustments which allow them to remain on their advanced mathematics track.

**Math is highly recommended at base school during 11th and 12th grade years. Students who intend to pursue STEM college majors and careers should choose four courses of algebra-based math (as shown) to fulfill four required credits of math. Statistics should be added as an elective. Social Studies, Physical Education, World Language and electives should be based on student preference and availability. Students are required to earn an Advanced Studies Diploma.

*** During the 11th and 12th grades, students will have the option to "opt up" from the STAT academic cohort to take any higher-level course, based on availability at base school. College-level credit may be available in some academic and CTE courses.
A JROTC curriculum consists of three components: Aerospace Science (AS), Leadership Education (LE) and Wellness. AS is the main component of the AFJROTC program and include Basic Aviation History and Advanced, Advanced Science of Flight, Exploring Space, Global Awareness, and/or Survival. AS acquaints students with the historical, scientific, and technical aspects of aerospace. LE is the AFJROTC curriculum component aimed at developing leadership skills; LE acquaints students with the practical application of life skills to include discipline, responsibility, leadership, followership, citizenship, customs and courtesies, cadet corps activities, study habits, time management, communication skills, and leadership and management studies. Basic military drill is incorporated for each level course. The Wellness component is keyed to the abilities of the individual students with the goal of meeting or exceeding the Presidential Physical Fitness Standards. The objectives of AFJROTC are to educate and train high school cadets in citizenship; promote community service; instill responsibility, character and self-discipline; and provide instruction in air and space fundamentals. The basic history course is taught every year, and the advanced courses are rotated annually.

**AIR FORCE MILITARY SCIENCE I**

Grades 9–12

1 Credit

This is the basic AS course for all new cadets. It is an aviation history course focusing on the development of flight throughout the centuries. It starts with ancient civilizations, then progresses through time to modern day. The emphasis is on civilian and military contributions to aviation; the development, modernization, and transformation of the Air Force; and a brief astronomical and space exploration history. It is interspersed with concise overviews of the principles of flight to include basic aeronautics, aircraft motion and control, flight power, and rockets. Throughout the course, there are readings, videos, hands on activities, and in-text and student workbook exercises to guide in the reinforcement of the materials. The leadership portion includes heritage, organization, and traditions of the Air Force; individual self-control, citizenship in the United States, and wellness, health and fitness. AS I cadets are welcome to serve as Group Staff trainees.

**Schools offering course:** NSHS

**AIR FORCE MILITARY SCIENCE II**

AF7916

Grades 10–12

1 Credit

**Recommended Background:** Air Force Military Science I

This advanced course is designated to acquaint the student with the aerospace environment, the human requirements of flight, principles of aircraft flight, and principles of navigation. The course begins with a discussion of the atmosphere and weather. After developing an understanding of the environment, how that environment affects flight is introduced. Discussions include the forces of lift, drag, thrust, and weight. Students also learn basic navigation including map reading, course plotting, and the effects of wind. The portion on the Human Requirements of Flight contains information on human physiology. The leadership portion of the course concentrates on Life Skills and Career Opportunities. Topics include choosing ones path, job searching, financial planning, and career opportunities. AS III cadets serve as trainers in class and are encouraged to serve on Group Staff.

**Schools offering course:** NSHS

**AIR FORCE MILITARY SCIENCE III**

AF7918

Grades 10–12

1 Credit

**Recommended Background:** Air Force Military Science II

This science course includes up-to-date information in space science and space exploration. The course begins with the interest in astronomy and early ideas of the heavens, through the Renaissance, and on to modern astronomy. It provides an in-depth study of the Earth, Sun, stars, Moon, and solar system, including the terrestrial and the outer planets. It discusses issues critical to travel in the upper atmosphere such as orbits and trajectories, unmanned satellites, and space probes. It investigates the importance of entering space and discusses manned and unmanned space flights, focusing on concepts surrounding spaceflight, space vehicles, launch systems, and space missions. The course covers human aspects of spaceflight, focusing on the human experience in space. It also examines advances in space technology, including robotics in space, the Mars Rover, and commercial uses of space.

**Schools offering course:** NSHS
AIR FORCE MILITARY SCIENCE IV  AF7919
Grades 10-12  1 Credit
Recommended Background: Air Force Military Science III

This is a customized course about the world's cultures. The course is specifically created for the US Army, Marine Corps, Navy, and Air Force JROTC programs. It acquaints students to world cultures through the study of world affairs, regional studies, and cultural awareness. The course delves into history, geography, religions, languages, culture, political systems, economics, social issues, environmental concerns, and human rights. It looks at major events and significant figures that have shaped each region. Throughout the course, there are readings, video segments, hands-on activities, other optional activities, technology enrichment, and assessments to guide in the reinforcement of the materials. 21st century skills as defined by the Partnership for 21st Century Skills are integrated into the course. The leadership portion of the course provides exposure to the fundamentals of management.

Schools offering course: NSHS

ARMY MILITARY SCIENCE I  7913
Grades 9-12  1 Credit

The first level course engages students in the practice of basic citizenship customs, traditions and in the exploration of opportunities for non-military and military service. The course consists of three units of instruction: Citizenship in Action, Leadership Theory and Application, and Foundation for Success. These modules orient cadets to the purpose of the Army JROTC program, their roles as cadets and the organization of the Department of Defense. Cadet leadership potential is further developed through the application of leadership principles, values, and strategies. Cadets learn to develop and expand their abilities to resolve conflict and prevent violence. This unit helps cadets prepare for life after high school by reinforcing the importance of career and personal financial planning.

Schools offering course: CFHS

ARMY MILITARY SCIENCE II  7916
Grades 10-12  1 Credit
Recommended Background: Army Military Science I

The second level of Military Science builds on the first year of instruction. The curriculum focuses on Wellness, Fitness and First Aid where cadets are provided information and strategies needed to take responsibility for their physical and mental wellness, learn how to assess their level of fitness, develop plans for nutrition and exercise improvement habits, and learn strategies to control stress. This unit also helps cadets to make responsible choices about substance use and measures and develop proficiency in providing basic first aid. In Geography, Map Skills, and Environmental Awareness, cadets learn map reading and land navigational skills and develop global awareness as they compare physical, political, economic and cultural elements of continents, regions, and countries.

Schools offering course: CFHS

ARMY MILITARY SCIENCE III  7918
Grades 11-12  1 Credit
Recommended Background: Army Military Science II

The third level of Military Science instruction incorporates Citizenship in American History and Government, while continuing to expand the cadet;
knowledge acquired in previous units. The curriculum builds on the basic skills and interest for participation in civic and political life. Cadets actively engage in the curriculum to explore the origins, structure, rights, and responsibilities of the American constitutional government. Cadets learn to apply problem solving strategies to current political and social issues. In addition, cadets are placed in positions of greater responsibility within the chain of command and staff to manage administrative and leadership responsibilities.

**Schools offering course: CFHS**

**ARMY MILITARY SCIENCE IV**

7919

Grade 12 1 Credit

**Recommended Background:** Army Military Science III

The fourth level of Military Science provides an opportunity for cadets to apply the knowledge learned during the previous three years of instruction. Cadets serve as assistant instructors for selected subjects. Fourth year cadets are responsible for the daily cadet Administration of the Corps of Cadets and perform in command and staff positions. Key components of the fourth year of instruction are development and implementation of Service Learning and Community Service initiatives within the secondary school environment and surrounding communities. Level IV cadet leaders serve lead planners for the annual Military Ball, Awards Ceremony, major field trips and Co-Curricular Team competitions.

**Schools offering course: CFHS**

**MCJROTC**

MCJROTC is a cadet run organization that teaches basic leadership, discipline, self-confidence, and encourages team work. Cadets are taught basic military knowledge, rules, regulations, and etiquette. Cadets are given opportunities to gain leadership roles and join MCJROTC teams. There is no obligation to join the military with taking MCJROTC courses, but cadets receive multiple benefits if they do decide to join any of the four services.

MCJROTC cadets also participate in a number of outside activities throughout the school year and during the summer months. These opportunities are designed to stimulate learning by hands-on experience and to reinforce classroom instruction.

Some of these activities include: School and local activities such as drill teams, rifle teams, orienteering, unit athletics, parades, field days, and nonpolitical community activities. Military/leadership training, orientation visits to various naval and military bases, and cruises aboard U.S. naval vessels may be conducted during the summer months.

**MARINE CORPS MILITARY SCIENCE I**

MC7913

Grades 9-11 1 Credit

**Recommended Background:** Marine Corps Military Science I

Students are introduced to the JROTC curriculum, and basic U.S. citizenship rights and responsibilities are established and reinforced. Students learn leadership, history, communication techniques, disciplined study habits, management skills, first aid, drug abuse prevention, map reading, physical fitness, and workplace readiness skills. Military customs and courtesies, proper uniform wear, and personal appearance guidelines are followed within the leadership lab, drill, and military ceremonies.

**Schools offering course: MVHS**

**MARINE CORPS MILITARY SCIENCE II**

MC7916

Grades 10-12 1 Credit

**Recommended Background:** Marine Corps Military Science I

This second course builds on the general introduction provided in Marine Corps I, to further develop the traits of citizenship and leadership in cadets, introduce cadets to technical areas of marine science. The course provides ongoing instruction in leadership and discipline, Military Justice, International Law and the Sea, National Strategy,
Maneuvering Board, Challenges of Future, Marine Research, Electricity, and Marine Electronics.

**Schools offering course:** MVHS

### MARINE CORPS MILITARY SCIENCE IV

**MC7919**

**Grades 12**

**1 Credit**

**Recommended Background:** Marine Corps Military Science III

This fourth course focuses solely on practical leadership. The intent is to assist the senior in understanding leadership and improving their leadership skills by putting them in positions of leadership, under supervision, then helping them analyze the reasons for their varying degrees of success through the year. Classroom activities include seminars, reading assignments, classroom presentations, and practical work with younger cadets. The course curriculum includes instruction in theoretical and applied aspects of leadership, training, and evaluation of performance. Students will become aware of the techniques used to create motivation, develop goals and activities for a work group, and the proper ways to set a leadership example. Cadets will also apply these principles when dealing with younger cadets in the areas of military drill and inspections, athletic events, and in other school activities.

**Schools offering course:** MVHS

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### NAVY JROTC

NIROTC is a cadet run organization that teaches basic leadership, discipline, self-confidence, and encourages team work. Cadets are taught basic military knowledge, rules, regulations, and etiquette. Cadets are given opportunities to gain leadership roles and join JROTC teams. There is no obligation to join the military with taking JROTC courses, but cadets receive multiple benefits if they do decide to join any of the four services.

NJROTC cadets also participate in a number of outside activities throughout the school year and during the summer months. These opportunities are designed to stimulate learning by hands-on experience and to reinforce classroom instruction. Some of these activities include: School and local activities such as drill teams, rifle teams, orienteering, unit athletics, parades, field days, and nonpolitical community activities. Military/leadership training, orientation visits to various naval and military bases, and cruises aboard U.S. naval vessels may be conducted during the summer months.

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### NAVY MILITARY SCIENCE I

**NA7913**

**Grades 9-11**

**1 Credit**

This first course introduces students to the meaning of citizenship, the elements of leadership, and the value of scholarship in attaining life goals; engenders a sound appreciation for the heritage and traditions of America, with recognition that the historically significant role of sea power will be important in America's future; and develops in each cadet a growing sense of pride in his/her organization, associates, and self. These elements are pursued at the fundamental level. The course includes Maritime Geography, Sea Power, Introductions to Navigation, Health Education, First Aid, and Drug, Alcohol, and Tobacco Abuse Prevention.

**Schools offering course:** BPHS, SHS

### NAVY MILITARY SCIENCE II

**NA7916**

**Grades 10-12**

**1 Credit**

**Recommended Background:** Navy Military Science I

This second course builds on the general introduction provided in Naval Science 1, to further develop the traits of citizenship and leadership in cadets, introduce cadets to technical areas of naval science, and engender a deeper awareness of the vital importance of the world oceans to the continued well-being of the United States. The course provides ongoing instruction in leadership theory, Naval Orientation, Citizenship, Maritime History, and Nautical Sciences including Oceanography, Meteorology, Astronomy and Physical Science.

**Schools offering course:** BPHS, SHS

### NAVY MILITARY SCIENCE III

**NA7918**

**Grades 11-12**

**1 Credit**

**Recommended Background:** Navy Military Science II

This third course broadens the understanding of students in the operative principles of military leadership, the concept and significance of teamwork, the intrinsic value of good order and discipline in the accomplishment of objectives, the fundamentals of American democracy, and to expand their understanding of naval academic subjects. The course provides ongoing instruction in leadership and discipline, Military Justice, International Law and the Sea, National Strategy,
Maneuvering Board, Challenges of Future, Navy Research, Electricity, and Naval Electronics.

**Schools offering course:** BPHS, SHS

**NAVY MILITARY SCIENCE IV**

<table>
<thead>
<tr>
<th>Grades</th>
<th>NA7919</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>1 Credit</td>
</tr>
</tbody>
</table>

**Recommended Background:** Navy Military Science III

This fourth course focuses solely on practical leadership. The intent is to assist the senior in understanding leadership and improving their leadership skills by putting them in positions of leadership, under supervision, then helping them analyze the reasons for their varying degrees of success through the year. Classroom activities include seminars, reading assignments, classroom presentations, and practical work with younger cadets. The course curriculum includes instruction in theoretical and applied aspects of leadership, training, and evaluation of performance. Students will become aware of the techniques used to create motivation, develop goals and activities for a work group, and the proper ways to set a leadership example. Cadets will also apply these principles when dealing with younger cadets in the areas of military drill and inspections, athletic events, and in other school activities.

**Schools offering course:** BPHS, SHS
CAREER AND TECHNICAL EDUCATION

All students are encouraged to seek Career and Technical Education (CTE) courses that provide a foundation for their career plans and interests. Industry certification exams are available in many CTE courses. Students should contact their CTE teacher or counselors for more details. Attendance, self-discipline, and safety awareness are vital to the successful enrollment and completion of CTE courses. All classes will not be offered at all schools due to enrollment and availability.

While students pursuing an Advanced Studies Diploma may enhance their career plans by enrolling in CTE courses, students pursuing a Standard Diploma MUST complete two sequential electives or a CTE concentration and pass an industry certification. Sequential electives MUST be selected from the same discipline or subject area to qualify as sequential electives, i.e. both courses from Agriculture, or both from Business, or both from Marketing, or both from Health and Medical Sciences, etc. Please refer to the VDOE sequence requirements at http://www.cteresource.org/apg/introduction.

A number of cooperative education (co-op) programs offer an opportunity to work at a part-time job while receiving high school credit. Students in co-op programs must provide their own transportation to the workplace. One (1) credit is awarded to students for successful completion of the program. Grades are awarded on a pass/fail basis. See your counselor or CTE teacher for more information.

CAREER AND TECHNICAL EDUCATION DUAL ENROLLMENT COURSES

<table>
<thead>
<tr>
<th>High School Course Name</th>
<th>College Course #</th>
<th>College Course Name</th>
<th>College Credits</th>
<th>Assessment Test Required (see NOTE below)</th>
<th>Schools</th>
</tr>
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<tbody>
<tr>
<td><strong>RICHARD BLAND COLLEGE</strong></td>
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<tr>
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<td>SDV 110</td>
<td>Student Development (Orientation to Teaching)</td>
<td>2</td>
<td>Reading &amp; Writing</td>
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<th>Assessment Test Required (see NOTE below)</th>
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<tr>
<td>Geospatial Technology I</td>
<td>GEOG 161</td>
<td>Geospatial Tools and Techniques</td>
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<td>No Compass</td>
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NOTE: Qualifying scores ENG 111 Qualified:
SAT Reading score of 500 or better, OR ACT Reading score of 21 or better, OR VPT ENG 111 Qualified.
Qualifying scores for Writing:
& SAT Writing score of 500 or better, OR ACT Writing score of 21 or better, OR VPT ENG 111 Qualified.
Qualifying scores for Math: SOL Algebra II 400+
* DE courses for CTE will only be offered if minimum enrollment is met, and DE course providers may vary.
CAREER AND TECHNICAL EDUCATION

CTE INDUSTRY CREDENTIAL REQUIREMENT FOR STANDARD DIPLOMA:

All students receiving a Standard Diploma are required to earn a career and technical education credential that has been approved by the Virginia Board of Education, that could include, but not be limited to, the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness skills assessment.

The chart below shows which CTE Industry Credential is offered in each CTE course offered in Stafford County Public Schools. All of these assessments are on the state-approved list of industry credentials.

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<thead>
<tr>
<th>SCPS CTE Course Title</th>
<th>Course</th>
<th>CTE Industry Credential Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting</td>
<td>6320</td>
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<tr>
<td>Advanced Accounting</td>
<td>6321</td>
<td>CTECS Workplace Readiness</td>
</tr>
<tr>
<td>Advanced Computer Information Systems</td>
<td>6613</td>
<td>MOS or CTECS Workplace Readiness</td>
</tr>
<tr>
<td>Advanced Design, Multimedia, and Web Technologies</td>
<td>6631</td>
<td>MOS student choice</td>
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<tr>
<td>Engineering Studies</td>
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<tr>
<td>Advanced Fashion Marketing</td>
<td>8145</td>
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<tr>
<td>Advanced Manufacturing Systems II</td>
<td>8427</td>
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<tr>
<td>Advanced Marketing</td>
<td>8130</td>
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<td>Advanced Programming</td>
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<td>Advanced Sports, Entertainment and Recreational Marketing</td>
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<td>Aerospace Engineering (PLTW)</td>
<td>8428</td>
<td>PLTW end of course test</td>
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<tr>
<td>Architectural Drawing and Design</td>
<td>8437</td>
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<td>Automotive Body Technology I</td>
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<tr>
<td>Automotive Body Technology II</td>
<td>8677</td>
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<td>Automotive Body Technology III</td>
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<td>Automotive Technology I</td>
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<tr>
<td>Automotive Technology II</td>
<td>8507</td>
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<tr>
<td>Automotive Technology III</td>
<td>8508</td>
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<td>Barbering I</td>
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<td>Barbering II</td>
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<td>Biomedical Innovations (PLTW)</td>
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<td>Construction Trades I</td>
<td>8515</td>
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<tr>
<td>Business Law</td>
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<td>Business Management</td>
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<td>Cabinetmaking I</td>
<td>8604</td>
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<td>Cabinetmaking II</td>
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<td>8601</td>
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<td>8603</td>
<td>CTECS Workplace Readiness or SkillsUSA Carpentry Examination</td>
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<tr>
<td>Child Development and Parenting</td>
<td>8232</td>
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<tr>
<td>Civil Engineering and Architecture (PLTW)</td>
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<tr>
<td>Communication Systems</td>
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<td>Computer Information Systems</td>
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<td>MOS</td>
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<td>Computer Integrated Manufacturing (PLTW)</td>
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<td>Cosmetology I</td>
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<td>Course</td>
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<td>ADDA—Architectural</td>
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<td>Military Science II (JROTC)</td>
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<td>Office Specialist I</td>
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<td>Office Specialist III</td>
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<td>Principles of Biomedical Sciences (PLTW)</td>
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<tr>
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<td>Principles of Engineering (PLTW)</td>
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<td>Principles of Technology I</td>
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<td>Principles of Technology II</td>
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<td>Production Systems</td>
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<td>Programming</td>
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<td>Sports, Entertainment and Recreational Marketing</td>
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<td>Teachers for Tomorrow (FACS)</td>
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<td>Technical Drawing and Design</td>
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<td>Video and Media Technology I</td>
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<td>Video and Media Technology II</td>
<td>8689</td>
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<tr>
<td>Video and Media Technology III</td>
<td>8690</td>
<td>CTECS Workplace Readiness</td>
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</table>
**CAREER AND TECHNICAL EDUCATION PROGRAM OF STUDIES**

‡ Students are required to use provided bus service for all classes requiring transportation from a base school to another high school.

● Application required

**NOTE:** All cooperative education programs require an application.

---

**DE VIRGINIA TEACHERS FOR TOMORROW**

Grade 12  
9062  
1 Credit

Student acceptance is based on application, teacher recommendation, and essay.

The DE Teachers for Tomorrow course introduces seniors to a career in teaching and education. The primary elements of the curriculum components are the learner, the school, and the teacher and teaching. The components are intentionally broad in scope and provide a great deal of flexibility based on the career interest of a student. In addition to the fundamental curriculum components, all students are required to observe and participate in an internship outside the classroom. The internship may be done from the pre-school through 12th grade. To complete a CTE sequence, students must add one Family and Consumer Sciences course.

**Schools offering course:** BPHS, MVHS, CFHS

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**AGRICULTURE & NATURAL RESOURCES**

**Future Farmers of America (FFA) is the co-curricular organization for horticulture students.**

‡**HORTICULTURE SCIENCES**  
8034  
Grades 10-12  
1 Credit

Students develop the necessary knowledge, skills, habits, and attitudes for entry-level employment and advancement in areas such as floriculture, landscape design, greenhouse operation, nursery plant production, and turf management. They receive instruction in using soil and other plant-growing media and in identifying, propagating, and growing horticultural plants in the greenhouse and land laboratory.

**Schools offering course:** NSHS

**GREENHOUSE PLANT PRODUCTION AND MANAGEMENT**  
8035  
Grades 10-12  
2 Credits

**Recommended Background:** Horticulture Sciences

Students enrolled in this course learn the operating procedures for a greenhouse. Units of instruction in this course include identification of plants; growing greenhouse crops; producing and maintaining nursery crops; establishing, maintaining, and designing landscape planting; establishing and maintaining turf grass; and operating a flower shop and garden center.

**Schools offering course:** NSHS

---

‡**GREENHOUSE PLANT PRODUCTION AND MANAGEMENT**  
8035  
Grades 10-12  
2 Credits

**Recommended Background:** Horticulture Sciences

Students enrolled in this course learn the operating procedures for a greenhouse. Units of instruction in this course include identification of plants; growing greenhouse crops; producing and maintaining nursery crops; establishing, maintaining, and designing landscape planting; establishing and maintaining turf grass; and operating a flower shop and garden center.

**Schools offering course:** NSHS

---

**LANDSCAPING**  
8036  
Grades 11-12  
2 Credits

**Recommended Background:** Horticulture Sciences

In this course, students develop knowledge, skills, habits, and attitudes for entry-level employment and advancement in areas such as landscape design, landscape construction, and landscape maintenance. They receive instruction in sketching and drawing, analyzing a landscape site, designing for function and aesthetics, identifying and selecting landscape plants, purchasing and installing plants, and maintaining the landscape by watering, fertilizing, mulching, pruning, and controlling pests.

**Schools offering course:** NSHS

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**BUSINESS & INFORMATION TECHNOLOGY**

**Future Business Leaders of America (FBLA) is the co-curricular organization for Business and IT students.**

*Keyboarding competency is required for several courses within business and information technology. Keyboarding competency may be demonstrated by successfully doing any ONE of the following:

- Completing Keyboarding Applications (6152),
- Completing Keyboarding (6153) at the Middle School, passing the SCPS common final exam, and completing the required portfolio, OR
- Passing the SCPS Keyboarding Competency Exam.
ACCOUNTING 6320
Grades 10-12  1 Credit
Recommended Background: Keyboarding – see NOTE under Keyboarding Applications

Students study the basic principles, concepts, and practices of the accounting cycle for various business structures with an emphasis on sole proprietorships and partnerships. Students learn fundamental accounting procedures using manual and electronic systems. Students may have the opportunity to earn college credit upon receiving a passing score on The College Board CLEP test. Students may have the opportunity to participate in the cooperative education program.

ADVANCED ACCOUNTING 6321
Grades 11-12  1 Credit
Required Background: Accounting

Students gain in-depth knowledge of accounting procedures and techniques used to solve problems and make financial decisions for various business structures with an emphasis on corporations. Students also learn to use accounting and/or spreadsheet software to analyze and interpret business applications. Students may have the opportunity to earn college credit upon receiving a passing score on The College Board CLEP test. Students may have the opportunity to participate in the cooperative education program.

BUSINESS LAW 6131
Grades 11-12  1 Credit

Students examine the foundations of the American legal system by learning concepts related to laws affecting business and individuals. Topics include contracts, individual rights and responsibilities, crimes, law enforcement, and the courts. Students may have the opportunity to earn college credit upon receiving a passing score on The College Board CLEP test. Students may have the opportunity to participate in the cooperative education program.

BUSINESS MANAGEMENT 6135
Grades 11-12  1 Credit

Students study management concepts and leadership styles as they explore business functions, economics, various business structures, and management responsibilities. Supervision, human relations, communication, and employability skills are enhanced. Students may have the opportunity to participate in the cooperative education program.

COMPUTER INFORMATION SYSTEMS 6612
Grades 10-12  1 Credit
Recommended Background: Keyboarding competency – see NOTE under Keyboarding Applications

Students use introductory word processing, spreadsheet, database, and presentation software to complete practical application and software integration activities. They explore computer concepts, operating systems, and emerging technologies. Students may have the opportunity to participate in the cooperative education program.

ADVANCED COMPUTER INFORMATION SYSTEMS 6613
Grades 11-12  1 Credit
Recommended Background: Computer Information Systems

Students apply problem solving through advanced word processing, spreadsheet, database, presentation, and integration of software. They learn advanced computer concepts, operating systems, and emerging technologies. Students may have the opportunity to participate in the cooperative education program.

CYBERSECURITY FUNDAMENTALS 6302
Grades 10-12  1 Credit
Recommended Background: Programming or Programming Aptitude

Students will be introduced to the principles of cybersecurity, explore emerging technologies, examine threats and protective measures, and investigate the diverse high-skill, high-wage, and high-demand career opportunities in the field of cybersecurity. Cybersecurity affects every individual, organization, and nation. This course focuses on the evolving and all-pervasive technological environment with an emphasis on securing personal, organizational, and national information.

CYBERSECURITY SOFTWARE OPERATIONS 6304
Grades 11-12  1 Credit
Required Background: Cybersecurity Fundamentals

Cybersecurity Software Operations is designed to teach many aspects of computer support and network administration. Students learn networking
concepts, from usage to components, and create peer-to-peer network systems and client server networks. Students learn how to install and configure network cards and connect them to networks; to install the operating systems; to create, set up, and manage accounts; to load software; and to establish, implement, and maintain network integrity security plans. This course may cover software-based network operating systems, such as Windows Server or Linux, to prepare students with a foundation in computer network administration.

**DESIGN, MULTIMEDIA, AND WEB TECHNOLOGIES**

**6630**

**Grades 10-12**

1 Credit

**Required Background:** Keyboarding competency – see NOTE under Keyboarding Applications

Students develop skills in creating desktop publications, multimedia presentations/projects, and Web sites using industry standard application software. Students incorporate principles of layout and design in completing publications and projects. Students may have the opportunity to participate in the cooperative education program.

**ADVANCED DESIGN, MULTIMEDIA, AND WEB TECHNOLOGIES**

**6631**

**Grades 11-12**

1 Credit

**Recommended Background:** Design, Multimedia, and Web Technologies

Students develop advanced skills in creating interactive media, Web sites, and publications for print and electronic distribution. Students design portfolios that may include business cards, newsletters, mini-pages, Web pages, multimedia presentations/projects, calendars, and graphics. Students may have the opportunity to participate in the cooperative education program.

**ECONOMICS AND PERSONAL FINANCE**

**6120**

**Grades 10-12**

1 Credit

Students learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit, insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship and career success. Students may have the opportunity to participate in the cooperative education program. In order to assist in meeting the standard diploma requirement for graduation, the WISE Financial Literacy test (State-approved Industry Credential) will be administered to all students enrolled in Economics and Personal Finance. In addition, to assist with meeting the graduation requirement for both Standard and Advanced Studies Diplomas, students will complete the Ever–Fi Financial Literacy module as an online experience.

**NOTE:** This course is a graduation requirement for students.

**INFORMATION TECHNOLOGY (IT) FUNDAMENTALS**

**6670**

**Grades 9-10**

1 Credit

**Required Background:** Keyboarding competency – see NOTE under Keyboarding Applications

Information Technology (IT) Fundamentals introduces the essential skills needed for students to pursue specialized programs leading to technical and professional careers in the IT industry. Skills related to information technology basics, Internet fundamentals, network systems, computer maintenance/upgrading/trouble shooting, computer applications, programming, graphics, Web page design, and interactive media are introduced. Students explore ethical issues related to computers and Internet technology and develop teamwork and communication skills that will enhance their employability.

**KEYBOARDING APPLICATIONS**

**6152**

**Grades 9-12**

1 Credit

Students develop or refine introductory touch computer keyboarding and beginning formatting skills for the input of information. These skills are applied using computer software to produce a variety of personal and professional documents including resumes, letters, and reports. Keyboarding competency is recommended for all students and is required for all advanced and technical course offerings.

**Note:** Keyboarding competency may be demonstrated by successfully doing any ONE of the following:

- Completing Keyboarding Applications (6152),
- Completing Keyboarding (6153) at the Middle School, passing the SCPS common final exam, and completing the required portfolio, OR
- Passing the SCPS Keyboarding Competency Exam.
**PRINCIPLES OF BUSINESS AND MARKETING**

**Grades 9-10**

6115

1 Credit

Students explore the roles of business and marketing in the global economy. They learn to make decisions as consumers, wage earners, and citizens. Students will also enhance their interpersonal, communication, and employability skills.

**PROGRAMMING**

**Grades 10–12**

6640

1 Credit

**Recommended Background:** Keyboarding competency recommended – see NOTE under Keyboarding Applications

Students explore computer concepts, use logic procedures, and implement programming procedures using one or more programming languages, such as Visual Basic. In addition, HTML is used to program Web pages. Students may have the opportunity to participate in the cooperative education program.

**ADVANCED PROGRAMMING**

**Grades 11-12**

6641

1 Credit

**Required Background:** Programming

Building on a foundation of programming skills, students will use object-oriented programming to develop applications for Windows, database, multimedia, games, mobile, and/or Web environments. Students will have the opportunity to explore and create applications related to the information technology and game design industries. Students may have the opportunity to participate in the cooperative education program.

**MARKETING**

Distributive Education Clubs of America (DECA) is the co-curricular organization for marketing students.

**FASHION MARKETING**

**Grades 10–12**

8140

1 Credit

**Recommended Background:** Interest in fashion career recommended

Students develop general marketing skills necessary for successful employment in fashion marketing. General marketing skills applied to the apparel and accessories industry, and specialized skills unique to fashion marketing. Personal selling, sales promotion, purchasing, physical distribution, market planning, and product/service technology are part of this course. Students may have the opportunity to participate in the cooperative education program.

**ADVANCED FASHION MARKETING**

**Grades 11–12**

8145

1 Credit

**Required Background:** Fashion Marketing required

Students with a career interest in fashion marketing gain in-depth knowledge of the apparel and accessories industry and skills important for supervisory-management employment in apparel businesses. They develop advanced skills unique to fashion marketing and advanced general marketing skills applied to the apparel and accessories industry. Professional selling, sales promotion, buying, merchandising, marketing research, product/service technology, and supervision related to the content are part of this course. Students may have the opportunity to participate in the cooperative education program.

**HOTEL MARKETING**

**Grades 11–12**

8160

1 Credit

In this specialized course, students with a career interest in the field of hospitality and tourism develop skills in the areas of hotel front office procedures, human relations, food and beverage service, purchasing, tourism, travel, and sales promotion. In addition, students obtain a thorough understanding of the hotel/motel industry and the career options available. Students may have the opportunity to participate in the cooperative education program.

**MARKETING**

**Grades 10–12**

8120

1 Credit

**Recommended Background:** Principles of Business and Marketing recommended

Students are introduced to the functions and foundations involved in the marketing of goods, services, and ideas and achieve the skills necessary for successful marketing employment. Students study risk management, selling, promotion, pricing, purchasing, marketing-information management, product/service planning, distribution, and financing. Foundation skills include economics, human resources, and marketing and business abilities necessary for success in marketing occupations. Students may have the opportunity to participate in the cooperative education program.
ADVANCED MARKETING  8130
Grades 11-12  1 Credit
Required Background: Marketing required

Students continue to gain knowledge of marketing functions and foundations as they relate to supervisory and management responsibilities and develop skills needed for advancement. They develop skills for supervisory positions and/or for continuing education in a marketing-related field. Students may have the opportunity to participate in the cooperative education program.

SPORTS, ENTERTAINMENT, AND RECREATIONAL MARKETING  8175
Grades 10-12  1 Credit

Students are introduced to the functions and foundations involved in the marketing of goods and services as they relate to the sports, entertainment, and recreational marketing field. Students develop skills in the areas of marketing analysis, event marketing, communications, and human relations. Students may have the opportunity to participate in the cooperative education program.

ADVANCED SPORTS, ENTERTAINMENT, AND RECREATIONAL MARKETING  8177
Grades 11-12  1 Credit
Required Background: Sports, Entertainment, and Recreational Marketing

Students will continue their study of the sports, entertainment, and recreation (SER) industry including the impact of electronic commerce and international marketing in this area. Other topics include market research, market segmentation, and sponsorship as well as planning, implementing, and evaluating SER events, working with agents and personal managers, and appraising the role of labor unions in SER. Additional study will be focused on developing a career plan in the sports, entertainment, and recreation area. Students may have the opportunity to participate in the cooperative education program.

HEALTH AND MEDICAL SCIENCES

HOSA-Future Health Professionals is the co-curricular organization for Health and Medical Sciences students.

EMERGENCY MEDICAL TECHNICIAN I  8333
Grades 11-12  1 Credit
Introduction to Health and Medical Sciences—student must be 16 years of age by the first day of school in order to enroll in EMT I. Emergency Medical Technician I must be completed to enroll in EMT II.

In these courses, students become skilled in identifying and dealing with emergencies such as bleeding, fractures, airway obstruction, and cardiac arrest. Instruction emphasizes proper care and use of common emergency equipment and safe methods for lifting, moving, and transporting injured persons. Supervised on-the-job training and patient-care experiences are part of the instructional program. Program completers may take the EMT state certification examination administered by the Virginia Department of Health. Students are encouraged but not required to consider membership with a volunteer rescue organization. Students must provide documentation of immunizations and a negative drug screen. Class assignments include technical reading level of at least grade 10.

Note: The EMT courses require students to devote time outside the scheduled course period to participate in related activities occurring in the evening and on weekends. AHA Healthcare provider or ARC Professional Cardiopulmonary Resuscitation (CPR) certification is required prior to the start of class.

Schools offering course: CFHS, SHS

EMERGENCY MEDICAL TECHNICIAN II  8334
Grades 11-12  1 Credit
Note: See Description above. MUST be concurrently enrolled in EMT I & EMT II

Schools offering course: CFHS, SHS
‡EMERGENCY MEDICAL TECHNICIAN III  8335
Grade 12  1 Credit

Required Background: Successful completion of EMT I and EMT II/Instructor Endorsement

EMT III is designed as preparatory course for higher levels of EMS training such as Advanced EMT and Paramedic. Coursework builds on material from EMT I/II; more in-depth lessons on patient assessments techniques, disease processes, and pharmacology are included. Advanced skills including ECG interpretation and advanced airway management are learned. Additionally, students will be introduced to EMS education and teaching methodology.
Students will recertify in Healthcare Provider CPR, and have the opportunity to earn additional certifications as part of the course. Students will earn all Continuing Education hours required for EMT recertification.
Schools offering course: CFHS

‡HEALTH ASSISTING CAREERS ●  8331
Grades 11-12  2 Credits
Recommended Background: Introduction to Health and Medical Sciences and teacher recommendation

Students enrolled in the two-credit Health Assistant class study families of health careers such as dental, medical, nursing, allied health, and related occupations and continue to develop basic skills common to careers in health care. Opportunities are provided for students to further explore their interests in various health care fields through shadowing experiences and selected skills practice in health care facilities based on their particular areas of interest. Note: Clinical/Work Experience: Students must provide his/her own transportation to and from the clinical work site. Students must meet work site health requirements including a negative PPD (Tuberculosis screening test) prior to clinical placement. A uniform is required to be worn in clinical areas.
Schools offering course: BPHS

INTRODUCTION TO HEALTH AND MEDICAL SCIENCES  8302
Grades 10-12  1 Credit

This course emphasizes the development of basic skills common to health care. Students explore the diverse opportunities available in the health care industry, as well as the educational requirements, personal characteristics, and professional responsibilities for specific fields of interest. The anatomy, physiology, and pathophysiology of the human body, medical terminology, infection control, and legal, ethical, and consumer issues pertaining to health care are studied. CPR and First Aid certifications are obtained. Upon successful completion of this course, the student may enroll in EMT I, Health Assistant I, Nursing Aide I, or Medical Assistant I. This course is designed for any student interested in any aspect of the health care industry.

‡MEDICAL ASSISTANT I ●  8345
Grades 11-12  2 Credits
Required Background: Introduction to Health and Medical Sciences

Students develop basic skills and techniques to assist the physician and/or other medical professionals in patient examinations, basic emergency care, simple laboratory tests, preparation for minor surgical procedures, and administrative duties and will gain foundation knowledge in basic anatomy and physiology, medical ethics and legal responsibilities. Students also explore medical assisting career pathways.
Schools offering course: MVHS

‡NURSE AIDE I ●  8360
Grades 11-12  2 Credits
Required Background: Introduction to Health and Medical Sciences (including clinical experience)

This course emphasizes advanced skills obtained in a variety of health care facilities under the supervision of an instructor. Communication and interpersonal skills, infection-control, safety and emergency procedures, recognition of changes in body functioning, personal care needs of both the long-term care and acute care patient are studied. The legal aspects of practice as a certified nurse aide and occupational health and safety measures are also included. Each student is required to purchase a white-scrub-uniform, apron, white shoes, second-hand watch, and have a negative PPD (Tuberculosis screening test) and a urine drug screen test prior to clinical placement. This course is approved by the State Board of Nursing and will qualify the student for participation in Virginia Nurse Aide Competence Evaluation Program (required for certification). Transportation to the clinical sites is provided.
Schools offering course: NSHS
‡NURSE AIDE II 8362
Grades 11-12 2 Credits

Note: See description above. MUST be concurrently enrolled in Nurse Aide I & Nurse Aide II
Schools offering course: NSHS

‡CULINARY ARTS I 8275
Grades 10-11 2 Credits

This course is designed to teach basic skills in the area of culinary arts. Labs offer hands-on experience in all areas of the food service industry. Students will be able to enter the food service job market or continue their education in the culinary arts field.

Note: The work in this course requires that the student comply with the regulations of the Virginia Health Department in preparing and serving food sold to the public.
Schools offering course: BPHS, MVHS, SHS

‡CULINARY ARTS II 8276
Grades 11-12 2 Credits

Required Background: Culinary Arts I and students must successfully pass ServSafe Manager Certification Exam

This course provides instruction in skills related to food preparation, development of personal qualities for job success, and a working knowledge of employment opportunities in the food industry.

Note: The work in this course requires that the student comply with the regulations of the Virginia Health Department in preparing and serving food sold to the public.
Schools offering course: BPHS, MVHS, SHS

‡EARLY CHILDHOOD, EDUCATION, & SERVICES I 8285
Grades 10-12 2 Credits

Students prepare for employment or continued education in the field of childcare and early childhood education. Emphasis will be placed on development, implementation, and evaluation of learning activities through first-hand experiences working with young children in an on-site lab setting. National Child Development Associate Credential competencies and state validated education competencies are the framework for the course.

Schools offering course: BPHS, NSHS

‡EARLY CHILDHOOD, EDUCATION, & SERVICES II 8286
Grades 11-12 2 Credits

Required Background: Early Childhood, Education, & Services I

This course is an extension of Early Childhood Education I. It is recommended for those students interested in child-related careers. Emphasis will be placed on occupational functions of early childhood
educators. Students continue to obtain on-site lab experiences.

Schools offering course: BPHS, NSHS

**FAMILY RELATIONS** 8225
Grades 9-12 1 Credit

Students enrolled in Family Relations focus on identifying factors that build and maintain relationships, developing communication patterns that enhance family friend, and work-related relationships, dealing effectively with family and peer stressors and conflicts.

**INTRODUCTION TO FASHION CAREERS** 8248
Grades 9-12 1 Credit

Students in Introduction to Fashion Careers focus on identifying and exploring the individual careers within the apparel, accessory, and textile design, manufacturing, and merchandising industry. Units of study include the relationships that exist among all areas of the clothing industry; related global and economic issues; apparel, accessory, and textile technology; exploration of careers, including entrepreneurial opportunities in related areas; and the skills and personal characteristics necessary for success in careers in the apparel, accessory, and textile design, manufacturing, and marketing industry.

**INTRODUCTION TO INTERIOR DESIGN** 8255
Grades 9-12 1 Credit

The home furnishings and design competencies focus on careers that relate to the elements and principles of design, cultural impact on the environment, decision-making skills for housing and home furnishings, development of artistic skills, and environmental issues. Emphasis will be placed on basic math, science, and communication skills.

**LIFE PLANNING** 8227
Grades 9-12 1 Credit

This course equips students with the skills needed to face the challenges of today's society. Students will develop a life-management plan which includes developing career, community, and life connections; healthy relationships; financial planning; and leadership within the community. Critical thinking and practical problem solving are emphasized through relevant life applications.

**NUTRITION AND WELLNESS** 8229
Grades 9-12 1 Credit

Students focus on making choices that promote good health, analyzing relationships between psychological and social needs and food choices, choosing foods that promote wellness, obtaining and storing food for self and family, preparing and serving nutritious meals and snacks, selecting and using equipment for food preparation, and identifying strategies to promote optimal nutrition and wellness of society. Teachers highlight the basic skills of math, science, and communication when appropriate in the content.

**TECHNOLOGY AND ENGINEERING EDUCATION**

Technology Student Association (TSA) is the co-curricular organization for Technology Education students.

*Successful completion of the technical drawing and design course is required for several courses within technology and engineering education.*

**ARCHITECTURAL DRAWING AND DESIGN** 8437
Grades 10-12 1 Credit

Required Background: Technical Drawing and Design

This course offers the student an opportunity to simulate the role of an architect by solving a residential design problem using a series of steps called “the design process.” The student will learn and follow accepted architectural design principles and drawing practices to arrive at their individual solution to the design problem. Classroom activities will include sketching preliminary ideas, drawing a presentation floor plan and presentation elevation drawing, and building a scaled architectural model. Architectural-related occupations will be explored during the year. Drawing/modeling tools and supplies are provided.

Schools offering course: BPHS, CFHS, MVHS, NSHS

**COMMUNICATION SYSTEMS** 8415
Grades 9-12 1 Credit

This course will provide students with experiences utilizing various processes and methods used in digital communication, providing them with the ability to effectively get their ideas across to others.
Students will explore communicating with data systems (GIS, GPS); produce graphics and 3D animations; explore optics (photographic concepts); create digital audio and video presentations; and integrate different media together by creating a digital portfolio of their work. Students will also investigate career opportunities related to communication and the impact of communication on society.

**Schools offering course:** CFHS

**CONSTRUCTION TECHNOLOGY** 8431
**Grades 9-12** 1 Credit

Students are given the opportunity to design, build, and test scale-model structures. Projects are introduced that help students understand the jobs of architects, carpenters, electricians, plumbers, surveyors, contractors, masons, design engineers, and many other construction careers.

**Schools offering course:** BPHS

**CYBERSECURITY**
Located under Business & Information Technology

**DIGITAL VISUALIZATION** 8459
**Grades 10-12** 1 Credit

**Required Background:** Technical Drawing and Design

Students will gain experiences related to computer animation by solving problems involving 3D object manipulation, storyboarding, texture mapping, lighting concepts, and environmental geometry. They will produce animations that include interdisciplinary projects related to science, engineering, and the entertainment industry. A major emphasis will be the production of a portfolio that showcases examples of original student work.

**Schools offering course:** CFHS

**ENGINEERING EXPLORATION** 8450
**Grades 9-11** 1 Credit

This course will enable students to examine technology and engineering fundamentals related to solving real-world problems. Students will be exposed to a variety of engineering specialty fields and related careers to determine whether they are good candidates for postsecondary educational opportunities in engineering. Students will gain a basic understanding of engineering history and design, using mathematical and scientific concepts.

**Schools offering course:** CFHS, MVHS, SHS

Students will participate in hands-on projects in a laboratory setting as they communicate information through team-based presentations, proposals, and technical reports.

**Schools offering course:** CFHS, MVHS, SHS

**ENGINEERING STUDIES** 8491
**Grades 10-12** 1 Credit

**Required Background:** Engineering Exploration or Engineering Practicum IV

To learn the applications and design process of engineering, students form engineering teams and select a group design problem. Each team uses communications, graphics, mathematics, and community resources to solve problems. Each team learns appropriate information in order to complete a project. Projects may be models, systems, or products that creatively solve an engineering problem. Engineering Exploration or Engineering Practicum IV

**Schools offering course:** CFHS, MVHS, SHS

**ENGINEERING DRAWING AND DESIGN** 8436
**Grades 10-12** 1 Credit

**Required Background:** Technical Drawing and Design

This course is an extension of Technical Drawing and Design in that the student will continue to learn technical drawing concepts with the aid of a CADD system. Lessons are initially arranged at the beginner skill level and progress to the intermediate skill level. The student will use AutoCAD for two-dimensional drawing applications, while three-dimensional solid modeling will be performed with Autodesk Inventor software. The student will be engaged in real-life projects while developing teamwork, design, and problem-solving skills. Several engineering-related occupations will be explored during the year.

**Schools offering course:** BPHS, CFHS, MVHS, NSHS

**GEOSPATIAL TECHNOLOGY I** 8423
**Grades 11-12** 1 Credit

The Geospatial Technology program provides experiences pertaining to the study and use of geographic information systems (GIS), global positioning systems (GPS), remote sensing (RS), and mobile technologies. Fundamentally, these technologies allow students to explore and analyze the natural and human-made world, from local to global and beyond. Students use various tools, processes, and techniques to create, store, access, manipulate, and revise data to solve human
challenges. These experiences employ real-world spatial analysis models and guidelines for integrating, interpreting, analyzing, and synthesizing data, with a focus on both the implications and the limitations of such technologies. These experiences also include interfacing to network-based data management systems. Students may have the opportunity to earn Dual Enrollment credit through a 2 or 4 year university/college.

Schools offering course: SHS

**GEOSPATIAL TECHNOLOGY II**

8424  
Grades 11-12  1 Credit

Required Background: Geospatial Technology I

Students further explore and analyze the natural and human-made world, from local to global and beyond. Students use various tools, processes, and techniques to create, store, access, manipulate, and revise data to solve human challenges. Data is created, collected, and used to analyze spatial relationships. These experiences employ real-world spatial analysis models and guidelines for integrating, interpreting, analyzing, and synthesizing data, with a focus on both the implications and the limitations of such technologies. These experiences also include interfacing to network-based data management systems.

Schools offering course: SHS

**IMAGING TECHNOLOGY**

8455  
Grades 9-12  1 Credit

Students are introduced to the basic principles of photography, with strong emphasis on digital imaging. Students will study the development of photography as a communication medium and its evolution into the digital realm. The traditional photographic process will be explored along with hands-on experience utilizing the camera and learning the features and controls used to produce a memorable photographic image. Students will learn to use image-editing software to correct, transform, and enhance digital images, as well as learn various presentation techniques necessary to display their work.

Schools offering course: CFHS

**MANUFACTURING SYSTEMS I**

8425  
Grades 9-12  1 Credit

This course provides an orientation to careers in various fields of manufacturing. Emphasis will be placed on the major systems in manufacturing, including design, working drawings, manufacturing processes, material handling, production planning, measurement systems, labor issues, occupational safety, and quality control. Students participate in teams and produce manufacturing projects that demonstrate critical elements of manufacturing systems.

Schools offering course: BPHS, MVHS

**ADVANCED MANUFACTURING SYSTEMS II**

8427  
Grades 10-12  1 Credit

Required Background: Manufacturing Systems or Production Systems

Students develop an in-depth understanding of automation and its applications in manufacturing. Activities center on flexible manufacturing processes and Computer Integrated Manufacturing (CIM). Students also learn basic computer aided design (CAD) skills and apply those skills toward manufacturing projects. The student will use all facets of the design process to produce a product through a study of basic concepts of manufacturing technology by experiences in forming, separating, combining, assembling and finishing materials used in the production of manufactured goods. Students are expected to use skills and knowledge to design and develop a manufacturing system that can produce consumer products.

Schools offering course: BPHS

**PRINCIPLES OF TECHNOLOGY I**

9811  
Grades 10-12  1 Credit

Recommended Background: Algebra

Students in this laboratory science course apply math and physics principles through a unified systems approach to develop a broad knowledge base of the principles underlying modern technological systems. As a foundation for more education and training in advanced technology career paths, the “principles and systems” approach ensures career flexibility as machines and technology advance. The topics introduced include seven technical principles: force, work, rate, resistance, energy, power, and force transformation systems, emphasizing how each principle plays a unifying role in the operation of mechanical, fluid, electrical, and thermal systems in high-tech equipment. Class work will entail significant math understanding and usage and rational thinking in individual- and small-group activities.

Schools offering course: MVHS
**PRINCIPLES OF TECHNOLOGY II**

*Grades 11-12*  
1 Credit  

Required Background: Principles of Technology I

Students in this laboratory science course continue to apply math and physic principles through a unified systems approach to develop a broad knowledge base of the principles underlying modern technological systems. As a foundation for more education and training in advanced technology career paths such as engineering, the “principles and systems” approach ensures career flexibility as machines and technology advance. The topics introduced include seven technical principles: momentum, waves, energy converters, transducers, radiation, optical systems, and time constraints, emphasizing how each principle plays a unifying role in the operation of mechanical, fluid, electrical, and thermal systems in high-tech equipment. Class work will entail significant math understanding and usage and rational thinking in individual and small group activities.

Note: Successful completion of Principles of Technology I and II is approved as a Physics Lab credit. Please see your counselor for details.

Schools offering course: BPHS, CFHS, MVHS, NSHS

**TELEVISION AND MEDIA PRODUCTION I, II, III**

Located Under Trade and Industrial Education

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**PRODUCTION SYSTEMS**

*Grades 9-12*  
1 Credit

Students understand how products are designed, manufactured, and marketed to the public. This course will also give students the opportunity to experience the construction trades such as drafting, carpentry, cabinetmaking, line production, and assembly line production techniques. A working knowledge of design and problem solving, research and development processes, and materials will be an integral part of this course.

Schools offering course: MVHS, NSHS

**TECHNICAL DRAWING AND DESIGN**

*Grades 9-12*  
1 Credit

This course provides the student a working knowledge of the language, tools, and practices of technical drawing. Technical drawing is the universal language of design. The focus of this course is to teach the student how to graphically communicate ideas using lines, symbols, and notations. In addition, the student will learn how to visualize and project objects in two-dimensional and three-dimensional form. Traditional drawing equipment and a computer-aided drafting and design (CADD) system will be used to teach technical drawing concepts. This course will give the student an opportunity to explore a skill that is creative, practical, and useful in industrial design, architecture, technical illustration, engineering, construction, and computer graphics.

Schools offering course: BPHS, CFHS, MVHS, NSHS

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SCHOOL KEY: BPHS=Brooke Point CFHS=Colonial Forge MVHS=Mountain View NSHS= North Stafford SHS= Stafford
THE AP + PROJECT LEAD THE WAY (PLTW) STUDENT RECOGNITION

Students who complete the requirements of their chosen pathway earn the AP + PLTW student recognition, a qualification that demonstrates to colleges and employers that the student is ready for advanced course work and interested in careers in this discipline.

To earn the recognition, the student must satisfactorily complete three courses in the pathway – one AP course; one PLTW course; and a third course, either AP or PLTW – and earn a qualifying score of 3 or higher on the AP Exam(s) and a score of Proficient or higher on the PLTW End of Course (EOC) assessment(s).

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<td>Career-PLTW Courses</td>
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<td>Principles of Biomedical Science</td>
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PROJECT LEAD THE WAY

AEROSPACE ENGINEERING – PLTW 8428
Grades 10 1 Credit
Required Background: Introduction to Engineering Design

The course explores the evolution of flight, flight fundamentals, navigation and control, aerospace materials, propulsion, space travel, orbital mechanics, ergonomics, remotely operated systems and related careers. In addition, the course presents alternative applications for aerospace engineering concepts.

Schools offering course: NSHS

‡ BIOMEDICAL INNOVATION – PLTW 8382
Grade 12 2 Credits
Required Background: Biology, Chemistry and one of the following: AP Chemistry, AP Biology, Physics/AP Physics, Anatomy & Physiology, plus teacher recommendations and letter of interest AND/OR one or more PLTW courses and teacher recommendation

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

Schools offering course: NSHS

CIVIL ENGINEERING AND ARCHITECTURE – PLTW 8430
Grades 11-12 1 Credit#
Required Background: Introduction to Engineering Design and Principles of Engineering or Digital Electronics

Students are introduced to the independent fields of civil engineering and architecture. Students learn through project-based and problem-based lessons including project planning, site planning, and building design. Software utilized includes AutoCAD, Autodesk Inventor Professional, and Autodesk Revit, Viz, and Architectural Desktop.

Schools offering course: NSHS

COMPUTER INTEGRATED MANUFACTURING – PLTW 8442
Grades 11-12 1 Credit#
Required Background: Introduction to Engineering Design and Digital Electronics

Students learn concepts of robotics and automated manufacturing by creating three-dimensional designs with modeling software and producing models of their designs. Students use Computer Numerical Control (CNC) equipment to produce actual models of their three-dimensional designs. Fundamental concepts of robotics used in automated manufacturing and design analysis are included.

Schools offering course: NSHS

DIGITAL ELECTRONICS – PLTW 8440
Grades 10-12 1 Credit#
Required Background: Introduction to Engineering Design

Students use computer simulations to learn about the logic of electronics as they design, test, and construct circuits and devices. Students apply control system programming and explore sequential logic and digital circuitry fundamentals. Topics in computer circuitry are also presented, including circuitry analysis and an exploration into diodes, transmitters, and operational amplifiers.

Schools offering course: NSHS

ENGINEERING DESIGN & DEVELOPMENT – PLTW 8443
Grade 12 1 Credit

In this capstone course, teams of students, guided by community mentors, work together to research, design, and construct solutions to engineering problems. Students synthesize knowledge, skills, and abilities through an authentic engineering experience. Students are expected to develop and formally present a three-dimensional design project and a team-oriented project that are critiqued by an evaluation committee. Fundamental concepts of
robotics used in automated manufacturing and design analysis are included.

Schools offering course: NSHS

**ENGINEERING PRACTICUM IV**  8453

Grades 10-12  1 Credit

Required Background: Combination of any three Engineering sequenced courses and with PLTW Engineering Design & Development (EDD); teacher recommendation

Engineering Practicum serves as a capstone course to enable students to examine technology and engineering fundamentals related to solving real-world problems. To do so, students examine ethics and intellectual property and design a practicum project, a culmination of knowledge and skill they gained in the previous engineering courses. In addition, students continue to investigate a variety of engineering specialty fields and related careers to determine whether they are good candidates for postsecondary educational opportunities in engineering.

Schools offering course: NSHS

‡**HUMAN BODY SYSTEMS - PLTW**  8380

Grades 10-12  1 Credit

Required Background: Biology and teacher recommendation AND/OR Principles of Biomedical Sciences-PLTW and teacher Recommendation

Students examine the processes, structures, and interactions of the human body systems to learn how they work together to maintain homeostasis (internal balance) and good health. Using real-world cases, students take on the role of biomedical professionals and work together to solve medical mysteries. Hands-on projects include designing experiments, investigating the structures and functions of body systems, and using data acquisition software to monitor body functions such as muscle movement, reflex and voluntary actions, and respiratory operation. Important concepts covered in the course are communication, transport of substances, locomotion, metabolic processes, defense, and protection. Exploring science in action, students build organs and tissues out of clay on a skeletal manikin throughout the year.

Schools offering course: NSHS

**INTRODUCTION TO ENGINEERING DESIGN - PLTW**  8439

Grades 9-11  1 Credit#

Students use a problem-solving model to improve existing products and invent new ones. Using sophisticated three-dimensional modeling software, students communicate the details of the products. Emphasis is placed on analyzing potential solutions and communicating ideas to others. This course is the first in a series being implemented for students seeking a more in-depth, hands-on knowledge of engineering and engineering technology-based careers.

Schools offering course: NSHS

‡**MEDICAL INTERVENTIONS - PLTW**  8381

Grades II-12  2 Credits

Required Background: Biology, Algebra II and Chemistry completed or concurrently enrolled and teacher recommendations AND/OR one or more PLTW courses and teacher recommendation; Anatomy and Physiology enrolled concurrently strongly recommended

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

Schools offering course: NSHS

‡**PRINCIPLES OF BIOMEDICAL SCIENCES – PLTW**

Grades 9-11  8379  1 Credit

This course is designed to provide an overview of all the courses in the Biomedical Sciences Program and to lay the scientific foundation necessary for student success in the subsequent courses. Students explore concepts of human medicine, research processes, bioinformatics and human physiology. Hands-on projects enable students to investigate human body systems and various health
conditions, including heart disease, diabetes, sickle cell disease and infectious diseases. Over the length of the course, students work together to investigate a crime scene and analyze autopsy reports in order to determine the factors that led to the death of a fictional person. After pinpointing those factors, the students investigate lifestyle choices and medical treatments that might have prolonged the person’s life. The key biological concepts embedded in the curriculum include homeostasis, metabolism, inheritance of traits and DNA, feedback systems, and defense against disease.

**Schools offering course:** NSHS

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**PRINCIPLES OF ENGINEERING - PLTW** 8441

**Grades 11-12**

1 Credit

**Required Background:** Introduction to Engineering Design; Algebra II, which may be taken concurrently, and Digital Electronics

Students develop an understanding of the engineering profession and the fundamental aspects of engineering problem solving. Students study the historical and current impacts of engineering on society as well as ethical implications. Mathematical and scientific concepts will be applied to fundamental engineering topics, including mechanics and electrical circuit theory.

**Schools offering course:** NSHS

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**TRADE AND INDUSTRIAL EDUCATION**

SkillsUSA is the co-curricular organization for Trade and Industrial students.

**AUTOMOTIVE BODY TECHNOLOGY**

Courses are taught by Automotive Service Excellence (ASE) Certified Instructors

The Automotive Body Technology program is a 3-year program with mastery of each task for job entry-level skills as a priority. The program is open to 10th, 11th, and 12th graders. Students will complete a pre-test prior to being admitted to Automotive Body Technology I (8676).

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‡**AUTO BODY TECHNOLOGY I – COLLISION AND REPAIR** 8676

**Grades 10-11**

2 Credits

**Other grades, if space available**

Students are taught non-structural analysis, damage repair, and welding. Students learn body and frame construction, and the use of hand and power tools. Students work with a variety of materials, using metal finishing and body filling techniques to prepare surfaces and repair panels. Students learn automotive history, practice shop safety, gain career skills, and use custom techniques.

**Schools offering course:** NSHS

‡**AUTO BODY TECHNOLOGY II – PAINTING AND REFINISHING** 8677

**Grades 11-12**

4 Credits

**Required Background:** Automotive Body Technology I

In this course, students are taught to repair, mask, and refinish auto body components and entire vehicles. In addition, they use spray guns and personal safety equipment, apply undercoats and topcoats, work with a variety of materials, and gain career skills. Students continue to improve skills in welding and body repair.

**Schools offering course:** NSHS

‡**AUTO BODY TECHNOLOGY III – COLLISION AND REPAIR AND PAINTING AND REFINISHING** 8678

**Grade 12**

4 Credits

**Required Background:** Automotive Body Technology II

Students further apply the tasks/competencies learned in Auto Body Technology I and II. This course may also be used as a capstone course in which students may perfect their auto body skills and move toward employment in the industry. Students who successfully complete this program sequence will be prepared to take and pass the respective ASE exam.

**Schools offering course:** NSHS
AUTOMOTIVE TECHNOLOGY

Courses are taught by Automotive Service Excellence (ASE) Certified Instructors.

The Automotive Technology program is a 3-year program with mastery of each task for job entry-level skills as a priority. The program is open to 10th, 11th, and 12th graders. Students will complete an application and a pre-test prior to being admitted to Automotive Technology I (8506). Students will have the opportunity to apply for job shadowing and internships programs with local automotive businesses.

‡AUTOMOTIVE TECHNOLOGY I ● 8506
Grades 10-11 1 Credit

Students learn all aspects of repair, safety, and customer service by concentrating on the four primary ASE certified areas: Brakes, Steering and Suspension, Electrical/Electronics and light duty vehicle repair.

Schools offering course: BPHS, NSHS, SHS

‡AUTOMOTIVE TECHNOLOGY II 8507
Grades 11-12 2 Credits
Required Background: Automotive Technology I

Students will learn to repair fuel, electrical, cooling, brake, drive train, and suspension systems. Instruction is also given in the adjustment and repair of individual components and systems such as radiators, transmission, and fuel injectors. Students will have the opportunity to apply for job shadowing and internships with local automotive businesses through the Automotive Youth Educational Systems (AYES) program.

Schools offering course: BPHS, NSHS, SHS

‡AUTOMOTIVE TECHNOLOGY III 8508
Grade 12 2 Credits
Required Background: Automotive Technology II

Students will continue to master skills related to suspension and steering, brakes, electrical/electronic systems, and engine performance.

Schools offering course: BPHS, NSHS, SHS

‡BARBERING I ● 8743
Grade 11 3 Credits
(Grade 10, if space available)
Required Background: Regular attendance is required in order to meet the clinical lab hours.

Barbering is the study of hair, scalp, and skin. Students study and prepare in a clinical lab setting, using mannequins and live models for manipulative practice. The program emphasizes safety and sanitation, communication, and management skills. Related areas of study include psychology, ethics, and professional image. Competency completions prepare the students to work or apprentice in a local barber shop or beauty salon.

Schools offering course: MVHS

‡BARBERING II 8744
Grade 11-12 4 Credits
Required Background: Passing score of 70%
Barbering I and regular attendance is required to meet clinical hours.

Students apply their knowledge of barbering skills in a clinical lab setting, using mannequins and live models for manipulative practice. The program emphasizes safety and sanitation, communication skills, and management of a barber shop or beauty salon. Related areas of study include psychology, ethics, and professional image. Competency completions prepare the students for the Virginia state licensing exam.

Schools offering course: MVHS

‡CABINETMAKING I ● 8604
Grades 9-11 1 Credit

Students learn workshop and tool safety and employability skills as they practice reading blueprints; estimating and selecting materials; cutting and shaping stock; assembling, fastening, and installing components; and finishing surfaces. The technical, problem-solving, leadership, and creative skills learned in cabinetmaking can be applied in industries well beyond the construction trades and professions and prepare the student for lifelong learning and success.

Schools offering course: NSHS
‡CABINETMAKING II 8605
Grades 10-12 2 Credits
Required Background: Cabinetmaking I

Students continue to learn workshop and tool safety and enhance their employability skills as they interpret blueprints; estimate and select materials; cut and shape stock; assemble, fasten, and install components; install interior finishes; apply wood veneers and plastic laminates; finish surfaces; and transport and install cabinets. The technical, problem-solving, leadership, and creative skills learned in Cabinetmaking can be applied in industries well beyond construction trades and professions and can prepare the student for lifelong learning and success.

Schools offering course: NSHS

‡CARPENTRY I 8601
Grades 9-10
BPHS – (140 hours) 1 Credit
SHS – (280 hours) 2 Credits
Recommended Background: Construction Trades

Instruction in this course includes the theory and practical application of blueprints and building plans, estimating materials, and finishing of a structure. Proper use of power tools will be demonstrated. Students are provided the opportunity to work on the construction of a new home through the BOOTS program (Bringing Occupational Opportunities to Students). Students must successfully complete the 10-hour OSHA Safety Course and comply with OSHA standards throughout the course to be eligible for Carpentry II. This course will be open to highly qualified 9th graders who are interested in pursuing a future in the BOOTS program. Please note there are some restrictions on power tool usages for 9th grades.

Schools offering course: BPHS, SHS

‡CARPENTRY II 8602
Grades 10-12 2 Credits
Required Background: Carpentry I

This course includes instruction in the skills that provide additional practical experiences related to the complete structural aspect of a building or dwelling and its finishing work. Students will be expected to comply with all OSHA and class safety practices. Students are provided the opportunity to work on the construction of a new home through the Bringing Occupational Opportunities to Students (BOOTS) program. Students completing Carpentry I as a 9th grader will be eligible for Carpentry II as a 10th grader with no restrictions on power tool usage.

Schools offering course: BPHS, SHS

CARPENTRY III 8603
Grade 11-12 2 Credits
Required Background: Carpentry II

This course expands on Carpentry I and II. Qualified students have the opportunity for work-based experience and to work on the construction of a new home through the Bringing Occupational Opportunities to Students (BOOTS) program. Construction management skills will also be stressed throughout the duration of the school year with the intent for students to enter the construction business upon completion. OSHA and class safety practices are mandatory and enforced.

Schools offering course: SHS

CONSTRUCTION TRADES I 9071
Grades 9-10 1 Credit

This introductory course is for students considering a career in the construction industry. Construction Trades prepares students to construct buildings, and other structures using materials such as metal, wood, stone, brick, concrete and composition substances. Students focus on completing a 9 weeks rotation exploring each of the following trade areas: masonry, carpentry, electricity and the last rotation will be chosen by the student according to his/her interests. Core safety will be taught in all areas.

Note: Formerly Building Trades I

Schools offering course: SHS

‡COSMETOLOGY I 8745
Grade 10-11 3 Credits

Recommended Background: Regular attendance is required in order to meet the clinical lab hours

In this course, students study and prepare in a clinical lab setting, using mannequins, and live models for skill practice. Students develop skills in hair shaping, finger waves, manicuring, and pedicures. Students also learn the principles of sterilization, sanitation, and bacteriology. They develop required safety procedures and study professional ethics. Regular attendance is essential to be successful in this program.

NOTE: (Grade 10, if space available)

Schools offering course: MVHS, SHS
‡COSMETOLOGY II 8746
Grades 11-12 4 Credits
Required Background: Passing score of 70% or above in Cosmetology I & Regular Attendance is required to meet clinical hours

Students develop skills and technical knowledge relating to hair coloring, hair pressing, facials, cosmetic make-up, and selection of commercial materials. Beauty salon management procedures are also studied. Upon successful completion of required competency performance and hours, students are prepared to take the Virginia Board of Cosmetology licensing exam.

Schools offering course: MVHS, SHS

CRIMINAL JUSTICE I 8702
Grades 11-12 1 Credit

Students learn the principles, techniques, and practices for pursuing careers within the criminal justice services system. Also provided in this course is an overview of the conflicts, coordination, and interdependency of the major components of the criminal justice system.

Schools offering course: BPHS, NSHS

CRIMINAL JUSTICE II 8703
Grades 11-12 1 Credit
Required Background: Criminal Justice I

Students will expand upon the course content developed in Criminal Justice I. In addition, this course introduces students to a career in law enforcement. Topics may include crime scene investigation, use of force continuum, criminal law court system and procedures, police concepts and skills, corrections concepts and skills, communication, security, and understanding and working with special populations.

Schools offering course: BPHS, NSHS

DRAFTING I (Fundamentals) 8530
Grades 9-11 1 Credit

This course is recommended for students who are interested in technical fields such as architecture, engineering, construction. The course emphasizes fundamental mechanical drawing concepts and techniques. The projection, visualization, and interpretation of two-dimensional and three-dimensional objects are explored. The student is also introduced to computer-aided drafting (CAD) using Autodesk drafting software. This course is a prerequisite for all other drafting courses.

Schools offering course: SHS

DRAFTING II (Advanced Mechanical) 8531
Grades 10-12 2 Credits
Required Background: Drafting I

This course focuses on creating mechanical drawings for manufacturing purposes. New skills learned include developing auxiliary views, reading tolerances, applying & interpreting weld symbols, specifying fasteners, additive manufacturing (3D printing) and the logic of mechanical assembly. Using 2D and 3D computer-aided design (CAD) software is integral to this course. Portfolio projects will be interspersed throughout the course, culminating in a design project of the student’s own design solutions. All students will take the ADDA International Drafter Certification Exam as part of this program.

Schools offering course: SHS

DRAFTING III (Architectural Drawing) 8532
Grades 11-12 2 Credits
Required Background: Drafting II

This course focuses on the creation of code compliant architectural drawings focusing on residential design. The student learns to prepare site plans, floor and foundation plans, electrical plans, elevations, wall sections and structural details. Both manual and CAD techniques are taught and utilized, with the focus on CAD using Autodesk design software. Portfolio projects will be interspersed throughout the course, culminating with the student’s own residential house design. All students will take the ADDA International Architectural Drafter Certification Exam as part of this program.

Schools offering course: SHS

‡ELECTRICITY I 8533
Grades 9-11 2 Credits
Recommended: Construction Trade and Algebra I, Part I

Students develop the skills and technical knowledge relating to test equipment, electrical circuits, single phase alternating current, residential wiring, estimating cost of labor and material, low voltage systems, wiring single family dwellings, and the use of the National Electrical Code. Students learn basic electrical terms. Students are provided the opportunity to work on the construction of a new home through the BOOTS program (Bringing Occupational Opportunities to Students). Students must successfully complete the 10-hour OSHA Safety Course and comply with OSHA standards
throughout the course to be eligible for Electricity II.

Schools offering course: SHS

‡ELECTRICITY II 8534
Grades 10-12 2 Credits
Required Background: Electricity I

Students develop the skills and technical knowledge of commercial wiring, installation of and maintaining conduit systems, appliance and motor service, industrial wiring, control wiring, transformers, three-phase circuitry, and low voltage control systems. Students are provided the opportunity to work on the construction of a new home through the Bringing Occupational Opportunities to Students (BOOTS) program. OSHA and class safety practices are mandatory and enforced.

Schools offering course: SHS

‡ELECTRICITY III 8535
Grade 11-12 2 Credits
Required Background: Electricity II

This course expands on Electricity I and II. Qualified students have the opportunity for work-based experience and to work on the construction of a new home through the Bringing Occupational Opportunities to Students (BOOTS) program. OSHA and class safety practices are mandatory and enforced.

Schools offering course: SHS

‡FIREFIGHTING I ● 8705
Grades 11-12 2 Credits
Required Background: Students must be at least 16 years old by the first day of the course offering. Enrollment also requires parental consent. Additional requirements, including CPR, HAZMAT and Mayday Awareness, are stipulated for those students seeking NFPA Firefighter I certification.

Firefighting is one of the most dangerous jobs in the world and, therefore, requires complete discipline and attention to achieving the academic and professional standards necessary to successfully fight live fires, address hazardous-materiasl incidents, and conduct search-and-rescue operations. Students will become familiar with the procedures, equipment, and technologies used by current fire departments. This course challenges students academically, mentally, and physically and meets the standards of National Fire Protection Association (NFPA) 1001–2013 leading to Firefighting I certification. Students must enroll in FFI (Semester I) and FFII (Semester II) consecutively in the same year.

Schools offering course: NSHS

‡FIREFIGHTING II ● 8706
Grades 11-12 2 Credits
Note: See description above.
Required Background: Completion of Firefighting I and passing Certification Exam

‡GRAPHIC IMAGING TECHNOLOGY I ● 8660
Grades 9-11 2 Credits

This course introduces students to the various areas of the printing field. These areas will include layout and design, desktop publishing, film processing, plate making, offset press operation, bindery, and digital photography. Students focus on the history of graphic imaging.

Schools offering course: NSHS

‡GRAPHIC IMAGING TECHNOLOGY II 8661
Grades 10-12 2 Credits
Required Background: Graphic Imaging Technology I

This course introduces students to the various areas of the printing field. In first semester, students will develop skills relating to desktop publishing, layout and design, film processing, plate-making, offset press operation, bindery, screen printing, and digital photography. In the second semester, students will apply all skills learned in a production setting.

Schools offering course: NSHS

‡MASONRY I ● 8512
Grades 9-11 2 Credits
Recommended Background: Construction Trades

Students develop skills and technical knowledge for laying block and brick, concrete construction, reading blueprints, completing straight wall and corner work, as well as estimating labor and materials. Students are provided the opportunity to work on the construction of a new home through the BOOTS program (Bringing Occupational Opportunities to Students). Students must successfully complete the 10-hour OSHA Safety Course and comply with OSHA standards throughout the course to be eligible for Masonry II.

Schools offering course: SHS
‡MASONRY II  
8513
Grades 10-12  
2 Credits

Required Background: Masonry I

A continuation of Masonry I, students are given additional instruction in the knowledge and skills of mixing and pouring concrete, building arches and columns, stone masonry and required competencies for masonry workers. Students are provided the opportunity to work on the construction of a new home through the Bringing Occupational Opportunities to Students (BOOTS) program. OSHA and class safety practices are mandatory and enforced.

Schools offering course: SHS

‡MASONRY III  
8514
Grade 11-12  
2 Credits

Required Background: Masonry II

This course expands on Masonry I and II. Qualified students have the opportunity for off-site work-based experience and to work on the construction of a new home through the Bringing Occupational Opportunities to Students (BOOTS) program. Fundamentals of construction management will be emphasized, including planning, estimating and problem solving on an actual construction jobsite. OSHA and class safety practices are mandatory and enforced. Hilti certification will be offered in addition to state-approved industry credential.

‡Students are required to use provided bus service for all classes requiring transportation from a base school to another high school.

● Application process required

Schools offering course: SHS

SMALL ENGINE TECHNOLOGY I  
8725
Grades 9-12  
1 Credit

Students will study the theory, repair and applications of small 4 stroke/cycle internal combustion engines. Students will operate a Small Engine Repair business, repairing customer's outdoor power equipment. Units will cover safety, engine theory, engine troubleshooting, engine repair, parts location/order, small business operation.

Schools offering course: SHS

SMALL ENGINE TECHNOLOGY II  
8726
Grades 10-12  
2 Credits

Required Background: Small Engine Technology I

Students will expand on the study of small engine repair from Small Engine Repair I. Units of study will include two-stroke/cycle engine theory and repair, engine rebuild, engine modifications, hydraulics, chain saw repair and maintenance, string trimmer repair and maintenance, go-cart and mini-bike repair, outdoor power equipment business operation.

Schools offering course: SHS

TELEVISION AND MEDIA PRODUCTION I  
8688
Grades 9-12  
1 Credit

This course combines public speaking and other communication skills with the study of video technology primarily used in broadcast journalism. Students receive training in written and verbal communication as it applies to broadcast journalism as well as instruction in the use and maintenance of electronic equipment used in broadcast television. Students will produce a variety of programming, including radio spots, live television interviews, in-house news broadcasts, broadcast television packages, and a variety of live coverage videography.

Note: Course requires time outside the scheduled class period for activities occurring in the evening and on weekends.

TELEVISION AND MEDIA PRODUCTION II  
8689
Grades 10-12  
(140 Hours)  
1 Credit

(280 Hours)  
2 Credits

Required Background: Television and Media Production I

This course is designed for the student interested in pursuing a career in broadcast technology or broadcast journalism. Experiences will be structured to simulate a private local company in the community, allowing the students to take on the responsibility of the day-to-day tasks. This simulation could include coverage of school and community events, developing a clientele through the creation of promotional and informational presentations, and daily production of live announcements for the school.

Note: Course requires time outside the scheduled class period for activities occurring in the evening and on weekends.
TELEVISION AND MEDIA PRODUCTION III  8690
Grades 11-12
(140 Hours) 1 Credit
(280 Hours) 2 Credits
Required Background: Television and Media Production II

Students will demonstrate mastery of media production knowledge and skills. They will function as media producers by creating original productions as they develop and market programs for target audiences. They will investigate the dynamic media production.

Note: Course requires time outside the scheduled class period for activities occurring in the evening and on weekends.

TELEVISION AND MEDIA PRODUCTION APPRENTICESHIP  8691
Grades 12 1 Credit
Required Background: Television and Media Production II

This course is designed to provide students with the practical and principle knowledge of community television production through participation in the development of programming for the Stafford Educational Channel. Course content will emphasize the exploration of advanced concepts and processes involved in managing and maintaining a PEG television station to include video and audio media production and editing with emphasis on hands-on experience in studio and field production, as well as, video and audio post-production.

Students will also qualify for employment opportunities as Video Production Technicians within the Stafford County Public School System.

Note: The work in Television and Media Production Apprenticeship requires that students be willing and able to devote considerable time outside of the scheduled class period to activities occurring in the evening and on weekends.

Schools offering course: BPHS, NSHS
Courses may be cancelled as a result of low enrollment, staffing and/or budget limitations.