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NOTICE: All graduation requirements documented in the 2016-2017 Standard Course Offerings Guide reflect Virginia Department of Education and Fairfax County Public Schools’ expectations at the time of publication.
Graduation Requirements for Students Who Entered 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 students who entered 9th grade 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. In 2013, the Virginia Board of Education voted to amend the graduation requirements for students with disabilities. The changes in graduation requirements provide eligible students with disabilities the opportunity to use credit accommodations to earn a Standard Diploma. Students must be found eligible for these accommodations. 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.**

| Standard Diploma Course Requirements (8 VAC 20-131-50) |
|---------------------------------|-----------------|-----------------|
| **Subject Area**                | **Standard Credits** | **Verified Credits** |
| English                         | 4               | 2               |
| Mathematics<sup>1</sup>         | 3               | 1               |
| Laboratory Science<sup>2,6</sup>| 3               | 1               |
| History and Social Sciences<sup>4,6</sup> | 4           | 1               |
| Health and Physical Education   | 2               |                 |
| Fine Arts or Career and Technical Ed | 1             |                 |
| Electives<sup>7</sup>           | 5               |                 |
| Student Selected Test<sup>3</sup> |                 | 1               |
| **Total Credits**               | **22**          | **6**           |

<sup>1</sup>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 (Board) may approve additional 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: earth sciences, biology, chemistry, or physics. The Board may approve additional courses to satisfy this requirement.

<sup>3</sup>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.

<sup>4</sup>Courses to satisfy this requirement shall include at least two sequential electives.

<sup>5</sup>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 in 8 VAC 20-131-110.

<sup>6</sup>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 as an additional test to verify student achievement.

<sup>7</sup>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 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 9th grade for the first time. The following applies to students who entered 9th grade 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>
<thead>
<tr>
<th>Advanced Studies Diploma Course Requirements (8 VAC 20-131-50)</th>
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</thead>
<tbody>
<tr>
<td><strong>Subject Area</strong></td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Mathematics</td>
</tr>
<tr>
<td>Laboratory Science</td>
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<tr>
<td>History and Social Science</td>
</tr>
<tr>
<td>World Language</td>
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<tr>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Ed</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td>Student Selected Test</td>
</tr>
<tr>
<td><strong>Total Credits</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 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 (Board) 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 9th grade for the first time. The following applies to students who entered 9th grade 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 Diploma. The student may not be excluded from courses and tests required to earn a Standard or Advanced Studies Diploma.

### Modified Standard Diploma Course Requirements (8 VAC 20-131-50)

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Standard Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics¹</td>
<td>3</td>
</tr>
<tr>
<td>Science²</td>
<td>2</td>
</tr>
<tr>
<td>History and Social Sciences³</td>
<td>2</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Ed</td>
<td>1</td>
</tr>
<tr>
<td>Electives⁴</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>20</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 (Board).
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 Who Entered 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 students who entered 9th grade 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. In 2013, the Virginia Board of Education voted to amend the graduation requirements for students with disabilities. The changes in graduation requirements provide eligible students with disabilities the opportunity to use credit accommodations to earn a Standard Diploma. Students must be found eligible for these accommodations. 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.

<table>
<thead>
<tr>
<th>Standard Diploma Course Requirements (8 VAC 20-131-50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject Area</strong></td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Mathematics</td>
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<tr>
<td>Laboratory Science</td>
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<tr>
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<tr>
<td>Health and Physical Education</td>
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<tr>
<td>World Language, Fine Arts or Career and Technical Ed</td>
</tr>
<tr>
<td>Economics &amp; Personal Finance</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td>Student Selected Test</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
</tr>
</tbody>
</table>

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 (Board) 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 students who entered 9th grade 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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<thead>
<tr>
<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>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Laboratory Science²</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>History and Social Sciences³</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>World Language⁴</td>
<td>3</td>
<td></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>
</tr>
<tr>
<td>Economics &amp; Personal Finance</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Student Selected Test⁵</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>26</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

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 (Board) shall approve these 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.
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 9th grade for the first time. The following applies to students who entered 9th grade 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. 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>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject Area</strong></td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Mathematics¹</td>
</tr>
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<td>History and Social Sciences³</td>
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<tr>
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</tr>
<tr>
<td>Fine Arts or Career and Technical Ed</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
</tr>
</tbody>
</table>

¹Courses 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 (Board).
²Courses 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.
³Courses 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.

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Graduation Requirements for Students Who Enter 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 students who enter 9th grade 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. In 2013, the Virginia Board of Education voted to amend the graduation requirements for students with disabilities. The changes in graduation requirements provide eligible students with disabilities the opportunity to use credit accommodations to earn a Standard Diploma. Students must be found eligible for these accommodations. 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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<tr>
<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>Mathematics</td>
<td>3</td>
<td>1</td>
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<tr>
<td>Laboratory Science</td>
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</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>
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<tr>
<td>World Language, Fine Arts or Career and Technical Ed</td>
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<td></td>
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<td>Economics &amp; Personal Finance</td>
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<td>Electives</td>
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<tr>
<td><strong>Total Credits</strong></td>
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<td><strong>6</strong></td>
</tr>
</tbody>
</table>

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 (Board) 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.

8 Students shall earn a career and technical education credential approved by the Board 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.

9 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 students who enter 9th grade 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>
</thead>
<tbody>
<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>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>History and Social Sciences (4)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>World Language (8)</td>
<td>3</td>
<td></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>
</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 (5)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total Credits (6)</td>
<td>26</td>
<td>9</td>
</tr>
</tbody>
</table>

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 (Board) 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.
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. As part of this planning, students develop and initiate a Student Learning Plan. This plan provides opportunities for students to identify strengths and interests, explore college and career options, and develop postsecondary goals. Students are counseled regarding opportunities for postsecondary education, financial aid, and employment prior to high school graduation. To assist in the process, information and resources are provided through the school counseling program and are available online. Additionally, each high school has a staffed Career Center with current college and career resource materials.

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” average or better in those courses or pass an examination or 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; or acquire a professional license in a career and technical education field from the Commonwealth of Virginia; or (b) 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 service 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 civic focus. Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement.

6. The Seal of Bilingualism will be available for those students demonstrating mastery in both English and a world language. More information including the necessary criteria to earn a seal will be forthcoming.

GRADING SYSTEM

<table>
<thead>
<tr>
<th>Grade</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A (93-100)</td>
<td>4.0</td>
</tr>
<tr>
<td>A- (90-92)</td>
<td>3.7</td>
</tr>
<tr>
<td>B+ (87-89)</td>
<td>3.3</td>
</tr>
<tr>
<td>B (83-86)</td>
<td>3.0</td>
</tr>
<tr>
<td>B+ (80-82)</td>
<td>2.7</td>
</tr>
<tr>
<td>C+ (77-79)</td>
<td>2.3</td>
</tr>
<tr>
<td>C (73-76)</td>
<td>2.0</td>
</tr>
<tr>
<td>C- (70-72)</td>
<td>1.7</td>
</tr>
</tbody>
</table>

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. All classes appearing on the high school transcript including high school classes taken in summer school, middle school, elementary 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 externally moderated 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. The score on the externally moderated exam does not impact a student’s GPA.

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 Board of Education 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.

**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. After this period of time and before the fourth quarter, courses dropped are recorded with a WP (withdrawn passing) or WF (withdrawn failing). Courses dropped after the start of the fourth quarter will be recorded as a WP or “F” (failure). 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, as outlined above. Unless the principal approves an exception, a student may not withdraw during the final quarter of a course if he/she is passing the course. If a student drops a course during the:

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Withdrawal Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st quarter</td>
<td>No penalty—nothing is recorded.</td>
</tr>
<tr>
<td>2nd quarter</td>
<td>WP (withdrawn passing) or WF (withdrawn failing) is recorded.</td>
</tr>
<tr>
<td></td>
<td>Exception: For semester courses a WP or F for failure is recorded.</td>
</tr>
<tr>
<td>3rd quarter</td>
<td>WP or WF is recorded.</td>
</tr>
<tr>
<td>4th quarter</td>
<td>WP or F for failure is recorded.</td>
</tr>
</tbody>
</table>

**PASS-FAIL**

The Fairfax County School Board policy permits students to take certain courses on a pass-fail basis.

- With parental/guardian approval, middle and high school students are given the option of taking one high school elective credit per school year on a pass-fail basis. For high school students, 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. For middle school students, this may be applied only to high school world language credits.

- 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 student wishing to take a course as pass-fail shall indicate this by completing a "Pass-Fail Status Request Form" requiring parent/guardian 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.
AUDIT

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 who 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 Program of Studies (POS) standards, benchmarks, and indicators. The decision may not be reversed with the exception of English language learners 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 in each fall and winter 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, Tigrinia, 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.

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 Board regulations. For additional information about pursuing coursework outside of FCPS for credit, please contact your school counselor.

EARNING COLLEGE CREDITS IN HIGH SCHOOL

FCPS provides a college readiness curriculum to students through standard and honors level courses. In addition, students may take advantage of opportunities to earn college credit while enrolled in high school through Advanced Placement (AP), International Baccalaureate (IB), and Dual Enrollment Courses. Dual Enrollment courses are courses taught at the high school by an FCPS teacher that offer high school and college credit through agreements with a college or university. The number of college credits the student will earn through a dual enrollment course is determined by the college or university. Students enrolled in a dual enrollment course pay college tuition; however, because FCPS provides the instructor as well as the facility, the tuition may be significantly discounted from what a student would pay if they took the course at the college or university. Students who wish to take a dual enrollment course must meet criteria set by the college or
Advanced Academic Programs (AAP) responds to the requirement from 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, International Baccalaureate (IB), and Advanced Placement (AP) fulfill this requirement.

Advanced Academic Programs at the high school level are comprised of Honors courses in 9th through 12th grades, and the Advanced Placement (AP) program in 10th, 11th, and 12th grades or the International Baccalaureate Middle Years Program (IBMYP) in 9th and 10th grades, and the IB Diploma Program (IBDP) in 11th and 12th grades. AAP courses 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 Advanced Academic Programs web site at [http://www.fcps.edu/is/aap/index.shtml](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 corresponding examinations. For more information, see Grade Point Average.

Differentiated curricula and teaching strategies which stress critical thinking skills, creativity, problem-solving, and relationship building are integrated into the content of all advanced academic course offerings. The four-year high school sequence of courses in each of the academic disciplines provides a continuous and balanced advanced academic program. There is no screening process to access Honors, AP or IB courses; however, prerequisites/co-requisites must be met. For more information on course sequencing, go to: [http://www.fcps.edu/is/schoolcounseling/courses/index.shtml](http://www.fcps.edu/is/schoolcounseling/courses/index.shtml)

**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 three 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 three and not more than four 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 two-year CTE sequence, two 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 grades. Students may choose to work toward the MYP certificate at authorized high schools, 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 (TJHSST) 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 selected in a
competitive process who 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 the TJHSST Office of Admissions at 571-423-3770 or:

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 sections of the Standard and Optional Course Offerings guides. 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, Fairfax County Fire and Rescue Academy, and the Fairfax County School of Practical Nursing located at the Plum Center for Lifelong Learning. Please visit the CTE website 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.

FCPS has established articulation agreements with a variety of postsecondary organizations that allow students to take certain career and technical education classes in high school and receive college 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. A full listing of Articulation and Dual Enrollment Agreements is available at http://www.fcps.edu/is/cte/index.shtml.

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.

FULL DAY SCHEDULE

Students enrolled in FCPS are expected to maintain a full-day schedule. Students with personal, family, or economic needs may still request a waiver of full day schedule requirements by speaking with their school counselor. Transportation arrangements for a student on this modified schedule are the responsibility of the family. Students 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. Schools will attempt to honor all requests; however, scheduling conflicts may prohibit some students from accessing this option. For additional information about full day schedule requirements, visit:

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ONLINE COURSE OPTIONS FOR STUDENTS

High school students may take up to two online courses through the FCPS Online Campus in place of a face-to-face course for scheduling conflicts or personal reasons, including health. 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 and plan closely with their school counselor.

Notes:
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 up to two courses through the FCPS Online Campus for scheduling conflicts or personal reasons, including health. 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Course</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algebra</td>
<td>Biology 1</td>
<td>Advanced Accounting</td>
</tr>
<tr>
<td>Algebra 1 Honors</td>
<td>Biology 1 Honors</td>
<td>Economics and Personal Finance</td>
</tr>
<tr>
<td>Geometry</td>
<td>Chemistry 1</td>
<td>Spanish 1</td>
</tr>
<tr>
<td>Geometry Honors</td>
<td>Chemistry 1 Honors</td>
<td>Spanish 2</td>
</tr>
<tr>
<td>Algebra 2</td>
<td>Physics 1</td>
<td>Spanish 3</td>
</tr>
<tr>
<td>Algebra 2 Honors</td>
<td>Geosystems</td>
<td>AP Spanish Language</td>
</tr>
<tr>
<td>Precalculus w/Trig</td>
<td>Oceanography</td>
<td>AP Spanish Literature</td>
</tr>
<tr>
<td>AP Calculus AB</td>
<td>World History &amp; Geography 1</td>
<td>Korean 1</td>
</tr>
<tr>
<td>AP Statistics</td>
<td>World History &amp; Geography 1 Honors</td>
<td>Korean 2</td>
</tr>
<tr>
<td>Creative Writing 1</td>
<td>World History &amp; Geography 2</td>
<td>Korean 3</td>
</tr>
<tr>
<td>Creative Writing 2</td>
<td>World History &amp; Geography 2 Honors</td>
<td>Korean 4</td>
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<tr>
<td>Creative Writing 2</td>
<td>VA &amp; US History</td>
<td>Physical Education 9</td>
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<td>English 9</td>
<td>VA &amp; US History Honors</td>
<td>Physical Education 10</td>
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<td>English 9 Honors</td>
<td>VA/U.S. Government</td>
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</tr>
<tr>
<td>English 10</td>
<td>VA/U.S. Government Honors</td>
<td></td>
</tr>
<tr>
<td>English 10 Honors</td>
<td>VA/U.S. Government Dual Enrollment*</td>
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<tr>
<td>English 11</td>
<td>AP U.S. Government</td>
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<tr>
<td>English 11 Honors</td>
<td>AP Microeconomics</td>
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</tr>
<tr>
<td>English 12</td>
<td>AP Macroeconomics</td>
<td></td>
</tr>
<tr>
<td>English 12 Honors</td>
<td>Psychology</td>
<td></td>
</tr>
<tr>
<td>English 12 Dual Enrollment*</td>
<td>AP Psychology</td>
<td></td>
</tr>
<tr>
<td>AP English Language</td>
<td>AP US History</td>
<td></td>
</tr>
</tbody>
</table>

*Deadline for enrollment is March 18, 2016 for the SY 2016-17
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/s/cte/academies.shtml](http://www.fcps.edu/s/cte/academies.shtml).

### 2016-2017 HIGH SCHOOL ACADEMY COURSE OFFERINGS

#### CHANTILLY ACADEMY – A Governor’s STEM Academy
[http://www.fcps.edu/ChantillyAcademy/](http://www.fcps.edu/ChantillyAcademy/)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Force JROTC</td>
<td>Exploring the Language of Medicine</td>
</tr>
<tr>
<td>Animal Science</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>Automotive Collision Service</td>
<td>Medical Assistant</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>Pre-Calculus (Dual Enrollment) with Chantilly Academy course</td>
</tr>
<tr>
<td>Carpenter</td>
<td>Pharmacy Technician</td>
</tr>
<tr>
<td>Cosmetology</td>
<td>STEM Engineering</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>STEM Robotics Systems</td>
</tr>
<tr>
<td>Culinary Arts</td>
<td>Teachers for Tomorrow</td>
</tr>
<tr>
<td>Cyber: Computer Systems Technology – A+</td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Cyber: Database Design &amp; Management, Oracle</td>
<td>Exploring Health Sciences</td>
</tr>
</tbody>
</table>

#### EDISON ACADEMY
[http://www.fcps.edu/EdisonAcademy](http://www.fcps.edu/EdisonAcademy)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Science</td>
<td>Culinary Arts</td>
</tr>
<tr>
<td>Automotive Collision Service</td>
<td>Heating, Ventilation, AC, &amp; Refrigeration</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>Small Engine Repair</td>
</tr>
<tr>
<td>Cosmetology</td>
<td>Teachers for Tomorrow</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Professional Photography Studio</td>
</tr>
<tr>
<td>Cyber: Database Design &amp; Management, Oracle</td>
<td>Professional Television Production</td>
</tr>
</tbody>
</table>

#### FAIRFAX ACADEMY
[http://www.fcps.edu/FairfaxAcademy](http://www.fcps.edu/FairfaxAcademy)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy Dance</td>
<td>Korean</td>
</tr>
<tr>
<td>Chinese</td>
<td>Music and Computer Technology</td>
</tr>
<tr>
<td>Fashion Careers</td>
<td>Professional Musical Theatre &amp; Actor’s Studio</td>
</tr>
<tr>
<td>Biotechnology Foundations</td>
<td>Medical Assistant</td>
</tr>
<tr>
<td>Biomedical Technician</td>
<td>Pharmacy Technician</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Practical Nursing @ Plum Center</td>
</tr>
<tr>
<td>Dental Careers</td>
<td>Fire and Emergency Medical Sciences</td>
</tr>
</tbody>
</table>

#### FALLS CHURCH ACADEMY – A Governor’s Health Sciences Academy
[http://www.fcps.edu/fallschurchacademy](http://www.fcps.edu/fallschurchacademy)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Biotechnology Foundations</td>
<td>Early Childhood Careers</td>
</tr>
<tr>
<td>Biomedical Technician</td>
<td>Exploring Health Sciences</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Exploring the Language of Medicine</td>
</tr>
<tr>
<td>Dental Careers</td>
<td>Fire and Emergency Medical Sciences</td>
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</tbody>
</table>

#### MARSHALL ACADEMY – A Governor’s STEM Academy
[http://www.fcps.edu/MarshallAcademy](http://www.fcps.edu/MarshallAcademy)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Aerospace Science</td>
<td>Culinary Arts</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>Entrepreneurship</td>
</tr>
<tr>
<td>Chinese</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>Cosmetology</td>
<td>STEM Robotic Systems</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Cyber: Routing and Switching, Cisco</td>
</tr>
<tr>
<td>Cyber: Security + Capstone</td>
<td>Medical Assistant</td>
</tr>
</tbody>
</table>

#### WEST POTOMAC ACADEMY – A Governor’s Health Sciences Academy
[http://www.fcps.edu/WestPotomacAcademy](http://www.fcps.edu/WestPotomacAcademy)

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
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<tbody>
<tr>
<td>Academy Dance</td>
<td>Early Childhood Careers</td>
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<tr>
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</tr>
<tr>
<td>Criminal Justice</td>
<td>Fire and Emergency Medical Sciences</td>
</tr>
<tr>
<td>Dental Careers</td>
<td>Medical Assistant</td>
</tr>
<tr>
<td>Fashion Marketing 2</td>
<td>Music and Computer Technology</td>
</tr>
<tr>
<td>Marketing Management</td>
<td>Pharmacy Technician</td>
</tr>
<tr>
<td>STEAK</td>
<td>Pharmacy Technician</td>
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<tr>
<td>PHYSICS</td>
<td>Pharmacy Technician</td>
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</tbody>
</table>

#### OTHER SPECIALIZED CTE PROGRAMS

<table>
<thead>
<tr>
<th>Program</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASSROOM ON THE MALL at Fair Oaks Mall</td>
<td>Fashion Marketing 2</td>
</tr>
<tr>
<td>FAIRFAX COUNTY SCHOOL OF PRACTICAL NURSING</td>
<td>Practical Nursing</td>
</tr>
<tr>
<td>Plum Center</td>
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<tr>
<td>SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE</td>
<td>Construction Technologies</td>
</tr>
<tr>
<td>in Springfield, Virginia</td>
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</tr>
<tr>
<td>FAIRFAX COUNTY FIRE AND RESCUE ACADEMY</td>
<td>Firefighting</td>
</tr>
<tr>
<td>in Fairfax, Virginia</td>
<td></td>
</tr>
</tbody>
</table>
ACCOUNTING (632000)  
Grades: 9, 10, 11, 12  
Credit: one  

Accounting is the language of business and beneficial for any student planning on studying business in a postsecondary school. This course is for students who want 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 management, cost accounting, financial analysis, and business ethics. Content areas include property, plant and equipment, corporate investments, notes payable and receivables, amortization, 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 to 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 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) 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.

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.

CYBER: COMPUTER SYSTEMS TECHNOLOGY 1 A+ (862322)  
Grades: 10, 11, 12  
Credit: one  
Prerequisite: Computer related course or equivalent skill (Chantilly, Edison, and Marshall Academies - transportation may be provided)

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.

CYBER: COMPUTER SYSTEMS TECHNOLOGY 2 A+ (862332)  
Grades: 10, 11, 12  
Credit: two  
Prerequisite: Computer Systems Technology 1 A+ (Chantilly, Edison, and Marshall Academies - transportation may be provided)

Building on the foundation of Computer Systems Technology 1 A+, 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.

CYBER: DATABASE DESIGN AND MANAGEMENT 1, ORACLE (660032)  
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.
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 are familiar with 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.

**CYBER: DATABASE DESIGN AND MANAGEMENT 2, ORACLE** (666232)

**Grades:** 11, 12  **Credit:** one  **Prerequisite:** Cyber: Database Design and Management 1, Oracle (Chantilly and Edison Academies - transportation may be provided)

This course is designed to continue teaching the components of database design and management. Students combine classroom instruction and supervised on-the-job training in approved positions 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.

**CYBER: ROUTING AND SWITCHING 1A, CISCO** (854232)

**Grades:** 10, 11, 12  **Credit:** one-half  **Prerequisite:** Computer related course or equivalent skill  **Corequisite:** Cyber: Routing and Switching 1B, Cisco (Chantilly and Marshall Academies - transportation may be provided)

This is part A of a full year course. Part A is taken in the fall semester. Students also register and take Cyber: Routing and Switching 1B, Cisco in the fall semester. This course prepares students for jobs as network technicians and helps them develop additional skills required for computer technicians and help desk technicians. It provides a basic overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide e-mail services, Web space, and authenticated access. Students learn about the soft skills required for help desk and customer service positions, and the final chapter helps them prepare for the CCENT certification exam. Network monitoring and basic troubleshooting skills are taught in context. 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.

**CYBER: ROUTING AND SWITCHING 2A, CISCO** (854432)

**Grades:** 11, 12  **Credit:** one-half  **Prerequisite:** Cyber: Routing and Switching 1A and 1B, Cisco  **Corequisite:** Cyber: Routing and Switching 2B, Cisco (Chantilly and Marshall Academies - transportation may be provided)

This is part A of a full year course. Part A is taken in the fall semester. Students also register and take Cyber: Routing and Switching 2B, Cisco in the spring semester. This course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks, IP Telephony requirements, and security. It also introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Hands-on exercises, including configuration, installation, and troubleshooting, reinforce student learning. 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.

**CYBER: ROUTING AND SWITCHING 2B, CISCO** (854532)

**Grades:** 11, 12  **Credit:** one-half  **Prerequisite:** Cyber: Routing and Switching 1A and 1B, Cisco  **Corequisite:** Cyber: Routing and Switching 2A, Cisco (Chantilly and Marshall Academies - transportation may be provided)

This is part B of a full year course. Part B is taken in the spring semester. Students also register and take Cyber: Routing and Switching 2A, Cisco in the fall semester. 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.
ENGLISH

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, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. Through narrative, expository, and persuasive writings, students build on their understanding of writing as a process of prewriting, drafting, revising, and publishing. In the research process, students find, evaluate, and select appropriate sources to access information to create a research product. They also develop communication skills through listening to and practicing oral presentations. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

ENGLISH 9 HONORS  (113036)  
**Grades:**  9  
**Credit:**  one/weighted +.5  
**Prerequisite:**  English 8  

English 9 Honors deepens and advances the curriculum of English 9. Students read and analyze a variety of literary and nonfiction texts, exploring the characteristics of different forms and the techniques authors use in literature of different cultures and eras. Language study continues to extend students' vocabulary through learning about 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 expository and analytic writing, students expand their understanding of writing as a process and develop their skills in revising to address a specific audience and purpose. In the research process, students collect, evaluate, organize, and present accurate and valid information to create a research product. They also improve communication and collaboration skills through small and large group discussions and presentations. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

ENGLISH 10  (114000)  
**Grades:**  10  
**Credit:**  one  
**Prerequisite:**  English 9  

Students read and analyze a variety of literary and nonfiction texts, comparing and contrasting the techniques authors use in literature of different cultures and eras. Language study continues to extend students' vocabulary through learning about 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 expository and analytic writing, students expand their understanding of writing as a process and develop their skills in revising to address a specific audience and purpose. In the research process, students collect, evaluate, organize, and present accurate and valid information to create a research product. They also improve communication and collaboration skills through small and large group discussions and presentations. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

ENGLISH 10 HONORS  (114036)  
**Grades:**  10  
**Credit:**  one/weighted +.5  
**Prerequisite:**  English 9  

English 10 Honors deepens and advances the curriculum of English 10. Students read and analyze a variety of literary and nonfiction texts, comparing and contrasting the techniques authors use in literature of different cultures and eras. Language study continues to extend students' vocabulary through learning about 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 expository and analytic writing, students expand their understanding of writing as a process and develop their skills in revising to address a specific audience and purpose. In the research process, students collect, evaluate, organize, and present accurate and valid information to create a research product. They also improve communication and collaboration skills through small and large group discussions and presentations. (This is a Standards of Learning aligned course, which is tested in 11th grade.)
ENGLISH 11 (115000)
Grades: 11  Credit: one
Prerequisite: English 10
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 11 HONORS (115036)
Grades: 11  Credit: one/weighted +.5
Prerequisite: English 10
English 11 Honors deepens and advances the curriculum of English 11. 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 (116000)
Grades: 12  Credit: one
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 HONORS (116036)
Grades: 12  Credit: one/weighted +.5
English 12 Honors deepens and advances the curriculum of English 12. 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 communication skills to craft formal oral presentations and their listening skills to analyze the relationships among purpose, audience, and content of presentations.

JOURNALISM 1 (120000)
Grades: 9, 10, 11, 12  Credit: one
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.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

VIRGINIA AND UNITED STATES GOVERNMENT FOR ENGLISH LEARNERS (244090)
Grades: 9, 10, 11, 12  Credit: one
This course is designed to develop content understandings and English language proficiency simultaneously. Students examine both the structure and function of American government at the national, state, and local levels using linguistically appropriate resources. The course focuses on political decision-making, comparative political and economic systems, and the student's role as a citizen. Students engage in reading, writing, speaking and listening tasks that promote academic language development and target the language necessary for students to demonstrate complex thinking and learning. This course is aligned to the WIDA English language development standards and the Virginia and US Government Standards of Learning and fulfills the Virginia and United States Government requirement for graduation.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

ENGLISH LANG DEV (ELD - LEVEL 1) (572095)
Grades: 9, 10, 11, 12  Credit: one
English learners develop their English language proficiency and English literacy skills through a balanced literacy approach. Students engage in tasks that support academic language development in the four domains—reading, writing, listening and speaking. Ongoing formal and informal assessment data are used to appropriate place and transition students through the levels of the ELD courses. This course is aligned to the WIDA English language development (ELD) standards and the grade-level English standards of learning.

ENGLISH LANG DEV (ELD - LEVEL 2) (572096)
Grades: 9, 10, 11, 12  Credit: one
English learners develop their English language proficiency and English literacy skills through a balanced literacy approach. Students engage in tasks that support academic language development in the four domains—reading, writing, listening and speaking. Ongoing formal and informal assessment data are used to appropriate place and transition students through the levels of the ELD courses. This course is aligned to the WIDA English language development (ELD) standards and the grade-level English standards of learning.

ENGLISH LANG DEV (ELD - LEVEL 3) (572097)
Grades: 9, 10, 11, 12  Credit: one
English learners develop their English language proficiency and English literacy skills through a balanced literacy approach. Students engage in tasks that support academic language development in the four domains—reading, writing, listening and speaking. Ongoing formal and informal assessment data are used to appropriate place and transition students through the levels of the ELD courses. This course is aligned to the WIDA English language development (ELD) standards and the grade-level English standards of learning.

ENGLISH 9 FOR ENGLISH LEARNERS (LEVEL 1) (573091)
Grades: 9, 10, 11, 12  Credit: one
This course is designed to develop content understandings and English language proficiency simultaneously. Students read and analyze a variety of linguistically appropriate 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, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. Through narrative, expository, and persuasive writings, students build on their understanding of writing as a process of prewriting, drafting, revising, and publishing. In the research process, students find, evaluate, and select appropriate sources to access information to create a research product. They also develop communication skills through listening to and practicing oral presentations. This course is aligned to the WIDA English language development standards and the English 9 Standards of Learning. (This is a Standards of Learning aligned course, which is tested in 11th grade.)
ENGLISH 9 FOR ENGLISH LEARNERS (LEVEL 2) (573092)
Level 2
Grades: 9, 10, 11, 12
Credit: one

This course is designed to develop content understandings and English language proficiency simultaneously. Students read and analyze a variety of linguistically appropriate 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, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. Through narrative, expository, and persuasive writings, students build on their understanding of writing as a process of prewriting, drafting, revising, and publishing. In the research process, students find, evaluate, and select appropriate sources to access information to create a research product. They also develop communication skills through listening to and practicing oral presentations. This course is aligned to the WIDA English language development standards and the English 9 Standards of Learning. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

ENGLISH 9 FOR ENGLISH LEARNERS (LEVEL 3) (573093)
Grades: 9, 10, 11, 12
Credit: one

This course is designed to develop content understandings and English language proficiency simultaneously. Students read and analyze a variety of linguistically appropriate 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, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. Through narrative, expository, and persuasive writings, students build on their understanding of writing as a process of prewriting, drafting, revising, and publishing. In the research process, students find, evaluate, and select appropriate sources to access information to create a research product. They also develop communication skills through listening to and practicing oral presentations. This course is aligned to the WIDA English language development standards and the English 9 Standards of Learning. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

ENGLISH LANG DEV (ELD - LEVEL 4) (573000)
Grades: 9, 10, 11
Credit: one

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.

STRATEGIES FOR SUCCESS FOR ENGLISH LEARNERS (788990)
Grades: 9, 10, 11
Credit: one

This elective course is designed to provide support to English Learners new to US schools in core curricular areas and to provide direct instruction in specific learning strategies, study skills, time management, organization, and self-advocacy skills to develop the habits necessary for academic success. Students will gain skills in personal development and socio-emotional awareness skills. In addition, this course will teach strategies to enhance English language development in the four language domains of reading, writing, listening and speaking. Students will participate in building a strong classroom and school community through class meetings and intercultural communication. Students who successfully complete the course will earn an elective credit. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard Diploma.

FAMILY & CONSUMER SCIENCES

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

This course is designed to focus on analyzing parenting roles and responsibilities, ensuring a healthy start for mother and child, evaluating support systems that provide services for parents, and evaluating parenting practices that maximize human growth and development. Critical thinking, practical problem solving using case studies, and entrepreneurship opportunities within the area of parenting responsibilities and child development are emphasized. 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.

INTRODUCTION TO CULINARY ARTS (825026)
Grades: 10, 11, 12
Credit: two

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.

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, meal identification and fabrication, pantry, breakfast cookery, purchasing, and basic culinary skills is offered. Curriculum also includes culinary 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)

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.

INTRODUCTION TO EARLY CHILDHOOD CAREERS (823426)
Grades: 10, 11, 12
Credit: one

Prerequisite: Culinary Arts 1 (827527)

This course is designed to focus on analyzing parenting roles and responsibilities, ensuring a healthy start for mother and child, evaluating support systems that provide services for parents, and evaluating parenting practices that maximize human growth and development. Critical thinking, practical problem solving using case studies, and entrepreneurship opportunities within the area of parenting responsibilities and child development are emphasized. 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.
Industry certification may be available as part of this course.

EARLY CHILDHOOD CAREERS 1 (828527)
Grades: 11, 12
Credit: two
(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 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 child care by focusing on the planning, organizing, and conducting of meaningful play and learning activities; child monitoring and supervision; record keeping; and referral procedures. Critical thinking, practical problem solving, and entrepreneurship opportunities within the field of early childhood education are emphasized. Students prepare for continuing education leading to careers in early childhood fields (e.g., medical, social services, and education). 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. Students focus on occupational skills needed by personnel employed in early childhood-related fields, such as workforce development education, medical/health care, social services, counseling, psychology, and entrepreneurship. 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 CAREERS 1 (828027)
Grades: 11, 12
Credit: two
Prerequisite: Art 1 (091000), Fashion Marketing (814000), or Introduction to Interior and Fashion Design (825432).
A performance review may be required. (Fairfax and West Potomac Academies - transportation may be provided)

The Fashion Careers 1 students will begin to develop technical and presentation skills in the field of fashion design. The program will emphasize the creative process of 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 will learn the business of fashion including fabric technology and apparel-production techniques. Teachers emphasize skills in art, communication, mathematics, science and technology in this course. (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 CAREERS 2 (828127)
Grades: 11, 12
Credit: two
Prerequisite: Fashion Careers 1 (828027) or Portfolio Review (examples of student work) and/or a performance review may be required. (Fairfax and West Potomac Academies - transportation may be provided)

Students enrolled in the Fashion Career 2 course focus on technical skills identified as essential for careers in the fashion industry. Students build on existing skills in the areas of design concepts, sketching, pattern making, and garment construction to develop a fashion portfolio. Following the portfolio, a fashion line is executed from conception to completion. Opportunities for entrepreneurship within the field of fashion design are examined. 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.

LIFE PLANNING (822632)
Grades: 9, 10, 11, 12
Credit: one-half
This course is designed to equip students with the skills to face the challenges in today's society. Students will develop a life-management plan which includes developing career, community, and life connections; applying problem-solving processes to life situations; creating and maintaining healthy relationships; developing strategies for lifelong career planning; developing a financial plan; examining components of individual and family wellness; and demonstrating leadership within the community. Critical thinking and practical problem solving are emphasized through relevant life applications. The core content of mathematics, science, and communications will be reinforced when appropriate in the context. 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. Focus is placed on developing a life-management plan which includes developing strategies for lifelong career planning and applying the appropriate resources to life situations. The core content of mathematics, science, and communications will be reinforced when appropriate in the context. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

TEACHERS FOR TOMORROW 1 (906226)
Grades: 11, 12
Credit: one
(Base school optional; Chantilly Academy, Edison Academy, and Falls Church Academy - transportation may be provided)

The Teacher's for Tomorrow course introduces juniors and seniors to a career in teaching and education. The primary elements of the curriculum components are the learner, the school, the teacher, and teaching. The components are intentionally broad in scope and provide a great deal of flexibility based on the career interest of a student. In addition to the fundamental curriculum components, all students are required to observe and participate in an internship outside the teachers for tomorrow classroom. The internship may involve the preschool level through 12th grade. Students enrolling in this course should have a GPA of 2.7 or higher, teacher recommendations, and/or approval of the instructor. Industry certification may be available as part of this course.
This course requires a student materials fee as listed in FCPS Notice 5922.

**ACADEMY DANCE 1 (931126)**  
Grades: 11, 12  
Credit: one  
Prerequisite: Successful Audition  
(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)  
Students will develop skills in basic movement, placement, alignment, technique and floor positions for selected dance forms (ballet, jazz, modern, improvisation). Students will study dance history, cultivate dance vocabulary, critique, improvise 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.

**ACADEMY DANCE 2 (931326)**  
Grades: 11, 12  
Credit: one  
Prerequisite: Dance 2 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, technique, flexibility and strength. Students will broaden and accrue knowledge in dance history, vocabulary, criticism, anatomy, theory and composition. Students will develop skills in choreography, improvisation and performance. For more information, visit the academy web site.  
This course requires a student materials fee as listed in FCPS Notice 5922.

**ACADEMY DANCE 3 (931527)**  
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 build on skills learned in Dance 2 and continue pedagogy in alignment, technique, flexibility and strength. Students will broaden and accrue knowledge in dance history, vocabulary, criticism, anatomy, theory and composition. Students will develop skills in choreography, improvisation and performance. For more information, visit the academy web site.  
This course requires a student materials fee as listed in FCPS Notice 5922.

**ACADEMY DANCE 4 (931927)**  
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 ballet, jazz and modern techniques and demonstrate excellence in rehearsal etiquette and performance. Students will expand choreographic methods and develop their own voice through creating and critiquing movement and choreography. This course will focus on preparing the dancer for post high school opportunities in the professional dance field including: professional company auditions, choreography, teaching or 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.

**BEGINNING BAND (923715)**  
Grades: 9, 10, 11, 12  
Credit: one  
Prerequisite: Successful audition  
Students develop skills as individual musicians and as members of a musical group. 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 required 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.

**INTERMEDIATE BAND (923315)**  
Level 1  
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.

**ADvanced BAND (923415)**  
Level 1  
Grades: 9, 10, 11, 12  
Credit: one  
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 required 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.

**BEGINNING ORCHESTRA (923715)**  
Grades: 9, 10, 11, 12  
Credit: one  
Students develop skills as individual musicians and as members of a musical group. 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 required 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.

**INTERMEDIATE ORCHESTRA (923815)**  
Level 1  
Grades: 9, 10, 11, 12  
Credit: one  
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 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  
Grades: 9, 10, 11, 12  
Credit: one  
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.

**MIXED CHORUS (926015)**  
Grades: 9, 10, 11, 12  
Credit: one  
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.

ADVANCED MIXED CHORUS (928915)
Level 1
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.

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 (922627)
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 1 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 (143026)
Grades: 10, 11, 12 Credit: one
Prerequisite: One of the following: Theatre Arts, Chorus, or Dance. Interview may be required.
(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 (144027)
Grades: 11, 12 Credit: two
Prerequisite: Professional Musical Theatre and Actor's Studio 1 or equivalent experience accepted.
(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
THEATRE ARTS

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

Theatre Arts 1 provides students with a survey of the theatre arts, allowing students opportunities to experience and appreciate dramatic literature, and participate in the creative processes of performance and production. This 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) Credit: one
Grades: 10, 11, 12
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
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: 12
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.

ADVANCED TECHNICAL THEATRE 1 (143527)
Grades: 11, 12
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, costume, 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
Prerequisite: Advanced Technical Theatre 1
Fairfax Academy

Students will explore advanced topics specifically in theatrical design, including set, lighting, sound, costume, 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 (143026)
Grades: 10, 11, 12
Prerequisite: One of the following: Theatre Arts, Chorus, or Dance. Interview may be required.

(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: 11, 12
Prerequisite: Professional Musical Theatre and Actor's Studio 1 or equivalent experience accepted.

(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 (144027)
Grades: 11, 12
Prerequisite: Professional Musical Theatre and Actor's Studio 2 or teacher recommendation

(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
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
Credit: one
Prerequisite: Studio Art and Design 1

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.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Grades</th>
<th>Credit</th>
<th>Prerequisite</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>914000</td>
<td>Studio Art and Design 2</td>
<td>11, 12</td>
<td>one</td>
<td>Studio Art and Design 1</td>
<td>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.</td>
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<tr>
<td>914700</td>
<td>Studio Art &amp; Design 4: Portfolio Preparation General</td>
<td>12</td>
<td>one</td>
<td>Studio Art and Design 3</td>
<td>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.</td>
</tr>
<tr>
<td>918011</td>
<td>Computer Graphics 1</td>
<td>9, 10, 11, 12</td>
<td>one</td>
<td>Computer Graphics 2</td>
<td>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.</td>
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<tr>
<td>918111</td>
<td>Computer Graphics 2</td>
<td>10, 11, 12</td>
<td>one</td>
<td>Computer Graphics 1</td>
<td>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.</td>
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<tr>
<td>918211</td>
<td>Computer Graphics 3</td>
<td>11, 12</td>
<td>one</td>
<td>Computer Graphics 2</td>
<td>Expand knowledge and ability in the application of hardware and software to create personally expressive, original art. Create visual solutions using a variety of media, including motion graphics/animation, graphic design, game development, web design and print design. A final portfolio or demo reel is required for evaluation. This course requires a student materials fee as listed in FCPS Notice 5922.</td>
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<tr>
<td>919311</td>
<td>Photography 1</td>
<td>9, 10, 11, 12</td>
<td>one</td>
<td>Photography 2</td>
<td>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.</td>
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<tr>
<td>919411</td>
<td>Photography 2</td>
<td>10, 11, 12</td>
<td>one</td>
<td>Photography 1</td>
<td>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.</td>
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<tr>
<td>919511</td>
<td>Photography 3</td>
<td>11, 12</td>
<td>one</td>
<td>Photography 2</td>
<td>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.</td>
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<tr>
<td>919914</td>
<td>Photography 4: Portfolio Preparation</td>
<td>12</td>
<td>one</td>
<td>Photography 3</td>
<td>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.</td>
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<tr>
<td>612000</td>
<td>Economics and Personal Finance</td>
<td>9, 10, 11, 12</td>
<td>one</td>
<td></td>
<td>Instruction in economics and personal finance prepares students to function effectively as consumers, savers, investors, entrepreneurs, and active citizens. Students learn how economies 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. Industry certification may be available as part of this course.</td>
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SELF-DIRECTED ONLINE ECONOMICS AND PERSONAL FINANCE -- 8TH PERIOD (6120VV)
Grades: 9, 10, 11, 12 Credit: one

This is a self-directed online course available on FCPS 24/7 with no teacher direction or assistance. It is a pass/fail, 8th period online course which requires a fee. Economics and Personal Finance prepares students to function effectively as consumers, savers, investors, entrepreneurs, and active citizens. Students learn how economies and markets operate and how the United States’ economy is interconnected with the global economy. Students also learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit, insurance, spending, taxes, savings, investing, buying/leasing a vehicle, and living independently. Understanding basic economic principles and developing sound financial literacy skills provide the basis for responsible citizenship, financial solvency, and career success. Beginning with students entering ninth grade in fall 2013, this course satisfies the graduation requirement for a virtual course. Industry certification may be available as part of this course. Industry certification may be available as part of this course.

AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS (AFJROTC) (791927)
Aerospace Science 4/Leadership Education 4
Grades: 11, 12 Credit: two
Prerequisite: Air Force Junior Reserve Officer Training Corps (AFJROTC) (791627) (Chantilly Academy - transportation may be provided)

This accelerated course offers three options: Option 1, Management of the Cadet Corps; Option 2, Honors Program-Ground School; and Option 3, Laboratory Manual, Geography, and Survival. Extracurricular activities and opportunities are an important part of AFJROTC. Cadets can participate in leadership camps, drill meets, orienteering, debates, and discussion forums. Career-minded high school students will learn about jobs in the aerospace industry and the Air Force that will open opportunities for the future. High school students who complete the aerospace science program in Air Force Junior ROTC may be eligible for ROTC scholarships. Also, AFJROTC cadets will be prepared to work in an expanding technological world — in the Air Force or as a civilian. College bound students can compete for an Air Force Academy nomination or an Air Force ROTC scholarship through their Air Force Junior ROTC unit. Or, they may receive credit for the first year of an Air Force ROTC four-year college program — plus, free uniforms, insignia and ROTC textbooks. There is no military obligation associated to AFJROTC. For more information, visit the CTE website.
Prerequisite: Exploring Health Sciences and Exploring the Language of Medicine

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).

Students must also register for part two, Exploring the Language of Medicine for the spring semester. This course 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 Academies this is part one (fall semester) of a two-part, full-year course. For base schools this a fall year course. For more information, visit the CTE web site.

Industry certification may be available as part of this course.

EXPLORING THE LANGUAGE OF MEDICINE (838326)
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).

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 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 Academies this is part two (spring semester) of a two-part, full-year course. For base schools this a full year course. 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 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, 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 N-REMT 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.

FIRE AND EMERGENCY MEDICAL SCIENCES 2 (833426)
Grades: 11, 12 Credit: one
Prerequisite: Fire & Emergency Medical Sciences 1 (833326)
(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, 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 N-REMT 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.

FIREFIGHTING I (870527)
Grades: 11, 12 Credit: two
Prerequisite: Students MUST be at least 16 years old (40-1.79.1 Code of Virginia) by the first day of the course offering. Enrollment also requires parental consent.
Fairfax County Fire Training Academy (West Ox Road, Fairfax - transportation may be provided)

Firefighting is one of the most dangerous jobs in the world and, therefore, requires complete discipline and attention to achieving the academic and professional standards necessary to successfully fight live fires, address hazardous-material incidents, and conduct search-and-rescue operations. Students will become familiar with the procedures, equipment, and technologies used by current fire departments. This course challenges students academically, mentally, and physically and meets the standards of the National Fire Protection Association (NFPA) 1001-2013 leading to Firefighter I certification. NOTE: Additional requirements, including CPR, HAZMAT operations, and Mayday Awareness are stipulated for those students seeking NFPA 1001-2013 Firefighter I certification.

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

FIREFIGHTING II (870627)
Grades: 11, 12 Credit: two
Prerequisite: Firefighting I; Students must be at least 16 years old (401.179.1 Code of Virginia) by the first day of the course. Enrollment also requires parental consent.
Fairfax County Fire Training Academy (West Ox Road, Fairfax - transportation may be provided)

This course builds upon the professional knowledge gained and skills taught in Firefighting I. Students respond to simulated hazardous-materiel incidents and conduct rescue operations, including vehicle extraction. Students react to multi-faceted situations (e.g., caused by simulated terrorism, accidents, and natural disasters) by managing resources such as medivac helicopters, emergency medical personnel, technical rescue teams, and community-based organizations. Students will become familiar with the procedures, equipment, and technologies used by current fire departments. This course challenges students academically, mentally, and physically and meets the standards of the National Fire Protection Association (NFPA) leading to firefighting II certification. NOTE: Additional requirements, including CPR, HAZMAT operations, and Mayday Awareness are stipulated for those students seeking NFPA 1001-2013 Firefighter II certification.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.
**HEALTH INFORMATICS** (832026)

Grades: 9, 10, 11, 12  
Falls Church Academy

Health Informatics offers an overview of the field of health informatics by providing students with the fundamental knowledge of the concepts of health informatics and how technology can be used in the delivery of health care. Students are provided a broad exposure to the field of Health Informatics in topics including networking, information systems, security, and HIPAA.

**MEDICAL ASSISTANT 1** (834526)

Grades: 11, 12  
Credit: one  
Prerequisite: Exploring Health Sciences (830226) and Exploring the Language of Medicine (838326) are recommended but not required.  
(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. This course incorporates both classroom and clinical lab pharmacy 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.

**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 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 NOCITs medical assisting assessment. A potential to earn AMCA clinical medical assistant certification (CMAC) may be available to graduates at the post-secondary level. 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. 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. This course requires a student materials fee as listed in FCPS Notice 5922.
HEALTH and PHYSICAL EDUCATION

HEALTH AND PHYSICAL EDUCATION 9  (730000)
Grades: 9  Credit: one
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.

ADAPTED HEALTH AND PHYSICAL EDUCATION    (770002)
Grades: 9, 10  Credit: one
Prerequisite: Students must have an Individual Education Plan (IEP) for course enrollment.
The adapted health and physical education course is a modified version of the general health and physical education course and is designed for students who have IEPs indicating adapted physical education services in a special education setting. Students gain knowledge and skills in a variety of team sports/activities and participate in individualized personal fitness plans to promote an active lifestyle. Activities are designed for the student’s present level of performance and directed to improve deficit areas and maximize participation. Students will participate in modified health education units required of their grade level.

ADAPTED PHYSICAL EDUCATION    (770003)
Grades: 11, 12  Credit: one
Prerequisite: Students must have an Individual Education Plan (IEP) for course enrollment.
The adapted physical education elective course builds on the knowledge and skills acquired in 9th and 10th grade and is designed for students who have IEPs indicating adapted physical education services in a special education setting. Students gain knowledge and skills in a variety of team sports/activities and participate in individualized personal fitness plans to promote an active lifestyle. Activities are designed for the student’s present level of performance and directed to improve deficit areas and maximize participation. NOTE: This course is not required for students who have completed 9th and 10th grade health and physical education and enrollment should be determined by IEP teams.
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, teamwork, guest speakers, and DECA activities 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.

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.

Entrepreneurship provides students opportunities for learning small business ownership skills. Students will experience the process of developing, financing, and marketing a new product or service through an interactive curriculum. Classroom instruction will be reinforced through the use of case studies, guest lecturers, and field trips. 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 may have a dual enrollment option with Northern Virginia Community College. For more information, visit the CTE website.

Industry certification may be available as part of this course.

This specialized program enables students to learn business organization as well as operation skills and techniques in a realistic business setting. Classes are held in Fair Oaks shopping mall. Traditional classroom instruction in marketing, merchandising, fashion and management is enhanced by the opportunity for students to meet and work with professionals in the mall businesses. Students will develop critical-thinking and decision-making skills through the application of marketing principles to small and large businesses, nonprofit organizations, service industries, and other institutions or associations that make products or provide services. Students attend their base schools for regular classes and then travel to Fair Oaks shopping mall for both classroom instruction and related on-the-job training. The Holiday Gift Wrap Center and Prom Dress Shop offer additional opportunities for real-life entrepreneurial experiences. Due to the unique structure of this program, excellent attendance is mandatory. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. The cooperative education (Marketing Cooperative Internship) 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.
CLASSROOM-ON-THE-MALL: FASHION MARKETING 2 (814523)
Grades: 11, 12
Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)
(Fair Oaks Mall - 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 in Fair Oaks shopping mall. Traditional classroom instruction in marketing, merchandising, fashion and management is enhanced by the opportunity for students to meet and work with professionals in the mall businesses. Students will develop critical-thinking and decision-making skills through the application of marketing principles to small and large businesses, nonprofit organizations, service industries, and other institutions or associations that make products or provide services. Students attend their base schools for regular classes and then travel to Fair Oaks shopping mall for both classroom instruction and related on-the-job training. The Holiday Gift Wrap Center and Prom Dress Shop offer additional opportunities for real-life entrepreneurial experiences. Due to the unique structure of this program, excellent attendance is mandatory. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. The cooperative education (Marketing Cooperative Internship) 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.

MARKETING COOPERATIVE INTERNSHIP (CO-OP) (819920)
Grades: 10, 11, 12
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
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.

MATHEMATICS

ALGEBRA 1 (313000)
Grades: 8, 9, 10, 11
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
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.

ALGEBRA 2 (313500)
Grades: 9, 10, 11, 12
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
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.
COMPUTER SCIENCE  (318400)
Grades: 9, 10, 11, 12
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.

PRECALCULUS WITH TRIGONOMETRY  (316000)
Grades: 10, 11, 12
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
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
Prerequisite: Algebra 2
Corequisite: Precalculus with Trigonometry

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; Sinusoids 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.
### GEOSYSTEMS HONORS (422036)

**Grades:** 11, 12  
**Credit:** one/weighted +.5  
**Prerequisite:** Biology 1 and Chemistry 1

Geosystems Honors 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 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.

### 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.

### ENGINEERING PHYSICS (452026)

**Grades:** 11, 12  
**Credit:** one  
**Corequisite:** Physics 1 (451000); 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.

### SOCIAL STUDIES

### 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 +.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 (221200)

**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 (221236)

**Grades:** 10  
**Credit:** one/weighted +.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.  

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

### VIRGINIA AND UNITED STATES HISTORY (236000)

**Grades:** 11  
**Credit:** one

Students examine the political, economic, social, and cultural changes of the United States, including the role of Virginia. Students study major historical developments and their impact on contemporary society and on the individual. Geography skills, 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 changes of the United States, including the role of Virginia. Students study major historical developments and their impact on contemporary society and on the individual. Geography skills, 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 international, 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.
TECHNOLOGY AND ENGINEERING EDUCATION

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.

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 and 3D 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.

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.

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 Autodesk 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 in Autodesk Inventor 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.

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.

AEROSPACE SCIENCE 1  (848726)
Grades: 10, 11, 12  Credit: one  Prerequisite: Recommended: STEM Engineering (845000)

(Air Force Academy 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.

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 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.
Grades: 11, 12  Credit: one
Corequisite: Physics 1 (451000); Algebra Option: Co-enrollment in or completion of Algebra 2 (313500); Calculus Option: Co-enrollment in a calculus-based mathematics course (316308, 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.

STEM ROBOTICS SYSTEMS 1 HONORS  (842560)
Grades: 10, 11, 12  Credit: one/weighted +.5
(Chantilly and Marshall Academies - 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 ROBOTICS SYSTEMS 2 HONORS  (842700)
Grades: 12  Credit: one/weighted +.5
(Chantilly and Marshall Academies - transportation may be provided)

Students develop and in-depth understanding of automation and its application in manufacturing. Activities center on flexible manufacturing processes and computer integrated manufacturing (CIM). Students work in teams to solve complex interdisciplinary problems that stem from the major systems in automated manufacturing.

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 and Edison 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 and Edison 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 and Edison 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: 10, 11  Credit: one
Prerequisite: 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: 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: 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 internships 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.

CONSTRUCTION TECH 1 - SPRING VILLAGE RESIDENTIAL
CONSTRUCTION SITE  (851562)
Grades: 10, 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). All aspects of new home construction will be addressed during the course of the year. Students will work directly on concrete installation, framing, ceramic tile, kitchen installation, bathroom installations, hardwood floors, electrical, plumbing, HVAC, landscape, and other areas of new home construction. Theoretical and physical aspects of the construction industry are explored in order for students to establish career goals in the industry. Industry certification may be available as part of this course.

COSMETOLOGY 1   (852727)
Grades: 10, 11, 12
Credit: two

Prerequisite: Cosmetology 1 (852827)

(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.

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

COSMETOLOGY 2   (852827)
Grades: 11, 12
Credit: two

Prerequisite: Cosmetology 1 (852827)

(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 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.

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). All aspects of new home construction will be addressed during the course of the year. Students will work directly on concrete installation, framing, ceramic tile, kitchen installation, bathroom installations, hardwood floors, electrical, plumbing, HVAC, landscape, and other areas of new home construction. Theoretical and physical aspects of the construction industry are explored in order for students to establish career goals in the industry. Industry certification may be available as part of this course.

COSMETOLOGY 3   (852827)
Grades: 10, 11, 12
Credit: two

Prerequisite: Cosmetology 2 (852827)

Base school optional; Hayfield Secondary School, Chantilly, Edison, and Marshall Academies - transportation may be provided)

Students 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 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.

CONSTRUCTION TECH 3   (853727)
Grades: 11, 12
Credit: two

Prerequisite: Construction Technologies 2 (852827)

Students 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 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.

CONSTRUCTION TECH 4   (853827)
Grades: 11, 12
Credit: two

Prerequisite: Construction Technologies 3 (852827)

Students 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 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.

Carpentry 1 (860126)
Grades: 10, 11, 12
Credit: one

Prerequisite: Carpentry 1 (860126)

(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. Curriculum is developed by the National Association of Home Builders (NAHB). 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 2 (860227)
Grades: 11, 12
Credit: two

Prerequisite: Carpentry 1 (860126)

(Chantilly Academy - Transportation may be provided)

Students 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 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.

Carpentry 3 (860327)
Grades: 12
Credit: two

Prerequisite: Carpentry 2 (860227)

(Chantilly Academy - Transportation may be provided)

Students 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 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.

CONSTRUCTION TECH 1 - SPRING VILLAGE RESIDENTIAL
CONSTRUCTION SITE  (851561)
Grades: 10, 11, 12
Credit: one

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). All aspects of new home construction will be addressed during the course of the year. Students will work directly on concrete installation, framing, ceramic tile, kitchen installation, bathroom installations, hardwood floors, electrical, plumbing, HVAC, landscape, and other areas of new home construction. Theoretical and physical aspects of the construction industry are explored in order for students to establish career goals in the industry. Industry certification may be available as part of this course.

Industry certification may be available as part of this course.
COSMETOLOGY 3 (852927)
Grades: 12
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 (87026)
Grades: 10, 11, 12
Prerequisite: Criminal Justice 1 (87026)
(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
Prerequisite: Criminal Justice 1 (87026)
(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.

Electrical Construction and Engineering 1 (853326)
Grades: 10, 11, 12
Prerequisite: Electrical Construction and Engineering 1 (853326)
(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
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: 11, 12
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 PLCs, 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
(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 specially 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 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 2 (850427)
Grades: 11, 12
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 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 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 PHOTOGRAPHY STUDIO 1  (860726)  
Grades: 10, 11, 12  
(Fairfax Academy - transportation may be provided)  
(Prerequisite: Professional Television Production 1 (868826). Portfolio review may be required.)  
This course provides students with experience needed to begin a career in professional 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. Students will be exercising by using high-end digital cameras and sophisticated imaging 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 workplace or advanced photography educational program. 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.

PROFESSIONAL PHOTOGRAPHY STUDIO 2  (860827)  
Grades: 11, 12  
(Fairfax Academy - transportation may be provided)  
(Prerequisite: Professional Photography Studio 1 (860726). Portfolio review may be required.)  
Students will develop studio lighting techniques and composition skills in this project-oriented course. Students will be and will be exercising by using high-end digital cameras and sophisticated imaging 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 workplace or advanced photography educational program. 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.

PROFESSIONAL TELEVISION PRODUCTION 1  (868826)  
Grades: 10, 11, 12  
(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 2  (868927)  
Grades: 11, 12  
(Fairfax and West Potomac Academies - transportation may be provided)  
(Prerequisite: Professional Television Production 1 (868826). 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  
(Fairfax and West Potomac Academies - Transportation may be provided)  
(Prerequisite: Professional Television Production 2 (868927)). 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 opportunities for real-world 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  
(Edison Academy - Transportation may be provided)  
(Prerequisite: None)  
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  

E-CLASSROOM ARABIC 1  (501062)  
Grades: 9, 10, 11, 12  
(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.

E-CLASSROOM ARABIC 2  (502062)  
Grades: 9, 10, 11, 12  
(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.
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.

**SPANISH 1 (551000)**

**Grades: 8, 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 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: 8, 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 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 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.

**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 and Fairfax 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 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.
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 Fairfax Academy. Students who sign up for Chinese 3 in the fall semester must take Chinese 4 in the spring.

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.

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. 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.

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 interact orally and in writing. Students begin to explore and study the 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.

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. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy.