Oakton High School
Course Offerings
2015 - 2016

Go Cougars!
Dear Oakton Parents and Students,

The Oakton Cougars comprise an exceptional community of learners—readers, artists, athletes, writers, thinkers, musicians, and innovators—and you are key members of that community. Ranked by the Washington Post as the first among county high schools in its Challenge Index and by U.S. News and World Report as among the top five in Virginia, Oakton High School holds a reputation as one of the best high schools in the nation. These recognitions reflect the commitment of students, parents, and school staff to a rigorous and rich high school experience; and they are made possible in part by the extensive course offerings represented in this booklet.

The vision of Oakton High School is “to prepare all students for productive and ethical living, lifelong learning, and innovative and responsible leadership.” Living, learning, and leading in the twenty-first century require a broad set of skills that will enable Oakton graduates to adapt to the ever-changing global economy. In order to attain this vision, we at Oakton continue to improve and expand programs to emphasize essential, twenty-first-century skills—particularly critical thinking, communication, creativity, collaboration, and citizenship. To this end, we offer a wide array of courses, including a variety of Advanced Placement, Honors, electives, co-curricular and interdisciplinary coursework that prepare students for postsecondary success. I encourage you to select courses that not only meet the requirements of the diploma you wish to obtain but also align with the path you will pursue after graduation. Challenge yourself with rigorous coursework that fulfills both Oakton’s vision and your own.

I encourage you to review the first portion of this booklet regarding diploma requirements, time requirements for courses, grading, academies, and online course requirements. Prior to registering you should complete your registration planner. Carefully read the booklet so that you meet all requirements; for example, some courses may require fees, and others will require teacher and parent signatures. Counselors, teachers, and assistant principals stand ready to advise you in the course selection process, so do not hesitate to ask for assistance as you craft your personal program of studies.

Sincerely,

John A. Banbury, Ed.D.
Principal, Oakton High School
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Graduation Requirements for Students Entering the 9th Grade for the First Time Prior to 2011-2012

For more information, please visit www.fcps.edu/is/schoolcounseling/graduation.shtml, which includes more detailed information and tutorials about diploma types and graduation requirements.
STANDARD DIPLOMA
22 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

The requirements for a student to earn a diploma shall be those in effect when the student enters the 9th grade for the first time. The following applies to 9th grade students who entered high school prior to 2011-2012.

To graduate from high school, students shall meet the minimum requirements for the Standard Diploma as outlined below, including 22 standard credits, 6 of which must be verified credits. A standard credit is earned when a student passes a course. A verified credit is earned when a student passes a course and the associated end-of-course SOL test. In some cases, students may utilize substitute tests, certifications, or the appeal process to earn verified credits. State guidelines prescribe the number of verified credits required for graduation for students entering a Virginia public high school for the first time during the tenth grade or after. Consult your school counselor for specific information.

Students receive credit toward graduation for high school courses taken and passed in middle school. These courses count toward credits in the required sequences as well as toward the total number of credits required for graduation and calculation of the grade point average (GPA). Middle school parents may request that grades for any high school credit-bearing course taken in the middle school be removed from the student’s high school transcript, and therefore the student will not earn high school credit for the course. In addition, the student will not be eligible for a verified credit in any course which has been removed from the transcript. The request to remove a course from the transcript must be made in writing to the middle or high school the student will attend the following year, prior to the end of the first nine weeks. See current version of FCPS Regulation 2408.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Standard Credits</th>
<th>Verified Credits</th>
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</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory Science</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>History and Social Sciences</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Ed</td>
<td>1</td>
<td></td>
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<tr>
<td>Electives</td>
<td>5</td>
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<tr>
<td>Student Selected Test</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td><strong>22</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

1 Courses completed to satisfy this requirement shall be at or above the level of algebra and shall include at least two course selections from among Algebra I, Geometry, Algebra II, or other mathematics courses above the level of algebra and geometry. The Board of Education may approve additional courses to satisfy this requirement.

2 Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines: earth sciences, biology, chemistry, or physics. The Board may approve additional courses to satisfy this requirement.

3 Courses completed to satisfy this requirement are U.S. and Virginia History, U.S. and Virginia Government, and World History/Geography I and World History/Geography II. AP World History satisfies the requirement for World History/Geography II.

4 Courses to satisfy this requirement shall include at least two sequential electives.

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

6 Students 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 educational field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student selected verified credit and (ii) either a science or history and social sciences 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.
ADVANCED STUDIES DIPLOMA
24 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

The requirements for a student to earn a diploma shall be those in effect when the student enters the 9th grade for the first time. The following applies to 9th grade students who entered high school prior to 2011-2012.

To graduate from high school with an Advanced Studies Diploma, students shall meet the minimum requirements as outlined below which include 24 credits, 9 of which must be verified credits. A standard credit is earned when a student passes a course. A verified credit is earned when a student passes a course and the associated end-of-course SOL test. In some cases, students may utilize substitute tests or certifications to earn verified credits. State guidelines prescribe the number of verified credits required for graduation for students entering a Virginia public high school for the first time during tenth grade or after. Consult your school counselor for specific information.

Students receive credit toward graduation for high school courses taken and passed in middle school. These courses count toward credits in the required sequences as well as toward the total number of credits required for graduation and calculation of the grade point average (GPA). Middle school parents may request that grades for any high school credit-bearing course taken in the middle school be removed from the student’s high school transcript, and therefore the student will not earn high school credit for the course. In addition, the student will not be eligible for a verified credit in any course which has been removed from the transcript. The request to remove a course from the transcript must be made in writing to the middle or high school the student will attend the following year prior to the end of the first nine weeks. See current version of FCPS Regulation 2408.

<table>
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<th>Advanced Studies Diploma Course Requirements (8 VAC 20-131-50)</th>
<th>Standard Credits</th>
<th>Verified Credits</th>
</tr>
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<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics(^1)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Science(^2)</td>
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<td>2</td>
</tr>
<tr>
<td>History and Social Science(^2)</td>
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<tr>
<td>*World Language(^4)</td>
<td>3</td>
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<td>Health and Physical Education</td>
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<td>Fine Arts or Career and Technical Ed</td>
<td>1</td>
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<tr>
<td>Electives</td>
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<td></td>
</tr>
<tr>
<td>Student Selected Test(^5)</td>
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<td>1</td>
</tr>
<tr>
<td>Total Credits</td>
<td>24</td>
<td>9</td>
</tr>
</tbody>
</table>

*Foreign Language is designated World Language in Fairfax County Public Schools.

\(^1\) Courses completed to satisfy this requirement shall be at or above the level of algebra and shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The Board of Education may approve additional courses to satisfy this requirement.

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

\(^3\) Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and World History/Geography I and World History/Geography II. AP World History satisfies the requirement for World History/Geography II.

\(^4\) Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.

\(^5\) A student may utilize additional tests for earning verified credit in computer science, technology, career or technical education or other areas as prescribed by the Board in 8 VAC 20-131-110.
MODIFIED STANDARD DIPLOMA
20 CREDIT DIPLOMA REQUIREMENT FOR GRADUATION

The requirements for a student to earn a diploma shall be those in effect when the student enters the ninth grade for the first time. The following applies to 9th grade students who entered high school between 2000-2001 and 2012-2013.

The Modified Standard Diploma is intended for certain students who have a disability and are unlikely to meet the credit requirements for a Standard Diploma. Eligibility and participation in the Modified Standard Diploma program shall be determined by the student’s Individual Education Program (IEP) team including the student, when appropriate, at any point after the student’s eighth grade year. There are no verified credit requirements for the Modified Standard Diploma. Students pursing the Modified Standard Diploma are required to meet literacy and numeracy requirements on the 8th grade English reading and mathematics Standards of Learning (SOL) tests. Students may substitute a higher level high school SOL test for the 8th grade SOL tests for the literacy and numeracy requirements.

A student who has chosen to pursue a Modified Standard Diploma shall also be allowed to pursue the Standard Diploma, or Advanced Studies Diploma. The student may not be excluded from courses and tests required to earn a Standard or Advanced Studies Diploma.

<table>
<thead>
<tr>
<th>Modified Standard Diploma Course Requirements (8 VAC 20-131-50)</th>
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</thead>
<tbody>
<tr>
<td><strong>Subject Area</strong></td>
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<tr>
<td>English</td>
</tr>
<tr>
<td>Mathematics¹</td>
</tr>
<tr>
<td>Science²</td>
</tr>
<tr>
<td>History and Social Sciences³</td>
</tr>
<tr>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Ed.</td>
</tr>
<tr>
<td>Electives⁴</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
</tr>
</tbody>
</table>

¹ Courses completed to satisfy this requirement shall include content from among applications of algebra, geometry, personal finance, and probability and statistics in courses that have been approved by the Board of Education.

² Courses completed shall include content from at least two of the following: applications of earth science, biology, chemistry, or physics in courses approved by the Board.

³ Courses completed to satisfy this requirement shall include one unit of credit in U.S. and Virginia History and one unit of credit in U.S. and Virginia Government in courses approved by the Board.

⁴ Courses to satisfy this requirement shall include at least two sequential electives in the same manner required for the Standard Diploma.

Declaration of Nondiscrimination
No student in Fairfax County Public Schools shall on the basis of race, color, sex (including sexual harassment, Title IX, and pregnancy), marital status, religion, national origin, age, disability, or genetic information be excluded from or denied enrollment in any academic activity or course. The director of the Office of Equity and Compliance has been designated to handle inquiries and complaints regarding nondiscrimination policies to include those covered under Title IX and can be reached at 571-423-3050. For concerns regarding compliance under Section 504 of the Rehabilitation Act of 1973, please contact the coordinator of Due Process and Eligibility at 703-317-3000.
Graduation Requirements for Students Entering the 9th Grade for the First Time in 2011-2012 and 2012-2013

For more information, please visit www.fcps.edu/is/schoolcounseling/graduation.shtml, which includes more detailed information and tutorials about diploma types and graduation requirements.
STANDARD DIPLOMA

22 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

The requirements for a student to earn a diploma shall be those in effect when the student enters the 9th grade for the first time. The following applies to 9th grade students who enter high school in 2011-2012 and 2012-2013.

To graduate from high school, students shall meet the minimum requirements for the Standard Diploma as outlined below, including 22 standard credits, 6 of which must be verified credits. A standard credit is earned when a student passes a course. A verified credit is earned when a student passes a course and the associated end-of-course SOL test. In some cases, students may utilize substitute tests, certifications, or the appeal process to earn verified credits. State guidelines prescribe the number of verified credits required for graduation for students entering a Virginia public high school for the first time during the tenth grade or after. Consult your school counselor for specific information.

Students receive credit toward graduation for high school courses taken and passed in middle school. These courses count toward credits in the required sequences as well as toward the total number of credits required for graduation and calculation of the grade point average (GPA). Middle school parents may request that grades for any high school credit-bearing course taken in the middle school be removed from the student’s high school transcript, and therefore the student will not earn high school credit for the course. In addition, the student will not be eligible for a verified credit in any course which has been removed from the transcript. The request to remove a course from the transcript must be made in writing to the middle or high school the student will attend the following year, prior to the end of the first nine weeks.

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<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory Science†‡</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>History and Social Sciences†‡</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>*World Language, Fine Arts or Career and Technical Ed†‡</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Economics &amp; Personal Finance</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Student Selected Test</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>22</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

*Foreign Language is designated World Language in Fairfax County Public Schools.

1 Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The Board of Education shall approve additional courses to satisfy this requirement.

2 Courses 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.

3 Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and World History/Geography I and World History/Geography II. AP World History satisfies the requirement for World History/Geography II.

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

5 A student 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.

6 Students 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 (i) the student selected verified credit and (ii) 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 as an additional test to verify student achievement.

7 Pursuant 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

26 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

The requirements for a student to earn a diploma shall be those in effect when the student enters the 9th grade for the first time. The following applies to 9th grade students who enter high school in 2011-2012 and 2012-2013.

To graduate from high school with an Advanced Studies Diploma, students shall meet the minimum requirements as outlined below which include 26 credits, 9 of which must be verified credits. A standard credit is earned when a student passes a course. A verified credit is earned when a student passes a course and the associated end-of-course SOL test. In some cases, students may utilize substitute tests or certifications to earn verified credits. State guidelines prescribe the number of verified credits required for graduation for students entering a Virginia public high school for the first time during tenth grade or after. Consult your school counselor for specific information.

Students receive credit toward graduation for high school courses taken and passed in middle school. These courses count toward credits in the required sequences as well as toward the total number of credits required for graduation and calculation of the grade point average (GPA). Middle school parents may request that grades for any high school credit-bearing course taken in the middle school be removed from the student’s high school transcript, and therefore the student will not earn high school credit for the course. In addition, the student will not be eligible for a verified credit in any course which has been removed from the transcript. The request to remove a course from the transcript must be made in writing to the middle or high school the student will attend the following year prior to the end of the first nine weeks.

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<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Mathematics&lt;sup&gt;1&lt;/sup&gt;</td>
<td>4</td>
<td>2</td>
<td></td>
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<tr>
<td>Laboratory Science&lt;sup&gt;2&lt;/sup&gt;</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>History and Social Sciences&lt;sup&gt;3&lt;/sup&gt;</td>
<td>4</td>
<td>2</td>
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<tr>
<td>*World Language&lt;sup&gt;4&lt;/sup&gt;</td>
<td>3</td>
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<tr>
<td>Health and Physical Education</td>
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<td>2</td>
<td></td>
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<tr>
<td>Fine Arts or Career and Technical Ed</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economics &amp; Personal Finance</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Student Selected Test&lt;sup&gt;5&lt;/sup&gt;</td>
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<td>1</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td><strong>26</strong></td>
<td><strong>9</strong></td>
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<sup>1</sup> Courses completed to satisfy this requirement shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The Board of Education shall approve courses to satisfy this requirement.

<sup>2</sup> Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: 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.

<sup>3</sup> Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and World History/Geography I and World History/Geography II. AP World History satisfies the requirement for World History/Geography II.

<sup>4</sup> Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.

<sup>5</sup> A student may utilize additional tests for earning verified credit in computer science, technology, career or technical education, economics, or other areas as prescribed by the Board in 8 VAC 20-131-110.
The requirements for a student to earn a diploma shall be those in effect when the student enters the ninth grade for the first time. The following applies to 9th grade students who entered high school between 2000-2001 and 2012-2013.

The Modified Standard Diploma is intended for certain students who have a disability and are unlikely to meet the credit requirements for a Standard Diploma. Eligibility and participation in the Modified Standard Diploma program shall be determined by the student’s Individual Education Program (IEP) team including the student, when appropriate, at any point after the student’s eighth grade year. There are no verified credit requirements for the Modified Standard Diploma. Students pursuing the Modified Standard Diploma are required to meet literacy and numeracy requirements on the 8th grade English reading and mathematics Standards of Learning (SOL) tests. Students may substitute a higher level high school SOL test for the 8th grade SOL tests for the literacy and numeracy requirements.

A student who has chosen to pursue a Modified Standard Diploma shall also be allowed to pursue the Standard Diploma or Advanced Studies. The student may not be excluded from courses and tests required to earn a Standard or Advanced Studies Diploma.

<table>
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<tr>
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<tr>
<td>Mathematics</td>
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<td>History and Social Sciences</td>
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<tr>
<td>Health and Physical Education</td>
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<tr>
<td>Fine Arts or Career and Technical Ed.</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
</tr>
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</table>

Courses completed to satisfy this requirement shall include content from among applications of algebra, geometry, personal finance, and probability and statistics in courses that have been approved by the Board of Education.

Courses completed shall include content from at least two of the following: applications of earth science, biology, chemistry, or physics in courses approved by the Board.

Courses completed to satisfy this requirement shall include one unit of credit in U.S. and Virginia History and one unit of credit in U.S. and Virginia Government in courses approved by the Board.

Declaration of Nondiscrimination

No student in Fairfax County Public Schools shall on the basis of race, color, sex (including sexual harassment, Title IX, and pregnancy), marital status, religion, national origin, age, disability, or genetic information be excluded from or denied enrollment in any academic activity. The director of the Office of Equity and Compliance has been designated to handle inquiries and complaints regarding nondiscrimination policies to include those covered under Title IX and can be reached at 571-423-3050. For concerns regarding compliance under Section 504 of the Rehabilitation Act of 1973, please contact the coordinator of Due Process and Eligibility at 703-317-3000.
Graduation Requirements for Students Entering the 9th Grade for the First Time in 2013-2014 and Beyond

For more information, please visit www.fcps.edu/is/schoolcounseling/graduation.shtml, which includes more detailed information and tutorials about diploma types and graduation requirements.
STANDARD DIPLOMA
22 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

The requirements for a student to earn a diploma shall be those in effect when the student enters the 9th grade for the first time. The following applies to 9th grade students who enter high school in 2013-2014 and beyond.

To graduate from high school, students shall meet the minimum requirements for the Standard Diploma as outlined below, including 22 standard credits, 6 of which must be verified credits. A standard credit is earned when a student passes a course. A verified credit is earned when a student passes a course and the associated end-of-course SOL test. In some cases, students may utilize substitute tests, certifications, or the appeal process to earn verified credits. State guidelines prescribe the number of verified credits required for graduation for students entering a Virginia public high school for the first time during the tenth grade or after. Consult your school counselor for specific information.

Students receive credit toward graduation for high school courses taken and passed in middle school. These courses count toward credits in the required sequences as well as toward the total number of credits required for graduation and calculation of the grade point average (GPA). Middle school parents may request that grades for any high school credit-bearing course taken in the middle school be removed from the student’s high school transcript, and therefore the student will not earn high school credit for the course. In addition, the student will not be eligible for a verified credit in any course which has been removed from the transcript. The request to remove a course from the transcript must be made in writing to the middle or high school the student will attend the following year, prior to the end of the first nine weeks. See current version of FCPS Regulation 2408.

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<th>Subject Area</th>
<th>Standard Credits</th>
<th>Verified Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics¹</td>
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<tr>
<td>Laboratory Science²,³</td>
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<tr>
<td>History and Social Sciences⁴,⁵</td>
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<tr>
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<tr>
<td>*World Language, Fine Arts or Career and Technical Ed⁷</td>
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<tr>
<td>Electives⁶</td>
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</table>

¹ Foreign Language is designated World Language in Fairfax County Public Schools.

² Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The Board of Education shall approve additional courses to satisfy this requirement.

³ Courses 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.

⁴ Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and World History/Geography I and World History/Geography II. AP World History satisfies the requirement for World History/Geography II.

⁵ Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.

⁶ A student 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.

⁷ Students 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 (i) the student selected verified credit and (ii) 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 as an additional test to verify student achievement.

⁸ Pursuant to Section 22.1-253.13-A, Code of Virginia, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education.

⁹ Students shall earn a career and technical education credential approved by the 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 Assessment.

Students shall successfully complete one virtual course, which may be a noncredit-bearing course or elective credit bearing course that is offered online.
ADVANCED STUDIES DIPLOMA
26 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

The requirements for a student to earn a diploma shall be those in effect when the student enters the 9th grade for the first time. The following applies to 9th grade students who enter high school in 2013-2014 and beyond.

To graduate from high school with an Advanced Studies Diploma, students shall meet the minimum requirements as outlined below which include 26 credits, 9 of which must be verified credits. A standard credit is earned when a student passes a course. A verified credit is earned when a student passes a course and the associated end-of-course SOL test. In some cases, students may utilize substitute tests or certifications to earn verified credits. State guidelines prescribe the number of verified credits required for graduation for students entering a Virginia public high school for the first time during tenth grade or after. Consult your school counselor for specific information.

Students receive credit toward graduation for high school courses taken and passed in middle school. These courses count toward credits in the required sequences as well as toward the total number of credits required for graduation and calculation of the grade point average (GPA). Middle school parents may request that grades for any high school credit-bearing course taken in the middle school be removed from the student’s high school transcript, and therefore the student will not earn high school credit for the course. In addition, the student will not be eligible for a verified credit in any course which has been removed from the transcript. The request to remove a course from the transcript must be made in writing to the middle or high school the student will attend the following year prior to the end of the first nine weeks. See current version of FCPS Regulation 2408.

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Standard Credits</th>
<th>Verified Credits</th>
</tr>
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<tbody>
<tr>
<td>English</td>
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<tr>
<td>Mathematics</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Science</td>
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<td>2</td>
</tr>
<tr>
<td>History and Social Sciences</td>
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<tr>
<td><em>World Language</em></td>
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<td>Health and Physical Education</td>
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<td>Student Selected Test</td>
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<td><strong>Total Credits</strong></td>
<td><strong>26</strong></td>
<td><strong>9</strong></td>
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</tbody>
</table>

*Foreign Language is designated World Language in Fairfax County Public Schools.

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

2 Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: 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.

3 Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and World History/Geography I and World History/Geography II. AP World History satisfies the requirement for World History/Geography II.

4 Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.

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

6 Students shall successfully complete one virtual course, which may be a noncredit-bearing course, or may be a course required to earn this diploma that is offered online.
STATE DIPLOMA SEALS

1. The Governor’s Seal shall 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 will earn the student at least nine transferrable college credits in Advanced Placement (AP), International Baccalaureate (IB), Cambridge, or dual enrollment courses.

2. Students who complete the requirements for a Standard or Advanced Studies Diploma with an average grade of “A” shall receive a Board of Education Seal on the diploma.

3. The Board of Education’s Career and Technical Education Seal will be awarded to students who earn a Standard or Advanced Studies Diploma and 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 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 acquire a professional license in that career and technical education field from the Commonwealth of Virginia. The Board 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 a Standard or Advanced Studies Diploma and (i) satisfy all of the 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, or 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 shall approve all professional licenses and examinations used to satisfy these requirements.

5. The Board of Education’s Seal for Excellence in Civics Education will be awarded to students who earn a Standard, Advanced Studies, or Modified Standard Diploma and: (i) complete Virginia and United States History and Virginia and United States Government courses with a grade of “B” or higher; and, (ii) have good attendance and no disciplinary infractions as determined by local school board policies and, (iii) complete 50 hours of voluntary participation in community service or extracurricular activities. Activities that would satisfy the requirements of clause (iii) of this subdivision include: (a) volunteering for a charitable or religious organization that provides services to the poor, sick or less fortunate; (b) participating in Boy Scouts, Girl Scouts, or similar youth organizations; (c) participating in JROTC; (d) participating in political campaigns or government internships, or Boys State, Girls State, or Model General Assembly; or (e) participating in school-sponsored extracurricular activities that have a civics focus. Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement.

GRADING SYSTEM

<table>
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<tr>
<th>GPA</th>
<th>Credit Value</th>
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<tr>
<td>A (93-100)</td>
<td>4.0</td>
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<tr>
<td>B (80-92)</td>
<td>3.7</td>
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<tr>
<td>C (77-79)</td>
<td>2.3</td>
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<tr>
<td>D (67-69)</td>
<td>1.3</td>
</tr>
<tr>
<td>F (below 64)</td>
<td>0.0</td>
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GRADE POINT AVERAGE

Grade point average (GPA) is calculated on the basis of all courses for which high school credit has been earned or attempted, including repeated courses previously passed.

In order for a repeat course to raise a GPA, the student’s grade must be higher than the one originally given. All classes appearing on the high school transcript including high school classes taken in summer school, middle school, or online are included when calculating GPA.

Advanced Placement (AP) courses, specified International Baccalaureate (IB) courses, and other courses approved through the annual course review process receive an additional 1.0 added to the final grade upon successful completion of the course. Successful completion is defined as completing the course with a passing grade and where applicable completing the corresponding exam. For example, a final grade of A in an AP/IB course shall receive 5.0 quality points for purposes of calculating grade point average.

Honors courses in mathematics, science, English, social studies, designated Thomas Jefferson High School courses, and other courses approved through the annual course review process receive an additional 0.5 weight added to the final grade upon successful completion of the course. Successful completion is defined as completing the course with a passing grade. For example, a final grade of A in an honors class shall receive 4.5 quality points.

Courses dropped will not be counted in grade point average (GPA) except when a final grade of F is received: (a) for the fourth grading period of a full-year course, or (b) for the second grading period of a semester course. A student's GPA is determined by dividing the total number of quality points earned by the number of courses included in the transcript. The grade point average is reported to three decimal places (thousandths). Fairfax County Public Schools does not rank its students.
EXPUNGING HIGH SCHOOL COURSES TAKEN IN MIDDLE SCHOOL

In accordance with Virginia state regulations, FCPS Regulation 2408 permits parents of students who take a high school credit-bearing course in middle school to request that the grade be omitted from the student's high school transcript and the student not earn high school credit for the course. **Parents must make this request in writing no later than the end of the first nine weeks of the school year following completion of the course.** The form to make this request, along with the process for making the request, is available at: [http://www.fcps.edu/it/forms/is104.pdf](http://www.fcps.edu/it/forms/is104.pdf) or through your student’s school counselor. Parents are strongly advised to discuss this decision with their student’s school counselor and the impact of expunging a course on desired high school diploma type and standard and verified credit requirements.

COURSES TAKEN OUTSIDE OF FCPS

Currently enrolled FCPS students who wish to take a course outside of FCPS and transfer back the credit must have written approval from their school **prior** to enrolling in the course. The course must meet the requirements outlined in the current version of FCPS regulation 2408 and Virginia state regulations. For additional information about pursuing coursework outside of FCPS for credit, please contact your school counselor.

LATE START OPTION FOR STUDENTS

Students may take up to two online courses that can be scheduled in the first block of the day to allow for additional time to sleep. Transportation arrangements for a student on this modified schedule are the responsibility of the family. Students who wish to pursue this option should indicate their intent at the time of course registration.

LATE START OPTION FOR SENIORS

Seniors who are on track to graduate may reduce their schedule by up to 2 periods in the first block to allow for additional time for sleep. Transportation arrangements for a student on this modified schedule are the responsibility of the family. Seniors considering this option should discuss possible implications for college admissions and Virginia High School League (VHSL) eligibility with their school counselor prior to reducing their schedule. Students who wish to pursue this option should indicate their intent at the time of course registration. Schools will attempt to honor all requests, however, scheduling conflicts may prohibit some students from accessing this option.

WITHDRAW POLICY

For the first grading period only, a student has five days after the date on which report cards are sent home in which to drop a course without having a grade recorded. Courses dropped are not counted in the grade point average except when an F is received for the course. Middle schools do not calculate grade-point averages; however, if a high school credit course is taken by a middle school student, courses dropped are not counted in the high school grade-point average except when an F is received for the course. Unless the principal approves an exception, a student may not withdraw during the final quarter of a course if he or she is passing the course. If a student drops a course during the:

1st quarter No penalty--nothing is recorded.

2nd quarter WP (withdrawn passing) or WF (withdrawn failing) is recorded. Exception: For semester courses a WP or F for failure is recorded.

3rd quarter WP or WF is recorded.

4th quarter WP or F for failure is recorded.
The Fairfax County School Board policy permits students to take certain courses on a pass-fail basis.

- With parental or guardian approval, any high school student shall be given the option of taking one elective credit per school year to be marked on a pass-fail basis. This may be applied to required health and physical education credits, world language credits, and to credits other than those required for English, social studies, mathematics, and laboratory science and specialized courses such as Principles of Engineering Technology and Senior Technology Research taught at Thomas Jefferson High School for Science and Technology.

- A double or triple-period class taken for two or three credits in the technical fields may be taken on a pass-fail basis as the one pass-fail course per year.

- No student may take more than two single semester electives or one full-year elective per school year on the pass-fail system except as indicated above.

- Any high school student wishing to take a course as pass-fail shall indicate this by completing a "Pass-Fail Status Request Form" requiring parent approval and returning it to designated school personnel on or before the 22nd school day or by the first half of the first grading period subsequent to entering the course. Students in schools using a semester block schedule must return the parent approval form to the designated school personnel on or before the 11th school day or by the first half of the first grading period subsequent to entering the course. This decision may not be reversed.

- If a student drops a class being taken on a pass-fail basis and transfers to a new class, the student shall have 10 school days to make a decision as to whether the new class will be taken on a pass-fail basis. Students in schools using a semester block schedule shall have 5 school days to make a decision as to whether the new class will be taken on a pass-fail basis, provided it is an elective course. This decision may not be reversed.

- Grades are determined as follows:
  - "P" for an A, A-, B+, B, B-, C+, C, C-, D+, D which will receive credit but will not count in grade-point average.
  - "F" for an F which will receive no credit but will be counted in grade-point average.

In special circumstances, students may be allowed to attend one course without receiving credit for it. The audit application must be completed, submitted, and approved prior to the beginning of the course. Students may audit a course one year and then take it for credit the next year. Students who audit a course must meet all attendance requirements and strive toward completion of POS standards, benchmarks, and indicators. The decision may not be reversed with the exception of ESOL students placed in a content class who may be changed from audit to credit status at the request of the content teacher and ESOL department chair if the student demonstrates mastery of the course content.

**PROMOTION POLICY**

**Middle School**
To qualify for promotion, seventh and eighth grade middle school students must demonstrate knowledge and competency based upon identified standards of achievement in the four core areas of language arts, mathematics, science, and social studies. To guarantee promotion, students must demonstrate proficiency in the foundational knowledge and skills in each of the four core subject areas and earn a passing final grade based on grade level expectations.

Students who earn an “F” as a final grade in one or two core subjects are retained, at the discretion of the principal, and encouraged to participate in an intervention program. Based upon the extent to which a student demonstrates knowledge and competency of identified standards of achievement in an intervention program, he/she is promoted or retained. Students who are promoted may receive continued intervention throughout the following school year. If students do not participate in an intervention program, they are retained at the discretion of the principal.

Students who earn an “F” in three or four core courses are retained, at the discretion of the principal.

**High School**
The minimum requirements for placement in high school grades are as follows:

To be placed in grade: The student must:

- 9 Be promoted from 8th grade
- 10 Be promoted from 9th grade and have earned at least 5 standard units of credit.
- 11 Have earned at least 10 standard units of credit.
- 12 Have a planned program providing sufficient credits to ensure graduation the following June or August.
WORLD LANGUAGES PROFICIENCY CREDIT

The Credit Exam for World Languages is given each fall to students who wish to demonstrate written proficiency in one of several languages: American Sign Language, Amharic, Arabic, Bengali/Bangla, Chinese/Mandarin, Farsi/Persian, French, German, Hindi, Italian, Japanese, Korean, Nepali, Punjabi, Russian, Somali, Spanish, Tagalog/Pilipino, Tamil, Telugu, Twi, Urdu, or Vietnamese. Students who are successful on the exam receive two world languages credits which may be used to fulfill the world languages requirements/electives of the Advanced Studies or Standard Diplomas. In addition, middle school students in grades 6-8 enrolled in certain ESOL 5720-5730 courses may receive up to two world languages credits towards high school graduation requirements in the two-plus-two option for fulfilling the world languages requirement. High school students enrolled in ESOL 5720 courses may receive elective or up to two world languages credits toward high school graduation requirements in the two-plus-two option for fulfilling the world languages requirement. For more information on the exam, go to: http://www.fcps.edu/is/worldlanguages/creditexam/index.shtml or contact the World Languages Team at 571-423-4602.

POSTSECONDARY PLANNING

Each high school in Fairfax County Public Schools provides a sequential postsecondary planning program that focuses on the acquisition of knowledge, skills, and self-understanding necessary to achieve postsecondary goals. Students are counseled regarding opportunities for postsecondary education, financial aid and employment prior to high school graduation. The program includes career planning that assists students in developing good decision-making skills, an understanding of their interests and abilities, and knowledge of the wide range of career opportunities. To assist in the process, information and resources are provided through the school counseling program at your school and are available online. Additionally, each high school has a staffed Career Center with current college and career resource materials.

ADVANCED ACADEMIC PROGRAMS

Advanced Academic Programs at the high school level are comprised of honors courses at the 9th through 12th grade levels, and the Advanced Placement (AP) program at the 10th, 11th, and 12th grade levels or the International Baccalaureate Diploma Program (IBDP) at the 11th, and 12th grade levels. Advanced Academic Programs are open to all students committed to rigorous academic work. Student transfer applications may be submitted for an AP or IB program if the base school does not offer the desired program of study. For more information on the program please visit the web site at http://www.fcps.edu/is/aap/index.shtml.

AP and IB courses are advanced-level courses with external exams. Students who take AP and IB courses are required to complete the examinations. (For more information, see Grade Point Average.)

The Advanced Academic Program responds to the requirement of the Virginia Board of Education that each local school division plan and implement an instructional program for gifted and talented students at all levels K-12. Courses designated as honors, IB or AP fulfill this requirement.

The Fairfax County Public Schools' high school advanced academic program provides educational opportunities designed and coordinated to meet the needs, abilities, and interests of gifted and talented students. The high school advanced academic program provides challenging courses for students who demonstrate advanced academic ability.

Differentiated curricula and teaching strategies which stress critical thinking skills, creativity, and problem-solving are integrated into the content of all advanced academic course offerings. The four-year sequence of courses in each of the academic disciplines, which progresses from honors to AP, and IB, provides a continuous and balanced advanced academic program.

Advanced Placement

Centreville, Chantilly, Fairfax, Falls Church, Hayfield, Herndon, Lake Braddock, Langley, Madison, McLean, Oakton, South County, West Potomac, West Springfield, Westfield, and Woodson High Schools offer the Advanced Placement (AP) program. Individual AP courses are also offered at other high schools. All students enrolled in an AP course are required to complete the end-of-course AP exam. Students may receive college credit and/or placement based upon their exam grades. The AP program is offered in English, social studies, mathematics, science, world languages, and fine arts. AP courses are offered as open enrollment to all students committed to rigorous, academic work. Students taking at least 3 AP exams with at least a grade of 3 on each are recognized by the College Board as AP Scholars. Further information about the AP program may be obtained by contacting the school counselor or AP coordinator at the participating school.
**International Baccalaureate**

Annandale, Edison, Lee, Marshall, Mount Vernon, Robinson, South Lakes, and Stuart High Schools offer the International Baccalaureate Diploma Program (IBDP). To qualify for the IB Diploma, students must select at least one subject from each of six IB subject groups including English, world languages, mathematics, science, social studies, and an elective. Students take at least 3 and not more than 4 of these subjects at higher level (HL), the others at standard level (SL). All students enrolled in an IB course are required to complete the end-of-course IB exams. IB diploma candidates must complete 150 hours of extracurricular activities and community service, take the Theory of Knowledge course, and write a 4000 word essay on a topic of their choice. Students in IB schools may also take IB courses in areas of academic strength and interest. IB diploma course students take one or more IB courses and the associated exam(s) and receive recognition for each IB exam with a score of “4” or better.

Annandale, Lee, Mount Vernon, South Lakes, and Stuart offer the IB Career-related Certificate (IBCC). To qualify for the IBCC students must complete a 2-year CTE sequence, 2 IBDP courses and demonstrate world language development. IBCC candidates must also complete community service, take the Approaches to Learning course, and complete a reflective project related to their CTE course of study.

The IB program is offered in English, social studies, mathematics, science, world languages, fine arts, and other electives. IB courses are offered as open enrollment to all students committed to rigorous, academic work. Further information about the IB program may be obtained by contacting the school counselor or IB coordinator at the participating school. Annandale, Edison, Lee, Mount Vernon, Robinson, South Lakes, and Stuart High Schools implement the IB Middle Years Program (IBMYP) in 9th and 10th grade. Students may choose to work toward the MYP certificate which requires the completion of a personal project at the end of 10th grade and success on the MYP 10th grade assessments.

**Thomas Jefferson High School For Science And Technology**

The Thomas Jefferson High School for Science and Technology is a unique Fairfax County public school offering a comprehensive college preparatory program emphasizing the sciences, mathematics, and technology. As the Governor’s School for Science and Technology in Northern Virginia, the school serves students who are selected in a competitive process and intend to pursue college preparation in the sciences, engineering, or related fields. Students may obtain information about application procedures and deadlines from the School Counseling Office of their local schools or by calling Thomas Jefferson High School for Science and Technology Office of Admissions at 571-423-3770 or at: http://www.fcps.edu/pla/TJHSST_Admissions/index.html.

**CAREER AND TECHNICAL EDUCATION**

Course descriptions for Career and Technical Education (CTE) courses can be found under Business and Information Technology, Family and Consumer Sciences, Health and Medical Sciences, Marketing, Technology and Engineering Education, and Trade and Industrial in sections of the Standard Course Offerings guide. School counselors can provide further information on specialized courses available at the following locations: Chantilly, Edison, Fairfax, Falls Church, Marshall, and West Potomac High School Academies, as well as at Tysons Corner Center, Fair Oaks Shopping Center, Spring Village Residential Construction Site, and the Fairfax County School of Practical Nursing located at the Plum Center for Lifelong Learning. Please visit the CTE web site at http://www.fcps.edu/is/cte/index.shtml.

FCPS now offers students opportunities at four Governor’s Academies. Chantilly and Marshall Governor’s STEM Academies specialize in engineering and information technology. Falls Church and West Potomac Governor’s Health Sciences Academies focus on five pathways in the area of health care.

Fairfax County Public Schools (FCPS) has established articulation agreements with the Art Institutes of Miami, Philadelphia, and Washington, The Culinary Institute of America, George Mason University, James Madison University, Johnson & Wales University, and Stratford University that allow students to take certain career and technical education classes in high school and receive advanced placement credit. In addition, FCPS has dual enrollment agreements with Northern Virginia Community College (NVCC) and Shenandoah University whereby students can earn college credits for select career and technical education classes.

**STUDENT FEES**

Courses that require a student fee for consumable materials have been designated in this catalog. The schedule of divisionwide student fees to be charged for any elective course can be found in Notice 5922 at http://www.boarddocs.com/vsba/fairfax/Board.nsf/goto?open& id=B1CC2EDFD153A2958525706E00545AA9. Students eligible for the federal Free and Reduced-Price meals program may have course and test fees waived. For more information, see your school counselor.
FCPS Online Campus is a program designed to provide students with an online option for earning credits toward high school graduation. This program supports the Governor’s “Early College Scholars” program by providing advanced courses to students.

Students registered in any Fairfax County Public School or alternative high school are eligible to apply to take a course through the FCPS Online Campus. These courses are for students who have scheduling conflicts or have special needs requiring web-based instruction. Additionally, students may take up to two online courses that can be scheduled in the first block to allow for additional time for sleep. Students who wish to pursue this option should indicate that at the time of course registration. Tuition will be charged when a student is already scheduled to receive seven credits during the academic year or when a student enrolls in an FCPS online summer course. Students must meet all regular eligibility requirements to enroll in an FCPS online course. Students interested in enrolling in an FCPS Online Campus course should consult their school counselor for information regarding the registration process. For more information go to [http://www.fcps.edu/is/onlinecampus/](http://www.fcps.edu/is/onlinecampus/).

The following courses are currently available online:

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<tr>
<th>Course</th>
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<td>Algebra 1 Honors</td>
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<td>Economics and Personal Finance</td>
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<td>Geometry</td>
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<td>VA &amp; US History Honors</td>
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<tr>
<td>English 10</td>
<td>VA/U.S. Government</td>
<td>Physical Education 9</td>
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<td>English 10 Honors</td>
<td>VA/U.S. Government Honors</td>
<td>Physical Education 10</td>
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<tr>
<td>English 11</td>
<td>AP U.S. Government</td>
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<td>English 11 Honors</td>
<td>AP Microeconomics</td>
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<td>English 12</td>
<td>AP Macroeconomics</td>
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<td>English 12 Honors</td>
<td>Psychology</td>
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<tr>
<td>AP English Language</td>
<td>AP Psychology</td>
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<tr>
<td>AP English Literature</td>
<td>AP US History</td>
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</tbody>
</table>
### HIGH SCHOOL ACADEMIES AND OTHER SPECIALIZED CTE COURSES

Advanced technical and specialized elective courses are available at High School Academies and other community-based locations. Students enrolling in these courses will be provided with opportunities to participate in shadowing, mentoring, and/or internships with local businesses to further prepare them for college and careers. Transportation may be provided. Refer to course descriptions in the *Standard Course Offerings* for specific information on these specialized courses or visit [http://www.fcps.edu/is/cte/academies.shtml](http://www.fcps.edu/is/cte/academies.shtml).

### HIGH SCHOOL ACADEMY COURSE OFFERINGS

**CHANTILLY ACADEMY – A Governor’s STEM Academy**
http://www.fcps.edu/ChantillyAcademy/

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Air Force JROTC</td>
<td>Culinary Arts</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>Animal Science</td>
<td>Dental Careers</td>
<td>GE³</td>
</tr>
<tr>
<td>Automotive Collision Service</td>
<td>Early Childhood Careers</td>
<td>Hotel Marketing</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>Engineering Math</td>
<td>Independent Research – Engineering</td>
</tr>
<tr>
<td>Carpentry</td>
<td>Engineering Physics</td>
<td>Manufacturing Systems</td>
</tr>
<tr>
<td>Cisco</td>
<td>Engineering Systems</td>
<td>Medical Assistant</td>
</tr>
<tr>
<td>Computer Systems Technology – A+</td>
<td>Entrepreneurship</td>
<td>Network Administration</td>
</tr>
<tr>
<td>Cosmetology</td>
<td>Exploring Health Sciences</td>
<td>Pharmacy Technician</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Exploring the Language of Medicine</td>
<td>Teachers for Tomorrow</td>
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**EDISON ACADEMY**
http://www.fcps.edu/EdisonAcademy

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<thead>
<tr>
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<tbody>
<tr>
<td>Animal Science</td>
<td>Criminal Justice</td>
<td>Landscape Architecture &amp; Turf Management</td>
</tr>
<tr>
<td>Automotive Collision Service</td>
<td>Culinary Arts</td>
<td>Network Administration</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>Electrical Construction &amp; Engineering</td>
<td>Oracle</td>
</tr>
<tr>
<td>Computer Systems Technology – A+</td>
<td>Heating, Ventilation, AC, &amp; Refrigeration</td>
<td>Small Engine Repair</td>
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<tr>
<td>Cosmetology</td>
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**FAIRFAX ACADEMY**
http://www.fcps.edu/FairfaxAcademy/

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<tr>
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<tbody>
<tr>
<td>Chinese</td>
<td>Korean</td>
<td>Professional Photography Studio</td>
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<tr>
<td>Dance</td>
<td>Music and Computer Technology</td>
<td>Professional Television Production</td>
</tr>
<tr>
<td>Fashion Design</td>
<td>Professional Musical Theatre &amp; Actor’s Studio</td>
<td>Social Media Marketing</td>
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**FALLS CHURCH ACADEMY – A Governor’s Health Sciences Academy**
http://www.fcps.edu/fallschurchacademy/

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<td>Exploring Health Sciences</td>
<td>Medical Assistant</td>
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<tr>
<td>Dental Careers</td>
<td>Exploring the Language of Medicine</td>
<td>Pharmacy Technician</td>
</tr>
<tr>
<td>Early Childhood Careers</td>
<td>Fire and Emergency Medical Sciences</td>
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**MARSHALL ACADEMY – A Governor’s STEM Academy**
http://www.fcps.edu/MarshallAcademy/

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<tr>
<th>Course</th>
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<tbody>
<tr>
<td>Aerospace Science</td>
<td>Cisco</td>
<td>Culinary Arts</td>
</tr>
<tr>
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<td>Computer Systems Technology – A+</td>
<td>Entrepreneurship</td>
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<tr>
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<td>Hotel Marketing</td>
</tr>
<tr>
<td>Chinese</td>
<td>Criminal Justice</td>
<td>Network Administration</td>
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**WEST POTOMAC ACADEMY – A Governor’s Health Sciences Academy**
http://www.fcps.edu/WestPotomacAcademy/

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</tr>
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<td>Medical Assistant</td>
<td>Professional Television Production</td>
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BUSINESS & INFORMATION TECHNOLOGY

ACCOUNTING (632000)
Grades: 9, 10, 11, 12  Credit: one

Accounting offers students the opportunity to learn about the financial operations of modern business enterprises and prepares students to make better financial decisions for the future. Students study accounting concepts for sole proprietorships, partnerships, and corporations to understand the fundamental accounting equation, the business transaction analysis process, and the elements of financial reporting. Interpretation of accounting information is mastered through decision-making and problem-solving approaches that include source documents, case studies, and simulations. Technology integration and related accounting software applications are used to enhance skills to analyze and evaluate financial situations. Internet learning activities are used to reinforce research, communication, and team building skills. Course topics include forms of ownership, accounts receivable/accounts payable systems, payroll, taxes, and banking activities. Upon completion of this course, students will be able to complete an accounting cycle from transactions to financial statements. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.

ADVANCED ACCOUNTING (632100)
Grades: 10, 11, 12  Credit: one
Prerequisite: Accounting (632000)

Students continue to master accounting principles and procedures, adding new topics about managerial accounting, cost accounting, financial analysis, and business ethics. Content areas include property, plant and equipment, corporate investments, bonds, notes payable and receivables, amortizations, cash flow statements, and ratio analysis for the corporate structure. Spreadsheet analysis and accounting software applications provide the opportunity for higher-level thinking skill activities and authentic simulations enhance teamwork, decision making, and communication skills. Students also develop an understanding of career opportunities as they complete career exploration activities. Upon completion, students should be able to demonstrate an understanding of the principles of decision making, problem solving and critical thinking, and apply them to both business and personal financial situations. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. This course is also available online. Industry certification may be available as part of this course.

ADVANCED INFORMATION SYSTEMS (661300)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Information Systems (661200), Computer Solutions (615030, 31, 32), Digital Input Technologies (660932) or equivalent skill

Advanced Information Systems provides students with the opportunity to develop professional computer and technology skills in a project-oriented and student-centered environment. Working independently or in teams, students apply problem-solving, decision-making, creative-thinking, and communication skills to relevant, real-life situations through a series of software, the Microsoft IT Academy, and peripheral applications. Instruction in current and emerging information technology includes operating systems, networking and hardware principles, document preparation, presentation tools, spreadsheet analysis and charts preparation, relational database management, technical writing, desktop publishing, copyright issues, and basic web page design. Upon completion of this course, students will be able to apply technology to analyze and solve problems and to complete technology tasks efficiently and effectively. Upon successful completion of Advanced Information Systems, students may elect to obtain industry-recognized professional certification by taking the Microsoft Office Specialist (MOS) exam. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.

ADVANCED PROGRAMMING (664100)
Grades: 10, 11, 12  Credit: one
Prerequisite: Programming, Computer Science, or equivalent skill

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. Industry certification may be available as part of this course.

BUSINESS COOPERATIVE INTERNSHIP (679920)
(Formerly Cooperative Office Education-COE)
Grades: 10, 11, 12  Credit: one
Corequisite: Student must be concurrently enrolled in a business course.

Business Cooperative Internship allows students to apply what they have learned in the classroom to the real world. The internship experience combines a business course with employment in a business-related field that reflects the student's current career interests. The program offers valuable work experience, enhances employment skills, and develops marketable skills. This course, taken in conjunction with another business course, will earn one to two units of credit. Students who successfully complete 396 hours of supervised on-the-job training in a related occupation will earn one credit. Students who successfully complete 720 hours of supervised on-the-job training in a related occupation will earn two credits.

BUSINESS LAW (613232)
To be taken in combination with Business Management (613534)
Grades: 9, 10, 11, 12  Credit: one-half

Business Law provides students with the basic knowledge to become a better informed citizen, employee, and consumer. The course offers students the opportunities to study the nature and function of our legal system, courts, and procedures. Topics include contracts, sales agreements, torts, constitutional law, criminal law, and family law. Students focus on consumer rights and responsibilities, examine legal aspects of employment, research careers in law, and discuss the impact of laws on travelers and those living abroad. Enriched with student projects, debates, mock trials, field trips, guest speakers, and Internet activities, the course helps students understand the laws affecting businesses and consumers.

BUSINESS MANAGEMENT (613632)
To be taken in combination with Business Law (613333)
Grades: 9, 10, 11, 12  Credit: one-half

Students study basic management concepts and leadership styles as they explore business ownership, planning, economics, international business, and human relations issues such as employee motivation and conflict resolution. Through engaging software simulations, students learn to utilize efficiently and effectively the basic management functions of planning, organizing, staffing, directing, and controlling, and their impact on human and capital resources. Upon completion of this course, students will develop a business plan for a real or simulated business.

CISCO I PART A (854232)
Grades: 10, 11, 12  Credit: one-half
Prerequisite: Computer related course or equivalent skill
Corequisite: Cisco I Part B
This course is designed for students interested in pursuing a career in the computer industry. Students will install, configure, upgrade, diagnose, troubleshoot and perform preventive maintenance on computer motherboards, processors, and memory chips. Other areas of study will include basic networking, software operation of Windows and DOS, memory management, and preventive maintenance. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site. Industry certification may be available as part of this course. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

COMPUTER SYSTEMS TECHNOLOGY · A+ LEVEL 1 (862332)

Grades: 10, 11, 12 Credit: one-half
Prerequisite: Computer related course or equivalent skill
Corequisite: Computer Systems Technology · A+ Level 2 (Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students also register for Computer Systems Technology · A+ Level 2 in the spring. Students enter the world of computer technology and gain practical experience in assembling a computer system, installing an operating system, troubleshooting computers and peripherals, and using system tools and diagnostic software. They develop skills in computer networking and resource sharing. In addition, students explore the relationships between internal and external computer components. Emphasis is placed on customer service skills and career exploration. Upon successful completion of the course, students may qualify to take the A+ Certification exam. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site. Industry certification may be available as part of this course.

COMPUTER SYSTEMS TECHNOLOGY · A+ LEVEL 2 (862332)

Grades: 10, 11, 12 Credit: one-half
Prerequisite: Computer related course or equivalent skill
Corequisite: Computer Systems Technology · A+ Level 1 (Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students also register for Computer Systems Technology · A+ Level 1 in the fall. Building on the foundation of Computer Systems Technology · A+ Level 1, this advanced course provides students with training in procedures for optimizing and troubleshooting concepts for computer systems and subsystems. Students explore wireless technologies (e.g., Bluetooth, Wi-Fi) and create and configure a network. Emphasis is placed on technical proficiency, skill-building, and workplace readiness. The course prepares students for postsecondary education and training, and a successful career in information technology. Upon successful completion of the course, students may qualify to take the A+ Certification exam. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site. Industry certification may be available as part of this course.

INFORMATION SYSTEMS (661200)

Grades: 9, 10, 11, 12 Credit: one-half
Prerequisite: Computer Solutions Digital Input Technologies or equivalent skill

Students apply problem-solving skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, integrated software activities and the use of the Microsoft IT Academy. Students work individually and in groups to explore computer concepts, operating systems, networks, telecommunications, and emerging technologies. Keyboarding instruction will be a component of this course based on student need. Integrating lessons with real-life business applications and cross-curricular
learning activities will enable the students to become better prepared for life-long learning and problem solving. Upon successful completion of Information Systems, students may elect to obtain industry-recognized professional certification by taking the Microsoft Office Specialist (MOS) exams. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.

Industry certification may be available as part of this course.

NETWORK ADMINISTRATION 1 (665032)
Grades: 10, 11, 12 Credit: one
Prerequisite: Computer related course, Algebra I, or equivalent skill
(Chantilly, Edison, and Marshall Academies - transportation may be provided)

Network Administration 1 is a comprehensive, hands-on computer course in which students are taught basic networking skills using Windows and Microsoft Server. Topics covered throughout the year include network concepts, installation, configuration, management, and troubleshooting. Network Administration is designed to teach many aspects of computer support and network administration. Students learn networking concepts, from usage to components, and set up peer-to-peer network systems and client server networks. Students install and configure network cards and connect them to networks. Students learn how to install the operating systems, set up and manage accounts, load software, and set up and implement security plans. Upon successful completion of Network Administration, students may elect to obtain industry-recognized professional certification by taking the Microsoft Technical Associate (MTA) exams. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site. Industry certification may be available as part of this course.

NETWORK ADMINISTRATION 2 (665132)
Grades: 10, 11 Credit: one
Prerequisite: Network Administration 1
(Chantilly, Edison, and Marshall Academies - transportation may be provided)

Network Administration 2 is designed to continue teaching aspects of network administration-focusing on management and support of network users and systems. Time is spent discussing responsibilities of computer professionals, training end users, evaluating new technology, developing system policies, troubleshooting workstations, managing network services and protocols, and effectively using e-business communications. Students learn communications protocols, troubleshooting techniques for systems and client server networks, web site management and other advanced networking topics. Upon successful completion of Network Administration, students may elect to obtain industry-recognized professional certification by taking the Microsoft Technical Associate (MTA) exams leading to the Microsoft Certified Professional (MCP) exams, Microsoft Certified Systems Administrator (MCSA), Microsoft Certified Desktop Support Technician (MCDST) and Microsoft Certified Systems Engineer (MCSE). The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site. Industry certification may be available as part of this course.

ORACLE 1 (666032)
Grades: 10, 11, 12 Credit: one
Prerequisite: Computer-related course or equivalent skill
(Chantilly and Edison Academies - transportation may be provided)

This is an advanced information technology class that provides complete, hands-on computer training in data modeling and database application software with an emphasis on Oracle 9i. An example of an Oracle web site would be Amazon.com. Students taking this course will be prepared to take Oracle's Introduction to SQL (Structured Query Language) programming exam. Preparation for careers is a major component of this class. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site. Industry certification may be available as part of this course.

ORACLE 2 (666232)
Grades: 11, 12 Credit: one
Prerequisite: Oracle 1
(Chantilly and Edison Academies - transportation may be provided)

This advanced information technology class offers supervised self-study opportunities for students interested in learning PL/SQL. Students who have previously passed the Oracle SQL exam and pass the PL/SQL exam will earn the Oracle Certified Associate (OCA) designation. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site. Industry certification may be available as part of this course.

PRINCIPLES OF BUSINESS (611500)
Grades: 9, 10 Credit: one

Students discover the roles of business in the free enterprise system and the global economy. Basic financial concepts of banking, insurance, credit, inheritance, taxation, and investments are investigated to provide a strong background as students prepare to make sound decisions as consumers, wage earners, and citizens. The real-world impact of technology, effective communication, and interpersonal skills is evident throughout the course. This course also supports career development skills and explores career options. This course is an excellent introduction course for IB Business and Management. Industry certification may be available as part of this course.

PROGRAMMING (664000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Computer related course or equivalent skills

Students explore computer concepts, apply logic procedures, and implement programming procedures with one or more languages, such as Visual Basic.Net. Graphical User Interfaces may be used as students design and develop interactive multimedia applications. In addition, HTML or JavaScript may be employed to create Web pages. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.

WEB PAGE DEVELOPMENT (663100)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Information Systems (661200) or equivalent skill

This course provides students the opportunity to study, develop and design sophisticated web pages in a client-based business environment. Basics of HTML, DHTML, scripting, and the use of authoring software are covered. Students are also provided instruction in preparing and editing Web page images, applying advanced design techniques and features, creating vector animations, and managing web site directory structures. Skill development will be achieved through hands-on activities that help students to design web pages for various audiences and uses. Upon successful completion of Web Page Development, students may elect to obtain industry-recognized professional certification by taking the Adobe Certified Expert (ACE) exams. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom
instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.

ENGLISH

ENGLISH 10 HONORS (BLOCKED WITH AP WORLD HISTORY) (114039)
Grades: 10
Credit: one/weighted +.5
Prerequisite: English 9

In this blocked class with AP World History, students examine relationships between literature and eras of world history from 1500 CE to modern times. They examine the connections among social, economic, and geopolitical developments in the times and places in which they occurred. They use the processes of conceptual and critical thinking to analyze historical and contemporary themes. Students are encouraged to think independently while developing skills in collaboration, written and oral communication, and technology. Students receive one credit for AP World History (234005) and one credit for English 10 Honors. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

AP ENGLISH LANGUAGE AND COMPOSITION (119605)
Grades: 11
Credit: one/weighted +1.0
Prerequisite: English 10

Students study advanced composition and analysis of language at a level equivalent to that of a full-year introductory college course. In refining their awareness of language and the writer's craft, students write works of publishable quality. Students who complete this course are prepared to take the Advanced Placement examination in English Language and Composition, and many earn college credit if a qualifying score is achieved. Completion of this course fulfills the English 11 course requirement. Students are required to take the Standards of Learning End of Course Test.

AP ENGLISH LITERATURE AND COMPOSITION (119504)
(119503J/faken with AP Government (244506) as Senior Seminar
Grades: 12
Credit: one/weighted +1.0
Prerequisite: English 11

Students study composition and literary analysis at a level equivalent to that of a full-year introductory college course. Through in-depth studies of literary works, students sharpen their awareness of language and their understanding of the writer's craft. They establish critical standards for appreciating and evaluating literature. Students who complete this course are prepared to take the Advanced Placement examination in English Literature and Composition, and may earn college credit if a qualifying score is achieved. Completion of this course fulfills the English 12 course requirement.

AP ENGLISH LITERATURE AND COMPOSITION (BLOCKED WITH AP US AND COMPARATIVE GOVERNMENT) (119561)
Grades: 12
Credit: one/weighted +1.0
Prerequisite: English 11

In this blocked class with Advanced Placement United States and Comparative Government (244569), students consider the ways literature reflects politics and the human experience as they refine their awareness of language and the writer's craft. They make connections between government and literature while examining the American and international political experience. Students acquire factual knowledge and strengthen critical thinking skills by studying the world's diverse political structures and practices, as well as interpreting and analyzing the key political relationships found in national governments. They simultaneously study literary works, with an in-depth study of the writer's craft. Students who complete this course are prepared to take the Advanced Placement examinations in English Literature and Composition as well as the Advanced Placement US and Comparative Government exams. College credit may be earned if qualifying scores are achieved.

DEVELOPING LITERACIES (118060)
Grades: 9
Credit: one

Developing Literacies provides direct instruction of content area reading skills necessary to understand the content of mathematics, science, social studies, and English. The course focuses on the reading skills necessary for successful completion of the SOL tests given in the four core areas.

EXPANDING LITERACIES 1 (151500)
Grades: 10, 11
Credit: one

Expanding Literacies provides direct intervention of reading skills and English content necessary to pass the EOC English: Reading and/or the EOC English: Writing SOL tests, which students take in English 11. Verified credit on both tests is required in order to earn a Standard Diploma. This course counts as a sequential elective when taken after Developing Literacies.

EXPANDING LITERACIES 2 (151600)
Grades: 11, 12
Credit: one
Prerequisite: Expanding Literacies 1

This course is for students who are continuing focused intervention in Expanding Literacies for a second year. Expanding Literacies provides direct intervention of reading skills and English content necessary to pass the EOC English: Reading and/or the EOC English: Writing SOL tests, which students take in English 11. Verified credit on both tests is required in order to earn a Standard Diploma. This course counts as a sequential elective when taken after Developing Literacies and/or Expanding Literacies.

JOURNALISM 2 (121000)
Newspaper
Grades: 10, 11, 12
Credit: one
Prerequisite: Journalism 1

In Journalism 2 students learn and apply techniques of layout, design and desktop publishing. Students develop a more sophisticated level of journalistic writing and participate in the operation and production of the high school newspaper and/or student produced website. Students also learn skills in business and circulation management.

JOURNALISM 3 (121100)
Newspaper
Grades: 11, 12
Credit: one
Prerequisite: Journalism 2

In addition to enhancing their skills as reporters, students in Journalism 3 learn the role of editorial leadership, develop a personal sense of professionalism, understand the role of the newspaper in society, and become productive members of the newspaper and/or student produced website staff. Students also learn skills in business and circulation management.

JOURNALISM 4 (121200)
Newspaper
Grades: 12
Credit: one
Prerequisite: Journalism 3
In Journalism 4 students learn marketable publications skills; develop individual writing, layout, and design styles; and may assume editorial leadership and responsibility for producing a high school newspaper and/or student produced website. Students also take responsibility for business and circulation management.

**BROADCAST JOURNALISM (122000)**
Grades: 10, 11, 12 Credit: one

In this course, students will learn and practice the language and processes of broadcast journalism and reporting. They will develop an understanding of the role and responsibilities of broadcast journalists.

**PHOTOJOURNALISM 1 (121500)**
*Yearbook*
Grades: 10, 11, 12 Credit: one
Prerequisite: Journalism 1 or instructor permission

In Photojournalism 1, students learn the principles of interviewing, copywriting, photography, layout, and design. Students will use publishing software to create pages for the school's yearbook.

**PHOTOJOURNALISM 2 (121600)**
*Yearbook*
Grades: 11, 12 Credit: one
Prerequisite: Photojournalism 1

In Photojournalism 2, students develop their copywriting skills and advance their photography and design skills as they create pages for the school's yearbook. They may become section editors.

**PHOTOJOURNALISM 3 (121700)**
*Yearbook*
Grades: 11, 12 Credit: one
Prerequisite: Photojournalism 2

In Photojournalism 3, students refine their copywriting skills and advance their computer and photography skills, develop individual style, and may assume leadership roles as members of the yearbook staff's editorial board.

**ADVANCED JOURNALISM (121300)**
Grades: 12 Credit: one

In Advanced Journalism, student leaders develop the leadership, collaborative, organizational, and time-management skills necessary to effectively manage a student publication. They hone their editing skills and learn a more sophisticated approach to journalistic writing.

**CREATIVE WRITING 1 (117100)**
*Literary Magazine*
Grades: 9, 10, 11, 12 Credit: one

This course provides students an opportunity for further exploration of creative writing. Students continue to experiment with many forms of writing, with an emphasis on poetry, short stories, plays, and all forms of descriptive writing. Students hone their writing skills by attempting more advanced work while also working collaboratively with other students on revision and critique.

**CREATIVE WRITING 3 (117300)**
*Literary Magazine*
Grades: 11, 12 Credit: one
Prerequisite: Creative Writing 2

This course provides students an opportunity to study creative writing at an advanced level through a collaborative workshop approach. Students continue to experiment with many forms of writing, with an emphasis on poetry, short stories, plays, and all forms of descriptive writing. Students work independently and through peer critique groups to refine their writing and develop a sense of voice.

**ADVANCED COMPOSITION 1 (117700)**
To be taken in combination with Reasoning Skills (011134)
Grades: 10, 11, 12 Credit: one

This course provides students an in-depth study of writing in the academic disciplines. Students improve their writing through intense word study, critical reading, and analytical thinking. Students expand and refine their ability to write through analyzing and evaluating their own writing and that of others.

**ADVANCED COMPOSITION 2 (117800)**
Grades: 11, 12 Credit: one
Prerequisite: Advanced Composition 1

This course provides students the opportunity for further exploration of academic writing. Students hone their writing skills by further analyzing published texts and attempting more advanced work while also collaborating with other students on revision and critique.

**ADVANCED COMPOSITION 3 (117900)**
Grades: 12 Credit: one
Prerequisite: Advanced Composition 2

This course provides students an opportunity to study writing at an advanced level. Students continue to experiment with many forms of writing, using published works as models. Students work independently and in peer critique groups to refine their writing and develop a sense of voice.

**FILM STUDY (144600)**
Grades: 9, 10, 11, 12 Credit: one

This course involves the study of classic and award-winning films. Students critique both the artistic and technical merits of the films. They study the development of theme, plot, characterization, and setting in each production. They learn the vocabulary associated with film and use this vocabulary when discussing or writing about films.

**ENGLISH 9 (113000)**
Grades: 9 Credit: one
Prerequisite: English 8

Students read and analyze a variety of literary and nonfiction texts, exploring the characteristics of different forms and the techniques authors use to achieve their intended purpose. Language study extends students' vocabulary through learning about connotations, denotations, word origins, and structures. Students apply their understanding of grammar,
Students read and analyze a variety of literary and nonfiction texts, comparing themes of various works and analyzing expository materials to draw conclusions. Language study extends students' vocabulary through applying understanding of connotations, denotations, word origins, and structures. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. With an emphasis on persuasive writing, students apply their skills and adapt content, vocabulary, voice, and tone to a specific audience and purpose. In the research process, students analyze, evaluate, synthesize, and organize information from a variety of sources to produce a research product. They also refine their oral communication skills through gathering and organizing evidence to support a position in informative and persuasive presentations.

Students are required to take the Standards of Learning End of Course Test.

ENGLISH 12 HONORS (116036) Credit: one/weighted +.5
Grades: 12
Prerequisite: English 11

Students read and analyze a variety of literary texts, recognizing major forms and their stylistic elements. Using nonfiction texts, students will analyze and synthesize information to solve problems. Language study expands students' general and specialized vocabulary through speaking, listening, reading, and viewing. Writing includes the production of informational, expository, and persuasive/argumentative essays, logically organized demonstrating knowledgeable judgments, and effective conclusions. They also apply their oral communication skills to craft formal presentations and their listening skills to analyze the relationships among purpose, audience, and content of presentations.

ENGLISH 12 (116000) Credit: one
Grades: 12
Prerequisite: English 11
In Journalism 1 students learn the history and language of journalism; develop communication skills in writing, designing and editing for a variety of media; understand news and the process of publication; and become more critical readers and viewers of mass media. This course prepares students for continued study in journalism, photojournalism, and broadcast journalism. This course prepares students to join the newspaper, yearbook, or Cougar News staff the following year.

This course is taken concurrently with Transitional English 9 or English 9. ESOL and English teachers work together to provide a comprehensive program based on the FCPS English 9 POS. Students read a variety of literature and relate life situations to literary themes. They continue to develop their reading and writing skills and study the structure of the English language through an integrated language arts curriculum. Students refine their listening and speaking skills through class discussions and oral presentations. This course may be repeated for elective credit.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

ESOL LEVEL 1 ENTERING (571011) Grades: 9, 10, 11 Credit: one

Students engage in listening, speaking, reading and writing English through an integrated language arts curriculum. The class is aligned with English 9 language arts standards. Students take three periods of ESOL classes: two content-based and one literature-based. Students develop language and literacy skills and content vocabulary through science and social studies topics. Students enrolled in this course also take 571012 and 571013. These courses earn elective credit and may be repeated.

ESOL LEVEL 2 BEGINNING (571014) Grades: 9, 10, 11 Credit: one

Students engage in listening, speaking, reading and writing English through an integrated language arts and content curriculum. The class is aligned with English 9 language arts standards. Students take three periods of ESOL classes: two content-based and one literature-based. Students enrolled in this course also take 571015 and 571016. These courses earn elective credits and may be repeated for additional elective credits.

ESOL LEVEL 2/3 BEGINNING/DEVELOPING (571017) Grades: 9, 10, 11 Credit: one

Students engage in listening, speaking, reading and writing English through an integrated language arts and content curriculum. The class is aligned with English 9 language arts standards. Emphasis is placed on developing background knowledge and developing academic language proficiency in social studies, science and language arts. Students take three periods of ESOL classes: two content-based and one literature-based. Students enrolled in this course also take 571018 and 571019. These courses earn elective credits and may be repeated for additional elective credits.

ESOL LEVEL 3 DEVELOPING (572091) Grades: 9, 10, 11 Credit: one

Students continue to develop listening, speaking, reading, and writing skills. They read more challenging fiction and non-fiction texts to increase academic vocabulary. Emphasis is placed on developing reading, writing, and learning strategies to support academic content classes. The class is aligned with English 9 language arts standards. Students enrolled in 572091 also take 572092. 572091 is a literature-based class and 572092 is a content-based class. A total of two credits from 572091 and 572092 may be used as world languages credits. This course may be repeated for elective credit.

ESOL LEVEL 4 EXPANDING (573000) Grades: 9, 10, 11 Credit: one

INDIVIDUALIZED MATH (312190) Grades: 9, 10, 11 Credit: one

This course is designed for WIDA ELP Level 1 & 2 students with significant gaps in mathematics to support the development of the mathematics and language skills necessary for success in Algebra 1. Students examine algebra- and geometry-preparatory concepts and skills; strategies for collecting, analyzing, and interpreting data; and number concepts and skills emphasizing proportional reasoning. Problem solving, communication, concept representation, and connections among mathematical ideas are presented in a hands-on learning environment. Students may need up to two years to complete the course, but should move to the next course as soon as their mathematics skills warrant. This course emphasizes language objectives in addition to mathematics objectives and does not meet the mathematics graduation requirements; students earn elective credit.

CONCEPTS SCIENCE (462260) Grades: 9, 10, 11 Credit: one

This course, taught by science or ESOL teachers, is designed for WIDA ELP Level 1 & 2 students. The course provides the students with background information, key vocabulary, and the basic concepts and skills in preparation for taking biology. This course can be offered on a semester basis for a half credit. Concepts Science is an elective and does not satisfy the state science graduation requirements. This course can be repeated for elective credit.

WORLD CONCEPTS (299660) Grades: 9, 10, 11 Credit: one

This course provides students with background information, key vocabulary, and basic concepts in preparation for taking World History and Geography 1. This course is designed for WIDA ELP Level 1 & 2 students. World Concepts is an elective and does not satisfy the state Social Studies requirements for graduation. This course may be repeated for elective credit.

FAMILY & CONSUMER SCIENCES

CHILD DEVELOPMENT AND PARENTING (823200) Grades: 10, 11, 12 Credit: one

This course is designed to focus on assessing the impact of the parenting role in society; taking responsibility for personal growth within the parenting role; preparing for a healthy, emotional, and physical beginning for parent and child; meeting developmental needs of children and adolescents; building positive parent-child relationships; using positive guidance to promote self-discipline, self-esteem, and socially responsible behavior; obtaining parenting information, support, and assistance; and, planning ways that families and society can share in nurturing children and adolescents. Teachers highlight the basic skills of mathematics, science, and technology when appropriate in the content. Industry certification may be available as part of this course.

CULINARY ARTS 1 (827527) Grades: 11, 12 Credit: two
This course is dedicated to providing students with a working knowledge of classical culinary techniques. Through lecture, hands-on work and projects, the students will learn the skills needed for a career in the food service industry. Training in sanitation, hot food production, meat identification and fabrication, pantry, bakery, and soups is offered. Curriculum also includes curriculum mathematics, field trips, and competitive events. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

CULINARY ARTS 2 (827627)
Grades: 11, 12 Credit: two
Prerequisite: Culinary Arts 1 (827527)
(Base school optional; Chantilly, Edison, and Marshall Academies - transportation may be provided)

This course builds on the skills learned in Culinary Arts 1. Further advanced instruction in table service, baking, pastries, and management techniques is emphasized. Students create a plan for establishing a restaurant that includes menu selection and preparation, facilities design, and management components. Selected students may participate in internship activities as an option in cooperation with the local business community. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

EARLY CHILDHOOD CAREERS 1 (828527)
Grades: 11, 12 Credit: two
Prerequisite: Early Childhood Careers 1 (828527)
(Base school optional; Chantilly, Falls Church, and West Potomac Academies.)

This course is designed to combine the study of child growth and development with participation in the planning and operation of a preschool laboratory for three- and four-year-olds. Opportunity is provided for students to prepare for careers involving children and for the responsibility of making daily decisions that affect children. Career opportunities that involve working with children are explored, such as social work, education, psychology, child-care, and medicine. Students enrolling in this course may be required to complete an application and/or have approval of the instructor. For more information please visit the CTE website.

Industry certification may be available as part of this course.

EARLY CHILDHOOD CAREERS 2 (828627)
Grades: 11, 12 Credit: two
Prerequisite: Early Childhood Careers 1 (828527)
(Base school optional; sites have collaborative education experiences for students through a preschool program. Transportation may be provided for high school students to Chantilly, Falls Church, and West Potomac Academies.)

This course is a double-period course with classroom instruction and child development/preschool laboratory experience. Class instruction expands on the skills of Early Childhood Careers 1 and includes development of employment strategies. Individual projects and training plans are required for school laboratory work experiences. Students enrolling in this course may be required to complete an application and/or have approval of the instructor. For more information please visit the CTE website.

Industry certification may be available as part of this course.

FASHION DESIGN 1 (828027)
Grades: 11, 12 Credit: two
Prerequisite: Art 1 (912000), Fashion Marketing (814000), or Introduction to Interior and Fashion Design (825432)
A performance review may be required.

The Fashion Design 1 students will begin to explore an in-depth creative process and develop technical and presentation skills in the field of fashion design. The program will emphasize design concepts, sketching, draping, pattern making, and garment construction. These skills will enable the student to design and construct a project from creative conception to completion. (Students interested in this course should also see Fashion Marketing 1 under Marketing.) For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

FASHION DESIGN 2 (828127)
Grades: 11, 12 Credit: two
Prerequisite: Fashion Design 1 (828027) or Portfolio Review (examples of student work) and/or a performance review may be required.

The Fashion Design 2 curriculum will continue to foster and explore the creative process and develop advanced technical skills in the field of fashion design. The student will build on existing skills in the areas of design concepts, sketching, pattern making, and garment construction. These skills will enable the student to develop a fashion portfolio and to execute a fashion line from conception to completion. Students will begin to develop a level of professionalism that is standard in the industry. (Students interested in this course should also see Fashion Marketing 1 under Marketing.) For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

GOURMET AND INTERNATIONAL FOODS (825900)
Grades: 10, 11, 12 Credit: one

This course allows students to explore food safety and sanitation, prepare and experience the flavor of global cuisines, become skilled in food presentation, and learn about the diverse careers opportunities related to the hospitality, tourism and recreation industry. Skills in mathematics, science, and technology will be reinforced throughout the curriculum. Students completing Gourmet and International Foods with a “B” or better may be eligible to articulate 4.5 credits at Stratford University.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

INTRODUCTION TO CULINARY ARTS (825026)
Grades: 10, 11, 12 Credit: one
Prerequisite: Culinary Arts 1 (827627)
(Base school optional)

The course focuses on identifying and exploring the individual careers within the food service industry. Units of study include food science and technology, dietetics and nutrition services, diverse cuisines and service styles, current trends, food and beverage production and preparation, and food safety and sanitation.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

LIFE PLANNING (822632) Credit: one-half

Grades: 9, 10, 11, 12

This course offers students the opportunity to explore a variety of career options. Students will gain an understanding of the importance of planning for the future by focusing on areas such as work, education, personal and family development, and leisure. Through a combination of classroom instruction, projects, and experiences, students will develop knowledge, skills, and attitudes necessary to make informed career and educational decisions for the next phase of their lives.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.
This course is designed to focus on managing resources to achieve personal goals; making informed consumer choices; creating and maintaining a sustainable living environment that supports the well-being of self and family; and evaluating types of housing. Critical thinking and practical problem solving are emphasized through relevant life applications. Students learn to make decisions related to maintaining clothing for self and others; planning food choices that meet the health needs of individuals and families and, preparing and serving nutritious foods. In addition, focus is placed on developing a life-management plan; building and maintaining constructive interpersonal relationships; developing strategies for lifelong career planning, coordinating personal and career responsibilities; and, apply the appropriate resources to life situations. The core content of mathematics, science, and communications will be reinforced when appropriate in the content.

This course requires a student materials fee as listed in FCPS Notice 5922.

LIFE PLANNING (822700)  
Grades: 9, 10, 11, 12  
Credit: one

This course is designed to focus on managing resources to achieve personal goals; making informed consumer choices; creating and maintaining a sustainable living environment that supports the well-being of self and family; and evaluating types of housing. Critical thinking and practical problem solving are emphasized through relevant life applications. Students learn to make decisions related to maintaining clothing for self and others; planning food choices that meet the health needs of individuals and families and, preparing and serving nutritious foods. In addition, focus is placed on developing a life-management plan; building and maintaining constructive interpersonal relationships; developing strategies for lifelong career planning, coordinating personal and career responsibilities; and, apply the appropriate resources to life situations. The core content of mathematics, science, and communications will be reinforced when appropriate in the content.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

FINE ARTS  
DANCE

DANCE PERFORMANCE AND APPRECIATION (931127)  
(Formerly Dance 1)  
Grades: 11, 12  
Credit: two

Prerequisite: Successful Audition  
(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)

Students will develop skills in basic movement fundamentals, placement and alignment, and beginning dance technique for selected dance forms (modern, jazz, ballet). Students will also develop dance vocabulary, study dance history, gain competence in critiquing skills, learn improvisational skills, and develop performance skills. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

DANCE PERFORMANCE AND TECHNIQUE (931327)  
(Formerly Dance 2)  
Grades: 11, 12  
Credit: two

Prerequisite: Dance 1 or Successful Audition  
(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)

Students will focus on intensive work and proficiency in alignment, selected techniques, flexibility, and strength. Students will broaden knowledge of dance history, anatomy, theory, vocabulary, criticism, and composition. Students will continue to develop choreographic and performance skills including the use of improvisation. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

DANCE PERFORMANCE AND ARTISTRY (931527)  
(Formerly Dance 3)  
Grades: 11, 12  
Credit: two

Prerequisite: Dance 2 or Successful Audition  
(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)

Students will focus on more intensive work and proficiency in alignment, selected techniques, flexibility, and strength. Students will continue to broaden knowledge of dance history, anatomy, theory, vocabulary, criticism, and composition. Students will continue to develop choreographic and performance skills including the use of improvisation. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

DANCE PERFORMANCE AND CHOREOGRAPHY (931927)  
(Formerly Dance 4)  
Grades: 12  
Credit: two

Prerequisite: Dance 3 or successful audition.  
(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)

Dance 4 students are advanced level dancers who display a mastery of jazz, ballet and modern technique as well as performance excellence on stage and in the rehearsal studio. Students will deepen their understanding of choreographic techniques and have the opportunity to explore and develop their own voice in creating movement and critiquing the choreography of others. The course will focus on preparing the dancer for post-high school opportunities in the professional dance field including: professional company auditions, teaching and/or choreographing for a dance studio or theatre, and earning a degree in Dance Performance or Dance Education. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

FINE ARTS  
MUSIC

BEGINNING BAND (923215)  
Grades: 9, 10, 11, 12  
Credit: one

Students develop skills as individual musicians and as members of a musical group. Guidance will be given by the instructor in the selection of an instrument. Course content includes beginning level technical and ensemble skills necessary for performance. Some performance opportunities are provided. Marching band techniques and performances may be included. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

INTERMEDIATE BAND (923315)  
Level 1  
Concert Band II Woodwinds  
Grades: 9, 10, 11, 12  
Credit: one

Prerequisite: Beginning Band or successful audition

Students continue developing as individual musicians and as members of a musical group. Emphasis is placed on the development of intermediate level technical and ensemble skills necessary for performance. Marching band techniques and performances may be included. Students must meet both the
school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

**INTERMEDIATE BAND** (923316)

**Level 2**

**Concert Band II Brass**

Grades: 9, 10, 11, 12  
Prerequisite: Beginning Band or successful audition

Students continue developing as individual musicians and as members of a musical group. Emphasis is placed on the development of intermediate level technical and ensemble skills necessary for performance. Marching band techniques and performances may be included. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**ADVANCED BAND** (923415)

**Level 1**

**Concert 1**

Grades: 9, 10, 11, 12  
Prerequisite: Successful audition

Students in this course form the representative performing band for the school. Emphasis is placed on the sequential development of advanced technical skills and on the study of related literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Marching band techniques, rehearsals, and performances are included in this course. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**ADVANCED BAND** (923416)

**Level 2**

**Symphonic Band**

Grades: 9, 10, 11, 12  
Prerequisite: Successful audition

Students in this course form the representative performing band for the school. Emphasis is placed on the sequential development of advanced technical skills and on the study of related literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Marching band techniques, rehearsals, and performances are included in this course. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**JAZZ ENSEMBLE** (924016)

**Level 2**

Grades: 9, 10, 11, 12  
Prerequisite: Successful audition or permission of the instructor

Corequisite: Schools may require membership in an intermediate or advanced band class, and may require participation in marching band.

The instrumental jazz ensemble curriculum emphasizes improvisation and styles of the jazz idiom at an intermediate level. Content includes the study of blues scale patterns and harmonic progressions innate in jazz music. Content also includes the study of the appropriate jazz literature and rehearsal and performance techniques from the jazz idiom. Instrumentation of the jazz ensemble is at the discretion of the instructor. Marching band techniques and performances may be included. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**BEGINNING ORCHESTRA** (923715)

Grades: 9, 10, 11, 12  
Prerequisite: None

Students develop skills as individual musicians and as members of a musical group. Emphasis is placed on the sequential development of advanced technical, ensemble, and disciplinary skills necessary for refined rehearsal and performance both in and out of school. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**INTERMEDIATE ORCHESTRA** (923815)

**Level 1**

**Concert Orchestra**

Grades: 9, 10, 11, 12  
Prerequisite: Attainment of beginning level skills and permission of instructor

Students continue developing as individual musicians and as members of a musical group. Emphasis is placed on the sequential development of intermediate level technical and ensemble skills necessary for performance. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**ADVANCED ORCHESTRA** (923915)

**Level 1**

**Symphonic Orchestra**

Grades: 9, 10, 11, 12  
Prerequisite: Successful audition

Students in this course form the representative string performing group for the school. Emphasis is placed on the sequential development of advanced technical, ensemble, and disciplinary skills necessary for refined rehearsal and performance both in and out of school. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**ADVANCED ORCHESTRA** (923916)

**Level 2**

**Chamber Orchestra**

Grades: 9, 10, 11, 12  
Prerequisite: Successful audition

Students continue developing as individual musicians and as members of a musical group. Emphasis is placed on the sequential development of intermediate level technical and ensemble skills necessary for performance. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**BEGINNING ORCHESTRA** (923715)

Grades: 9, 10, 11, 12  
Prerequisite: None

Students develop skills as individual musicians and as members of a musical group. Guidance will be given by the instructor in the selection of an instrument. Course content includes beginning level technical and ensemble skills necessary for performance. Some performance opportunities are provided. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.

**MIXED CHORUS** (926015)

Grades: 9, 10, 11, 12  
Prerequisite: None

Students will participate in a chorus of mixed voices. Emphasis is placed upon correct vocal performance techniques and sight-singing through the study of appropriate choral literature. Based on successful completion of
sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

WOMEN'S CHORUS (926016)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: none

Students will participate in a chorus of women's voices. Emphasis is placed upon correct vocal performance techniques and sight-singing through the study of appropriate choral literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

MEN'S CHORUS (926017)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: none

Students will participate in a chorus of men's voices. Emphasis is placed upon correct vocal performance techniques and sight-singing through the study of appropriate choral literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

INTERMEDIATE MIXED CHORUS (928515)
Concert Choir
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Beginning Chorus or successful audition

Intermediate level chorus will provide for the continued study of correct vocal production, sight-singing and development of musicianship through the study of appropriate choral literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

INTERMEDIATE WOMEN'S CHORUS (928516)
Treble Choir
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Beginning level chorus or successful audition.

Intermediate level women's chorus will provide for the continued study of correct vocal production, sight-singing and development of musicianship through the study of appropriate choral literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

INTERMEDIATE MEN'S CHORUS (928517)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Beginning level chorus or successful audition

Intermediate level men's chorus will provide for the continued study of correct vocal production, sight-singing and development of musicianship through the study of appropriate choral literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED MIXED CHORUS (928915)
Level 1
Madrigals
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Successful audition

Students are offered advanced choral experiences for mixed voices. Emphasis is placed on the development of musicianship and proficiency in ensemble performance. Course content includes a study of choral literature, vocal techniques, and sight-singing. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED WOMEN'S CHORUS (928916)
Select Women
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Successful audition

Students are offered advanced choral experiences for women's voices. Emphasis is placed on the development of musicianship and proficiency in ensemble performance. Course content includes a study of choral literature, vocal techniques, and sight-singing. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

VOCAL ENSEMBLE (928015)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Successful audition
Corequisite: Schools may require membership in intermediate or advanced choral class.

The vocal ensemble class is designed to meet specific needs and/or interests. Content includes study of the appropriate ensemble literature, and rehearsal and performance techniques from the various areas of musical composition. Schools may also require membership in intermediate or advanced choral class. Voicing of the group is at the discretion of the instructor. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

MUSIC AND COMPUTER TECHNOLOGY 1 (922527)
Grades: 11, 12 Credit: two
Prerequisite: Advanced Music Theory or a music theory background (Interview may be required with the instructor.) (Selected sites or transportation may be provided to Fairfax or West Potomac Academies)

Students will explore the use of computers and other electronic technologies in music including: Musical Instrumental Digital Interface (MIDI), analog and digital synthesis, sequencing, acoustics, sound processing, and electronic musical composition using the latest music industry software and the internet. For more information, visit the academy web site. This course requires a student materials fee as listed in FCPS Notice 5922.
MUSIC AND COMPUTER TECHNOLOGY 2 (923627)
Grades: 12 Credit: two
Prerequisite: Music and Computer Technology 1
(Selected site or transportation may be provided to Fairfax or West Potomac Academies)

Students will expand on the use of computers and other electronic technologies developed in Music and Computer Technology I including: Musical Instrumental Digital Interface (MIDI), analog and digital synthesis, sequencing, acoustics, sound processing, and electronic musical composition using the latest music industry software and the internet. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 1 (143027)
Grades: 11, 12 Credit: two
Prerequisite: One of the following: Theatre Arts, Chorus, or Dance. Audition is also required of all applicants. (See Fairfax Academy website for audition information.)
(Selected sites or transportation may be provided to Fairfax Academy.)

Students will study advanced performance techniques specific to both classic and modern American musical theatre including acting, bodily/stage movement, and singing technique. Students will explore the history of musical theatre as well as current topics related to auditioning and resume development. Students will participate in school-based performances that may be in conjunction with students from an advanced technical theatre course. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 2 (144027)
Grades: 12 Credit: two
Prerequisite: Professional Musical Theatre and Actor's Studio 1
(Selected sites or transportation may be provided to Fairfax Academy.)

Students will continue to study advanced performance techniques specific to both classic and modern American musical theatre including acting, bodily/stage movement, and singing technique. Students will continue to explore the history of musical theatre as well as current topics related to auditioning and resume development. Students will participate in school-based performances that may be in conjunction with students from an advanced technical theatre course. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 3 (145027)
Grades: 12 Credit: two
Prerequisite: Professional Musical Theatre and Actor’s Studio 2 or teacher recommendation
(Selected sites or transportation may be provided to Fairfax Academy.)

Students will expand and deepen their knowledge and skills developed in levels 1 and 2. Outside class projects such as auditioning for community, high school, semi-professional and professional theatres, scene directing, reviewing performances in the area, and interviewing area professionals will be required. In addition, in-class presentations on topics of interest or areas of expertise will be required. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED PLACEMENT MUSIC THEORY (922604)
Grades: 10, 11, 12 Credit: one/weighted +1.0
Prerequisite: Music Theory or equivalency exam

The purpose of this course is to prepare students to take the Advanced Placement music theory examination, with college credit and/or placement being awarded if a qualifying score is achieved. Students are given a solid foundation in intervals, pitch patterns, metric/rhythmic patterns, chords, and the terms that are part of a basic understanding of reading, performing, and listening to music. Analysis, elementary composition, aural skills, sight-singing, and keyboard harmony will also be studied. All students are required to take the Advanced Placement Music Theory exam.

This course requires a student materials fee as listed in FCPS Notice 5922.

GUITAR 1 (924515)
Grades: 9, 10, 11, 12 Credit: one

Students learn the fundamentals of guitar. Guitar instruction emphasizes basic technique, reading, progressions, and music theory. Instructional literature is selected from classical and contemporary repertoire. Guest artists and field trips to performances and/or seminars may also be part of the curriculum.

This course requires a student materials fee as listed in FCPS Notice 5922.

FINE ARTS
THEATRE ARTS

THEATRE ARTS 1 (141000)
Grades: 9, 10, 11, 12 Credit: one

Theatre Arts 1 provides students with a survey of the theatre arts, allowing students the opportunities to experience and appreciate dramatic literature, and participate in the creative processes of performance and production. The course emphasizes skill development and provides theatrical opportunities that enable students to determine personal areas of interest. Participation in co-curricular theatre productions may be arranged. This course may be used to satisfy the graduation requirement for a credit in fine and practical arts.

This course requires a student materials fee as listed in FCPS Notice 5922.

THEATRE ARTS 2 (142000)
Grades: 10, 11, 12 Credit: one
Prerequisite: Theatre Arts 1 and/or recommendation of the theatre arts instructor.

Theatre Arts 2 integrates and builds upon concepts and skills from Theatre Arts 1. Through various modes of expression and performance, students investigate dramatic literature, theatrical styles, and historical periods. Students will study and respond to a variety of theatre experiences that will refine their communicative, collaborative, analytical, interpretive, and problem solving skills. Students will expand their artistic abilities and appreciation of the theatrical arts. Students must meet both the school day and after-school participation requirements to receive credit for the course. This course may be used to satisfy the graduation requirement for a credit in fine and practical arts.

This course requires a student materials fee as listed in FCPS Notice 5922.

THEATRE ARTS 3 (143000)
Grades: 11, 12 Credit: one

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Prerequisite: Theatre Arts 2 and/or recommendation of the theatre arts instructor.

Students exhibit independence, discipline, and commitment to the theatre process through their work on assigned projects. Advanced work in acting skills and preparation, play analysis, and character interpretation are expected. Collaboration with actors and directors is augmented by special assignments and opportunities. Students must meet both the school day and after-school participation requirements to receive credit for the course. This course may be used to satisfy the graduation requirement for a credit in fine arts.

This course requires a student materials fee as listed in FCPS Notice 5922.

THEATRE ARTS 4 (144000)
Grades: 10, 11, 12
Credit: one
Prerequisite: Theatre Arts 3 and/or recommendation of the theatre arts instructor.

Students identify areas of special interest in theatre arts, and initiate and complete major research and/or creative projects, such as playwriting, producing, directing, designing, and stage-managing. Emphasis is placed on in-depth study and completion of projects, assumption of leadership roles, and expansion of criteria for self-evaluation. Students will analyze and evaluate scripts, concentrate on vocal and physical dramatics, and undertake a special theatre project in their area of specialization. Students are expected to assume leadership positions in co-curricular theatre productions. Participation in major projects related to the co-curricular theatre productions may be required. Students must meet both the school day and after-school participation requirements to receive credit for the course. This course may be used to satisfy the graduation requirement for a credit in fine arts.

This course requires a student materials fee as listed in FCPS Notice 5922.

TECHNICAL THEATRE 1 (143511)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Theatre Arts 1 and/or recommendation of theatre arts instructor.

Students explore various areas of technical theatre such as lighting, costumes, sound, scenery, makeup, properties, and theatre management. An analysis of dramatic literature leads students to an understanding of the design and production process. Participation in co-curricular productions is strongly encouraged. This course may be used to satisfy the graduation requirement for a credit in fine arts.

This course requires a student materials fee as listed in FCPS Notice 5922.

TECHNICAL THEATRE 2 (143512)
Grades: 10, 11, 12
Credit: one
Prerequisite: Technical Theatre 1 and/or recommendation of theatre arts instructor.

Students apply technical theatre knowledge and skills by participating in a variety of theatre lab activities and practical projects. Emphasis is on script interpretation and execution of the design concept. Students will collaborate to effectively and safely create functional scenery, properties, lighting, sound, costumes and makeup, and to develop stage management, business and public relations skills. Students must meet both the school day and after-school participation requirements to receive credit for the course. This course may be used to satisfy the graduation requirement for a credit in fine arts.

This course requires a student materials fee as listed in FCPS Notice 5922.

TECHNICAL THEATRE 3 (143513)
Grades: 11, 12
Credit: one
Prerequisite: Technical Theatre 2 or recommendation of the instructor.

Students exhibit independence, discipline, and commitment to the theatre process through their work on assigned projects. Advanced work in technical elements of production is augmented by special assignments and opportunities. Students must meet both the school day and after-school participation requirements to receive credit for the course. This course may be used to satisfy the graduation requirement for a credit in fine arts.

This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED TECHNICAL THEATRE 1 (143527)
Grades: 11, 12
Credit: two
Prerequisite: 11th or 12th grade standing, Technical Theatre 2, or permission of instructor
Fairfax Academy

Students will explore advanced topics specifically in theatrical design, including set, lighting, sound, costuming, and dramaturgy. Students will learn how to find inspiration for design; explore artistic elements such as color, line, texture, and shape; draft using an architect scale rule; understand and implement McCandless and additive/subtractive color theories; as well as research and effectively draw human figures. Students are given time to focus on design with the emphasis on taking these acquired skills back to their base school to employ them practically, and they will focus on the creation of a professional portfolio. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED TECHNICAL THEATRE 2 (143567)
Grades: 12
Credit: two
Prerequisite: Advanced Technical Theatre 1
Fairfax Academy

Students will explore advanced topics specifically in theatrical design, including set, lighting, sound, costuming, and dramaturgy. Students will learn how to find inspiration for design; explore artistic elements such as color, line, texture, and shape; draft using an architect scale rule; understand and implement McCandless and additive/subtractive color theories; as well as research and effectively draw human figures. Students are given time to focus on design with the emphasis on taking these acquired skills back to their base school to employ them practically, and they will focus on the creation of a professional portfolio. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 1 (143027)
Grades: 11, 12
Credit: two
Prerequisite: One of the following: Theatre Arts, Chorus, or Dance. Audition is also required of all applicants. (See Fairfax Academy website for audition information.) (Selected sites or transportation may be provided to Fairfax Academy.)

Students will study advanced performance techniques specific to both classic and modern American musical theatre including acting, body/stage movement, and singing technique. Students will explore the history of musical theatre as well as current topics related to auditioning and resume development. Students will participate in school-based performances that may be in conjunction with students from an advanced technical theatre course. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 2 (144026)
Grades: 12
Credit: one
Prerequisite: Professional Musical Theatre and Actor’s Studio 1 (Selected sites or transportation may be provided to Fairfax Academy.)

Students will explore advanced topics specifically in theatrical design, including set, lighting, sound, costuming, and dramaturgy. Students will learn how to find inspiration for design; explore artistic elements such as color, line, texture, and shape; draft using an architect scale rule; understand and implement McCandless and additive/subtractive color theories; as well as research and effectively draw human figures. Students are given time to focus on design with the emphasis on taking these acquired skills back to their base school to employ them practically, and they will focus on the creation of a professional portfolio. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.
Students will continue study of advanced performance techniques specific to both classic and modern American musical theatre including acting, body/stage movement, and singing technique. Students will continue exploration of the history of musical theatre as well as current topics related to auditioning and resume development. Students will participate in school-based performances that may be in conjunction with students from an advanced technical theatre course. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

**PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 2**

(144027)

**Grades:** 12

**Credit:** two

**Prerequisite:** Professional Musical Theatre and Actor’s Studio 1

(Selected sites or transportation may be provided to Fairfax Academy.)

Students will continue to study advanced performance techniques specific to both classic and modern American musical theatre including acting, body/stage movement, and singing technique. Students will continue to explore the history of musical theatre as well as current topics related to auditioning and resume development. Students will participate in school-based performances that may be in conjunction with students from an advanced technical theatre course. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

**PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 3**

(145027)

**Grades:** 12

**Credit:** two

**Prerequisite:** Professional Musical Theatre and Actor’s Studio 2 or teacher recommendation

(Selected sites or transportation may be provided to Fairfax Academy.)

Students will expand and deepen their knowledge and skills developed in levels 1 and 2. Outside class projects such as auditioning for community, high school, semi-professional and professional theatres, scene directing, reviewing performances in the area, and interviewing area professionals will be required. In addition, in-class presentations on topics of interest or areas of expertise will be required. For more information, visit the academy web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

**FINE ARTS**

**VISUAL ARTS**

**STUDIO ART AND DESIGN 1**

(912000)

**Grades:** 9, 10, 11, 12

**Credit:** one

Explore a variety of exciting opportunities and materials to inform the artmaking process. Learn to think conceptually and realize potential as a creative and critical thinker in order to meet the challenges of 21st century living. Explore personal interests while developing skills in the areas of drawing, painting, printmaking, ceramics, sculpture, and digital media. Course content includes art production, art appreciation, and studies in visual culture.

This course requires a student materials fee as listed in FCPS Notice 5922.

**STUDIO ART & DESIGN 2**

(913000)

**Grades:** 10, 11, 12

**Prerequisite:** Studio Art and Design 1

**Credit:** one

Cultivate previously developed artistic knowledge and skills learned in Studio Art and Design 1. Explore new combinations and possibilities in the use of two-dimensional and three-dimensional media including technological applications. Investigate contemporary topics as they relate to artistic expression and design. Ask questions, solve problems, create products, and communicate ideas in innovative ways. Course content includes art production, design thinking, art history, criticism, aesthetics, and studies in visual culture.

This course requires a student materials fee as listed in FCPS Notice 5922.

**STUDIO ART AND DESIGN 3**

(914000)

**Grades:** 11, 12

**Prerequisite:** Studio Art and Design 2

Think creatively and solve visual problems to create personally expressive, original artworks using technology. Develop expertise in the use of computers, scanners, and digital cameras for artmaking. Use Adobe Photoshop, Adobe Illustrator, Bryce 3-D, and Adobe Flash in the areas of motion graphics/animation, graphic design, and digital imaging. Learn to address ethical issues concerning computer generated imagery. No prior computer experience is required.

This course requires a student materials fee as listed in FCPS Notice 5922.

**STUDIO ART & DESIGN 4: PORTFOLIO PREPARATION**

GENERAL

(914700)

**Grades:** 12

**Prerequisite:** Studio Art and Design 3

Engage in advanced study of art production, art history, aesthetics, and art criticism while maintaining the attitude and self-discipline of a working artist. Practice and exhibit technical proficiency and personal style, work in advanced media, and apply professional presentation techniques to develop and prepare artwork for exhibitions and portfolios. Demonstrate quality, concentration, and breadth of experience in a body of work and select work for personal exhibitions, exit portfolios, and presentation portfolios.

This course requires a student materials fee as listed in FCPS Notice 5922.

**COMPUTER GRAPHICS 1**

(918011)

**Grades:** 9, 10, 11, 12

**Credit:** one

Expand and improve artistic understandings and skills by using creative processes. Develop an individual style and voice to communicate ideas. Articulate responses to personal and global issues through the integration of traditional and electronic media. Present artworks in diverse formats. Course content includes art production, design application, art history, criticism, aesthetics, and studies in visual culture.

This course requires a student materials fee as listed in FCPS Notice 5922.

**COMPUTER GRAPHICS 2**

(918111)

**Grades:** 10, 11, 12

**Prerequisite:** Computer Graphics 1

Expand knowledge in the application of computer hardware and software to create personally expressive, original art. Solve complex visual problems within the areas of multimedia presentations, motion graphics/animation, graphic design, and digital imaging using Adobe Photoshop, Adobe Illustrator, Bryce 3-D, and Adobe Flash. Prepare a final required portfolio for evaluation.

This course requires a student materials fee as listed in FCPS Notice 5922.

**COMPUTER GRAPHICS 3**

(918211)

**Grades:** 11, 12

**Credit:** one
Prerequisite: Computer Graphics 2

Photography 2 (919411)
Grades: 10, 11, 12
Credit: one
Prerequisite: Photography 1

Expand on the study of black and white photography and digital processes. Acquire and apply in-depth knowledge of photographic equipment, films, and specialized processes to include digital applications. Investigate leading exponents, equipment, and techniques from an historical perspective. Learn to critique and evaluate personal artwork and photographic works of others. Examine photography and its relationship to other art forms. Prepare a portfolio of meaningful artworks that demonstrate expressive content and quality of craftsmanship.

This course requires a student materials fee as listed in FCPS Notice 5922.

Photography 3 (919511)
Grades: 11, 12
Credit: one
Prerequisite: Photography 2

Develop a thematic path that integrates an in-depth exploration of film and digital processes. Explore various career paths in photography such as Photo Journalism, Commercial and Fine Art Photography. Apply professional exhibition techniques to present own work. Develop a quality portfolio that effectively illustrates a personal voice.

This course requires a student materials fee as listed in FCPS Notice 5922.

Photography 4: Portfolio Preparation (919914)
Grades: 12
Credit: one
Prerequisite: Photography 3

Engage in advanced study of photographic processes. Practice the attitude and self-discipline of a working artist. Apply professional exhibition techniques to exhibit personal work. Meet expectations by demonstrating initiative and commitment to communication of ideas through the use of the photographic medium. Prepare a final, required portfolio evidencing technical proficiency, quality, concentration, and breadth of experience.

This course requires a student materials fee as listed in FCPS Notice 5922.

Computer Graphics 4: Portfolio Preparation (919911)
Grades: 12
Credit: one
Prerequisite: Computer Graphics 3

Engage in advanced study and application of computer graphics while developing the attitude and self-discipline of a working artist. Integrate advanced knowledge of software with creative thinking skills to produce a portfolio of original artworks that shows evidence of expressive content, quality, concentration, and breadth of experience.

This course requires a student materials fee as listed in FCPS Notice 5922.

Photography 1 (919311)
Grades: 9, 10, 11, 12
Credit: one

Explore and practice standard black and white photographic processes through the use of cameras, films, light effects, and the application of basic darkroom techniques. Explore and practice digital photographic processes. Produce meaningful photographs that express ideas about experiences and observations of the world. Study the history of photography and the work of well known photographers to inform artmaking. Develop a beginning portfolio.

This course requires a student materials fee as listed in FCPS Notice 5922.

Visual Communications 1 (915311)
Senior Art
Grades: 9, 10, 11, 12
Credit: one

Develop and apply techniques in visual communication through the use of traditional and electronic media. Create original artworks for a variety of intended purposes such as personal, commercial, informational, social, cultural and environmental. Develop an understanding of ways in which artists communicate meaningful ideas for a specific purpose or intent. Become familiar with ethical issues related to the field of visual communications. Maintain a traditional and non-traditional sketchbook in addition to compiling a beginning visual communications portfolio.

This course requires a student materials fee as listed in FCPS Notice 5922.

Animation (918100)
Grades: 10, 11, 12
Credit: one
Prerequisite: Computer Graphics 1

Learn to use 2-D and 3-D computer software to create animation. Create personally expressive animations and communicate visually in effective ways through the use of modeling, story and character development, and lifelike motion. Become familiar with animation related careers such as game design, animation, film and television special effects.

This course requires a student materials fee as listed in FCPS Notice 5922.

3-D Studio Art 1 (919711)
Sculpture & Ceramics
Grades: 10, 11, 12
Credit: one
Prerequisite: Studio Art and Design 1 or permission of the instructor

Develop skills and techniques in the use of materials and equipment to create three-dimensional artworks that may include sculpture, ceramics, architecture, and other three-dimensional art forms. Experiment with a variety of three-dimensional media to improve skills and refine craftsmanship and express ideas in innovative ways. Maintain a required portfolio of personal artwork.

This course requires a student materials fee as listed in FCPS Notice 5922.

3-D Studio Art 2 (919712)
Sculpture & Ceramics
Grades: 11, 12
Credit: one
Prerequisite: 3-D Studio Art 1

Acquire and apply in-depth knowledge of three-dimensional processes to create original artworks that may include sculpture, ceramics, architecture, and other three-dimensional art forms. Study historical and cultural styles and leading artists of three dimensional art forms to inform the artmaking process. Analyze personal artworks and the work of others through critique and evaluation and apply professional exhibition techniques to arrange a display of selected artworks. Compile a culminating portfolio evidencing expressive content, quality, concentration, and breadth of experience.

This course requires a student materials fee as listed in FCPS Notice 5922.
ADVANCED PLACEMENT ART: DRAWING PORTFOLIO
(915064)

AP ART STUDIO

Grades: 11, 12  Credit: one/weighted +1.0
Prerequisite: Studio Art and Design 1 and 2 or permission of the instructor

This course is designed for highly motivated, advanced art students who have demonstrated a serious interest in the study of art. Ideally suited for students who work well independently, the course will focus on the preparation of a drawing portfolio of artworks that exhibit quality, concentration in an area of visual interest or problem solving, and breadth of experience in the formal, technical, and expressive means of an artist. The drawing portfolio addresses a broad interpretation of drawing issues including painting, printmaking, studies for sculpture, some forms of design, and abstract and observational works. Students will prepare and submit drawing portfolios based on objectives that reflect the format and requirements established by the College Board for Advanced Placement Studio Art. Advanced Placement college credit and/or placement may be awarded if a qualifying exam score is achieved. All students are required to take Advanced Placement Art: Studio Art Drawing exam.

This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED PLACEMENT ART: 2-D DESIGN PORTFOLIO
(914064)

Grades: 11, 12  Credit: one/weighted +1.0
Prerequisite: Studio Art and Design 1 and 2 or permission of the instructor

This course is designed for highly motivated, advanced art students who have demonstrated a serious interest in the study of art. Ideally suited for students who work well independently, the course will focus on the preparation of a two-dimensional design portfolio of artworks that exhibit quality, concentration in an area of visual interest or problem solving, and breadth of experience in the formal, technical, and expressive means of an artist. The two-dimensional portfolio may include, but is not limited to, forms of artwork in graphic design, typography, digital imaging, photography, collage, fabric design, weaving, illustration, painting, and printmaking. Students will submit two-dimensional portfolios based on objectives that reflect the format and requirements established by the College Board for Advanced Placement Studio Art. Advanced Placement college credit and/or placement may be awarded if a qualifying exam score is achieved. All students are required to take the Advanced Placement Art: 2-D Design exam.

This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED PLACEMENT ART: 3-D DESIGN PORTFOLIO
(914061)

Grades: 11, 12  Credit: one/weighted +1.0
Prerequisite: Studio Art and Design 1 and 2 or permission of the instructor

This course is designed for highly motivated, advanced art students who have demonstrated a serious interest in the study of art. Ideally suited for students who work well independently, the course will focus on the preparation of a three-dimensional design portfolio of artworks that exhibit quality, concentration in an area of visual interest or problem solving, and breadth of experience in the formal, technical, and expressive means of an artist. The three-dimensional portfolio may include, but is not limited to, traditional sculpture, architectural models, ceramics, and three dimensional fiber arts or metal work. Students will submit three-dimensional portfolios based on objectives that reflect the format and requirements established by the College Board for Advanced Placement Studio Art. Advanced Placement college credit and/or placement may be awarded if a qualifying exam score is achieved. All students are required to take the Advanced Placement Art: 3-D Design exam.

This course requires a student materials fee as listed in FCPS Notice 5922.

GENERAL

ECON & PERS FIN   (612005)
Grades: 9, 10, 11, 12  Credit: one

Instruction in economics and personal finance prepares students to function effectively as consumers, savers, investors, entrepreneurs, and active citizens. Students learn how economics and markets operate and how the United States' economy is interconnected with the global economy. On a personal level, students learn that their own human capital (knowledge and skills) is their most valuable resource. Beginning with students entering ninth grade in fall 2011, one standard unit of credit in Economics and Personal Finance is required for graduation.

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS
(AFJROTC)   (791627)
Aerospace Science 3/ Leadership Education 3
Grades: 9, 10, 11, 12  Credit: two
Prerequisite: Aerospace Science 2; Leadership Education 2
(Chantilly Academy - transportation may be provided)

Aerospace Science: The Exploration of Space course is divided into four units. Unit 1, "The Space Environment," discusses our solar system and the challenges facing space explorers. Unit 2, "Space Programs," introduces United States and covers Russian (Soviet), and international space exploration efforts. Unit 3, "Space Technology," examines the means for accessing space and the technology used to exploit its unique properties. Rocket boosters and basic orbital mechanics are introduced. Unit 4, "Manned Spaceflight," details United States manned spaceflight from Mercury to the present. Also included is a discussion of the developing field of space law. Leadership Education 3 is a study of performance counseling and the fundamentals of management, to include theories, financial, and stress management. The philosophy of citizenship and ethics are included. Students are given the opportunity to apply knowledge and techniques useful in dealing with fellow students and the experience of holding a position of leadership of the cadet organization. For more information, visit the CTE website.

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS
(AFJROTC)   (791927)
Aerospace Science 4/Leadership Education 4
Grades: 11, 12  Credit: two
Prerequisite: Aerospace Science 3; Leadership Education 3
(Chantilly Academy - transportation may be provided)

The fourth year curriculum is unique to the others. It offers one of the following three options: Option 1: Management of the Cadet Corps; Option 2: Honors Program - Ground School; Option 3: Civics Course. The Aerospace Science Instructor chooses the option which is best suited for their school. Leadership Education 4 course gives tips on choosing a career, finding a job, and maintaining employment. Students plan and carry out curricular activities. For more information, visit the CTE website.

ECONOMICS AND PERSONAL FINANCE   (612000)
Grades: 9, 10, 11, 12  Credit: one

Instruction in economics and personal finance prepares students to function effectively as consumers, savers, investors, entrepreneurs, and active citizens. Students learn how economics and markets operate and how the United States' economy is interconnected with the global economy. On a personal level, students learn that their own human capital (knowledge and skills) is their most valuable resource. Beginning with students entering ninth grade in fall 2011, one standard unit of credit in Economics and Personal Finance is required for graduation. Students who choose an EPF option that requires payment, will not be reimbursed should additional options become available.

Students who choose an EPF option that requires payment will not be reimbursed should additional options become available.

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This course is designed to support motivated, capable students in pursuing a rigorous course of high school study leading to acceptance to and success in a four-year college or university. Through a variety of instructional techniques, students develop skills in higher-level thinking, writing across the curriculum, and reading strategies for accessing challenging course material. Students develop time management, note taking, research, organization, and other skills fundamental to success in higher-level mathematics, social studies, English, science, and world language courses. Students participate in college, career, and cultural exploration activities, including field trips. Students must submit an application to be considered for the AVID program.

COMPUTER TECHNOLOGY ASSISTANCE (980818)
Grades: 11, 12 Credit: one
Prerequisite: Successful completion of an introductory computer course or approval of course instructor. Technical Assistant Application. Personal Traits and Occupational Skills Rating by each current teacher.

Computer Technology Assistance is an elective course open to students who have a fundamental level of computer hardware and software knowledge. Students will learn advanced level concepts of computer architecture, computer operating systems, network concepts, software maintenance, and advanced computer troubleshooting techniques as they apply their knowledge to the maintenance and support of computers within the school. Students will maintain a weekly journal of their learning experiences that will serve as documentation for potential employment opportunities.

LEADERSHIP TRAINING 1 (980800)
Grades: 9, 10, 11, 12 Credit: one

This course provides leadership training to interested students. It is especially appropriate for student body officers, organizational leaders, and class officers. The course includes understanding leadership, assessment of leadership styles, planning and organization skills, relationship building and problem solving. Focus will be placed on organization, time management, election processes, financial planning, opinion surveys, communication techniques, and becoming a community liaison. Student government and class activities will be the basis around which most of the course work is designed.

All students wishing to join Leadership must APPLY and be ACCEPTED before enrolling.

HEALTH & MEDICAL SCIENCES

ANIMAL SCIENCE 1 (831027)
Grades: 10, 11, 12 Credit: two
(Chantilly and Edison Academies - transportation may be provided)

Students interested in studying animals and desiring experience in the care of a variety of animals will benefit from this course. The course is designed for students interested in a career in the animal health care field. Core curriculum includes animal anatomy, animal behavior, handling techniques, nutrition, disease pathology, sanitation, and disease control. Students gain hands-on experience working with laboratory animals. Students must purchase a lab apron and provide proof of current tetanus immunization for this course. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ANIMAL SCIENCE 2 (831127)
Grades: 11, 12 Credit: two
Prerequisite: Animal Science 1 (831027)
(Chantilly and Edison Academies - transportation may be provided)

Course content progresses from Animal Science 1 and includes more in-depth instruction and skill training necessary for a variety of high-tech animal science employment opportunities. Students continue to work with laboratory animals and have the opportunity to observe or participate at selected animal care facilities, such as veterinary clinics and grooming facilities, throughout the community. Students must purchase a lab apron and provide proof of current tetanus immunization for this course. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

DENTAL CAREERS 1 (832827)
Grades: 11, 12 Credit: two
(Chantilly, Falls Church, and West Potomac Academies - transportation may be provided)

Dental Careers 1 is the first-level course of a two-year dental assisting program. The course content focuses on introducing all dental-related careers as well as competencies necessary to manage a dental office. The curriculum includes head and neck anatomy, infection control, tooth charting, and instrumentation. The dental skills relevant to the curriculum are practiced in a classroom dental clinic. Lab coats or scrubs must be purchased for this class. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

DENTAL CAREERS 2 (832927)
Grades: 12 Credit: two
Prerequisite: Dental Careers 1 (832827)
(Chantilly, Falls Church, and West Potomac Academies - transportation may be provided)

During the second year of this course, students refine advanced skills and learn more about the management of the office as well as the dental specialties of oral surgery, orthodontics, and periodontics. Students are provided the opportunity to experience an internship while participating in patient care at local dental offices and to earn a DANB Radiation Health and Safety certification. Lab coats or scrubs must be purchased for this class. Students must purchase liability insurance and meet current dental health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

EXPLORING HEALTH SCIENCES (830226)
Grades: 10, 11, 12 Credit: one
(Base school optional year-long course; Chantilly, Falls Church, and West Potomac Academies - transportation may be provided).

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Exploring the Language of Medicine for the spring semester. It introduces the student to health care careers and develops basic skills common to all health and medical sciences. It is recommended as the first course for other health and medical sciences courses. This course focuses on exploring health careers, communication skills, safety, first aid, and Healthcare Provider CPR. For more information, visit the CTE web site.

Industry certification may be available as part of this course.

EXPLORING THE LANGUAGE OF MEDICINE (838236)
Grades: 10, 11, 12 Credit: one
Prerequisite: Exploring Health Sciences
(Base school optional year-long course; Chantilly, Falls Church, and West Potomac Academies - transportation may be provided).
This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Exploring Health Sciences for the fall semester. This course builds on the foundations of the Exploring Health Sciences course. Exploring the Language of Medicine is designed to help students learn medical terminology. It is presented in a logical order, beginning with each body system's anatomy and physiology and progressing through pathology, diagnostic procedures, therapeutic interventions, and pharmacology. Concepts, terms, and abbreviations are also presented to the students. Dual enrollment with Northern Virginia Community College may be available. For more information, visit the CTE web site.

Industry certification may be available as part of this course.

FIRE AND EMERGENCY MEDICAL SCIENCES 1 (833326)
Grades: 11, 12
Credit: one
Prerequisite: Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required.
(Falls Church Academy - transportation may be provided)

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Fire and Emergency Medical Sciences 2 for the spring semester. Fire and Emergency Medical Sciences prepares the student to enter the workforce or pursue further education in the field of Emergency Medical Services (EMS) and Fire Science. The principles and practices of emergency response and firefighting will be explored under the direct supervision of a certified EMT instructor. The curriculum consists of planned learning experiences in the classroom, laboratory, and faculty supervised clinical settings. Students will have the opportunity to observe and interact with a variety of patients experiencing varying degrees of injury or disease that are carefully selected to provide appropriate clinical learning experiences. As preparation, students will be provided with ample lab practice to fully prepare them for the clinical experience and minimize risks. During the course of study, students will have the opportunity to earn NREMT and other certifications. Offsite clinical lab opportunities with Fairfax County Fire and Rescue may be available to the students. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students are required to take the Standards of Learning End of Course Test.

FIRE AND EMERGENCY MEDICAL SCIENCES 2 (833426)
Grades: 11, 12
Credit: one
Prerequisite: Fire & Emergency Medical Sciences 1 (833326)
(Falls Church Academy - transportation may be provided)

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Fire and Emergency Medical Sciences 1 for the fall semester. Fire and Emergency Medical Sciences prepares the student to enter the workforce or pursue further education in the field of Emergency Medical Services (EMS) and Fire Science. The principles and practices of emergency response and firefighting will be explored under the direct supervision of a certified EMT instructor. The curriculum consists of planned learning experiences in the classroom, laboratory, and faculty supervised clinical settings. Students will have the opportunity to observe and interact with a variety of patients experiencing varying degrees of injury or disease that are carefully selected to provide appropriate clinical learning experiences. As preparation, students will be provided with ample lab practice to fully prepare them for the clinical experience and minimize risks. During the course of study, students will have the opportunity to earn NREMT and other certifications. Offsite clinical lab opportunities with Fairfax County Fire and Rescue may be available to the students. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

MEDICAL ASSISTANT 1 (834526)
Grades: 11, 12
Credit: one
Prerequisite: Exploring Health Sciences (830226) and Exploring the Language of Medicine (838326).
(Chantilly, Falls Church, and West Potomac Academies only - transportation may be provided)

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Medical Assistant 2 for the spring semester. Medical Assistant 1 allows students to develop entry-level skills and techniques to increase their knowledge base so that they may enter the health care field. Some of these skills and knowledge base areas include administrative and clinical medical assisting. Field trips to a variety of health care settings may be available. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

MEDICAL ASSISTANT 2 (834626)
Grades: 11, 12
Credit: one
Prerequisite: Medical Assistant 1 (834526)
(Chantilly, Falls Church, and West Potomac Academies only - transportation may be provided)

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Medical Assistant 1 for the fall semester. Students further develop medical-assisting skills and techniques learned in Medical Assistant 1. They also learn management of patient records, cardiopulmonary resuscitation, care and use of equipment, collection and analysis of laboratory specimens, special diagnostic testing, basic diseases and disorders, basic knowledge of treatment and medication, and job preparedness skills. Advanced on-the-job clinical experience in a health care facility may be available as a part of the course. Successful completion of the program may lead to employment in physicians' offices or clinics. Students have the opportunity to earn Healthcare Provider CPR and Medical Assisting certifications. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PHARMACY TECHNICIAN 1 (830526)
Grades: 11, 12
Credit: one
Prerequisite: Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required.
(Chantilly, Falls Church, and West Potomac Academies - transportation may be provided)

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Pharmacy Technician 2 for the spring semester. The Pharmacy Technician course incorporates both classroom and clinical lab pharmacy experiences. The student will be given the opportunity to meet state pharmacy technician competencies as well as be exposed to the larger arena of pharmacy careers. Students may have the opportunity to participate in a clinical experience. Students must purchase liability insurance and meet current health agency requirements to participate in clinical experiences. Students in this course are eligible to sit for the Virginia Pharmacy Technician Certification provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Pharmacy. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PHARMACY TECHNICIAN 2 (830626)
Grades: 11, 12
Credit: one
Prerequisite: Pharmacy Technician 1
(Chantilly, Falls Church, and West Potomac Academies - transportation may be provided)

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Pharmacy Technician 2 for the fall semester. The Pharmacy Technician course incorporates both classroom and clinical lab pharmacy experiences. The student will be given the opportunity to meet
state pharmacy technician competencies as well as be exposed to the larger arena of pharmacy careers. Students may have the opportunity to participate in a clinical experience. Students must purchase liability insurance and meet current health agency requirements to participate in clinical experiences. Students in this course are eligible to sit for the Virginia Pharmacy Technician Certification provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Pharmacy. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PHYSICAL THERAPY/OCCUPATIONAL THERAPY 1 (836527)
Grades: 11, 12
Credit: two
Prerequisite: Biology 1, Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required.
(West Potomac Academy - transportation may be provided)

This course is designed to provide an introduction to the professions of physical and occupational therapy. Students will explore the principles and practices of therapists in the health care industry and may participate in a clinical experience under the direct supervision of a licensed physical and/or occupational therapist. Clinical skills in the areas of physical therapy and occupational therapy will enable students to gain experience in rehabilitative care, which is practiced throughout the continuum of care and across the lifespan of individuals. After successful completion of this course, students will be prepared for employment as a rehabilitation technician or students may seek higher education for specific degrees in a variety of fields such as physical therapy, occupational therapy, speech therapy, sports medicine, athletic training, chiropractic medicine, biology, or exercise physiology. Students must purchase scrubs and liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PHYSICAL THERAPY/OCCUPATIONAL THERAPY 2 (836627)
Grades: 11, 12
Credit: two
Prerequisite: Physical Therapy/Occupational Therapy 1 (836527)
(West Potomac Academy - transportation may be provided)

Physical Therapy/Occupational Therapy 2 provides a more in-depth study of the topics covered in the first-level course with emphasis upon individual interests and strengths. Students will be able to select and participate in a clinical experience of their choice from a wide range of clinical settings serving diverse patient populations. The course work will focus on the advancement of problem-solving skills, hands-on techniques, and interpersonal skills with an introduction to clinical research. There will be a greater emphasis on musculoskeletal anatomy during the first two quarters of this course. This course is most appropriate for students anticipating employment or further studies in physical therapy, occupational therapy, or other related healthcare careers. Students must purchase scrubs and liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PRACTICAL NURSING 1 (835726)
Grades: 12
Credit: one/weighted +.5
Prerequisite: Biology 1 and Algebra 1, Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required.
(Plum Center for Lifelong Learning - transportation may be provided)

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Practical Nursing 2 for the spring semester. This course offers preclinical nursing instruction during the student's senior year of high school. Foundations of nursing including communication, anatomy and physiology, and medical math, are the main units of focus. Competency-based instruction provides students with the skills needed to provide basic bedside nursing care used for hospitalized, nursing home, and homebound patients. Following successful completion of Practical Nursing 1 and 2, students electing to enroll in the post-secondary clinical internship curriculum enables students to demonstrate advanced nursing competencies. Students successfully completing this course are eligible to sit for the Virginia Practical Nursing Licensing Exam (NCLEX) provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Nursing. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

HEALTH AND PHYSICAL EDUCATION

ADAPTED PHYSICAL EDUCATION (770003)
Grades: 11, 12
Credit: one
Prerequisite: Students must have an Individual Education Plan (IEP) for course enrollment.

Adapted physical education is a developmental course for general education and/or special education students. The course serves students who are temporarily or permanently physically disabled or have deficiencies in motor coordination and/or physical fitness. The program is individualized and is directed toward improvement of deficiencies.

ADAPTED HEALTH AND PHYSICAL EDUCATION (770002)
Grades: 9, 10
Credit: one
Prerequisite: Students must have an Individual Education Plan (IEP) for course enrollment.
Adapted health and physical education is a developmental course for general education and/or special education students. The course serves students who are temporarily or permanently physically disabled or have deficiencies in motor coordination and/or physical fitness. The program is individualized and is directed toward improvement of deficiencies.

HEALTH AND PHYSICAL EDUCATION 9  (730000)
Grades: 9  Credit: one
Prerequisite: Successful completion of Health and Physical Education, grade 8
Students gain knowledge and skills in a variety of individual, dual, and team sports/activities to develop competencies to promote an active lifestyle. Students begin to apply personal fitness planning concepts to individualized plans. One quarter of the course includes instruction in the health education topics of alcohol, tobacco, and other drug use prevention; emotional and social health; personal health; injury and violence prevention; disease prevention; and cardiopulmonary resuscitation and automated external defibrillation (CPR and AED).

HEALTH AND PHYSICAL EDUCATION 10  (740500)
Grades: 10  Credit: one
Prerequisite: Successful completion of Health and Physical Education, grade 9
Students demonstrate competency in a lifetime sport or activity and demonstrate personal fitness planning. One quarter of the course includes instruction in the health education topics of personal and community health, nutrition, human growth and development, and injury and violence prevention. One quarter of the course includes the classroom component of driver education. The 90-minute Parent/Teen Traffic Safety Presentation (Partners for Safe Teen Driving) is offered to fulfill the requirements of juvenile licensing. Grades from all quarters are averaged to determine the final course grade.

ADVANCED PHYSICAL EDUCATION LEVEL 1  (751000)
(751033)FALL and (751034)SPRING
Grades: 11, 12  Credit: one
Prerequisite: Successful completion of grade 9 and grade 10 health and physical education.
Students continue to learn and master and/or refine lifetime sports activities with emphasis on health and sports related fitness, as they relate to attainment of a healthy lifestyle. Students may elect this course in grade 11 or grade 12. Students may not take this course in lieu of Health and Physical Education grade 9 or grade 10 course requirements.

ADVANCED PHYSICAL EDUCATION LEVEL 2  (761000)
(761033)FALL and (761034)SPRING
Grades: 12  Credit: one
Prerequisite: Successful completion of grade 9 and grade 10 health and physical education. Successful completion of Advanced Physical Education Level 1.
Students continue to learn and master and/or refine lifetime sports activities with emphasis on health and sports related fitness, as they relate to attainment of a healthy lifestyle. Students may elect this course in grade 12. Students may not take this course in lieu of Health and Physical Education grade 9 or 10 requirement.

PERSONAL FITNESS - LEVEL 1  (764011)
Grades: 11, 12  Credit: one
Prerequisite: Successful completion of Health and Physical Education, grade 9
Students study and apply concepts related to human anatomy and physiology, kinesiology, nutrition, and personal fitness planning. Students will develop and participate in a personal fitness program to improve cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition. Students may not take this course in lieu of the grade 9 or grade 10 Health and Physical Education requirements.

PERSONAL FITNESS - LEVEL 2  (764012)
Grades: 11, 12  Credit: one
Prerequisite: Successful completion of Personal Fitness - Level 1
Students extend and enrich their knowledge and the application of human anatomy and physiology, kinesiology, nutrition, and personal fitness planning. Students will develop and participate in a personal fitness program to improve cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition. Students will utilize concepts to assess, plan, monitor, and modify their individual personal fitness plan. Students may not take this course in lieu of the grade 9 or grade 10 Health and Physical Education requirements.

MARKETING

ADVANCED MARKETING  (813000)
Grades: 11, 12  Credit: one
Prerequisite: Marketing 1 (812000), Fashion Marketing 1 (814000), Sports and Entertainment Marketing (817500), or approval of instructor
Students build on knowledge gained in a prior Marketing course. Students participate in supervisory and management activities focusing on the marketing mix, purchasing, financing, human resources, global marketing, pricing, and emerging technologies. Students will prepare for advancement in marketing careers and postsecondary education. Classroom instruction will be reinforced through the use of case studies, guest lecturers, and field trips. This course reinforces mathematics, science, English, and history/social science Standards of Learning (SOL). Computer/technology applications and DECA activities enhance the course. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.

CLASSROOM-ON-THE-MALL: FASHION MARKETING 2  (814523)
Grades: 11, 12  Credit: one
Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)
(Fair Oaks Mall and Tyson's Corner Center—transportation may be provided)
This specialized program enables students to learn business organization as well as operation skills and techniques in a realistic business setting. Classes are held at Tysons Corner Center and Fair Oaks Shopping Malls. Traditional classroom instruction in marketing, merchandising, and management is enhanced by the opportunity for students to meet and work with professionals in the mall businesses. This course provides an in-depth study of merchandising techniques, fashion trends, fashion promotion, and management skills. Students attend their base schools for regular classes and then travel the mall for both classroom instruction and related on-the-job training. The Holiday Gift Wrap Center at Fair Oaks Mall offers additional opportunities for real-life entrepreneurial experiences. Due to the unique structure of this program, excellent attendance is mandatory. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.
In this specialized course, students gain basic knowledge of the apparel and accessories industry and skills necessary for successful employment in apparel businesses. Students develop general marketing skills necessary for successful employment in fashion marketing, general marketing skills applicable 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 as well as academic skills (mathematics, science, English, and history/social science) related to the content are part of this course. Computer/technology applications supporting this course are studied. Marketing simulations, case studies, projects, team work, guest speakers, and DECA competitions provide many opportunities for application of instructional competencies. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Industry certification may be available as part of this course.

FASHION MARKETING 2 (814500)
Grades: 11, 12
Credit: one
Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)

Students with a career interest in apparel and accessories marketing gain in-depth knowledge of the apparel and accessories industry and skills important for 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 as well as academic skills (mathematics, science, English, and history/social science) related to the content are part of this course. Computer/technology applications supporting this course are studied. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. (Students interested in this course should also see Fashion Design 1 under Family and Consumer Sciences.)

Industry certification may be available as part of this course.

INTRODUCTION TO HOTEL MARKETING (816026)
Grades: 9, 10, 11, 12
Credit: one
(Edison and Marshall Academies - transportation may be provided)

Hotel Marketing 1 actively investigates careers in the hospitality and tourism career cluster including hotel and restaurant management, event and wedding planning, tourism, resort and golf course management, and the cruise ship industry. Students become familiar with concepts in marketing, convention, banquet and meeting services, catering services and event planning, venue management, guest services and retention, food and beverage operation, travel and transportation, and social and internet marketing. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. Program activities include: field trips, guest speakers, DECA competitive events, and projects. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE website.

Industry certification may be available as part of this course.

HOTEL MARKETING 1 (816027)
Grades: 9, 10, 11, 12
Credit: two
(Edison and Marshall Academies - transportation may be provided)

This course actively investigates careers in the hospitality and tourism career cluster including hotel and restaurant management, event and wedding planning, tourism, resort and golf course management and the cruise ship industry. Students become familiar with concepts in marketing, convention, banquet and meeting services, catering services and event planning, venue planning, and transportation and supervision. Students develop general marketing skills necessary for successful employment in the hospitality and tourism career cluster including hotel and restaurant management, event and wedding planning, tourism, resort and golf course management, and the cruise ship industry. Students become familiar with concepts in marketing, convention, banquet and meeting services, catering services and event planning, venue
management, guest services and retention, food and beverage operation, travel and transportation, and social and internet marketing. Students will have the opportunity to attend classes at participating hotels. Students are required to wear uniforms and follow the hotel dress code. Program activities include: field trips, guest speakers, DECA competitive events, and projects. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE website.

Industry certification may be available as part of this course. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

HOTEL MARKETING 2 (816227)
Grades: 12  Credit: two
Prerequisite: Hospitality Marketing 1 (816026 or 816027)
(Edison and Marshall Academies - transportation may be provided)

This advanced course enables students to continue to develop and grow their skills in the hospitality industry. Students will intern in a hotel, work with hotel staff and guests to develop resume-building skills in a variety of departments. Three career clusters will be explored: Business Management & Administration, Marketing, and Hospitality & Tourism. Concentration of course work and internships will be in marketing techniques, supervisory skills, management reporting, overall operations and cost controls, specific department operations, and professional development. While attending classes at participating hotels, students are required to wear uniforms and follow the hotel dress code. Program activities include: field trips, guest speakers, DECA competitive events, and projects. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE website.

Industry certification may be available as part of this course.

INTRODUCTION TO MARKETING (811000)
Grades: 9, 10  Credit: one

Students gain an understanding of the importance of marketing in today's society. They develop skills related to interpersonal communication, self-presentation, economics, marketing, sales, employability, career discovery, and ethical decision-making. This course reinforces mathematics, science, English, and history/social science Standards of Learning (SOL). Computer/technology applications and DECA activities support this course. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Field trips, guest speakers, and competitive events through DECA membership enhance the course work.

Industry certification may be available as part of this course.

MARKETING 1 (812000)
Grades: 10, 11, 12  Credit: one

Students examine activities in marketing and business important for success in marketing employment and postsecondary education. Students will learn how products are developed, branded, and sold to businesses and consumers. Students will analyze industry trends and gain hands-on experience in the marketing of goods, services, and ideas. Topics will include professionalism in the workplace, product planning and positioning, promotion, pricing, selling, economic issues, and the impact of technology on the marketplace. This course reinforces mathematics, science, English, and history/social science Standards of Learning (SOL). Computer/technology applications and DECA activities enhance the course. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Industry certification may be available as part of this course.

MARKETING COOPERATIVE INTERNSHIP (CO-OP) (819920)
Grades: 10, 11, 12  Credit: one
Corequisite: Student must be concurrently enrolled in a Marketing or EFE course.

The Marketing Cooperative Internship (Co-op) option enhances classroom instruction by providing practical work experience that is relevant to students' career goals. Students enrolled in Co-op attend at least one marketing or EFE class and work a minimum of 396 hours (10 hours per week) in an approved, supervised marketing-related, part-time job for one credit.

MARKETING COOPERATIVE INTERNSHIP (CO-OP) (819921)
Grades: 10, 11, 12  Credit: two
Corequisite: Student must be concurrently enrolled in a Marketing or EFE course.

The Marketing Cooperative Internship (Co-op) option enhances classroom instruction by providing practical work experience that is relevant to students' career goals. Students enrolled in Co-op attend at least one marketing or EFE class and work a minimum of 720 hours (20 hours per week) in an approved, supervised marketing-related, part-time job for two credits.

SOCIAL MEDIA MARKETING (812526)
Grades: 10, 11, 12  Credit: one
(Fairfax Academy - transportation may be provided)

Students receive an introduction to marketing functions and study the Internet and Social Media marketing's role in the global economy. Students gain knowledge of the tools and technique used in Internet and Social Media marketing. They explore ethical, legal, and security aspects and prepare for a career in Internet and/or Social Media marketing. Academic skills (mathematics, science, English, and history/social science) related to the content are part of this course. Computer/technology applications supporting this course are studied. Classroom instruction will be reinforced through the use of outside lectures, case studies, and field trip experiences. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE website.

Industry certification may be available as part of this course.

SPORTS AND ENTERTAINMENT MARKETING (817500)
Grades: 10, 11, 12  Credit: one

This introductory course helps students develop a thorough understanding of fundamental marketing concepts and theories as they relate to the sports, entertainment, and recreation industries. Students will investigate the components of branding, sponsorships and endorsements, as well as promotion plans needed for sports, entertainment and recreation events. The course also supports career development skills and explores career options. Academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course. Classroom instruction will be reinforced through the use of outside lectures, case studies, and field trip experiences. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Industry certification may be available as part of this course.
MATHEMATICS

ALGEBRA 1 / PART 1 (313100)
Grades: 9, 10
Credit: one
Prerequisite: Middle School Mathematics

Algebra 1 / Part 1 extends students’ understanding of the real number system and its properties through the study of variables, expressions, equations, inequalities, and analysis of data derived from real-world phenomena. Topics include linear equations and inequalities, linear relations and functions, measures of central tendency (mean, median, mode), data analysis and middle school objectives as needed. Algebra 1 / Part 1 includes approximately sixty percent of the Virginia Standards of Learning for Algebra 1. Students who began 9th grade during the 2009-2010 school year or earlier must pass Algebra 1 to receive mathematics graduation credit for Algebra 1 / Part 1. This course will not count towards a mathematics graduation credit for students who start 9th grade during the 2010-2011 school year or later.

ALGEBRA 1 (313000)
Grades: 8, 9, 10, 11
Credit: one
Prerequisite: Mathematics 7 and/or Mathematics 8

This course extends students’ knowledge and understanding of the real number system and its properties through the study of variables, expressions, equations, inequalities, and analysis of data derived from real-world phenomena. Emphasis is placed on making connections in algebra to geometry and statistics. Calculator and computer technologies will be used as tools wherever appropriate. Use of a graphing calculator is considered essential to provide a graphical and numerical approach to topics in addition to a symbolic approach. Topics include linear equations and inequalities, systems of linear equations, relations, functions, polynomials, and statistics. Students are required to take the Standards of Learning End of Course Test.

ALGEBRA 1 HONORS (313036)
Grades: 7, 8, 9
Credit: one/weighted +.5
Prerequisite: Mathematics 7 and/or Mathematics 8

The depth and level of understanding expected in Algebra 1 Honors is beyond the scope of Algebra 1. Students are expected to master algebraic mechanics and understand the underlying theory, as well as apply the concepts to real-world situations in a meaningful way. Students extend knowledge and understanding of the real number system and its properties through the study of variables, expressions, equations, inequalities, and the analysis of data from real world phenomena. Emphasis is placed on algebraic connections to arithmetic, geometry, and statistics. Calculators and computer technologies are integral tools. Graphing calculators are an essential tool for every student to explore graphical, numerical, and symbolic relationships. Students are required to take the Standards of Learning End of Course Test.

GEOMETRY (314300)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Algebra 1

This course emphasizes two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. A variety of applications and some general problem-solving techniques, including algebraic skills, will be used to explore geometric relationships. Conjectures about properties and relationships are developed inductively and then verified deductively. Calculators, computers, graphing utilities, dynamic geometry software, and other appropriate technology tools will be used to assist in teaching and learning. Students are required to take the Standards of Learning End of Course Test.

GEOMETRY HONORS (314336)
Grades: 8, 9, 10
Credit: one/weighted +.5
Prerequisite: Algebra 1

The depth and level of understanding expected in Geometry Honors is beyond the scope of Geometry. This course emphasizes two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. A variety of applications and some general problem-solving techniques, including algebraic skills, will be used to explore geometric relationships. Conjectures about properties and relationships are developed inductively and then verified deductively. Students investigate non-Euclidean geometries, formal logic, and use deductive proofs to verify theorems. Calculators, computers, graphing utilities, dynamic geometry software, and other appropriate technology tools will be used to assist in teaching and learning. Students are required to take the Standards of Learning End of Course Test.

ALGEBRA 2 (313500)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Algebra 1 and Geometry

Algebra 2 provides a thorough treatment of algebraic concepts through the study of functions, polynomials, rational expressions, complex numbers, exponential and logarithmic equations, arithmetic and geometric sequences and series, and data analysis. Emphasis is placed on the mechanics of algebra with real world applications and modeling. A transformational approach to graphing is used with families of related graphs. Numerical, graphical, and algebraic solutions are considered for all problems as applicable. Graphing utilities, especially graphing calculators, are integral to the course. Students are required to take the Standards of Learning End of Course Test.

ALGEBRA 2 HONORS (313536)
Grades: 9, 10, 11
Credit: one/weighted +.5
Prerequisite: Algebra 1 and Geometry

The depth and level of understanding expected in Algebra 2 Honors is beyond the scope of Algebra 2. Students are expected not only to master algebraic mechanics but also to understand the underlying theory and to apply the concepts to real-world situations in a meaningful way. A thorough treatment of advanced algebraic concepts is provided through the study of functions, polynomials, rational expressions, complex numbers, matrices, exponential and logarithmic equations, infinite geometric sequences and series, permutations and combinations, data analysis, and selected topics in discrete mathematics. Emphasis is on modeling, logic, and interpretation of results. A transformational approach to graphing is used with families of related graphs. Numerical, graphical, and algebraic solutions are considered for all problems, as applicable. Graphing utilities, especially graphing calculators, are integral to the course. Students are required to take the Standards of Learning End of Course Test.

PRECALCULUS WITH TRIGONOMETRY (316000)
Grades: 10, 11, 12
Credit: one
Prerequisite: Geometry and Algebra 2

Precalculus with Trigonometry includes all the topics of Trigonometry (3150) and a thorough treatment of functions through the study of polynomials, rational functions, logarithmic, exponential, and inverse functions. Topics include continuity, maximum and minimum points, an intuitive approach to limits, and rates of change. A transformational approach to graphing is used with families of related graphs. Numerical, graphical, and algebraic solutions are considered for all problems as applicable. Emphasis will be placed on problem solving techniques. Graphing utilities, especially graphing calculators, are integral to the course.

PRECALCULUS WITH TRIGONOMETRY HONORS (316036)
Grades: 10, 11, 12
Credit: one/weighted +.5
Prerequisite: Algebra 2 and Geometry
Prerequisite: Geometry and Algebra 2

The depth and level of understanding expected in Precalculus with Trigonometry Honors is beyond the scope of Precalculus with Trigonometry. Precalculus with Trigonometry Honors includes all of the topics of Trigonometry (3150) and an in-depth treatment of functions through the study of polynomials, transformations, rational functions, exponential and logarithmic functions, inverses, polar equations, parametric equations, two-dimensional vectors, and selected topics in discrete mathematics. The course also includes the study of limits, continuity, maximum and minimum points and values, definition and properties of the derivative, rules of differentiation, equations of tangent lines to polynomial functions, infinite limits, and partial fractions. Numerical, graphical, and algebraic solutions are considered for all problems as applicable. Graphing utilities, especially graphing calculators, are integral to the course.

ENGINEERING MATHEMATICS (316326)
Grades: 10, 11, 12
Credit: one
Prerequisite: Algebra 2
Corequisite: Precalculus with Trigonometry
(Chantilly Academy – transportation may be provided)

The mathematics topics taught in this course are motivated through direct applications in engineering. Engineering Mathematics addresses salient mathematics topics actually used in the primary core engineering college courses; Basic Algebraic Manipulations; Trigonometry; 2-D Vectors; Complex Numbers; Simuloids and Harmonic Signals; Systems of Equations and Matrices; Basics of Differentiation; Basics of Integration; Linear Differential Equations with Constant Coefficients. Course material is taught through hands-on physical experiments in the classroom and laboratory, and is thoroughly integrated with the engineering analysis software MATLAB. Students learn the interconnection between classroom theory, laboratory measurement and numerical representation of their engineering results.

ADVANCED PLACEMENT STATISTICS (319204)
Grades: 10, 11, 12
Credit: one/weighted +1.0
Prerequisite: Geometry and Algebra 2

Advanced Placement Statistics includes graphical and numerical techniques to study patterns and explore data, strategies for developing a plan to conduct a study based on data analysis, probability as a tool for predicting distribution of data, and techniques of statistical inference. Students who successfully complete this course and the AP statistics examination may receive credit and/or advanced placement for a one-semester college statistics course. All students are required to take the Advanced Placement exam.

ADVANCED PLACEMENT CALCULUS AB (317004)
Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Precalculus with Trigonometry or Precalculus with Trigonometry Honors

This course emphasizes a multi-representational approach to calculus. Concepts, results, and problems are expressed graphically, numerically, analytically, and verbally. Content includes concepts and applications of differential and integral calculus, limits, and elementary differential equations. This course prepares students for the Calculus AB Advanced Placement examination, for which placement and/or credit may be awarded at the college level, if a qualifying score is obtained. Content of this college-level course corresponds to the syllabus of the College Board Calculus BC Advanced Placement Program. All students are required to take the Advanced Placement exam.

ADVANCED PLACEMENT CALCULUS BC (317704)
Grades: 10, 11, 12
Credit: one/weighted +1.0
Prerequisite: PreCalculus with Trigonometry with Honors or AP Calculus AB

This course is an extension of Advanced Placement Calculus AB. This course emphasizes a multi-representational approach to calculus. Concepts, results, and problems are expressed graphically, numerically, analytically, and verbally. Content includes concepts and applications of differential and integral calculus, sequences and series, and elementary differential equations. This course prepares students for the Calculus BC Advanced Placement examination, for which placement and/or credit may be awarded at the college level, if a qualifying score is obtained. Content of this college-level course corresponds to the syllabus of the College Board Calculus BC Advanced Placement Program. All students are required to take the Advanced Placement exam.

COMPUTER SCIENCE (318400)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Algebra 1 and Geometry

Students develop detailed knowledge of the fundamental structure of a computer system, with emphasis on problem solving and structured programming. Skills in defining, writing, and running programs on a computer are developed through an individual approach that allows the student to work with both mathematical and non-mathematical problems. Java will be the major programming language.

ADVANCED PLACEMENT COMPUTER SCIENCE A (318505)
Grades: 10, 11, 12
Credit: one/weighted +1.0
Prerequisite: Algebra 1 and Geometry

The purpose of this course is to prepare students for the Advanced Placement Computer Science A examination, for which college credit and/or placement may be given, if a qualifying score is achieved. Content of this college-level course corresponds to the syllabus of the College Board Advanced Placement Program for Computer Science A. Students will design software to solve problems and use data structures, such as classes and arrays, to represent information within a program. Students will also gain a working knowledge of the major hardware and software components of computer systems. Java is the main vehicle for implementing solutions to problems. All students are required to take the Advanced Placement exam.

DISCRETE MATHEMATICS SEMESTER COURSE (315432)
To be taken in combination with Probability and Statistics (319033) Semester Course
Grades: 11, 12
Credit: one-half
Prerequisite: Geometry and Algebra 2

Discrete mathematics requires problem-solving strategies be applied to real-world application, develops verbal and written skills in the process of problem-solving, and promotes mathematical connections across disciplines. Course content includes management science, the mathematics of apportionment, matrix operations and applications, recursion, and other discrete applications in the natural and social sciences.

PROBABILITY AND STATISTICS SEMESTER COURSE (319032)
To be taken in combination with Discrete Mathematics Semester Course (315434)
Grades: 11, 12
Credit: one-half
Prerequisite: Geometry and Algebra 2

Course content includes theory of probability, description of statistical measurements, probability distributions, and statistical inference. Optional topics include statistical inference involving two populations, linear regression, and correlation.

MULTIVARIABLE CALCULUS (317860)
(FALL)
Grades: 11, 12
Credit: one-half/weighted +.5
Prerequisite: AP Calculus BC or IB Mathematics HL II

A third semester college-level course. Multivariable calculus is the calculus of three dimensions and includes the study of partial differentiation, multiple
These big ideas are developed through inquiry and experimentation. All students are required to take the Advanced Placement exam for which college credit and/or placement may be given if a qualifying score is achieved.

**ADVANCED PLACEMENT PHYSICS 2** (457406)  
Grades: 12  
Credit: one/weighted +1.0  
Prerequisite: AP Physics 1

AP Physics 2 is the second year of a two year AP Physics sequence. The second year builds on the six big ideas that are developed in the first year of the course. Additionally, students learn how the mathematics of probability can be used to describe the behavior of complex systems and how to interpret the behavior of quantum mechanical systems. As in the previous year, these big ideas are developed through inquiry and experimentation. All students are required to take the Advanced Placement exam for which college credit and/or placement may be given if a qualifying score is achieved.

**HUMAN ANATOMY AND PHYSIOLOGY:** AN INTRODUCTION TO THE MEDICAL SCIENCES (453000)  
Grades: 11, 12  
Credit: one  
Prerequisite: Biology 1 and Chemistry 1

Human Anatomy and Physiology provides students with an in-depth understanding and working knowledge of the human body. It covers the ten systems of the human body with emphasis on the mechanisms that maintain homeostasis. Lab activities cover both the physiological and anatomical aspects of human biology. Students have the opportunity to explore careers in the medical sciences. An independent project is required. If dissections are part of the laboratory experience, alternatives are available. This course does not count as one of the science credits for the standard diploma. It can be used as the fourth science credit for an advanced studies diploma if the student has already taken three science courses from three different disciplines.

**CONCEPTS SCIENCE** (462260)  
Grades: 9, 10, 11  
Credit: one

This course, taught by science or ESOL teachers, is designed for WIDA ELP Level 1 & 2 students. The course provides the students with background information, key vocabulary, and the basic concepts and skills in preparation for taking biology. This course can be offered on a semester basis for a half credit. Concepts Science is an elective and does not satisfy the state science graduation requirements. This course can be repeated for elective credit.

**CHEMISTRY 1** (441000)  
Grades: 10, 11, 12  
Credit: one  
Prerequisite: One laboratory science course, Algebra 1

Chemistry 1 provides students the opportunity to develop their critical thinking skills as they acquire a better understanding of the chemical nature of our world. Students investigate the composition, properties, and reactions

In Biology 1 Honors, students engage in scientific inquiry as they explore biological processes. All class activities and laboratory activities focus on life processes that occur within organisms or cells as well as the characteristics of life including: reproduction, development, and adaptation to environment. Major topics of study include molecular biology, cells, genetics, organisms, evolution and ecology. In comparison to Biology 1, students will investigate some topics at a deeper level including biotechnology, health and environmental issues. Students will be involved in an externally moderated experimental/research project, either independently or in teams. The course includes a unit on human life education that addresses the topics of human reproduction and human development. Parents have the option of withdrawing their child from any or all topics included in the state-mandated Family Life Education portion. Students opting-out will be provided with alternative biology lessons. If dissections are a part of the laboratory experience, alternatives are available. Students are required to take the Standards of Learning End of Course Test.

**ADVANCED PLACEMENT BIOLOGY** (457004)  
Grades: 11, 12  
Credit: one/weighted +1.0  
Prerequisite: Biology 1 and Chemistry 1

After completing the core science curriculum, students pursue a more advanced and specialized study of biology topics. Students conduct standard first year college-level laboratory research as well as analyze and interpret biological data. Students engage in authentic science practices and examine biology content within four big ideas: 1) the process of evolution drives the diversity of life, 2) biological systems utilize energy and molecular building blocks to grow, reproduce and maintain homeostasis, 3) living systems retrieve, transmit, and respond to information essential to life processes, and 4) biological systems interact, and these interactions possess complex properties. If dissections are part of the laboratory experience, alternatives are available. Students are required to take the Advanced Placement exam for which college credit and/or placement may be given if a qualifying score is achieved.

**BIOLOGY 1** (431000)  
Grades: 9, 10, 11, 12  
Credit: one  
Prerequisite: CHEMISTRY 1

In Biology 1, students engage in scientific inquiry through lab work as they explore biological processes. All class activities and laboratory activities focus on life processes that occur within organisms or cells as well as the characteristics of life including: reproduction, development, and adaptation to environment. Major topics of study include molecular biology, cells, genetics, organisms, evolution and ecology. The course includes a unit on human life education that addresses the topics of human reproduction and human development. Parents have the option of withdrawing their child from any or all topics included in the state-mandated Family Life Education portion. Students opting-out will be provided with alternative biology lessons. If dissections are a part of the laboratory experience, alternatives are available. Students are required to take the Standards of Learning End of Course Test.

**BIOLOGY 1 HONORS** (431036)  
Grades: 9, 10, 11, 12  
Credit: one/weighted +.5

In Biology 1 Honors, students engage in scientific inquiry as they explore biological processes. All class activities and laboratory activities focus on life processes that occur within organisms or cells as well as the characteristics of life including: reproduction, development, and adaptation to environment. Major topics of study include molecular biology, cells, genetics, organisms, evolution and ecology. In comparison to Biology 1, students will investigate some topics at a deeper level including biotechnology, health and environmental issues. Students will be involved in an externally moderated experimental/research project, either independently or in teams. The course includes a unit on human life education that addresses the topics of human reproduction and human development. Parents have the option of withdrawing their child from any or all topics included in the state-mandated Family Life Education portion. Students opting-out will be provided with alternative biology lessons. If dissections are a part of the laboratory experience, alternatives are available. Students are required to take the Standards of Learning End of Course Test.

**MATRIX ALGEBRA** (319800)  
(SPRING)  
Grades: 11, 12  
Credit: one/half/weighted +.5  
Prerequisite: AP Calculus AB or AP Calculus BC or IB Mathematics HL II

This college-level course includes the study of systems of linear equations, vector spaces, linear dependence, linear transformations and matrix representation, orthogonal reduction, determinants, eigenvectors and eigenvalues, and a variety of applications. This course will receive a weighted grade and may be taken for college credit.
of matter. The approach is inductive, mathematical, and conceptual. Laboratory experiments and subsequent classroom analysis are integral components of the course.

Students are required to take the Standards of Learning End of Course Test.

CHEMISTRY 1 HONORS (441036)
Grades: 10, 11, 12
Credit: one/weighted +.5
Prerequisite: One laboratory science course, Algebra 1
Corequisite: Algebra 2

Chemistry 1 Honors provides students the opportunity to utilize their strong critical thinking skills and apply their mathematical knowledge as they investigate in depth the composition, properties, and reactions of matter. Laboratory experiments and subsequent classroom analysis are integral components of the course. Students will participate in an externally-moderated experimental/research project, either independently or in teams. Students are required to take the Standards of Learning End of Course Test.

ADVANCED PLACEMENT CHEMISTRY (447004)
Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Chemistry 1
Corequisite: Recommended: Physics or Pre-calculus with Trigonometry

Advanced Placement Chemistry represents a full year (two semesters) of college chemistry. The purpose of this course is to prepare students to take the Advanced Placement examination, for which college credit and/or placement may be given if a qualifying score is achieved. Advanced Placement Chemistry is a second-level, laboratory-centered course that provides an opportunity for students to undertake a more comprehensive investigation at a level above Chemistry 1. It is designed for students who have completed a core science curriculum and are now ready to pursue more advanced and specialized studies. Students are required to take the Advanced Placement exam. Required summer assignments.

ENGINEERING PHYSICS 1 (451026)
Grades: 10, 11, 12
Credit: one
Prerequisite: One year of laboratory science and Algebra 1 (313000)
(Chantilly Academy - transportation may be provided)

This course may be used to satisfy one credit toward the science, elective, fine arts or career and technical education requirement of the standard or advanced studies diploma. This course is the first year of the two-year college preparatory, laboratory-based Engineering Physics sequence; it is designed for students anticipating careers in the physical sciences, engineering, technology, medicine, or other research, and experimentation disciplines. The course begins with a review of mathematical and basic physics and engineering concepts to assure that all students are brought to a consistent level of preparedness. Curriculum topics include universal concepts, inquiry processes, fundamental constants, special relativity, rotational dynamics, waves and vibrations, energy conversion, transducers, electromagnetic radiation, optical measurements, and exponential behavior. These topics are addressed in the context of mechanical, fluid, electrical, thermal, and aerospace systems. Students complete approximately 50 hours of laboratory experimentation and participation in advanced technology competitions. The course may include curriculum-related field trips and college-oriented information seminars. Individual academies apply the curriculum in the manner that best fits local facilities and opportunities. Participating students may compete for a limited number of industry internships. For more information, visit the academy web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

ACTIVE PHYSICS (451050)
Grades: 10, 11, 12
Credit: one
Prerequisite: One laboratory science course

Active Physics is a physics course for students who have not yet passed Algebra I or were weak in Algebra I during the previous school year. This course has a strong emphasis on experimentation. The units of study focus on predictions and real-world applications such as sports, medicine, transportation, home, and communication. The physics content is presented in a problem solving manner to strengthen both science and mathematics content knowledge and skills. This course is for designated students only.

PHYSICS 1 (451000)
Grades: 11, 12
Credit: one
Prerequisite: Two laboratory science courses

Physics 1 introduces the central concepts of physics, including kinematics, dynamics, the conservation laws (mass, energy, and momentum), electricity, magnetism, and waves. This laboratory-centered course utilizes an approach that is inductive and mathematical as well as conceptual.

ADVANCED PLACEMENT PHYSICS C (457004)
Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Physics 1
Corequisite: Calculus AB or Calculus BC

Advanced Placement Physics is a second-level course which surveys a broad selection of physics topics at a level above Physics 1. It is designed for students who have completed a core science curriculum and are now ready to pursue more advanced and specialized studies in mechanics, electricity, and magnetism. AP Physics C serves as the foundation in physics for students who wish to pursue physical science or engineering degrees. Students are required to take the Advanced Placement exam, and may be given college credit and/or placement if a qualifying score is achieved.

ENGINEERING PHYSICS 2 (452026)
Grades: 11, 12
Credit: one
Prerequisite: Engineering Physics 1 (451026) or Physics 1 (451000).
Corequisite: Algebra Option: Co-enrollment in or completion of Algebra 2 (313500); Calculus Option: Co-enrollment in a calculus-based mathematics course (316306, 316506, or equivalent)
(Chantilly Academy - transportation may be provided)

This course may be used to satisfy one credit toward the science, elective, fine arts or career and technical education requirement of the standard or advanced studies diploma. The course is the second year of the two-year college preparatory, laboratory-based Engineering Physics sequence; and is designed for students anticipating careers in the physical sciences, engineering, technology, medicine, or other research, and experimentation disciplines. The course begins with a review of mathematical and basic physics and engineering concepts to assure that all students are brought to a consistent level of preparedness. Curriculum topics include universal concepts, inquiry processes, fundamental constants, special relativity, rotational dynamics, waves and vibrations, energy conversion, transducers, electromagnetic radiation, optical measurements, and exponential behavior. These topics are addressed in the context of mechanical, fluid, electrical, thermal, and aerospace systems. Students complete approximately 50 hours of laboratory experimentation and participation in advanced technology competitions. The course may include curriculum-related field trips and college-oriented information seminars. Individual academies apply the curriculum in the manner that best fits local facilities and opportunities. Participating students may compete for a limited number of industry internships. For more information, visit the academy web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

GEOSYSTEMS (422000)
Grades: 11, 12
Credit: one
Prerequisite: Biology 1 and Chemistry 1

Geosystems utilizes content from geology, astronomy, oceanography, and meteorology to investigate, both qualitatively and quantitatively, the major earth systems (atmosphere, hydrosphere, lithosphere, biosphere) and their dynamic inter-relationships. Students explore concepts with the same tools professional scientists use including computers, Geographic Information System, and college preparatory, laboratory science courses.
Systems (GIS), Global Positioning System (GPS), image processing software, and probeware. Students are required to take the Standards of Learning End of Course Test.

GEOSYSTEMS HONORS (422036)
Grades: 11, 12
Credit: one/weighted +.5
Prerequisite: Biology 1 and Chemistry 1

Geosystems Honors utilizes content from geology, geography, oceanography, and meteorology to investigate, both qualitatively and quantitatively, the major earth systems (atmosphere, hydrosphere, lithosphere, biosphere) and their dynamic inter-relationships. Students explore concepts with the same tools professional scientists use including computers, Geographic Information Systems (GIS), Global Positioning System (GPS), image processing software, and probeware. Students will investigate some topics at a deeper level and will participate in an externally moderated experimental/research project either independently or in teams. Students are required to take the Standards of Learning End of Course Test.

ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE (427004)
Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Biology 1 and Chemistry 1

The AP Environmental Science course is designed to be the equivalent of a one-semester, introductory college course in environmental science and is designed to stress scientific principles and analysis. The course includes a laboratory component. Students examine how science is a process, how energy conversions underlie all ecological processes, and how the Earth is one interconnected system. Students will explore how humans alter the natural system and the cultural and social context of environmental problems. Major topics include earth systems and resources, the living world, population, land and water use, energy resources and consumption, pollution, and global change. Students are required to take the Advanced Placement exam, and may be given college credit and/or placement if a qualifying score is achieved.

ASTRONOMY (426000)
Grades: 11, 12
Credit: one
Prerequisite: Two laboratory science courses

Astronomy deals with topics such as the universe, universal laws, galaxies, stellar evolution, the solar system and its motion, and the exploration of space. This course is designed to be an in-depth and mathematical survey of astronomy concepts. This course does not count as one of the science credits for the standard diploma. It can be used as the fourth credit for an advanced studies diploma, if the student has already taken three science courses from three different disciplines.

SOCIAL STUDIES

WORLD CIVILIZATIONS I HONORS (237539)
Grades: 9
Credit: one/weighted +.5

In this blocked class with English 9 Honors, students examine eras of world history from early ages to 1500 CE. World Civ 1 Honors deepens and extends the curriculum of World History and Geography 1 and English 9. Students examine the relationship among social, economic, and geopolitical developments in the times and places in which they occurred. They use conceptual and critical thinking to analyze historical and contemporary issues as presented in literature and society. Students are encouraged to think independently while developing group process, writing, and technology skills. Students receive one credit for World History and Geography 1 Honors and English 9 Honors (113039). Students are required to take the Standards of Learning End of Course Test.

WORLD CIVILIZATIONS II HONORS (237540)
Grades: 10, 11, 12
Credit: one/weighted +1.0

This course provides students with background information, key vocabulary, and basic concepts in preparation for taking World History and Geography 1. This course is designed for WIDA ELP Level 1 & 2 students. World Concepts is an elective and does not satisfy the state Social Studies requirements for graduation. This course may be repeated for elective credit.

WORLD HISTORY AND GEOGRAPHY I HONORS (WORLD CIVILIZATIONS I HONORS) (221939)
Grades: 9
Credit: one/weighted +.5

In this blocked class with English 9 Honors, students examine eras of world history from early ages to 1500 CE. World Civ 1 Honors deepens and extends the curriculum of World History and Geography 1 and English 9. Students examine the relationship among social, economic, and geopolitical developments in the times and places in which they occurred. They use conceptual and critical thinking to analyze historical and contemporary issues as presented in literature and society. Students are encouraged to think independently while developing group process, writing, and technology skills. Students receive one credit for World History and Geography 1 Honors and English 9 Honors (113039). Students are required to take the Standards of Learning End of Course Test.

WORLD HISTORY AND GEOGRAPHY II HONORS (WORLD CIVILIZATIONS II HONORS) (234005)
Grades: 10, 11, 12
Credit: one/weighted +1.0

This course is blocked with English 10 Honors (114039). Advanced Placement World History is designed to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. Focused primarily on the past fifteen hundred years of the global experience, the course builds on an understanding of cultural, institutional, and technological precedents that, along with geography, set the human stage prior to 600. All students are required to take the Advanced Placement World History Exam. This course may be used to satisfy the World History and Geography II requirement. Note: When taken as the World History and Geography 2 substitute course, the World History and Geography 2 SOL Test is required. The SOL Test is not given when AP World is taken as an elective. Students are required to take the Standards of Learning End of Course Test.

ADVANCED PLACEMENT WORLD HISTORY (BLOCKED WITH ENGLISH 10 HONORS) (234005)
Grades: 10
Credit: one/weighted +1.0

This course is blocked with English 10 Honors (114039). Advanced Placement World History is designed to develop greater understanding of the evolution of global processes and contacts, in interaction with different types of human societies. This understanding is advanced through a combination of selective factual knowledge and appropriate analytical skills. Focused primarily on the past fifteen hundred years of the global experience, the course builds on an understanding of cultural, institutional, and technological precedents that, along with geography, set the human stage prior to 600. All students are required to take the Advanced Placement World History Exam. This course may be used to satisfy the World History and Geography II requirement. Students are required to take the Standards of Learning End of Course Test.
US VA HISTORY (AMERICAN CIVILIZATION) (236060)
Grades: 11 Credit: one
In this blocked class with English 11, students examine eras of United States History. Students examine the relationship among social, economic, and geopolitical developments in the times and places in which they occurred. They use conceptual and critical thinking to analyze historical and contemporary issues as presented in literature and society. Students are encouraged to think independently while developing group process, writing, and technology skills. Students receive one credit for Virginia and United States History and one credit for English 11 (115060).
Students are required to take the Standards of Learning End of Course Test.

ADVANCED PLACEMENT UNITED STATES HISTORY (231904)
Grades: 11 Credit: one/weighted 1.0
In this course students develop the factual knowledge and analytical skills necessary to deal with the issues and problems of American History. They do in-depth analysis of major developments; become familiar with primary sources; assess historical materials, evidence, and interpretations; and learn to write research papers. This course prepares students to take the Advanced Placement examination in American History for which college credit and/or placement may be given if a qualifying score is made. The course is equal to a full-year introductory college course. Completion of this course fulfills the graduation requirement for one credit in Virginia and United States History.
Students are required to take the Standards of Learning End of Course Test.

ADVANCED PLACEMENT GOVERNMENT (244504)
Grades: 12 Credit: one/weighted 1.0
This course prepares students to take the Advanced Placement examination for which college credit and/or placement may be given if a qualifying score is made. Completion of this course fulfills the graduation requirement for one credit in Virginia and United States Government.

ADVANCED PLACEMENT COMBINED UNITED STATES AND COMPARATIVE GOVERNMENT (244507)
Grades: 12 Credit: one/weighted 1.0
This course includes a study of comparative government as well as American government and politics. In the study of American government, students interpret national, state, and local government and politics through an examination of both general concepts used to interpret U.S. politics and the analysis of specific examples. This course prepares students to take the Advanced Placement examination for which college credit and/or placement may be given if a qualifying score is made. Completion of this course fulfills the graduation requirement for one credit in Virginia and United States Government.

AP US GOVERNMENT (BLOCKED WITH AP ENGLISH LITERATURE AND COMPOSITION) (244506)
Grades: 12 Credit: one/weighted 1.0
In this blocked class with Advanced Placement English Literature and Composition, students consider the ways literature reflects American politics and the human experience as they refine their awareness of language and the writer's craft. They make connections between government and literature while examining the American political experience. Students who complete this course are prepared to take the Advanced Placement examinations in both US Government and English Literature and Composition (119505). College credit may be earned if qualifying scores are achieved.

WORLD HISTORY AND GEOGRAPHY 1 (221900)
Grades: 9 Credit: one
This is the first of a two-year, chronologically and thematically organized study of world history and geography. In this first year, students study the world from ancient times to 1500 CE. The course highlights relationships between the geography and history of Europe, Africa, Asia, and Latin America. Students refine and expand critical thinking skills, practice decision making and problem solving, and formulate questions to guide research. World History and Geography 1 is required for graduation.
Students are required to take the Standards of Learning End of Course Test.

WORLD HISTORY AND GEOGRAPHY 1 HONORS (221936)
Grades: 9 Credit: one/weighted 1.5
This is the first of a two-year, chronologically and thematically organized study of world history and geography. In this first year, students study the world from ancient times to 1500 CE. The course highlights the relationship between the geography and history of Europe, Africa, Asia, and Latin America. Students examine the relationship among social, economic and geopolitical developments across time and place. They use the processes of conceptual and critical thinking to analyze historical and contemporary issues. Students are encouraged to think independently while developing group process skills. World History and Geography 1 Honors satisfies the World History and Geography 1 graduation requirement.
Students are required to take the Standards of Learning End of Course Test.

WORLD HISTORY AND GEOGRAPHY 2 (222100)
Grades: 10 Credit: one
This is the second of a two-year, chronologically and thematically organized study of world history and geography. In this second year, students study the world from 1500 CE through the present. The course weaves together the skills and content of both history and geography so that students may learn how both affect the world around them. Regions of study include North and South America, Europe, Asia, and Africa. Students continue to refine and expand critical thinking skills, practice decision making and problem solving, and formulate questions to guide research. World History and Geography 2 is required for graduation.
Students are required to take the Standards of Learning End of Course Test.

WORLD HISTORY AND GEOGRAPHY 2 HONORS (222136)
Grades: 10 Credit: one/weighted 1.5
This is the second of a two-year, chronologically and thematically organized study of world history and geography. In this second year, students study the world from 1500 CE through the present. The course weaves together the skills and content of both history and geography so that students may learn how both affect the world around them. Regions of study include North and South America, Europe, Asia, and Africa. Students continue to examine the relationship among social, economic, and geopolitical developments across time and place. Students are encouraged to think independently while developing group process skills. World History and Geography 2 is required for graduation.

VIRGINIA AND UNITED STATES HISTORY (236000)
Grades: 11 Credit: one
Students examine the political, economic, social, and cultural change of the United States, including the role of Virginia. Students study major historical developments and their impact on contemporary society and on the individual. Map and globe reading, critical thinking, writing, research, and group-process skills are refined. Virginia and United States History is required for graduation.

Students are required to take the Standards of Learning End of Course Test.

VIRGINIA AND UNITED STATES HISTORY HONORS (236036) Grades: 11 Credit: one/weighted +.5
Virginia and United States History Honors deepens and advances the curriculum of Virginia and United States History. Students examine the political, economic, social, and cultural growth of the United States, including the role of Virginia in this growth. Students study major historical developments and their impact on contemporary society and on the individual. Map and globe reading, critical thinking, writing, research, and group-process skills are refined. Virginia and United States History is required for graduation.

Students are required to take the Standards of Learning End of Course Test.

VIRGINIA AND UNITED STATES GOVERNMENT (244000) Grades: 12 Credit: one
Students examine both the structure and function of American government at the national, state, and local levels. The course focuses on political decision-making, comparative political and economic systems, and the student's role as a citizen. Critical thinking, writing, research, and group-process skills are refined. Virginia and United States Government is required for graduation.

VIRGINIA AND UNITED STATES GOVERNMENT HONORS (244036) Grades: 11, 12 Credit: one/weighted +.5
Virginia and United States Government Honors deepens and advances the curriculum of Virginia and United States Government. Students examine both the structure and function of American government at the national, state, and local levels. The course focuses on political decision-making, comparative political and economic systems, and the student's role as a citizen. Critical thinking, writing, research, and group-process skills are refined. Virginia and United States Government is required for graduation.

Students are required to take the Standards of Learning End of Course Test.

PHILOSOPHY (295000) Grades: 11, 12 Credit: one
This course offers students an opportunity to investigate classical philosophical issues from both secular and religious sources. A study of philosophy will help students respect the difference between systematic philosophical investigation and personal belief; develop critical skill in the analysis of the writings of the philosophers and a comprehensive understanding of similarities and differences in philosophical discussion, both religious and secular, throughout the ages; value the rich diversity of ideas and points of view on many issues; and transfer philosophical knowledge and method to the study of other disciplines and to problem solving.

ADVANCED PLACEMENT HUMAN GEOGRAPHY (221204) Grades: 10, 11, 12 Credit: one/weighted +1.0
The purpose of Advanced Placement Human Geography is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, interaction with, and alteration of the earth's surface. Students will use spatial concepts and landscape analysis to analyze human social organization and its environmental consequences. They also will learn about the methods and tools geographers use in their science and practice. This course prepares students to take the Advanced Placement examination in Human Geography, for which college credit and/or placement is given if a qualifying score is achieved. All students are required to take the Advanced Placement Human Geography exam.

ADVANCED PLACEMENT MACROECONOMICS (280304) Grades: 11, 12 Credit: one-half/weighted +.5
This course is designed to provide students with an understanding of the principles of economics which apply to the functions of decision-makers, both consumers and producers, within the larger economic system. Primary emphasis is placed on the nature and functions of product markets, and includes the study of factor markets and the role of government in promoting greater efficiency and equity in the economy. This course prepares students to take the Advanced Placement examination, for which college credit and/or placement may be given if a qualifying score is achieved. This course fulfills the Economic and Personal Finance graduation requirement.

ADVANCED PLACEMENT MICROECONOMICS (280204) Grades: 11, 12 Credit: one-half/weighted +.5
This course is designed to provide students with an understanding of the economic principles which apply to an economic system as a whole. Primary emphasis is placed on industries, national economics, performance indicators, and international economics. This course prepares students to take the Advanced Placement examination, for which college credit and/or placement may be given if a qualifying score is achieved. This course fulfills the Economic and Personal Finance graduation requirement.

ADVANCED PLACEMENT PSYCHOLOGY (290204) Grades: 11, 12 Credit: one/weighted +1.0
The purpose of this course is to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the methods psychologists use in their science and practice. The aim of Advanced Placement Psychology is to provide the students with a learning experience equivalent to that obtained in an introductory college psychology course. College credit and/or placement may be given if a qualifying score is made on the Advanced Placement examination. The rigorous course syllabus and college level texts both suggest that students who enroll should be highly motivated and intellectually curious.
TECHNOLOGY AND ENGINEERING EDUCATION

ADVANCED DRAWING (843800)
Grades: 11, 12
Credit: one
Prerequisite: Engineering Drawing (843600) or Architectural Drawing (843700)

Students use a graphic language for product design and technical illustration. They increase their understanding of drawing techniques learned in the prerequisite courses. They research design-related fields while identifying the role of advanced drawing and design in manufacturing and construction industry processes. They apply the design process, analyze design solutions, reverse engineer products, create 3-D solid models using Computer-Assisted Drafting (CAD), construct physical models, and create multimedia presentations of finished designs. They complete a work portfolio based on a chosen graphic projects using advanced software of Inventor, Revit, and 3D Studio.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students are required to take the Standards of Learning End of Course Test.

AEROSPACE SCIENCE 1 (848726)
Grades: 10, 11, 12
Credit: one
Prerequisite: Recommended: STEM Engineering (845000)
(Base school optional; Marshall Academy - transportation may be provided)

Aerospace Science 1 is a course that allows students to study aerodynamic principles, aviation history, electrical and mechanical systems, instrumentation, flight operations, safety and security, air traffic control, airport design, economic impacts, rocketry, and satellite and space operations. Numerous lab activities include computer simulators, and model aircraft design and testing. Leading national institutions and commercial businesses provide valuable resources and career experiences to participating students. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students are required to take the Standards of Learning End of Course Test.

AEROSPACE SCIENCE 2 (848826)
Grades: 11, 12
Credit: one
Prerequisite: Aerospace Science 1 (848726)
(Base school optional; Marshall Academy - transportation may be provided)

This course provides students with the opportunity to increase their depth and understanding of aerospace principles. Students may be involved with internship opportunities in a variety of areas including air traffic control, airport operations, and fixed-based operator's management. Upon successful completion of the course, students will be endorsed to take the written portion of the private pilot's examination. This is the first step to earning a private pilot's license. In addition, students will be exposed to a variety of guest speakers who will provide firsthand knowledge of the aerospace industry as well as postsecondary and career education opportunities. Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal. Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal. Students successfully completing this course will satisfy the sequential elective requirement for the standard or modified standard diploma. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students are required to take the Standards of Learning End of Course Test.

ARCHITECTURAL DRAWING (843700)
Grades: 10, 11, 12
Credit: one

Prerequisite: Basic Technical Drawing (843500)

Students study the history of architecture, examine various construction techniques, use Computer-Assisted Drafting (CAD) equipment, and design elements of living and industrial structures. They develop working drawings and specifications as well as a scale model. Students interested in architecture or related careers will benefit from this course.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

BASIC TECHNICAL DRAWING (843500)
Grades: 9, 10, 11, 12
Credit: one

Students develop basic skills in drawing and study careers related to drafting through the use of Computer-Assisted Drafting (CAD) and other software applications to gain an understanding of the technical drawing processes. This course is recommended for students interested in technical drawing, interior design, fashion design, decorating, construction, architecture, or engineering careers. 2D CAD certifications may be available.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

DESIGN AND TECHNOLOGY (840300)
Grades: 9, 10, 11, 12
Credit: one

Aerospace Science 2 is recommended for students interested in technical drawing, computer-aided design, and related fields. Students may be involved with internship opportunities in a variety of areas including air traffic control, airport operations, and fixed-based operator's management. Upon successful completion of the course, students will complete a work portfolio. Students are required to take the Standards of Learning End of Course Test.

AEROSPACE SCIENCE 1 (848726)
Grades: 10, 11, 12
Credit: one
Prerequisite: Recommended: STEM Engineering (845000)
(Base school optional; Marshall Academy - transportation may be provided)

Aerospace Science 1 is a course that allows students to study aerodynamic principles, aviation history, electrical and mechanical systems, instrumentation, flight operations, safety and security, air traffic control, airport design, economic impacts, rocketry, and satellite and space operations. Numerous lab activities include computer simulators, and model aircraft design and testing. Leading national institutions and commercial businesses provide valuable resources and career experiences to participating students. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students are required to take the Standards of Learning End of Course Test.

AEROSPACE SCIENCE 2 (848826)
Grades: 11, 12
Credit: one
Prerequisite: Aerospace Science 1 (848726)
(Base school optional; Marshall Academy - transportation may be provided)

This course provides students with the opportunity to increase their depth and understanding of aerospace principles. Students may be involved with internship opportunities in a variety of areas including air traffic control, airport operations, and fixed-based operator's management. Upon successful completion of the course, students will be endorsed to take the written portion of the private pilot's examination. This is the first step to earning a private pilot's license. In addition, students will be exposed to a variety of guest speakers who will provide firsthand knowledge of the aerospace industry as well as postsecondary and career education opportunities. Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal. Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal. Students successfully completing this course will satisfy the sequential elective requirement for the standard or modified standard diploma. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students are required to take the Standards of Learning End of Course Test.

ARCHITECTURAL DRAWING (843700)
Grades: 10, 11, 12
Credit: one

Prerequisite: Basic Technical Drawing (843500)

Students study the history of architecture, examine various construction techniques, use Computer-Assisted Drafting (CAD) equipment, and design elements of living and industrial structures. They develop working drawings and specifications as well as a scale model. Students interested in architecture or related careers will benefit from this course.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

BASIC TECHNICAL DRAWING (843500)
Grades: 9, 10, 11, 12
Credit: one

Students develop basic skills in drawing and study careers related to drafting through the use of Computer-Assisted Drafting (CAD) and other software applications to gain an understanding of the technical drawing processes. This course is recommended for students interested in technical drawing, interior design, fashion design, decorating, construction, architecture, or engineering careers. 2D CAD certifications may be available.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

DESIGN AND TECHNOLOGY (840300)
Grades: 9, 10, 11, 12
Credit: one

Design and Technology is designed as a foundation high school course in technology education. Students use core technology knowledge to solve open-ended problems and create systems. Laboratory activities engage students in the design process through projects that integrate mathematics, science, and other core subjects. Working in groups, students build and control systems in the development of technology.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ELECTRONICS 1 (841600)
Grades: 9, 10, 11, 12
Credit: one

Students explore career fields in electricity and electronics. The course includes information on electrical and electronic theory and applications, computer-aided instruction and circuit simulation, components, circuitry troubleshooting, use of test instruments and lab training devices, consumer information, and career opportunities. The course covers the fundamentals of basic electronics through complex AC and DC circuit theory. Students interested in engineering or related careers will benefit from the course.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ENGINEERING DRAWING (843600)
Grades: 10, 11, 12
Credit: one
Prerequisite: Basic Technical Drawing (843500)

Students gain an understanding of technical drawing careers in modern industry. The course includes engineering-drafting problems, use of Computer-Assisted Drafting (CAD) equipment, and drafting skills and techniques. Students use Inventor software and specifications along with other resource materials. Students interested in engineering or related careers will benefit from this course. 3D parametric modeling is introduced. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ENGINEERING PHYSICS 1 (451026)
Grades: 10, 11, 12
Credit: one
Prerequisite: One year of laboratory science and Algebra I (313000)
(Chantilly Academy - transportation may be provided)

This course may be used to satisfy one credit toward the science, elective, fine arts or career and technical education requirement of the standard or
advanced studies diploma. This course is the first year of the two-year college preparatory, laboratory-based Engineering Physics sequence; it is designed for students anticipating careers in the physical sciences, engineering, and technology. The course begins with a review of mathematical and basic scientific procedures. Course curriculum topics include universal concepts, inquiry processes, forcing functions, movement functions, time dependence functions, resistance functions, energy functions, transforming functions, unifying forces, unifying laws, and space-time extremes. These topics are addressed in the context of mechanical, fluid, electrical, thermal, and aerospace systems. Students complete approximately 40 hours of active inquiry and participation in modern technology competitions, and are introduced to the cycle of rapid prototyping design, build, test, and modify. These form the core of modern product development. The course may include curriculum-related field trips, and college-oriented information seminars. For more information, visit the academy web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ENGINEERING PHYSICS 2 (452026)
Grades: 11, 12  Credit: one
Prerequisite: Engineering Physics 1 (451026) or Physics 1 (451000).
Corequisite: Algebra Option: Co-enrollment in or completion of Algebra 2 (313500); Calculus Option: Co-enrollment in a calculus-based mathematics course (316308, 316508, or equivalent)
(Chantilly Academy - transportation may be provided)

This course may be used to satisfy one credit toward the science, elective, fine arts or career and technical education requirement of the standard or advanced studies diploma. The course is the second year of the two-year college preparatory, laboratory-based Engineering Physics sequence; and is designed for students anticipating careers in the physical sciences, engineering, technology, medicine, or other research, and experimentation disciplines. The course begins with a review of mathematical and basic physics and engineering concepts to assure that all students are brought to a consistent level of preparedness. Curriculum topics include universal concepts, inquiry processes, fundamental constants, special relativity, rotational dynamics, waves and vibrations, energy conversion, transducers, electromagnetic radiation, optical measurements, and exponential behavior. These topics are addressed in the context of mechanical, fluid, electrical, thermal, and aerospace systems. Students complete approximately 50 hours of laboratory experimentation and participation in advanced technology competitions. The course may include curriculum-related field trips and college-oriented information seminars. Individual academies apply the curriculum in the manner that best fits local facilities and opportunities. Participating students may compete for a limited number of industry internships. For more information, visit the academy web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

ENGINEERING SYSTEMS 2 (845226)
Grades: 11, 12  Credit: one
Prerequisite: Engineering Systems 1 (845126) or STEM Engineering (845000)
(Chantilly Academy - transportation may be provided)

Engineering Systems 2 is the second year of the two-year Engineering Systems sequence, and is designed for students anticipating careers in science, engineering and technology who seek to enter colleges with strong science and engineering programs. The Engineering Systems 2 curriculum is heavily oriented toward engineering techniques and major system projects which address the national need for advanced energy, transportation, and space systems. Development, maintenance, and retirement of systems are studied in depth. The use of robotics as an enabling technology for advanced systems is incorporated into the course as students engage in an intensive six-week robotics competition project selected for the course. The course may include curriculum-related field trips and college-oriented information seminars. Individual academies apply the curriculum in the manner that best fits local facilities and opportunities. Students may compete for a limited number of industry internships. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

GEOGRAPHIC INFORMATION SYSTEMS 1 (842326)
Grades: 11, 12  Credit: one
(Chantilly Academy - transportation may be provided)

This course will introduce students to the theory, vocabulary and concepts behind these and other applications of GIS, while providing students the opportunity to develop basic skills to apply GIS in a variety of contexts. Students will receive instruction in geographic information systems, global positioning systems, remote sensing, digital imaging processing simulator, Geodesy, automated cartography, land surveying, and navigation. Fundamentally, these technologies will enable students to explore and analyze the natural and human-made world, from local to global and beyond. Students will use various tools, processes, and techniques to create, store, access, manipulate, and revise data to solve human challenges. These experiences will employ real-world spatial analysis models and guidelines for integrating, interpreting, analyzing, and synthesizing data. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

INDEPENDENT RESEARCH-ENGINEERING (845326)
Grades: 12  Credit: one
Prerequisite: Engineering Systems 1 (844726) or STEM Engineering (845000), and Engineering Systems 2 (845226)
(Chantilly - transportation may be provided)

Independent Research-Engineering is a one-year program designed to provide a work-based learning and mentorship experience in engineering at a selected industry, center of higher education, or government organization. The project is a structured, school-coordinated arrangement requiring student preparation, which includes career awareness and exploration prior to the actual experience. For more information, visit the CTE website. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

MANUFACTURING SYSTEMS 1 (842526)
Grades: 10, 11, 12  Credit: one
(Chantilly Academy - transportation may be provided)

This course provides an orientation to careers in various fields of manufacturing. Emphasis will be placed on manufacturing systems, safety, materials, production, business concepts, and the manufacturing process. Students participate in individual and team activities to create products that demonstrate critical elements of manufacturing. For more information, visit the CTE website. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

STEM ADVANCED ENGINEERING AND EMERGING TECHNOLOGIES (845300)
(Formerly Research and Development Engineering)
Lab Fee: $15
Grades: 11, 12  Credit: one/weighted +.5
Prerequisite: STEM Engineering (845000)

This advanced level engineering course emphasizes student knowledge and application of engineering problem-solving through research and development concepts. It focuses on current and emerging technologies. Students learn to work in collaborative engineering teams and solve group design and projects. Students are challenged to solve problems using design, mathematics, computer simulations, scientific analysis, and oral and written skills. Engineering is studied with a focus on modeling, systems, optimization, technology-society interaction, design, and engineering ethics. Projects may be models, systems, or products that creatively solve an engineering problem. This course is the capstone course in the engineering sequence to prepare students for college or engineering careers. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.
STEM ENGINEERING  (845000)
Grades: 10, 11, 12
Credit: one/weighted +.5

For students interested in engineering, this course builds a solid foundation to move forward in the Science, Technology, Engineering and Math (STEM) curriculum. Students are introduced conceptually and analytically to the primary concepts in the four classic engineering disciplines civil, mechanical, electrical, and aerospace engineering. Students will explore and develop problem based learning projects in these areas while working as real world collaborative teams. By applying STEM concepts to design problems students will dramatically improve their use of mathematics, computer simulations, scientific analysis, oral and written skills during this course. This course provides for orientation to the careers and challenges of engineering. Students are actively involved with high-tech devices, engineering graphics, and mathematics/scientific principles through problem-solving and critical thinking experiences. Students integrate mathematics, science, and technical writing with technology instruction to solve engineering-based problems.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

TRADE AND INDUSTRIAL

AUTOMOTIVE COLLISION SERVICE 1  (867626)
Grades: 10, 11, 12
Credit: one
(Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students are introduced to skill sets derived from industry standards in the auto body repair and restoration industry. The curriculum and laboratory activities are defined by I-CAR and include panel repairs, painting, frame and uni-body construction, steering, suspension, detailing, and welding. In addition, students are exposed to the theoretical and practical aspects of this career. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

AUTOMOTIVE COLLISION SERVICE 2  (867727)
Grades: 11, 12
Credit: two
Prerequisite: Auto Collision Service 1 (867626)
(Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students will refine existing skills and develop specific skills necessary to repair late-model damaged vehicles to their original condition. The curriculum and laboratory practices defined by I-CAR include the following: refinishing, metal working, welding, frame-strengthening systems, uni-body measuring principles, structural repair, steering, suspension, mechanical, and electrical repairs. As an option, many students will have an opportunity to participate in internship experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

AUTOMOTIVE COLLISION SERVICE 3  (867827)
Grades: 12
Credit: two
Prerequisite: Automotive Collision Service 2 (867727)
(Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students participating in Automotive Collision 3 will strive towards independence and quality workmanship as they become more proficient in their individual skill set to repair and/or refinish minor late-model damaged vehicles. The curriculum and laboratory practices defined by I-CAR include the following: refinishing, metal working, welding, frame-strengthening systems, uni-body measuring principles, structural repair, steering, suspension, mechanical, and electrical repairs. As an option, many students will have an opportunity to participate in internship experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

AUTOMOTIVE TECHNOLOGY 1  (850626)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Automotive Servicing (871026) (where offered at base high schools); Algebra 1 (Base school optional; Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students will study and define the eight major systems of the automobile, related tools and equipment, and the automotive industry. An emphasis will be placed on diagnosing systems, developing troubleshooting skills, and the safe use of laboratory equipment. Curriculum is developed from the National Automotive Technicians Education Foundation (NATEF) task lists. Major topics include engine performance, brakes, electrical and electronic systems, and suspension and steering systems. This course may be offered for college credit. In addition, students will be tested on NATEF criteria. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

AUTOMOTIVE TECHNOLOGY 2  (850727)
Grades: 10, 11, 12
Credit: two
Prerequisite: Automotive Technology 1 (850626)
(Base school optional; Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students will study and define the eight major systems of the automobile, related tools and equipment, and the automotive industry. An emphasis will be placed on diagnosing systems, developing troubleshooting skills, and the safe use of laboratory equipment. Curriculum is developed from the National Automotive Technicians Education Foundation (NATEF) task lists. Major topics include engine performance, brakes, electrical and electronic systems, and suspension and steering systems. This course may be offered for college credit. In addition, students will be tested on NATEF criteria. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

AUTOMOTIVE TECHNOLOGY 3  (850827)
Grades: 11, 12
Credit: two
Prerequisite: Automotive Technology 2 (850727)
(Base school optional; Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students will diagnose, troubleshoot, and install components and parts, while focusing on the standards established by the National Automotive Technicians Education Foundation (NATEF). Opportunities will be provided to enhance skills and competencies. An emphasis is placed on problem-solving issues related to technological enhancements in the automotive industry. This course may be offered for college credit. As an option, many students will have an opportunity to participate in local internship experiences. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

CARPENTRY 1  (860126)
Grades: 10, 11, 12
Credit: one
(Chantilly Academy - Transportation may be provided)

Students will have an opportunity to study and learn about a $700 billion industry providing a variety of employment opportunities. An emphasis will be focused on construction safety, OSHA regulations, mathematics applications, and craft knowledge. In addition to a variety of hands-on experiences, students will be introduced to electricity, framing, plumbing, millwork, and problem solving activities related to the construction industry.

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Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

CARPENTRY 2 (860227)
Grades: 11, 12  
Credit: two  
Prerequisite: Carpentry 1 (860126)  
(Chantilly Academy - transportation may be provided)

Students will receive advanced instruction and experiences in the areas of layout and design, framing, estimating, purchasing, planning, and installing. Topics will range from residential through commercial construction. An emphasis will be placed on entrepreneurship and construction site management using curriculum developed by the National Association of Home Builders (NAHB). Student internships experiences are an option for this course. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

CONSTRUCTION TECH 2 - SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE (851662)
Grades: 11, 12  
Credit: two  
Prerequisite: Construction Technologies 1 (851561)  
Spring Village Residential Construction Site (transportation may be provided)

Through a partnership with the Foundation of Applied Technical Education, Inc. (FATE), students have an opportunity to build a single-family home in Springfield, Virginia. This specialized course curriculum is developed by the National Association of Home Builders (NAHB). Industry certification may be available as part of this course. For more information visit the CTE website.

CONSTRUCTION TECH 3 - SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE (851762)
Grades: 12  
Credit: two  
Prerequisite: Construction Technologies 2 (851662)  
Spring Village Residential Construction Site (transportation may be provided)

Through a partnership with the Foundation of Applied Technical Education, Inc. (FATE), students have an opportunity to build a single-family home in Springfield, Virginia. This specialized course curriculum is developed by the National Association of Home Builders (NAHB). Industry certification may be available as part of this course. For more information visit the CTE website.

COSMETOLOGY 1 (852727)
Grades: 11, 12  
Credit: two  
(Base school optional; Hayfield Secondary School, Chantilly, Edison and Marshall Academies - transportation may be provided)

Students learn about the characteristics of hair, product selection, and basic elements that determine hair growth, health, and appearance. In addition to up-to-date skills in hair styling and cutting, permanent waving, coloring, scalp and facial treatment, and manicuring, students will begin licensure preparation as prescribed by the Virginia Board of Cosmetology. For more information, visit the CTE website.

COSMETOLOGY 2 (852827)
Grades: 11, 12  
Credit: two  
Prerequisite: Cosmetology 1 (852727)  
(Base school optional; Hayfield Secondary School, Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students use a laboratory setting for the study of skin, hair, nails and cosmetic chemistry. Through laboratory experiences, students will develop advanced skills and knowledge in all phases of salon industry. Students complete the required cosmetology competencies determined by the Virginia Board of Cosmetology. For more information, visit the CTE website.
Board of Cosmetology in order to successfully pass the Virginia Cosmetology exam to qualify as a licensed cosmetologist. Students in this course will sit for the Virginia Cosmetology Licensing Exam provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Cosmetology. For more information, visit the CTE website. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

COSMETOLOGY 3 (852927)
Grades: 12  Credit: two
Prerequisite: Cosmetology 2 (852827)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.
(Base school optional; Hayfield Secondary School, Chantilly, Edison, and Marshall Academies - transportation may be provided)
Students will focus on management and supervisory skills in their area of concentration. Opportunities will be provided to enhance any skills and competencies not mastered in the second year of instruction. Student internship experiences are an option for this course. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

CRIMINAL JUSTICE 1 (870226)
Grades: 10, 11, 12  Credit: one
(Base school optional; Chantilly, Edison, Falls Church, Marshall, and West Potomac Academies - transportation may be provided)
This course is designed for students who are considering a career in criminal justice. The course prepares students for career opportunities within the criminal justice system as well as entrance into institutions of higher learning. Specific areas of training will be provided in criminal law and investigation, security training, communications, emergency response, crimes, search and seizures, arrests, crime prevention, court procedure, and police operations. The program is structured to give students a strong academic background with the skills and knowledge necessary to meet the needs of a career in any of the cited fields. In addition, experts from various agencies provide in-depth information and experiences. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

CRIMINAL JUSTICE 2 (870327)
Grades: 11, 12  Credit: two
Prerequisite: Criminal Justice 1 (870226)
(Base school optional; Chantilly, Edison, Falls Church, Marshall, and West Potomac Academies - transportation may be provided)
This course is an in-depth study of crime in America, United States’ courts in action, and law enforcement efforts to deal with crime. The course will look into victimization, due process, and Constitutional laws affecting law enforcement as well as a review of sentencing offenders, parole, prison rehabilitation, and corrections of the 1990s. Included will be a view of other employment careers in private and mechanical security systems as well as local, state, and federal law enforcement. A major component of level 2 will include the work-experience component, i.e., shadowing, mentorship, etc. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

CRIMINAL JUSTICE 3 (870427)
Grades: 12  Credit: two
Prerequisite: Criminal Justice 2 (870327)
(Base school optional; Chantilly, Edison, Falls Church, Marshall, and West Potomac Academies - transportation may be provided)
Students in this course will further their study of the American criminal justice system and global law enforcement. The course will involve in-depth case studies and role playing scenarios. Students will learn advance crime scene processing and handling techniques, case preparation, and criminal justice managements. The course will also examine corporate emergency preparedness and workplace violence issues. A major component of level 3 will include the work-experience component, i.e., shadowing, mentorship, etc. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ELECTRICAL CONSTRUCTION AND ENGINEERING 1 (853326)
Grades: 10, 11, 12  Credit: one
(Edison Academy - transportation may be provided)
Laboratory work and academic studies include AC/DC circuit analysis, designing and construction switching circuits, fixture specifications and installations, computing and fabricating residential electrical services, and other wiring exercises as required by residential wiring systems. Theory and the national electric code are taught as they apply to the lesson topic. Students learn to install, relocate, troubleshoot, and repair copper twisted pair network cabling. This course may be offered for college credit. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ELECTRICAL CONSTRUCTION AND ENGINEERING 2 (853427)
Grades: 11, 12  Credit: two
Prerequisite: Electrical Construction and Engineering 1 (853326)
(Edison Academy - transportation may be provided)
Further study of electrical wiring and power distribution techniques is offered, including direct- and alternating-current machines, such as motors and generators, and magnetic controls and transformers in both single- and two- or three-phase systems. National Electrical Codes, as well as state and power company policies pertaining to electrical power distribution, are studied. Major appliance repair is also taught. Student internship experiences are an option for this course. For more information, visit the academy web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ELECTRICAL CONSTRUCTION AND ENGINEERING 3 (853527)
Grades: 12  Credit: two
Prerequisite: Electrical Construction and Engineering 2 (853427)
(Edison Academy - transportation may be provided)
Students will further their electrical study to learn about layout, planning, and installation of wiring systems in commercial facilities. An introduction to Programmable Logic controls (PLC) and its associated applications will be provided with the most current Allen Bradley controls. Students will also get the chance to lead other students in installing wiring in a residential house. Upon completion of this course students should be able to install and wire all aspects of a residential house to include ordering and managing materials and equipment. Students should also have a knowledge of PLC’s, solar power and other related electrical specialty fields. Student internship experiences are an option for this course. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION 1 (850326)
Grades: 10, 11, 12  Credit: one
(Edison Academy - transportation may be provided)
In the first year of the heating, ventilation and air conditioning (HVAC) program students will learn to use a verity of hand tools including wrenches, pliers, screw drivers, hammers as well as specialty tools of the HVAC trade which include digital multi-meters, thermometers, scales, vacuum pumps and refrigerant recovery equipment. Students will complete projects utilizing copper tubing, PVC and black iron pipe with ACR tubing cutters, flaring,
swaging and threading tools. Students will also master the use of various types of torches for soldering and brazing and build a basic mechanical refrigeration cycle. Students will also learn the concepts of electricity and complete a series of electrical projects and also be introduced to the sheet metal arts. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION 2 (850427)
Grades: 11, 12 Credit: two
Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration 1 (850326)
(Edison Academy - transportation may be provided)

Students continuing their education of the HVAC program in the second year which focuses on the installation, maintenance, troubleshooting service and repair of a central air conditioning system as well as a gas furnace, oil furnace and heat pump systems. Students will also learn about weatherization and energy efficiency of HVAC equipment and ductwork as well as understanding various types of motors used in HVAC equipment. During the second year focus is also given to the Environmental Protection Agency's Section 608 refrigerant handling certification with the goal of passing the Core section plus one or more types in either small appliances, high or low pressure systems earning them an industry credential. Student internship experiences are an option for this course. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION 3 (850527)
Grades: 12 Credit: two
Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration 2 (850427)

The third year of the program focuses on commercial application of the HVAC trade utilizing energy management and zoning controls as well as developing an understanding of the Air Conditioning Contractors of America (ACCA) Manuel J - Load Calculations and Sizing of Equipment for both commercial and residential applications. Students will utilize a laptop and computer programs to size, calculate, control and troubleshoot HVAC equipment as well as specialty tools such as velocity meters, manometers and psychrometers. Students will gain an understanding of the psychometric properties of air and be exposed to testing and balancing of the HVAC systems. Students will also become familiar with commercial ice making, refrigeration and freezer installation service and repair as well as geothermal heat pumps, cooling towers and ductless split systems. Internships are available for this course and it is designed for high school seniors or post graduate students who are able to return the year following graduation. Student internship experiences are an option for this course. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

LANDSCAPE ARCHITECTURE AND TURF MANAGEMENT 1 (803626)
Grades: 10, 11, 12 Credit: one
(Edison Academy - Transportation may be provided)

In this course, students develop the necessary knowledge, skills, and habits for employment and advancement in areas such as landscape design, landscape construction, landscape maintenance, turf grass installation, and turf grass management. Students work in the areas of 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. This class is both classroom instruction as well as field work. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

LANDSCAPE ARCHITECTURE AND TURF MANAGEMENT 2 (805127)
Principles of Landscaping 2
Grades: 11, 12 Credit: two
Prerequisite: Landscape Architecture and Turf Management 1 (803626)
(Edison Academy - transportation may be provided)

In this course, students continue to develop the necessary knowledge, skills, and habits for employment and advancement in areas such as landscape design, landscape construction, landscape maintenance, turf grass installation, and turf grass management. Students work in the areas of 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. This class is both classroom instruction as well as field work. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PROFESSIONAL PHOTOGRAPHY STUDIO 1 (860726)
Grades: 10, 11, 12 Credit: one
(Fairfax Academy - transportation may be provided)

In a state-of-the-art digital photography lab/studio, students use the latest digital cameras on both the PC and Mac platforms. Students will photograph people, places, and objects and will prepare these images with the intent of professional publication using software such as Adobe Photoshop, Illustrator, InDesign, and Acrobat. The course allows the students to see dynamic results in real time and to print their work on professional color printers. Topics include image composition, digital editing, studio and location lighting, file formats, file maintenance and storage, and print production. Students will relate these skills to the current business and art practices of the modern commercial photographic industry. In addition, students will develop personal portfolios to aid in entry into the marketplace or advanced photography educational program. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

PROFESSIONAL PHOTOGRAPHY STUDIO 2 (860827)
Grades: 11, 12 Credit: two
Prerequisite: Professional Photography Studio 1 (860726). Portfolio review may be required.
(Fairfax Academy - transportation may be provided)

This course provides students with experience needed to begin a career in commercial photography as well as an in-depth view of digital photography and related industries. Students will develop studio lighting techniques and composition skills in this project-oriented course. Creativity, imagination, and innovation are qualities that will be exercised by using high-end digital cameras and sophisticated imagery and production software such as Adobe Photoshop, Adobe Illustrator, InDesign, and Acrobat. Students will relate these skills to the current practices of art and business in the modern commercial photographic industry. A component of this course is dedicated to learning how to open and maintain a professional photography studio. Students will work independently, as well as collaboratively, toward the completion of class projects. Students will develop personal portfolios to aid in entry into the marketplace or advanced photography educational program. For more information, visit the CTE website.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

PROFESSIONAL TELEVISION PRODUCTION 1 (868826)
Grades: 10, 11, 12 Credit: one
(Fairfax and West Potomac Academies - Transportation may be provided)
This curriculum is designed to train students for a career in, or entry into a collegiate program involving the television and film production industries. Film, Video, and Multi-Media terminology, technique, and theory will be discussed. Only state-of-the-art, video equipment is used by the students in this class. Students will learn to operate professional video cameras and field equipment for productions outside of the classroom, and professional studio cameras, audio equipment, special effect generators, and character generators for use in the fully equipped studio. With parental permission, equipment may be checked out and used for on-location shoots. Students learn postproduction skills on cutting edge non-linear editing equipment, and finalize their projects to DVD. Toward the end of the first year, students may be presented with internship and professional work opportunities. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PROFESSIONAL TELEVISION PRODUCTION 2 (868927)
Grades: 11, 12 Credit: two
Prerequisite: Professional Television Production 1 (868826)
(Fairfax and West Potomac Academies - transportation may be provided)

Students continue to build a foundation of knowledge and skills through hands-on experience operating professional television production equipment in the field and studio as described in Television Production 1. All students are expected to take advantage of numerous internship opportunities that are available for 2nd year students. New learning opportunities include the ability to specialize in any of several dozen areas of interest with regards to pre-production, production, and post-production. Extensive guidance is offered to students seeking postsecondary educational opportunities and professional experience. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PROFESSIONAL TELEVISION PRODUCTION 3 (869027)
Grades: 12 Credit: two
Prerequisite: Professional Television Production 2 (868927)
(Fairfax and West Potomac Academies - Transportation may be provided)

Students will demonstrate mastery of media production knowledge and skills. They will function as media producers by creating original productions developed and marketed toward target audiences. Students will assemble a professional digital portfolio to advance postsecondary and career goals. They will investigate the dynamic media production industry and identify programs involving the television and film production experiences (e.g., internship, job shadowing). Students will research postsecondary opportunities and formulate strategies for both college and career success. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

SMALL ENGINE REPAIR (872426)
Grades: 10, 11, 12 Credit: one
(Edison Academy - Transportation may be provided)

Students will receive advanced instruction and experiences in the areas of small engine repair, small engine maintenance, welding, and servicing. Topics will range from lifecycle, economics, and funding. An emphasis will be placed on entrepreneurship and project management. Student internship experiences are an option for this course. For more information, visit the CTE web site.

This course requires a student materials fee as listed in FCPS Notice 5922.

WORLD LANGUAGES

CHINESE 1 (581000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: None

Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. For middle school students, this credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirement of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

CHINESE 2 (582000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Chinese 1 or equivalency test

Students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the themes of Home Life, Student Life, Leisure Time, and Vacation and Travel.

CHINESE 3 (583000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Chinese 2 or equivalency test

Students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities.

FRENCH 4 (514000)
Grades: 10, 11, 12 Credit: one
Prerequisite: French 3 or equivalency test

Students develop more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. The authentic reading selections are emphasized at this level. Students communicate using more complex language structures and express abstract ideas with reasonable fluency. Students are able to create and listen with understanding to reports and presentations. They are also able to describe, summarize and discuss selected upper level POS themes and topics.

FRENCH 5 (515000)
Grades: 11, 12 Credit: one
Prerequisite: French 4, or Advanced Placement Language, or equivalency test

Students study selected upper level POS themes and topics using more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. They participate in in-depth studies of major literary works and historical events and learn to recognize the various themes and conflicts involved. Students express abstract ideas while discussing literature, history, and current events.
ADVANCED PLACEMENT FRENCH LANGUAGE (517004)

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: French 4 or equivalency test

The purpose of this course is to prepare students to take the Advanced Placement Language examination given each spring, for which placement and/or credit may be awarded at the college level if a qualifying score is obtained. Students study the use of language for active communication. Specifically, they understand the spoken target language in both formal and conversational situations. They express ideas accurately and resourcefully, both orally and in writing, with reasonable fluency, and they develop a vocabulary sufficiently ample for reading newspaper and magazine articles, contemporary literature, and other nontechnical writings. They receive extensive training in the organization and writing of compositions, review syntax, and study selected works by contemporary authors. Materials will include recordings, films, newspapers, and magazines. All students are required to take the Advanced Placement French Language exam. Required Summer Assignment.

JAPANESE 3 (593000)

Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Japanese 2 or equivalency test

Students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities.

JAPANESE 4 (594000)

Grades: 10, 11, 12
Credit: one
Prerequisite: Japanese 3 or equivalency test

Students develop more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. The authentic reading selections are emphasized at this level. Students communicate using more complex language structures and express abstract ideas with reasonable fluency. Students are able to create and listen with understanding to reports and presentations. They are also able to describe, summarize and discuss selected upper level POS themes and topics.

JAPANESE 5 (595000)

Grades: 11, 12
Credit: one
Prerequisite: Level 4 or equivalency test

Students study selected upper level POS themes and topics using more sophisticated communication skills in all four areas - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They participate in in-depth studies of major literary works and historical events and learn to recognize the various themes and conflicts involved. Students express abstract ideas while discussing literature, history, and current events.

ADVANCED PLACEMENT JAPANESE LANGUAGE (597004)

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Japanese 4 or equivalency test

The purpose of this course is to prepare students to take the Advanced Placement Language examination given each spring, for which placement and/or credit may be awarded at the college level if a qualifying score is obtained. Students study the use of language for active communication. Specifically, they understand the spoken target language in both formal and conversational situations. They express ideas accurately and resourcefully, both orally and in writing, with reasonable fluency, and they develop a vocabulary sufficiently ample for reading newspaper and magazine articles, contemporary literature, and other nontechnical writings. They receive extensive training in the organization and writing of compositions, review syntax, and study selected works by contemporary authors. Materials will include recordings, films, newspapers, and magazines. All students are required to take the Advanced Placement Japanese Language exam. Required Summer Assignment.

LATIN I (531000)

Grades: 8, 9, 10, 11, 12
Credit: one
Prerequisite: Level 1 or equivalency test

Students learn basic language structures and essential elements of Latin pronunciation in order to be able to read simple passages in Latin. The relationship of English to Latin is emphasized in vocabulary building, word derivation, and meanings of prefixes and suffixes. Language structures and syntax are developed through the study of literary passages. The geography, history, government and the culture of the Roman Empire are studied. For middle school students, this credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

LATIN 2 (532000)

Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Latin 2 or equivalency test

Students learn additional vocabulary, more complex language structures and syntax in order to be able to read more challenging passages in Latin. Language structures and syntax are developed through the study of literary passages. Students continue to explore as they study Roman life and Rome's contribution to our civilization.

LATIN 3 (533000)

Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Latin 3 or equivalency test

Students continue to develop and refine their reading skills through the study of Latin literature. Additional vocabulary, more complex language structures and syntax are emphasized in order to be able to read the writings of prose authors. Through translation and interpretation, students gain a greater understanding of the foundation of Western government and civilization.

E-CLASSROOM ARABIC I (501062)

Grades: 9, 10, 11, 12
Credit: one
Prerequisite: None

Enrollment in this course must be approved by the Director of Student Services

In this electronic classroom course, students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. Schools must have a facilitator on hand to proctor tests, ensure students are on task, and forward information to the instructor. Schools must provide adequate study area for distance learning students, access to TV, and telephone.

LATIN 4 (534000)

Grades: 11, 12
Credit: one
Prerequisite: Latin 3 or equivalency test

Students continue to develop and refine their reading skills through the study of Latin literature. Students read Vergil's Aeneid silently for comprehension.
and orally for poetic meter and analyze the various passages for content, connotation of words and author's style. Students study the life and times of Vergil, his influence on later writers, his poetic devices, and his Aeneid as a literary work.

LATIN 5 (535000)
Grades: 11, 12
Credit: one
Prerequisite: Latin 4 or equivalency test

Students continue their study of Latin prose and/or poetry, improving their reading proficiency as they deepen their understanding of more complex syntax. Analysis of the Latin texts as literature is emphasized. Students also develop a greater appreciation of the social and political context in which the various works were written as well as their influence upon later literature.

SPANISH 4 (554000)
Grades: 11, 12
Credit: one
Prerequisite: Spanish 3 or equivalency test

Students develop more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. The authentic reading selections are emphasized at this level. Students communicate using more complex language structures and express abstract ideas with reasonable fluency. Students are able to create and listen with understanding to reports and presentations. They are also able to describe, summarize and discuss selected upper level POS themes and topics.

SPANISH 5 (555000)
Grades: 11, 12
Credit: one
Prerequisite: Spanish 4, or Advanced Placement Language, or equivalency test

Students study selected upper level POS themes and topics using more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. They participate in in-depth studies of major literary works and historical events and learn to recognize the various themes and conflicts involved. Students express abstract ideas while discussing literature, history, and current events.

ADVANCED PLACEMENT SPANISH LANGUAGE (557004)
Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Spanish 4 or equivalency test

The purpose of this course is to prepare students to take the Advanced Placement Language examination given each spring, for which placement and/or credit may be awarded at the college level if a qualifying score is obtained. Students study the use of language for active communication. Specifically, they understand the spoken target language in both formal and conversational situations. They express ideas accurately and resourcefully, both orally and in writing, with reasonable fluency, and they develop a vocabulary sufficiently ample for reading newspaper and magazine articles, contemporary literature, and other nontechnical writings. They receive extensive training in the organization and writing of compositions, review syntax, and study selected works by contemporary authors. Materials will include recordings, films, newspapers, and magazines. All students are required to take the Advanced Placement Spanish Language exam. Required Summer Assignment.

E-CLASSROOM ARABIC 2 (502062)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Level 1 or equivalency test
Enrollment in this course must be approved by the Director of Student Services

In this electronic classroom course, students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the themes of Home Life, Student Life, Leisure Time, and Vacation and Travel. Schools must have a facilitator on hand to proctor tests, ensure students are on task, and forward information to the instructor. Schools must provide adequate study area for distance learning students, access to TV, and telephone.

E-CLASSROOM ARABIC 3 (503062)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Level 2 or equivalency test
Enrollment in this course must be approved by the Director of Student Services

In this electronic classroom course, students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities. Schools must have a facilitator on hand to proctor tests, ensure students are on task, and forward information to the instructor. Schools must provide adequate study area for distance learning students, access to TV, and telephone.

CHINESE 1 (581026)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: none
(Marshall and Fairfax Academies - transportation may be provided)

Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. This course is only offered at Fairfax Academy and Marshall Academy.

CHINESE 2 (582026)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Chinese 1 or equivalency test
(Marshall and Fairfax Academies - transportation may be provided)

Students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the themes of Home Life, Student Life, Leisure Time, and Vacation and Travel. This course is only offered at Fairfax Academy and Marshall Academy.

CHINESE 3 (583026)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Chinese 2 or equivalency test
(Marshall Academy - transportation may be provided)

Students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to...
Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities. This course is only offered at the Marshall Academy.

**Chinese 3 (583033)**
Grades: 9, 10, 11, 12  
Prerequisite: Chinese 2 or equivalency test  
(Fairfax Academy - transportation may be provided)

During this fall semester course students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities. This course is only offered at the Marshall Academy. Students who sign up for Chinese 3 in the fall semester must take Chinese 4 in the spring.

**Chinese 4 (584026)**
Grades: 10, 11, 12  
Prerequisite: Chinese 3 or equivalency test  
(Fairfax Academy - transportation may be provided)

Students develop more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. The authentic reading selections are emphasized at this level. Students communicate using more complex language structures and express abstract ideas with reasonable fluency. Students are able to create and listen with understanding to reports and presentations. They are also able to describe, summarize and discuss selected upper level POS themes and topics. This course is only offered at the Marshall Academy.

**Korean 1 (587026)**
Grades: 9, 10, 11, 12  
Prerequisite: none  
(Fairfax Academy - transportation may be provided)

Students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the POS themes of Home Life, Student Life, Leisure Time, and Vacation and Travel.

**French 1 (511000)**
Grades: 9, 10, 11, 12  
Prerequisite: none

Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the POS themes of Personal and Family Life, School Life, Social Life, and Community Life. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy.

**French 2 (512000)**
Grades: 9, 10, 11, 12  
Prerequisite: French 1 or equivalency test

Students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the POS themes of Home Life, Student Life, Leisure Time, and Vacation and Travel.

**Korean 2 (587526)**
Grades: 9, 10, 11, 12  
Prerequisite: Korean 1 or equivalency test  
(Fairfax Academy - transportation may be provided)

Students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the POS themes of Home Life, Student Life, Leisure Time, and Vacation and Travel. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy.

**Korean 3 (588026)**
Grades: 9, 10, 11, 12  
Prerequisite: Korean 2 or equivalency test  
(Fairfax Academy - transportation may be provided)

During this fall semester course students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them.
while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy. Students who sign up for Korean 3 in the fall semester must take Korean 4 in the spring semester.

KOREAN 4 (588526)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Korean 3 or equivalency test.
(Fairfax Academy - transportation may be provided)
During this spring semester course students develop more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. The authentic reading selections are emphasized at this level. Students communicate using more complex language structures and express abstract ideas with reasonable fluency. Students are able to create and listen with understanding to reports and presentations. They are also able to describe, summarize and discuss selected upper level POS themes and topics. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy. Students who sign up for Korean 4 in the spring semester must have taken Korean 3 in the fall semester.

SPANISH 1 (551000)
Grades: 8, 9, 10, 11, 12  Credit: one
Prerequisite: Spanish 1 or equivalency test
Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the POS themes of Personal and Family Life, School Life, Social Life, and Community Life. For middle school students, this credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirement of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

SPANISH 2 (552000)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Spanish 1 or equivalency test
Students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the POS themes of Home Life, Student Life, Leisure Time, and Vacation and Travel.

SPANISH 3 (553000)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Spanish 2 or equivalency test
Students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear and are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying the POS themes of Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities.

PART 2: SPECIAL EDUCATION

BASIC SKILLS I-IV (788980)
AP students (11th and 12th grades only)  Credit: one
Grades: 9, 10, 11, 12
This elective course is designed to provide support to a student in core curricular areas and to provide direct instruction in specific learning strategies, study skills, time management, organization, and self-advocacy skills. This course may be taught for an elective credit all four years or more, as appropriate. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard and Modified Standard Diploma. (Students may be awarded a half-credit upon completion of a full semester of placement in the Basic Skills course. Such a decision is made by the guidance counselor in conjunction with the special education department chair.)

BASIC SKILLS I-IV (788981)
LD  Credit: one
Grades: 9, 10, 11, 12
This elective course is designed to provide support to a student in core curricular areas and to provide direct instruction in specific learning strategies, study skills, time management, organization, and self-advocacy skills. This course may be taught for an elective credit all four years or more, as appropriate. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard and Modified Standard Diploma. (Students may be awarded a half-credit upon completion of a full semester of placement in the Basic Skills course. Such a decision is made by the guidance counselor in conjunction with the special education department chair.)

EDUCATION FOR EMPLOYMENT - LEVEL 1 (908561)  Credit: one
Grades: 9, 10, 11, 12
This course teaches students to make informed career and continuing education choices as they transition from school, gain technical skills, and adapt to the workplace. Students are taught ethical behaviors and career- research, job-acquisition, workplace-communication, self-awareness, self-advocacy, customer-service, and life skills. Students successfully completing two years of this course will satisfy sequential elective requirements prescribed in certain diplomas.

FOUNDATIONS OF SCIENCE (781180)  Credit: one
Grades: 9, 10, 11, 12
Foundations of Science is a one-credit elective course designed to support instruction along the FCPS Program of Studies and the VA Aligned Standards of Learning (ASOL) in the identified content area; does not require SOL testing. Students may enroll in this elective class each year of HS participation. Instruction is individualized based on needs identified in the IEP to help students gain a basic content vocabulary, knowledge and skills and designed to be taught at the learning pace of the individual students. Participation in Foundations courses will aid the student in fulfilling requirements of the Virginia Alternative Assessment Program (VAAP) and meet the requirements for a Special Diploma. This course is for designated students only.
FOUNDATIONS OF ENGLISH 9-12  (781380)
Grades: 9, 10, 11, 12  Credit: one

Foundations of English, 9-12, is a one-credit elective course designed to support instruction along the FCPS Program of Studies and the VA Aligned Standards of Learning (ASOL) in the identified content area; does not require SOL testing. Students may enroll in this elective class each year of HS participation. Instruction is individualized based on needs identified in the IEP to help students gain a basic content vocabulary, knowledge and skills and designed to be taught at the learning pace of the individual students. Participation in Foundations courses will aid the student in fulfilling requirements of the Virginia Alternative Assessment Program (VAAP) and meet the requirements for a Special Diploma.

PERSONAL DEVELOPMENT (781580)
Grades: 9, 10, 11, 12  Credit: one

This course is designed to provide instruction to enhance personal development and interpersonal skills for students with disabilities. In addition, this course will provide social and/or emotional support in order to progress in the general education curriculum. Students who participate in the course have documented social and/or emotional needs in their individualized education program (IEP) and/or have a Behavior Intervention Plan (BIP). The areas of instruction for this course include peer relations, self-management, academic skills, compliance skills, and assertion skills. This course may be taught for an elective credit all four years or more, as appropriate. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard and Modified Standard Diploma.

LIFE SKILLS  (798800)
Grades: 9, 10, 11, 12  Credit: one

This comprehensive individualized program is designed to prepare students for a style of living that will require a minimum of dependence on family. The course is geared to meet the needs of the students as they prepare to enter employment and emphasizes developing interpersonal skills, following directions, working independently, completing a task, and developing self-advocacy and other community living skills.

OFFICE TECHNOLOGY AND PROCEDURES  (847161)
Grades: 9, 10, 11, 12  Credit: one

This program offers instruction in office procedures and technology. Students learn skills in MS Office applications and perform assignments essential to the operation of an office in a school or community business. This course can be taken for more than one year. Students successfully completing two years of this course will satisfy sequential elective requirements prescribed in certain diplomas.