Madison High School
HOME OF THE WARHAWKS

2016 - 2017
Course Selection Guide

James Madison High School
2500 James Madison Drive
Vienna, Virginia 22181
703-319-2300
www.fcps.edu/MadisonHS/
Schedule Change Policy

The counselors and teachers at Madison High School spend a great deal of time during the second semester meeting and talking with students to help them select the appropriate courses for the following year. We expect students, with input from their parents, teachers and counselors to select their courses wisely and not to anticipate an opportunity to solve a problem in their schedules after school begins. The variety of courses and the number of sections of each course that we offer are based on the number of students who have signed up for a class. Teachers are hired and assigned to classes based on students’ course selection. **After school begins, changes in elective courses will only be honored for the first week. Students taking Honors and AP courses are expected to attempt them for the entire year.**

**Any Change in a student’s schedule is always subject to availability in that class.**
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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.

<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>3</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory Science(^2,6)</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>History and Social Sciences(^4,6)</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Ed</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Electives(^7)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Student Selected Test(^3)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>22</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

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

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

\(^4\) Courses to satisfy this requirement shall include at least two sequential electives.

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

\(^6\) Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquires a professional license in a career and technical educational field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student selected verified credit and (ii) either a science or history and social sciences verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board as an additional test to verify student achievement.
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>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 Science(^2)</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>World Language(^4)</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>Electives</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Student Selected Test(^5)</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>24</strong></td>
<td><strong>9</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.

<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>Mathematics(^1)</td>
</tr>
<tr>
<td>Science(^2)</td>
</tr>
<tr>
<td>History and Social Sciences(^3)</td>
</tr>
<tr>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Ed</td>
</tr>
<tr>
<td>Electives(^4)</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
</tr>
</tbody>
</table>

\(^1\) Courses completed to satisfy this requirement shall include content from among applications of algebra, geometry, personal finance, and probability and statistics in courses that have been approved by the Board of Education (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>Subject Area</td>
</tr>
<tr>
<td>-----------------------------------</td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Mathematics&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Laboratory Science&lt;sup&gt;2, 6&lt;/sup&gt;</td>
</tr>
<tr>
<td>History and Social Sciences&lt;sup&gt;3, 6&lt;/sup&gt;</td>
</tr>
<tr>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>World Language, Fine Arts or Career and Technical Ed&lt;sup&gt;5&lt;/sup&gt;</td>
</tr>
<tr>
<td>Economics &amp; Personal Finance</td>
</tr>
<tr>
<td>Electives&lt;sup&gt;7&lt;/sup&gt;</td>
</tr>
<tr>
<td>Student Selected Test&lt;sup&gt;3&lt;/sup&gt;</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.

<table>
<thead>
<tr>
<th>Advanced Studies 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>
</tr>
<tr>
<td>Laboratory Science</td>
</tr>
<tr>
<td>History and Social Sciences</td>
</tr>
<tr>
<td>World Language</td>
</tr>
<tr>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>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 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.
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.

### 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>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Science</td>
<td>2</td>
</tr>
<tr>
<td>History and Social Sciences</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>Electives</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.

### 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 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>
<thead>
<tr>
<th>Standard Diploma Course Requirements (8 VAC 20-131-50)</th>
<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>
<td></td>
</tr>
<tr>
<td>Mathematics(^1)</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Laboratory Science(^2),(^6)</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>History and Social Sciences(^4),(^6)</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>World Language, Fine Arts or Career and Technical Ed(^7)</td>
<td>2</td>
<td></td>
<td></td>
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<tr>
<td>Economics &amp; Personal Finance</td>
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<tr>
<td>Electives(^4)</td>
<td>3</td>
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<td></td>
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<tr>
<td>Student Selected Test(^8)</td>
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<tr>
<td>Career and Technical Education Credential(^8)</td>
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<tr>
<td>Total Credits(^9)</td>
<td>22</td>
<td>6</td>
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</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>Advanced Studies 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>
<td>History and Social Sciences</td>
</tr>
<tr>
<td>World Language</td>
</tr>
<tr>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>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 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” or better average in those courses or pass an examination or an occupational competency assessment in a career and technical education concentration or specialization that confers certification or occupational competency credential from a recognized industry, trade or professional association or acquire a professional license in that career and technical education field from the Commonwealth of Virginia. The Board shall approve all professional licenses and examinations used to satisfy these requirements.

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

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

6. The **Seal of Biliteracy** 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</td>
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<tr>
<td>A-</td>
<td>3.7</td>
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<tr>
<td>A-</td>
<td>3.3</td>
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<tr>
<td>A-</td>
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<td>C-</td>
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<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>E</td>
<td>0.0</td>
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</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:

1st quarter No penalty—nothing is recorded.

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

3rd quarter WP or WF is recorded.

4th quarter WP or F for failure is recorded.

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 may audit a course one year and then take it for credit the next year. Students who audit a
course must meet all attendance requirements and strive toward completion of 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 university for admission into the course. Students enrolling in a dual enrollment course will work directly with their high school to register for the course. With the exception of highly specialized Career and Technical Education (CTE) courses offered only at high school academy sites, individual high schools determine if they will offer dual enrollment courses based on teacher endorsement requirements, existing course offerings, and student interest. For more information on dual enrollment opportunities and the opportunity to earn a General Education Certificate, speak with your school counselor or
ADVANCED ACADEMIC PROGRAMS

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.

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

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 IB Diploma 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: http://www.fcps.edu/pla/TJHSST_Admissions/index.html.

CAREER AND TECHNICAL EDUCATION
Course descriptions for Career and Technical Education (CTE) courses can be found under Business and Information Technology, Family and Consumer Sciences, Health and Medical Sciences, Marketing, Technology and Engineering Education, and Trade and Industrial 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=B1CC2EDFD153A295825706E00545AA9 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:

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>Algebra</th>
<th>Biology 1</th>
<th>Advanced Accounting</th>
</tr>
</thead>
<tbody>
<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>
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<tr>
<td>Geometry Honors</td>
<td>Chemistry 1 Honors</td>
<td>Spanish 2</td>
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<tr>
<td>Algebra 2</td>
<td>Physics 1</td>
<td>Spanish 3</td>
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<td>Algebra 2 Honors</td>
<td>Geosystems</td>
<td>AP Spanish Language</td>
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<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>
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<td>Creative Writing 1</td>
<td>World History &amp; Geography 2</td>
<td>Korean 3</td>
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<td>Creative Writing 2</td>
<td>World History &amp; Geography 2 Honors</td>
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<td>Creative Writing 2</td>
<td>VA &amp; US History</td>
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<td>VA &amp; US History Honors</td>
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<td>English 9 Honors</td>
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<td>English 11</td>
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<td>English 11 Honors</td>
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<tr>
<td>AP English Language</td>
<td>AP US History</td>
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</tbody>
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*Deadline for enrollment is March 18, 2016 for the SY 2016-17*
HIGH SCHOOL ACADEMIES AND OTHER SPECIALIZED CTE COURSES

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

2016-2017 HIGH SCHOOL ACADEMY COURSE OFFERINGS

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<tr>
<th>CHANTILLY ACADEMY – A Governor’s STEM Academy</th>
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<tbody>
<tr>
<td>Air Force JROTC</td>
<td>Cyber: Network Administration</td>
</tr>
<tr>
<td>Animal Science</td>
<td>Exploring the Language of Medicine</td>
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<tr>
<td>Automotive Collision Service</td>
<td>Cyber: Routing and Switching, Cisco</td>
</tr>
<tr>
<td>Automotive Technology</td>
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<tr>
<td>Automotive Technology</td>
<td>Medical Assistant</td>
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<tr>
<td>Criminal Justice</td>
<td>Pre-Calculus (Dual Enrollment) with Chantilly Academy course</td>
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<tr>
<td>Carpentry</td>
<td>Pharmacy Technician</td>
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<tr>
<td>Cosmetology</td>
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<td>Criminal Justice</td>
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<tr>
<td>Culinary Arts</td>
<td>Teachers for Tomorrow</td>
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<tr>
<td>Cyber: Computer Systems Technology – A+</td>
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<tr>
<td>Cyber: Database Design &amp; Management, Oracle</td>
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<tr>
<th>EDISON ACADEMY</th>
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<td>Electrical Construction &amp; Engineering</td>
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<tr>
<td>Academy Dance</td>
<td>Heating, Ventilation, AC, &amp; Refrigeration</td>
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<tr>
<td>Chinese</td>
<td>Professional Photography Studio</td>
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<tr>
<td>Fashion Careers</td>
<td>Professional Television Production</td>
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<tr>
<td>Teachers for Tomorrow</td>
<td>Social Media Marketing</td>
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<tr>
<th>FALLS CHURCH ACADEMY – A Governor’s Health Sciences Academy</th>
<th><a href="http://www.fcps.edu/fallschurchacademy/">http://www.fcps.edu/fallschurchacademy/</a></th>
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<tbody>
<tr>
<td>Biotechnology Foundations</td>
<td>Early Childhood Careers</td>
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<tr>
<td>Biomedical Technician</td>
<td>Exploring Health Sciences</td>
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<tr>
<td>Criminal Justice</td>
<td>Exploring the Language of Medicine</td>
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<tr>
<td>Dental Careers</td>
<td>Fire and Emergency Medical Sciences</td>
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<tr>
<td>Aerospace Science</td>
<td>Cyber: Network Administration</td>
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<tr>
<td>Automotive Technology</td>
<td>Entrepreneurship</td>
</tr>
<tr>
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<td>Cyber: Computer Systems Technology – A+</td>
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<td>Criminal Justice</td>
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<th>MARSHALL ACADEMY – A Governor’s STEM Academy</th>
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<tr>
<th>WEST POTOMAC ACADEMY – A Governor’s Health Sciences Academy</th>
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<tr>
<th>CLASSROOM ON THE MALL at Fair Oaks Mall</th>
<th>FAIRFAX COUNTY SCHOOL OF PRACTICAL NURSING Plum Center</th>
<th>SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE in Springfield, Virginia</th>
<th>FAIRFAX COUNTY FIRE AND RESCUE ACADEMY in Fairfax, Virginia</th>
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<tr>
<td>Fashion Marketing 2 Marketing Management</td>
<td>Practical Nursing</td>
<td>Construction Technologies</td>
<td>Firefighting</td>
</tr>
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</table>
BUSINESS & INFORMATION TECHNOLOGY

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 accounts receivable/accounts payable, inventory, systems, payroll, taxes, and banking activities. Upon completion of this course, students will be able to complete an accounting cycle from transactions to financial statements. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Industry certification may be available as part of this course.

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

Students continue to master accounting principles and procedures, adding new topics about managerial accounting, cost accounting, financial analysis, and business ethics. Content areas include property, plant and equipment, corporate investments, bonds, notes payable and receivables, 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 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.

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

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

BUSINESS LAW (613233) /BUSINESS MANAGEMENT (613634)
Grades: 9, 10, 11, 12  Credit: one

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

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

Industry certification may be available as part of this course.

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

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

Industry certification may be available as part of this course.

CYBER: COMPUTER SYSTEMS TECHNOLOGY 1 A+ (862232)
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 (666032)
Grades: 10, 11, 12  Credit: one
Prerequisite: Computer-related course or equivalent skill (Chantilly and Edison Academies - transportation may be provided)
This is an advanced information technology class that provides complete, hands-on computer training in data modeling and database application software with an emphasis on Oracle 9i. An example of an Oracle web site would be Amazon.com. Students taking this course will be prepared to take Oracle's Introduction to SQL (Structured Query Language) programming exam. Preparation for careers is a major component of this class. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site.

Industry certification may be available as part of this course.

**CYBER: DATABASE DESIGN AND MANAGEMENT 2, ORACLE**

662332 Grades: 11, 12 Credit: one Prerequisite: Cyber: Database Design and Management 1, Oracle (Chantilly and Edison Academies - transportation may be provided)

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

Industry certification may be available as part of this course.

**CYBER: NETWORK ADMINISTRATION 1**

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

Cyber: Network Administration 1 is a comprehensive, hands-on computer course in which students are taught basic networking skills using Windows and Microsoft Server. Topics covered throughout the year include network concepts, installation, configuration, management, and troubleshooting. Network Administration is designed to teach many aspects of computer support and network administration. Students learn networking concepts, from usage to components, and set up peer-to-peer network systems and client server networks. Students install and configure network cards and connect them to networks. Students learn how to install the operating systems, set up and manage accounts, load software, and set up and implement security plans. Upon successful completion of Network Administration, students may elect to obtain industry-recognized professional certification. 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: NETWORK ADMINISTRATION 2**

665132 Grades: 11, 12 Credit: one Prerequisite: Cyber: Network Administration 1 (Chantilly, Edison, and Marshall Academies - transportation may be provided)

Cyber: Network Administration 2 is designed to continue teaching aspects of network administration-focusing on management and support of network users and systems. Time is spent discussing responsibilities of computer professionals, training end users, evaluating new technology, developing system policies, troubleshooting workstations, managing network services and protocols, and effectively using e-business communications. Students learn communications protocols, troubleshooting techniques for systems and client server networks, web site management and other advanced networking topics. Upon successful completion of Network Administration, students may elect to obtain industry-recognized professional certification. 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 1A, CISCO**

854322 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 spring semester. This course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help-desk technicians. It provides a hands-on introduction to networking and the Internet, using tools and hardware commonly found in home and small business environments. Labs include PC installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of game consoles, scanners, and cameras. 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 1B, CISCO**

854332 Grades: 10, 11, 12 Credit: one-half Prerequisite: Cyber: Routing and Switching 1A, Cisco Corequisite: Cyber: Routing and Switching 1A, 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 1A, 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 administration 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 1A and 1B, Cisco in the spring semester. This course focuses on management and support of network systems, set up peer-to-peer network systems and client server networks. Students install and configure network cards and connect them to networks. Students learn how to install the operating systems, set up and manage accounts, load software, and set up and implement security plans. Upon successful completion of Network Administration, students may elect to obtain industry-recognized professional certification. 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 1A, 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 1A, 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,
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 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 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.

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

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

Students are required to take the Standards of Learning End of Course
Test. Recommendation of current English teacher.

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.

AP ENGLISH LITERATURE AND COMPOSITION (119504)
Grades: 12 Credit: one/weighted +1.0
Prerequisite: English 11

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

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.

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

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

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

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

JOURNALISM 4 (121200)
Grades: 12 Credit: one
Prerequisite: Journalism 3

In Journalism 4 students learn marketable publications skills; develop
individual writing, layout, and design styles; and may assume editorial
leadership and responsibility for producing a high school newspaper and/or
student produced website. Students also take responsibility for business and
circulation management. Permission of Instructor.

BROADCAST JOURNALISM 1 (122000)
Grades: 10, 11, 12 Credit: one

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

BROADCAST JOURNALISM 2 (122012)
Grades: 10, 11, 12 Credit: one
Prerequisite: Broadcast Journalism 1

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

BROADCAST JOURNALISM 3 (122013)
Grades: 11, 12 Credit: one
Prerequisite: Broadcast Journalism 2

In this course, students expand their learning and practice the language and
processes of broadcast journalism and reporting. They become proficient at
producing the news while understanding of the role and responsibilities of
broadcast journalists. Permission of Instructor.

BROADCAST JOURNALISM 4 (122014)
Grades: 12 Credit: one
Prerequisite: Broadcast Journalism 3

In this course, students advance their broadcast journalism skills by
practicing communication skills in the community and in the media
workplace. They become proficient at producing in-depth news packages
and quality field reports. They master the rights and responsibilities of
broadcast journalism. Permission of instructor.

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

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

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

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

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

In Photojournalism 3, students refine their copywriting skills and advance
their computer and photography skills, develop individual style, and may
assume leadership roles as members of the yearbook staff's editorial board.
Permission of Instructor.
ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

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.

STRATEGIES FOR SUCCESS (788991)
Grades: 9, 10, 11, 12
Credit: one

This elective course is designed to provide support English Learners 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.

ENGLISH AND UNITED STATES GOVERNMENT FOR ENGLISH LEARNERS (244091)
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 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.

ESOL INDIVIDUALIZED MATH 1 (312191)
Grades: 9, 10, 11
Credit: one
The course is designed for WIDA ELP Level 1 & 2 students with significant gaps in mathematics to support the development of the mathematics and language skills necessary for success in Algebra 1. Over the period of one year meeting daily, students examine algebra- and geometry-preparatory concepts and skills; strategies for collecting, analyzing, and interpreting data; and number concepts and skills emphasizing proportional reasoning. Problem solving, communication, concept representation, and connections among mathematical ideas are presented in a hands-on learning environment. Students may need up to two years to complete the course, but should move to the next course as soon as their mathematics skills warrant. This course emphasizes language objectives in addition to mathematics objectives and does not meet the mathematics graduation requirements; students earn elective credit.

ESOL INDIVIDUALIZED MATH 2 (312190)
Grades: 9, 10, 11
Credit: one
The course is designed for WIDA ELP Level 1 & 2 students with gaps in mathematics to support the development of the mathematics and language skills necessary for success in Algebra 1. Students examine algebra- and geometry-preparatory concepts and skills; strategies for collecting, analyzing, and interpreting data; and number concepts and skills emphasizing proportional reasoning. Problem solving, communication, concept representation, and connections among mathematical ideas are presented in a hands-on learning environment. Students may need up to two years to complete the course, but should move to the next course as soon as their mathematics skills warrant. This course emphasizes language objectives in addition to mathematics objectives and does not meet the mathematics graduation requirements; students earn elective credit.

FAMILY & CONSUMER SCIENCES

GOURMET AND INTERNATIONAL FOODS (825900)
Grades: 10, 11, 12
Credit: one
This course allows students to explore food safety and sanitation, prepare and experience the flavor of global cuisines, become skilled in food presentation, and learn about the diverse careers opportunities related to the hospitality, tourism and recreation industry. Skills in mathematics, science, and technology will be reinforced throughout the curriculum. Students completing Gourmet and International Foods with a ‘B’ or better may be eligible to articulate 4.5 credits at Stratford University. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

INTRODUCTION TO CULINARY ARTS (825026)
Grades: 10, 11, 12
Credit: one
Chantilly, Edison, and Marshall Academies - transportation may be provided
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
Chantilly, Edison, and Marshall Academies - transportation may be provided
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 preparation, meat identification and fabrication, pantry, breakfast, and serving and equipment and purchasing. Students completing Culinary Arts 1 will be eligible to articulate 1.0 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.

CULINARY ARTS 2 (827627)
Grades: 11, 12
Credit: two
Prerequisite: Culinary Arts 1 (827527)
Chantilly, Edison, and Marshall Academies - transportation may be provided
This course builds on the skills learned in Culinary Arts 1. Further advanced instruction in table service, baking, pastries, and management techniques is emphasized. Students create a plan for establishing a restaurant that includes menu selection and preparation, facilities design, and management components. Selected students may participate in internship activities as an option in cooperation with the local business community. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

INTRODUCTION TO EARLY CHILDHOOD CAREERS (823426)
Grades: 10, 11, 12
Credit: one
This course focuses on the principles and elements of design, design types and vocabulary, psychological and physiological aspects of color, decision-making skills, utilization of space, and development of artistic skills. The interior design component focuses on environmental components, lighting, accessories, energy conservation, furnishings, equipment selection and including the historical and cultural influences in the interior design industry. Career development and careers related to design are explored. Instructors emphasize the basic skills of mathematics, science, technology, and the arts when appropriate in the content.
This course requires a student materials fee as listed in FCPS Notice 5922.
Students focus on the principles of child growth and development; development of self-concepts and building self-esteem; appreciation of diversity; learning experiences for children; principles of guiding children in a positive manner; healthy and safe environments; career development; and careers related to early childhood professionals through hands-on exploration, projects, and group learning.

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 (912000), 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 web site.

Industry certification may be available as part of this course.

**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.

**TEACHERS FOR TOMORROW 1** (906226)

*Grades: 11, 12 Credit: one*

**Prerequisite:** Early Childhood Careers 1 (828527)

(Base school optional; Chantilly Academy, Edison Academy, and Falls Church Academy - transportation may be provided)

**TEACHERS FOR TOMORROW 2** (907226)

*Grades: 11, 12 Credit: one*

**Prerequisite:** Teachers for Tomorrow 1 (906226)

(Base school optional; Chantilly Academy, Edison Academy, and Falls Church Academy - transportation may be provided)

In this advanced level course, students will continue to pursue their interest of careers in education. The primary focus of the class is the teacher and teaching, reinforcing the skills and knowledge needed to prepare students to become future educators. Students will have the opportunity to gain teaching experience through participation in supervised internships outside the teacher cadet classroom. The internships 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.

**FINE ARTS DANCE**

**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
(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.

FINE ARTS

MUSIC

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) Symphonic
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.

ADVANCED BAND (923416) Wind Symphony
Level 2
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.

JAZZ ENSEMBLE (924015)
Level 1
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition or permission of the instructor
Corequisite: Schools may require membership in an intermediate or advanced band class, and may require participation in marching band.

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

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

PERCUSSION ENSEMBLE (925015)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition
Corequisite: Schools may also require membership in an intermediate or advanced band, chorus or orchestra class. Participation in marching band may be required for wind and/or percussion students.

The percussion ensemble class is designed to meet specific needs of percussionists. Content includes study of the appropriate ensemble literature, and rehearsal and performance techniques from the various areas of musical composition. Instrumentation of the group is at the discretion of the instructor. Marching band techniques and performances may be included. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

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

INTERMEDIATE ORCHESTRA (923816) Concert
Level 2
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) Symphonic
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.
This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED ORCHESTRA (923916) Philharmonic Level 2
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Successful audition

Students continue developing as individual musicians and as members of a musical group. Emphasis is placed on the development of advanced 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 (923917) Chamber Level 3
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.

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

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

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

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

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

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

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

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

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

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

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

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

GUITAR 2 (924516)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Successful audition or successful completion of Guitar 1 or permission of the instructor

Students continue to develop skills on the guitar. Guitar instruction emphasizes intermediate technique, reading, progressions, and music theory. Instructional literature is selected from classical and contemporary repertoire. Guest artists and field trips to performances and/or seminars may also be part of the curriculum. Beginning, intermediate, and advanced levels may be offered, depending on curriculum needs and student enrollment. Student performance may be required.

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

PIANO LAB 1 (925515)
Grades: 9, 10, 11, 12  Credit: one

Students learn the fundamentals of keyboard instruments. Keyboard instruction includes the study of scale patterns and knowledge of harmonic progressions, as well as individual practice on a keyboard instrument. Instructional literature is selected from classical and contemporary repertoire. Guest artists and field trips to performances and/or seminars may also be part of the curriculum. Beginning, intermediate, and advanced levels may be offered, depending on curriculum needs and student enrollment. Student performance may be required.

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

PIANO LAB 2 (925516)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Piano Lab 1, or successful audition

Students refine the fundamentals of playing keyboard instruments. Intermediate keyboard instruction includes the study of scale patterns and knowledge of harmonic progressions, as well as individual practice on a keyboard instrument. Instructional literature is selected from classical and contemporary repertoire. Guest artists and field trips to performances and/or seminars may also be part of the curriculum. Student performance may be required.

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

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

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

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

THEATRE ARTS 3 (143000)
Grades: 11, 12  Credit: one
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  Credit: one
Prerequisite: Theatre Arts 3 and/or recommendation of the theatre arts instructor.

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

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

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

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

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

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

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

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

**TECHNICAL THEATRE 3** (143513)

*Grades: 11, 12  Credit: one
Prerequisite: Technical Theatre 2 or recommendation of the instructor*

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

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

**ADVANCED TECHNICAL THEATRE 1** (143527)

*Grades: 11, 12  Credit: two
Prerequisite: 11th or 12th grade standing, Technical Theatre 2, or permission of instructor*

*Fairfax Academy*

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

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

**ADVANCED TECHNICAL THEATRE 2** (143567)

*Grades: 12  Credit: two
Prerequisite: Advanced Technical Theatre 1*

*Fairfax Academy*

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

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

**PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 1** (143027)

*Grades: 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 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 3** (145027)

*Grades: 12  Credit: two
Prerequisite: Professional Musical Theatre and Actor’s Studio 2 or teacher recommendation*

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

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

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

**FINE ARTS VISUAL ARTS**

**STUDIO ART AND DESIGN 1** (912000)

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

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

Course content includes art production, art appreciation, and studies in visual culture.

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

**STUDIO ART & DESIGN 2** (913000)

*Grades: 10, 11, 12  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.

STUDIO ART AND DESIGN 3 (914000)
Grades: 11, 12
Prerequisite: Studio Art and Design 2

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.

STUDIO ART & DESIGN 4: PORTFOLIO PREPARATION GENERAL (914700)
Grades: 12
Prerequisite: Studio Art and Design 3

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

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

COMPUTER GRAPHICS 1 (918011)
Grades: 9, 10, 11, 12
Credit: one

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.

COMPUTER GRAPHICS 2 (918111)
Grades: 10, 11, 12
Credit: one
Prerequisite: Computer Graphics 1

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

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

COMPUTER GRAPHICS 3 (918211)
Grades: 11, 12
Credit: one
Prerequisite: Computer Graphics 2

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.

COMPUTER GRAPHICS 4: PORTFOLIO PREPARATION (919911)
Grades: 12
Prerequisite: Computer Graphics 3

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

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

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

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

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

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

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

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

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

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

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

PHOTOGRAPHY 4: PORTFOLIO PREPARATION (919914)
Grades: 12
Credit: one
Prerequisite: Photography 3

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

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

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

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

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

3-D STUDIO ART 2 (919712)
Grades: 11, 12
Credit: one
Prerequisite: 3-D Studio Art 1

Acquire and apply in-depth knowledge of three-dimensional processes to create original artworks that may include sculpture, ceramics, architecture, and other three-dimensional art forms. Study historical and cultural styles and leading artists of three-dimensional art forms to inform the artmaking process. Analyze personal artworks and the work of others through critique.

This course requires a student materials fee as listed in FCPS Notice 5922.
and evaluation and apply professional exhibition techniques to arrange a display of selected artworks. Compile a culminating portfolio evidencing expressive content, quality, concentration, and breadth of experience. This course requires a student materials fee as listed in FCPS Notice 5922.

**3-D STUDIO ART 3: PORTFOLIO PREPARATION**  
(914763)  
Grades: 12  
Credit: one  
Prerequisite: 3-D Studio Art 2

Engage in advanced study of three-dimensional studio art processes, aesthetics, and criticism. Use advanced level three-dimensional materials and equipment to produce meaningful artworks that exhibit technical proficiency and personal style. Communicate ideas in unique and innovative ways and demonstrate initiative and commitment to the pursuit of artistic expression. Organize and present an exhibition of personal artworks. Compile a body of work in a final portfolio. This course requires a student materials fee as listed in FCPS Notice 5922.

**ADVANCED PLACEMENT ART: DRAWING PORTFOLIO**  
(915004)  
Grades: 11, 12  
Credit: one/weighted +1.0  
Prerequisite: Studio Art and Design 1 and 2 or permission of the instructor

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

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

**ADVANCED PLACEMENT ART: 2-D DESIGN PORTFOLIO**  
(914804)  
Grades: 11, 12  
Credit: one/weighted +1.0  
Prerequisite: Studio Art and Design 1 and 2 or permission of the instructor

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

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

**ADVANCED PLACEMENT ART: 3-D DESIGN PORTFOLIO**  
(914961)  
Grades: 11, 12  
Credit: one/weighted +1.0  
Prerequisite: Studio Art and Design 1 and 2 or permission of the instructor

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

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

**GENERAL**

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

Instruction in economics and personal finance prepares students to function effectively as consumers, savers, investors, entrepreneurs, and active citizens. Students learn how 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.

**SELF-DIRECTED ONLINE ECONOMICS AND PERSONAL FINANCE - 8TH PERIOD**  
(61200V)  
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)  
(Air Force Academy - transportation may be provided)

This accelerated course covers the heritage and development of flight and military aerospace policies. The year includes the environment in which aircraft and spacecraft operate. Flight and navigational principles and the requirements for human flight are also included. Rocketry, space vehicles, and the exploration of space are covered. Leadership education is emphasized with emphasis on the development of life-skills while exposing cadets to opportunities to learn and practice basic leadership. The leadership/life-skills help prepare cadets for positions in any career. Classes provide cadets with a basic knowledge of military customs and courtesies, military organization and principles of leadership, flag etiquette, and drill and ceremony. Extracurricular activities and opportunities are an important part of AFJROTC. Cadets can participate in drill meets, orienteering, debates, and discussion forums. There is no military obligation associated to AFJROTC. For more information, visit the CTE website.
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 able to enter the Military at higher pay grades than most enlistees. 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.

**STRATEGIES FOR SUCCESS** (788900)

Grades: 9, 10, 11, 12

Credit: one

This elective course is designed to provide support to a student in core curricular areas and to provide direct instruction in specific learning strategies, study skills, time management, organization, and self-advocacy skills. Time is also allotted to address individual areas of need as identified in a student’s Individual Educational Plan (IEP). While students may receive assistance on core curricular assignments, the course is not designed to serve as a study hall. Students enrolled in the course receive the equivalent of one period of instruction each day and earn an elective credit. This course may be taught for an elective credit all four years or more, as appropriate. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard and Modified Standard Diploma. (Students may be awarded a half-credit upon completion of a full semester of placement in the Strategies for Success course. Such a decision is made by the school counselor in conjunction with the special education department chair.)

**COMPUTER TECHNOLOGY ASSISTANCE** (980818)

Grades: 11, 12

Credit: one

Prerequisite: Successful completion of an introductory computer course or approval of course instructor. Technical Assistant Application, Personal Traits and Occupational Skills Rating by each current teacher.

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

**LEADERSHIP TRAINING 1** (980800)

Grades: 9, 10, 11, 12

Credit: one

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

**HEALTH & MEDICAL SCIENCES**

**ANIMAL SCIENCE 1** (831027)

Grades: 10, 11, 12

Credit: two

(Chantilly and Edison Academies - transportation may be provided)

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

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

**ANIMAL SCIENCE 2** (831127)

Grades: 11, 12

Credit: two

Prerequisite: Animal Science 1 (831027)

(Chantilly and Edison Academies - transportation may be provided)

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

**BIOTECHNOLOGY FOUNDATIONS** (834426)

Grades: 11, 12

Credit: one/weighted +.5

(Falls Church and West Potomac Academies - transportation may be provided)

This course focuses on various techniques that are used to modify living organisms, or parts of organisms, to improve plants and animals, and the development of microorganisms for specific purposes. Student activities range from bioprocessing and DNA analysis, to medicine, biomechanical systems, and the environment. Students gain insight and understanding about biotechnology career fields. Successful completion of this course in conjunction with a corresponding industry certification may qualify for a student selected verified credit.

**BIOMEDICAL TECH** (834727)

Grades: 9, 10, 11, 12

Credit: two/weighted +.5

Falls Church and West Potomac

Students gain foundational knowledge and skills appropriate for a variety of medical-related career paths in the field of biotechnology. They are introduced to diagnostic and therapeutic laboratory procedures that support bioscience research and practice, and they investigate safety, quality assurance, and ethical concerns associated with the field of biomedical technology.

**DENTAL CAREERS 1** (832827)

Grades: 11, 12

Credit: two

(Chantilly, Falls Church, and West Potomac Academies - transportation may be provided)

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

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

**DENTAL CAREERS 2** (832927)

Grades: 12

Credit: two

Prerequisite: Dental Careers 1 (832827)

(Chantilly, Falls Church, and West Potomac Academies - transportation may be provided)

During the second year of this course, students refine advanced skills and learn more about the management of the office as well as the dental specialties of oral surgery, orthodontics, and periodontics. Students are provided the opportunity to experience an internship while participating in patient care at local dental offices and to earn a DANB Radiation Health and Safety certification. Lab coats or scrubs must be purchased for this class. Students must purchase liability insurance and meet current dental health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.
Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

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

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 full 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.
(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, 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 for field practice to fully prepare them for the clinical experience and minimize risks. During the course of study, students will have the opportunity to earn NREMT and other certifications. Offsite clinical lab opportunities with Fairfax County Fire and Rescue may be available to the students. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

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

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 for field practice to fully prepare them for the clinical experience and minimize risks. During the course of study, students will have the opportunity to earn NREMT and other certifications. Offsite clinical lab opportunities with Fairfax County Fire and Rescue may be available to the students. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

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

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 a full understanding of the standards necessary to successfully fight 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 Firefighting 1 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 (40.1.79.1 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-material incidents and conduct rescue operations, including vehicle extrication. 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 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  Credit: one
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. Medical Assistant 1 allows students to develop entry-level skills and techniques to increase their knowledge base so that they may enter the health care field. Some of these skills and knowledge base areas include administrative and clinical medical assisting. Field trips to a variety of health care settings may be available. For more information, visit the CTE web site.

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

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 only - transportation may be provided)

This is part one (fall semester) of a two-part, full-year course. Students must also register for part one, Medical Assistant 1 for the fall semester. Students further develop medical-assisting skills and techniques learned in Medical Assistant 1. They also learn management of patient records, cardiopulmonary resuscitation, care and use of equipment, collection and analysis of laboratory specimens, special diagnostic testing, basic diseases and disorders, basic knowledge of treatment and medication, and job preparedness skills. Advanced on-the-job clinical experience in a health care facility may be available as a part of the course. Successful completion of the program may lead to employment in physicians' offices or clinics. Students have the opportunity to earn Healthcare Provider CPR and NOCTI's 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.

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 exposure to 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 scrub 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 (836527)
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 rehabilitation skills and increased exposure to other related healthcare careers. Students must purchase scrub 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.

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

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Practical Nursing 2 for the spring semester. This course offers preclinical nursing instruction during the student's senior year of high school. Foundations of nursing including communication, anatomy and physiology, and medical math, are the main units of focus. Competency-based instruction provides students with the skills needed to provide basic bedside nursing care used for hospitalized, nursing home, and homebound patients. Following successful completion of Practical Nursing 1 and 2, students electing to enroll in the post-secondary clinical level participate in the summer clinical are eligible to sit for the Certified Nursing Assistant (CNA) exam. Courses are held at the Plum Center for Lifelong Learning while community healthcare agencies serve as sites for the practical application of the learned competencies. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. Eligibility for acceptance into nursing program includes strong algebra and biology grades, attendance, and student statement/essay. Successful completion of the Practical Nursing 1 and 2 courses allows students to take a nine-month, full-time postgraduate clinical internship program. The postgraduate clinical internship curriculum enables students to demonstrate advanced nursing competencies. Students successfully completing the preclinical course are eligible to take the Virginia Practical Nursing Licensing Exam (NCLEX) provided they have a Social Security Number or a control number issued by the Virginia
Department of Motor Vehicles as required by the Virginia Board of Nursing. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

PRACTICAL NURSING 2 (835826)
Grades: 12 Credit: one/weighted .5
Prerequisite: Practical Nursing 1 (835726)
(Plum Center for Lifelong Learning - transportation may be provided)

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Practical Nursing 1 for the fall semester. This course offers preclinical nursing instruction during the student's senior year of high school. Foundations of nursing including communication, anatomy and physiology, and introduction to pharmacology, are the main units of focus. Competency-based instruction provides students with the skills needed to provide basic bedside nursing care used for hospitalized, nursing home, and homebound patients. Following successful completion of Practical Nursing 1 and 2, students electing to enroll in the post-secondary clinical level participate in the summer clinical are eligible to take the Certified Nursing Assistant (CNA) exam. Classes are held at the Plum Center for Lifelong Learning while community healthcare agencies serve as sites for the practical application of the learned competencies. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. Successful completion of the Practical Nursing 1 and 2 courses allows students to take a nine-month, full-time postgraduate clinical internship program. The postgraduate clinical internship curriculum enables students to demonstrate advanced nursing competencies. Students successfully completing the post-secondary course are eligible to sit for the Virginia Practical Nursing Licensing Exam (NCLEX) provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Nursing. For more information, visit the CTE web site. Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

HEALTH and PHYSICAL EDUCATION

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 personal fitness plans to develop competencies to promote an active lifestyle. Students gain knowledge and skills in a variety of team sports/activities to participate in individualized personal fitness plans to promote an active lifestyle. Activities are designed for the student's present 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.

PERSONAL FITNESS - LEVEL 1 (764011)
Grades: 10, 11, 12 Credit: one
Prerequisite: Successful completion of Health and Physical Education, grade 9

Students study and apply concepts related to human anatomy and physiology, kinesiology, nutrition, and personal fitness planning. Students will develop and participate in a personal fitness program to improve cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition. Students may not take this course in lieu of the grade 9 or grade 10 Health and Physical Education requirements. Students must have successfully passed PE 9.

PERSONAL FITNESS - LEVEL 2 (764012)
Grades: 11, 12 Credit: one
Prerequisite: Successful completion of Personal Fitness - Level 1

Students extend and enrich their knowledge and the application of human anatomy and physiology, kinesiology, nutrition, and personal fitness planning. Students will develop and participate in a personal fitness program to improve cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition. Students will utilize concepts to assess, plan, monitor, and modify their individual personal fitness plan. Students may not take this course in lieu of the grade 9 or grade 10 Health and Physical Education requirements. Permission of instructor / successful completion of Weight Training and Conditioning - Level 1

SPORTS MEDICINE (763000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Successful completion or concurrent enrollment in biology.

Students will study and apply concepts related to medical professions, anatomy and physiology of skeletal and muscular systems, kinesiology, types of injuries, injury prevention and nutrition. Students may not take this course in lieu of the grade 9 or grade 10 Health or Physical Education requirements.

MARKETING

INTRODUCTION TO MARKETING (811000)
Grades: 9, 10 Credit: one
Students gain an understanding of the importance of marketing in today's society. They develop skills related to interpersonal communication, self-presentation, economics, marketing, sales, employability, career discovery, and ethical decision-making. This course reinforces mathematics, science, English, and history/social science Standards of Learning (SOL). Computer/technology applications and DECA activities support this course. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Field trips, guest speakers, and competitive events through DECA membership enhance the course work.

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

ADVANCED MARKETING (813000)
Grades: 11, 12  Credit: one
Prerequisite: Marketing 1 (812000), Fashion Marketing 1 (814000), Sports and Entertainment Marketing (817500), or approval of instructor

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

SOCIALLY MEDIA MARKETING (817700)
Grades: 10, 11, 12  Credit: one
Prerequisite: Sports and Entertainment Marketing (817500)

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

ADVANCED SPORTS AND ENTERTAINMENT MARKETING (817700)
Grades: 11, 12  Credit: one
Prerequisite: Sports and Entertainment Marketing (817500)

Students will build on prior knowledge of sports, entertainment, and recreation marketing. This course focuses on the principles of management and planning supported by research, financial, and legal concepts. Students will be able to plan and execute an event, develop a career plan, and establish a sports, entertainment, or recreation marketing product/business. Academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course. Computer/technology applications supporting the course are studied. 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. Industry certification may be available as part of this course.

FASHION MARKETING 1 (814000)
Grades: 10, 11, 12  Credit: one

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.

ENTREPRENEURSHIP 1 (909326)
Grades: 11, 12  Credit: one
Prerequisite: Entrepreneurship 1 (909326), Business Plan. Classroom instruction will be supplemented with industry 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.

ENTREPRENEURSHIP 2 (909416)
Grades: 12  Credit: one
Prerequisite: Entrepreneurship 1 (909326), Business Plan. Classroom instruction will be supplemented with industry 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.

SOCIAL MEDIA MARKETING (812526)
Grades: 10, 11, 12  Credit: one
Prerequisite: Entrepreneurship 1 (909326)

This course provides students opportunities for learning basic 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. Industry certification may be available as part of this course.

Students receive an introduction to marketing functions and study the Internet and Social Media marketing's role in the global economy. Students gain knowledge of the tools and technique used in Internet and Social Media marketing. They explore ethical, legal, and security aspects and prepare for a career in Internet and/or Social Media marketing. Academic skills (mathematics, science, English, and history/social science) related to the content are part of this course.

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

Industry certification may be available as part of this course.

CLASSROOM-ON-THE-MALL: MARKETING MANAGEMENT (813223)
Grades: 11, 12  Credit: one
(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.

CLASSROOM-ON-THE-MALL: FASHION MARKETING 2 (814523)
Grades: 11, 12  Credit: one
Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)
(Fair Oaks Mall - 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  Credit: one
Corequisite: Student must be concurrently enrolled in a Marketing or EFE course.

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

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

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

MATHMATICS

ALGEBRA 1 / PART 1 (313164) ALGEBRA 1 (313064)
Grades: 9, 10  Credit: one
Prerequisite: Middle School Mathematics

Algebra 1 / Part 1 1st Semester: extends students' understanding of the real number system and its properties through the study of variables, expressions, equations, inequalities, and analysis of data derived from real-world phenomena. Topics include linear equations and inequalities, linear relations and functions, measures of central tendency (mean, median, mode), data analysis and middle school objectives as needed.

Grade 11, 12

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

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

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

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

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

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

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

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

**ALGEBRA 2 (313500)**

Grades: 9, 10, 11, 12  
Credit: one  
Prerequisite: Algebra 1 and Geometry

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

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

**ALGEBRA 2 STRATEGIES (011035)**

Grades: 9, 10, 11, 12  
Credit: one  
Corequisite: Algebra 2

This course is designed for students enrolled in Algebra 2 who would benefit from extended work building foundational Algebra skills. Students will explore the mathematics process goals in-depth while building algebraic proficiencies. The materials in this course support the core curriculum instructed in Algebra 2. Algebra 2 strategies is to be taken concurrently with Algebra 2.

**ALGEBRA 2 HONORS (313536)**

Grades: 9, 10, 11  
Credit: one/weighted +.5  
Prerequisite: Algebra 1 and Geometry

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

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

**PRECALCULUS WITH TRIGONOMETRY (316000)**

Grades: 10, 11, 12  
Credit: one  
Prerequisite: Geometry and Algebra 2

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

**PRECALCULUS WITH TRIGONOMETRY HONORS (316036)**

Grades: 10, 11, 12  
Credit: one/weighted +.5  
Prerequisite: 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.

**TRIGONOMETRY (315032)**

**DISCRETE MATHEMATICS (315432)**

Grades: 11, 12  
Credit: one  
Prerequisite: Geometry and Algebra 2

Trigonometry: Semester 1- topics include circular functions, right triangle ratios, solving trigonometric equations, inverses, identities, the Laws of Sines and Cosines, graphing trigonometric functions, and applying trigonometric techniques to solving real-world problems. 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.

**Discrete Mathematics**: Semester 2- requires problem-solving strategies be applied to real-world application, develops verbal and written skills in the process of problem-solving, and promotes mathematical connections across disciplines. Course content includes management science, the mathematics of apportionment, matrix operations and applications, recursion, and other discrete applications in the natural and social sciences.

**PROBABILITY AND STATISTICS (319062)**

Grades: 11, 12  
Credit: one  
Prerequisite: Geometry and Algebra 2

Probability and Statistics is an activity-based introduction to statistics that emphasizes working with data, graphs, and statistical ideas including the use of statistical software. Students are expected to develop and present professional quality statistical analyses. Course content includes theory of probability, description of statistical measurements, sampling and experimental design, probability distributions, and statistical inference.

**ADVANCED PLACEMENT STATISTICS (319204)**

Grades: 10, 11, 12  
Credit: one/weighted +1.0  
Prerequisite: Geometry and Algebra 2

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

**APPLIED CALCULUS (319910)**

Grades: 11, 12  
Credit: one  
Prerequisite: Precalculus with Trigonometry

This course provides a conceptual introduction to calculus. Students will investigate the big ideas of differential and integral calculus through applications in business, engineering, and physical and life sciences. They will work individually and collaboratively to engage in research and problem solving, and an emphasis will be placed on communication about their ideas.

**ADVANCED PLACEMENT CALCULUS AB (317004)**

Grades: 11, 12  
Credit: one/weighted +1.0  
Prerequisite: Precalculus with Trigonometry or Precalculus with Trigonometry Honors

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

**ADVANCED PLACEMENT CALCULUS BC (317074)**

Grades: 10, 11, 12  
Credit: one/weighted +1.0  
Prerequisite: PreCalculus with Trigonometry Honors or AP Calculus AB.
This course is an extension of Advanced Placement Calculus AB. This course emphasizes a multi-representational approach to calculus. Concepts, results, and problems are expressed graphically, numerically, analytically, and verbally. Content includes concepts and applications of differential and integral calculus, sequences and series, and elementary differential equations. This course prepares students for the Calculus BC Advanced Placement Examination, for which placement and/or credit may be awarded at the college level, if a qualifying score is obtained. Content of this college-level course corresponds to the syllabus of the College Board Calculus BC Advanced Placement Program. All students are required to take the Advanced Placement exam.

MULTIVARIABLE CALCULUS (317860) MATRIX ALGEBRA
(319800)
Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: AP Calculus BC or IB Mathematics HL II

**Multivariable Calculus:** A third semester college-level course, Multivariable Calculus will provide topics for programming assignments in which students can apply their knowledge. Java is the vehicle for implementing solutions to problems.

**Matrix Algebra:** This college-level course includes the study of systems of linear equations, matrices, linear dependence, linear transformations, and matrix representation, orthogonal reduction, determinants, eigenvectors and eigenvalues, and a variety of applications. This course will receive a weighted grade and may be taken for college credit.

**COMPUTER SCIENCE (318400)**

Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Algebra 1 and Geometry

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

**ADVANCED PLACEMENT COMPUTER SCIENCE A (318505)**

Grades: 10, 11, 12
Credit: one/weighted +1.0
Prerequisite: Algebra 1 and Geometry

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

**ADVANCED COMPUTER SCIENCE AB (320000)**

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: AP Computer Science A or equivalent

This is an advanced course in Computer Science for students looking to continue the study of programming beyond Computer Science or AP Computer Science A. The major emphases in this course are programming methodology, algorithms, and data structures. Applications of computing are used to develop students' awareness of particular algorithms and data structures. Students will apply their knowledge. Java is the vehicle for implementing solutions to problems.

**AP COMPUTER SCIENCE PRINCIPLES (318507)**

Grades: 11, 12
Credit: one/weighted +1.0

The AP Computer Science Principles course is equivalent to a first-semester introductory college computer course. The course explores the big ideas of computing: creativity, abstraction, data and information, algorithms, programming, the Internet, and global impact. These big ideas are fundamental to computing and connect students to a curriculum that includes the art of programming but is not programming-centric. Students in this course design and produce solutions, models, and artifacts, and they evaluate and analyze their own computational work as well as the computational work others have produced. There is an emphasis on innovation through collaboration and on communication as a tool to analyze, justify and describe computational work. Notes for 2015-16: There will not be a College Board Advanced Placement exam available in 2016. Students will take a locally administered exam to earn the 1.0 course weight. Students who do not graduate in 2016 may elect to take the official AP exam as a non-enrolled student in 2017.

**ENGINEERING MATHEMATICS (316326)**

**Grades:** 10, 11, 12
**Credit:** one
**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.

**SCIENCE**

**BIOLOGY 1 (431000)**

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

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

**BIOLOGY 1 HONORS (431863)**

**Grades:** 9, 10, 11, 12
**Credit:** one/weighted +.5

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

**CHEMISTRY 1 (441000)**

**Grades:** 10, 11, 12
**Credit:** one

Chemistry 1 provides students the opportunity to develop their critical thinking skills as they acquire a better understanding of the chemical nature of our world. Students investigate the composition, properties, and reactions of matter. The approach is inductive, mathematical, and conceptual. Laboratory experiments and subsequent classroom analysis are integral components of the course. Students are required to take the Standards of Learning End of Course Test.
CHEMISTRY 1 HONORS (441036)
Grades: 10, 11, 12 Credit: one/weighted +.5
Prerequisite: One laboratory science course, Algebra 1
Corequisite: Algebra 2
Chemistry 1 Honors provides students the opportunity to utilize their strong critical thinking skills and apply their mathematical knowledge as they investigate in depth the composition, properties, and reactions of matter. Laboratory experiments and subsequent classroom analysis are integral components of the course. Students will participate in an externally-modulated experimental/research project, either independently or in teams. Students are required to take the Standards of Learning End of Course Test.

GEOSYSTEMS (422000)
Grades: 11, 12 Credit: one
Prerequisite: Biology 1 and Chemistry 1
Geosystems utilizes content from geology, astronomy, oceanography, and meteorology to investigate, both qualitatively and quantitatively, the major earth systems (atmosphere, hydrosphere, lithosphere, biosphere) and their dynamic inter-relationships. Students explore concepts with the same tools professional scientists use including computers, Geographic Information Systems (GIS), Global Positioning System (GPS), image processing software, and probeware. Students are required to take the Standards of Learning End of Course Test.

GEOSYSTEMS HONORS (422036)
Grades: 11, 12 Credit: one/weighted +.5
Prerequisite: Biology 1 and Chemistry 1
Geosystems Honors utilizes content from geology, 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-modered experimental/research project either independently or in teams. Students are required to take the Standards of Learning End of Course Test.

GEOSPATIAL ANALYSIS (422067)
Grades: 12 Credit: one
Prerequisite: Three laboratory science classes
Schools must contact the science office in Instructional Services before offering this course. This course is offered in partnership with James Madison University. Students spend the year completing a community-based research project that involves spatial reasoning and decision-making. In the process, students develop critical thinking, spatial reasoning, communication, and collaboration skills, while addressing a problem that is important to their community. A final presentation of their project to local community leaders and to faculty at their home school and JMU is required. Students can earn JMU credit at a reduced fee. This course does not count as one of the credits for the standard diploma, but it can count as a fourth science credit for the advanced diploma.

ACTIVE PHYSICS (451050)
Grades: 10, 11, 12 Credit: one
Prerequisite: One laboratory science course
Active Physics is a physics course for students who have not yet passed Algebra 1 or were weak in Algebra 1 during the previous school year. This course has a strong emphasis on experimentation. The units of study focus on predictions and real-world applications such as sports, medicine, transportation, home, and communication. The physics content is presented in a problem solving manner to strengthen both science and mathematics content knowledge and skills.

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
Prerequisite: 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.

HUMAN ANATOMY AND PHYSIOLOGY: AN INTRODUCTION TO THE MEDICAL SCIENCES (433000)
Grades: 11, 12 Credit: one
Prerequisite: Biology 1 and Chemistry 1
Human Anatomy and Physiology provides students with an in-depth understanding and working knowledge of the human body. It covers the ten systems of the human body with emphasis on the mechanisms that maintain homeostasis. Lab activities cover both the physiological and anatomical aspects of human biology. Students have the opportunity to explore careers in the medical sciences. An independent project is required. If dissections are part of the laboratory experience, alternatives are available. This course does not count as one of the science credits for the standard diploma. It can be used as the fourth science credit for an advanced studies diploma if the student has already taken three science courses from three different disciplines.

ADVANCED PLACEMENT BIOLOGY (437004)
Grades: 11, 12 Credit: one/weighted +1.0
Prerequisite: Biology 1 and Chemistry 1
After completing the core science curriculum, students pursue a more advanced and specialized study of biology topics. Students conduct standard first year college-level laboratory research as well as analyze and interpret biological data. Students engage in authentic science practices and examine biological content within four big ideas: 1) the process of evolution drives the diversity of life, 2) biological systems utilize energy and molecular building blocks to grow, reproduce and maintain homeostasis, 3) living systems retrieve, transmit, and respond to information essential to life processes, and 4) biological systems interact, and these interactions possess complex properties. If dissections are part of the laboratory experience, alternatives are available. Students are required to take the Advanced Placement exam for which college credit and/or placement may be given if a qualifying score is achieved.

ADVANCED PLACEMENT CHEMISTRY (447004)
Grades: 11, 12 Credit: one/weighted +1.0
Prerequisite: Chemistry 1
Corequisite: Recommended: Physics or PreCalculus with Trigonometry
Advanced Placement Chemistry represents a full year (two semesters) of college chemistry. The purpose of this course is to prepare students to take the Advanced Placement examination, for which college credit and/or placement may be given if a qualifying score is achieved. Advanced
Placement Chemistry is a second-level, laboratory-centered course that provides an opportunity for students to undertake a more comprehensive investigation at a level above Chemistry 1. It is designed for students who have completed a core science curriculum and are now ready to pursue more advanced and specialized studies. Students are required to take the Advanced Placement exam.

ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE (427004)
Grades: 11, 12
Prerequisite: Biology 1 and Chemistry 1

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

ADVANCED PLACEMENT PHYSICS 1 (457306)
Grades: 11, 12
Corequisite: Precalculus with Trigonometry

AP Physics 1 is a first year physics course. The course is designed around six big ideas: objects and systems have properties; fields can be used to explain interactions; interactions between objects can be described by forces; interactions result in changes in systems; changes are constrained by conservation laws; and waves can transfer energy and momentum. These big ideas are developed through inquiry and experimentation. All students are required to take the Advanced Placement exam for which college credit and/or placement may be given if a qualifying score is achieved.

ADVANCED PLACEMENT PHYSICS 2 (457406)
Grades: 12
Prerequisite: AP Physics 1

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

ADVANCED PLACEMENT PHYSICS C - MECHANICS AND ELECTRICITY AND MAGNETISM (457004)
Grades: 11, 12
Corequisite: AP Calculus AB or BC

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

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: 11, 12
Credit: one/weighted +1.0

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

WORLD HISTORY AND GEOGRAPHY 2 (222100)
Grades: 10
Credit: one/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 refine and expand critical thinking skills, practice decision making and problem solving, and formulate questions to guide research. World History and Geography 2 is required for graduation. Students are required to take the Standards of Learning End of Course Test.

WORLD HISTORY AND GEOGRAPHY 2 HONORS (222136)
Grades: 10
Credit: one/weighted +.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.

ADVANCED PLACEMENT WORLD HISTORY (234004)
Grades: 10, 11, 12
Credit: one/weighted +1.0

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

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

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.**

**ADVANCED PLACEMENT UNITED STATES HISTORY (231994)**
Grades: 11
Credit: one/weighted +1.0

In this course students develop the factual knowledge and analytical skills necessary to deal with the issues and problems of American History. They do in-depth analysis of major developments; become familiar with primary sources; assess historical materials, evidence, and interpretations; and learn to write research papers. This course prepares students to take the Advanced Placement examination in American History for which college credit and/or placement may be given if a qualifying score is made. All students are required to take the Advanced Placement exam. The course is equal to a full-year introductory college course. Completion of this course fulfills the graduation requirement for one credit in Virginia and United States History.

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

**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.

**VIRGINIA AND UNITED STATES GOVERNMENT HONORS (244036)**
Grades: 12
Credit: one/weighted +.5

Virginia and United States Government Honors deepens and advances the curriculum of Virginia and United States Government. Students examine both the structure and function of American government at the 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.

**ADVANCED PLACEMENT US GOVERNMENT (244504)**
Grades: 12
Credit: one/weighted +1.0

In this study of American government, students interpret national, state, and local government and politics through an examination of both general concepts used to interpret U.S. politics and the analysis of specific examples. This course prepares students to take the Advanced Placement examination for which college credit and/or placement may be given if a qualifying score is made. Completion of this course fulfills the graduation requirement for one credit in Virginia and United States Government. All students are required to take the Advanced Placement exam.

**ECONOMICS (280032) ADVANCED PLACEMENT MICROECONOMICS (280204)**
Grades: 11, 12
Credit: one

**Economics:** Semester 1- In this course, students develop an understanding of economic principles and their applications by analyzing basic theories and concepts. They examine the role of private financial institutions, multinational companies, and the government in influencing the economy. They identify ways in which economic developments affect them as consumers and ways in which they as consumers affect the economic system.

**AP Microeconomics:** Semester 2 - This course is designed to provide students with an understanding of the economic principles which apply to an economic system as a whole. Primary emphasis is placed on industries, national economics, performance indicators, and international economics. All students are required to take the Advanced Placement Microeconomics examination for which college credit and/or placement may be given if a qualifying score is achieved. This course fulfills the Economic and Personal Finance and the virtual course graduation requirements.

**PSYCHOLOGY (290000)**
Grades: 11, 12
Credit: one

In this course, students examine patterns and variations of human behavior and the process of individual human development. They identify and examine the emotional, cognitive, and physical factors which influence the development of the individual human being. Students distinguish among the major schools and systems of psychology and methods of investigation.

**ADVANCED PLACEMENT PSYCHOLOGY (290204)**
Grades: 11, 12
Credit: one/weighted +1.0

The purpose of this course is to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the methods psychologists use in their science and practice. The aim of Advanced Placement Psychology is to provide the students with a learning experience equivalent to that obtained in an introductory college psychology course. College credit and/or placement may be given if a qualifying score is made on the Advanced Placement examination. The rigorous course syllabus and college level texts both suggest that students who enroll should be highly motivated and intellectually curious. All students are required to take the Advanced Placement exam.

**COMBATING INTOLERANCE (982200)**
Grades: 10, 11, 12
Credit: one

This elective course examines fundamental issues which emerge from an ethnically and economically diverse, democratic society. Topics of study include the nature of prejudice, stereotyping, and discrimination; individual and governmental responsibility; and the ways in which individual choices can both combat or promote intolerance.

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**PART 2: SPECIAL EDUCATION**

**CURRENT AFFAIRS (299680 EDSC)**
Grades: 10, 11, 12
Credit: one

This elective course provides students with an understanding of the skills with which to analyze basic frameworks, concepts, terminology and principles of contemporary issues and events. Students will use various resources and technologies to examine topics and issues of local, state, national, international, and global significance.

**DEVELOPMENTAL READING (118080 LDSC/EDSC)**
Grades: 9, 10, 11, 12
Credit: one

This course is designed to provide direct, explicit and intensive reading instruction to students with disabilities who are reading significantly below grade level. Basic objectives of the reading courses are focused on closing the gap between the student's present level of performance and the level of performance needed to successfully access the general curriculum. Instruction focuses on increasing student's decoding, fluency and comprehension skills of fiction and nonfiction materials, which is based on the diagnosis of each student's needs as outlined through the student's Individual Education Program (IEP). Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard Diploma and the Standard Diploma with credit accommodations.
This elective course is designed to provide support to a student in core curriculum areas and to provide direct instruction in specific learning strategies, study skills, time management, organization, and self-advocacy skills. Time is also allotted to address individual areas of need as identified in a student's Individual Educational Plan (IEP). While students may receive assistance on core curricular assignments, the course is not designed to serve as a study hall. Students enrolled in the course receive the equivalent of one period of instruction each day and earn an elective credit. This course may be taught for an elective credit all four years or more, as appropriate. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard and Modified Standard Diploma. (Students may be awarded a half-credit upon completion of a full semester of placement in the Strategies for Success course. Such a decision is made by the school counselor in conjunction with the special education department chair.)

EDUCATION FOR EMPLOYMENT - LEVEL 1 (908561 LDSC EDSC)
Grades: 9, 10, 11, 12  Credit: one

This course teaches students to make informed career and continuing education choices as they transition from school, gain technical skills, and adapt to the workplace. Students are taught ethical behaviors and career-research, job-acquisition, workplace-communication, self-awareness, self-advocacy, customer-service, and life skills. Students successfully completing two years of this course will satisfy sequential elective requirements prescribed in certain diplomas.

EDUCATION FOR EMPLOYMENT - LEVEL 1 (908562 LDSC EDSC)
Grades: 9, 10, 11, 12  Credit: two

This course teaches students to make informed career and continuing education choices as they transition from school, gain technical skills, and adapt to the workplace. Students are taught ethical behaviors and career-research, job-acquisition, workplace-communication, self-awareness, self-advocacy, customer-service, and life skills. Students successfully completing two years of this course will satisfy sequential elective requirements prescribed in certain diplomas.

FOUNDATIONS OF ENGLISH 9-12 (781382 ID)
Grades: 9, 10, 11, 12  Credit: one

Foundations of English, 9-12, is a one-credit elective course designed to support instruction along the FCPS Program of Studies and the VA Aligned Standards of Learning (ASOL) in the identified content area; does not require SOL testing. Students may enroll in this elective course each year of HS participation. Instruction is individualized based on needs identified in the IEP to help students gain a basic content vocabulary, knowledge and skills and designed to be taught at the learning pace of the individual students. Participation in Foundations courses will aid the student in fulfilling requirements of the Virginia Alternative Assessment Program (VAAP) and meet the requirements for an Applied Studies Diploma.

FOUNDATIONS OF SCIENCE (781182 ID)
Grades: 9, 10, 11, 12  Credit: one

Foundations of Science is a one-credit elective course designed to support instruction along the FCPS Program of Studies and the VA Aligned Standards of Learning (ASOL) in the identified content area; does not require SOL testing. Students may enroll in this elective course each year of HS participation. Instruction is individualized based on needs identified in the IEP to help students gain a basic content vocabulary, knowledge and skills and designed to be taught at the learning pace of the individual students. Participation in Foundations courses will aid the student in fulfilling requirements of the Virginia Alternative Assessment Program (VAAP) and meet the requirements for an Applied Studies Diploma.

FOUNDATIONS OF WORLD HISTORY/GEOGRAPHY (781082 ID)
Grades: 9, 10, 11, 12  Credit: one

Foundations of World History/Geography is a one-credit elective course designed to support instruction along the FCPS Program of Studies and the VA Aligned Standards of Learning (ASOL) in the identified content area; does not require SOL testing. Students may enroll in this elective course each year of HS participation. Instruction is individualized based on needs identified in the IEP to help students gain a basic content vocabulary, knowledge and skills and designed to be taught at the learning pace of the individual students. Participation in Foundations courses will aid the student in fulfilling requirements of the Virginia Alternative Assessment Program (VAAP) and meet the requirements for a Special Diploma.

INDIVIDUALIZED MATHEMATICS (312182 ID)
Grades: 9, 10, 11, 12  Credit: one

The purpose of this course is to provide instruction of foundational mathematics skills to special education students who are functioning more than two years below grade level in mathematics. The course is designed to present the foundational skills necessary to enter Algebra 1 using manipulatives, special materials, and adaptive strategies. The course may include number concepts, mental mathematics, estimation, problem solving, operations, measurement, geometry, data analysis, statistics, probability, and fractions. This course should be reflected in the student's IEP. This course does not meet the mathematics graduation requirements for the Standard or Advanced Studies Diploma. Students earn elective credit.

PERSONAL DEVELOPMENT (781580 EDSC/781582 ID)
Grades: 9, 10, 11, 12  Credit: one

This course is designed to provide instruction to enhance personal development and interpersonal skills for students with disabilities. In addition, this course will provide social and/or emotional support in order to progress in the general education curriculum. Students who participate in the course have documented social and/or emotional needs in their individualized education program (IEP) and/or have a Behavior Intervention Plan (BIP). The areas of instruction for this course include peer relations, self-management, academic skills, compliance skills, and assertion skills. This course may be taught for an elective credit all four years or more, as appropriate. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard and Modified Standard Diploma.

WORK AWARENESS AND TRANSITION (907164 LDSC/EDSC)
Grades: 9, 10, 11, 12  Credit: one

This option is available to high school students receiving special education services. Students explore potential career options while developing/improving skills needed for success in employment such as interpersonal/co-worker relationships. Most students participate in community work experiences as well.

WORK AWARENESS AND TRANSITION (907164 LDSC/EDSC)
Grades: 9, 10, 11, 12  Credit: two

This option is available to high school students receiving special education services. Students explore potential career options while developing/improving skills needed for success in employment such as interpersonal/co-worker relationships. Most students participate in community work experiences as well.

TECHNOLOGY AND ENGINEERING EDUCATION

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.

STEM ENGINEERING HONORS (845000)
Grades: 10, 11, 12  Credit: one/weighted +.5

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

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

STEM ADVANCED ENGINEERING HONORS (845360)
Grades: 11, 12 Credit: one/weighted +.5
Prerequisite: STEM Engineering (845000)

This advanced level engineering course emphasizes student knowledge and application of engineering problem-solving through research and development concepts. It focuses on current and emerging technologies. Students learn to work in collaborative engineering teams and solve group design and projects. Students are challenged to solve problems using design, mathematics, computer simulations, scientific analysis, and oral and written skills. Engineering is studied with a focus on modeling, systems, optimization, technology-society interaction, design, and engineering ethics. Projects may be with models, systems, or products that creatively solve an engineering problem. This course is the capstone course in the engineering sequence to prepare students for college or engineering careers.

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

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
(Chantilly 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, rocke...latory and space operations. Numerous lab activities include computer simulations, 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)
(Chantilly 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.

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.

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 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 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.
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 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 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*

(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)*

(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)*

(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. An option, many students will have an opportunity to participate in local 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.

**Carpentry 1** (860126)

*Grades: 10, 11, 12*

*Credit: one*

(Chantilly Academy - Transportation may be provided)

Students will have an opportunity to study and learn about a $700 billion industry providing a variety of employment opportunities. An emphasis will be focused on construction safety, OSHA regulations, mathematics applications, and craft knowledge. In addition to a variety of hands-on experiences, students will be introduced to electricity, framing, plumbing, millwork, and problem solving activities related to the construction industry. 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 will receive advanced instruction and experiences in the areas of layout and design, framing, estimating, purchasing, planning, and installing. Topics will range from residential through commercial construction. An emphasis will be placed on entrepreneurship and construction site management using curriculum developed by the National Association of Home Builders (NAHB). Student 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 will receive advanced instruction and experiences in the areas of layout and design, framing, estimating, purchasing, planning, and installing. An emphasis is 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*

(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. For more information visit the CTE website.
Industry certification may be available as part of this course.

CONSTRUCTION TECH 1 - SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE  (851562)
Grades: 10, 11, 12  Credit: two
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.

CONSTRUCTION TECH 2 - SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE  (851662)
Grades: 11, 12  Credit: two
Prerequisite: Construction Technology 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. 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 1  (852727)
Grades: 10, 11, 12  Credit: two
(Chantilly 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 (852727)
(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.

COSMETOLOGY 3  (852927)
Grades: 12  Credit: two
Prerequisite: Cosmetology 2 (852827)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.

(English 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 website.

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

CRIMINAL JUSTICE 1  (870226)
Grades: 10, 11, 12  Credit: one
(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 education. 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 website.

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

CRIMINAL JUSTICE 2  (870327)
Grades: 11, 12  Credit: two
Prerequisite: Criminal Justice 1 (870226)
(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 website.

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

ELECTRICAL CONSTRUCTION AND ENGINEERING 1  (853326)
Grades: 10, 11, 12  Credit: one
(Edison Academy - transportation may be provided)

Laboratory work and academic studies include AC/DC circuit analysis, designing and construction switching circuits, fixture specifications and installations, computing and fabricating residential electrical services, and other wiring exercises as required by residential wiring systems. Theory and the national electric code are taught as they apply to the lesson topic. Students learn to install, relocate, troubleshoot, and repair copper twisted pair network cabling. This course may be offered for college credit. For more information, visit the CTE website.

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

ELECTRICAL CONSTRUCTION AND ENGINEERING 2  (853427)
Grades: 11, 12  Credit: two
Prerequisite: Electrical Construction and Engineering 1 (853326)
(Edison Academy - transportation may be provided)

Further study of electrical wiring and power distribution techniques is offered, including direct- and alternating-current machines, such as motors and generators, and magnetic controls and transformers in both single- and two- or three-phase systems. National Electrical Codes, as well as state and power company policies pertaining to electrical power distribution, are studied. Major appliance repair is also taught. Student internship experiences are an option for this course. For more information, visit the academy 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 will further their electrical study to learn about layout, planning, and installation of wiring systems in commercial facilities. An introduction to Programmable Logic controls (PLC) and its associated applications will be provided with the most current Allen Bradley controls. Students will also get the chance to lead other students in installing wiring in a residential house. Upon completion of this course students should be able to install and wire all aspects of a residential house to include ordering and managing materials and equipment. Students should also have a knowledge of PLC’s, solar power and other related electrical specialty fields. Student internship experiences are an option for this course. For more information, visit the CTE web site.

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

HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION 1 (850326)
Grades: 10, 11, 12
Credit: one
(Edison Academy - transportation may be provided)

In the first year of the heating, ventilation and air conditioning (HVAC) program students will learn to use a verity of hand tools including wrenches, pliers, screw drivers, hammers as well as specialty tools of the HVAC trade which include digital multi-meters, thermometers, scales, vacuum pumps and refrigerant recovery equipment. Students will complete projects utilizing copper tubing, PVC and black iron pipe with ACR tubing cutters, flaring, sweating 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
Credit: two
Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration 1 (850326)
(Edison Academy - transportation may be provided)

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

This course provides students with experience needed to begin a career in commercial photography as well as an in-depth view of digital photography and related industries. Students will develop studio lighting techniques and composition skills in this project-oriented course. Creativity, imagination, and innovation are qualities that will be exercised by using high-end digital cameras and sophisticated imaging and production software such as Adobe Photoshop, Adobe Illustrator, InDesign, and Acrobat. Students will relate these skills to the current practices of art and business in the modern commercial photographic industry. A component of this course is dedicated to learning how to open and maintain a professional photography studio. Students will work independently, as well as collaboratively, toward the completion of class projects. Students will develop personal portfolios to aid in entry into the marketplace or advanced photography educational program. For more information, visit the CTE 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
Credit: two
Prerequisite: Professional Photography Studio 1 (860726), Portfolio review may be required.
(Fairfax Academy - transportation may be provided)

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

This curriculum is designed to train students for a career in, or entry into a collegiate program involving the television and film production industries. Film, Video, and Multi-Media terminology, technique, and theory will be discussed. Only state-of-the-art, video equipment is used by the students in this class. Students will learn to operate professional video cameras and field equipment for productions outside of the classroom, and professional studio cameras, audio equipment, special effect generators, and character animation software such as Adobe Photoshop, Adobe Illustrator, InDesign, and Acrobat. Students will relieve these skills to the current practices of art and business in the modern commercial photographic industry. A component of this course is dedicated to learning how to open and maintain a professional photography studio. Students will work independently, as well as collaboratively, toward the completion of class projects. Students will develop personal portfolios to aid in entry into the marketplace or advanced photography educational program. For more information, visit the CTE web site.

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

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

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

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.
Students will research postsecondary opportunities and formulate strategies for both college and career success. 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.

SMALL ENGINE REPAIR (572426)
Grades: 10, 11, 12
Credit: one
(Edison Academy - Transportation may be provided)

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

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

WORLD LANG UAGES

FRENCH 1 (511000)
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.

FRENCH 2 (512000)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: French 1 or equivalency test

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

FRENCH 3 (513000)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: French 2 or equivalency test

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

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

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

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

Prerequisite: French 4 or equivalency test

AP Latin will be offered ONLY if there is sufficient enrollment.

LATIN 1 (531000)
Grades: 8, 9, 10, 11, 12
Credit: one
Prerequisite: Level 1 or equivalency test

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

LATIN 2 (532000)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Latin 1 or equivalency test

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

LATIN 3 (533000)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Latin 2 or equivalency test

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

LATIN 4 (534000)
Grades: 11, 12
Credit: one
Prerequisite: Latin 3 or equivalency test

Students continue to develop and refine their reading skills through the study of Latin literature. Students read Vergil's Aeneid silently for comprehension and orally for poetic meter and analyze the various passages for content, connotative language and author's style. Students study the life and times of Vergil, his influence on later writers, his poetic devices, and his Aeneid as a literary work.
ADVANCED PLACEMENT LATIN (557004)

Grades: 11, 12  Credit: one/weighted +1.0
Prerequisite: Latin 3, Latin 4, or equivalency test

The purpose of this course is to prepare students to take the Advanced Placement examination, for which placement and/or credit may be awarded at the college level if a qualifying score is obtained. Students study the literary techniques used by Roman authors by reading Latin poetry and prose with historical and literary sensitivity. Students are encouraged to develop linguistic skills by engaging in multiple activities, including translating poetry and prose from the required-reading list, precisely and literally; reading passages of poetry and prose with comprehension; and analyzing literary texts in clear, coherent written arguments, supported by textual examples. All students are required to take the Advanced Placement Latin exam.

AP Latin will be offered only if there is sufficient enrollment.

SPANISH 1 (551000)

Grades: 8, 9, 10, 11, 12  Credit: one

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 requirements 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 interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear and are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying the POS themes of Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities.

SPANISH 4 (554000)

Grades: 11, 12  Credit: one

Prerequisite: Spanish 3 or equivalency test

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

SPANISH 5 (555000)

Grades: 11, 12  Credit: one/weighted +.5

Prerequisite: Spanish 4, or Advanced Placement Language, or equivalency test

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

ADVANCED PLACEMENT SPANISH LANGUAGE (557004)

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

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

SPANISH FOR FLUENT SPEAKERS 1 (551100)

Grades: 8, 9, 10, 11, 12  Credit: one
Prerequisite: Permission from instructor

This course offers fluent speakers of Spanish the opportunity to strengthen their basic skills in reading and writing Spanish. The students learn about the Hispanic contributions to the English language and American culture. The students also study the major historical figures and events of Spanish-speaking countries. The course is conducted in Spanish and counts toward fulfilling the world languages requirement. Middle School: credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

SPANISH FOR FLUENT SPEAKERS 2 (552100)

Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Spanish for Fluent Speakers 1 or permission from instructor

This course, designed for fluent speakers of Spanish, continues to emphasize the improvement of students' skills in speaking, reading, and writing in Spanish. Students read and critique contemporary short stories and make oral presentations. The writing and reading processes are emphasized to ensure growth in both skills. The students will also study various Hispanic personalities and historic events of Spanish-speaking countries. The course is conducted in Spanish. Middle School: credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

CHINESE 1 (581026)

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

This course, designed for fluent speakers of Chinese, continues to emphasize the improvement of students' skills in speaking, reading, and writing in Chinese. Students read and critique contemporary short stories and make oral presentations. The writing and reading processes are emphasized to ensure growth in both skills. The students will also study various Chinese personalities and historic events of Chinese-speaking countries. The course is conducted in Chinese. Middle School: credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

CHINESE 2 (582026)

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

This course, designed for fluent speakers of Chinese, continues to emphasize the improvement of students' skills in speaking, reading, and writing in Chinese. Students read and critique contemporary short stories and make oral presentations. The writing and reading processes are emphasized to ensure growth in both skills. The students will also study various Chinese personalities and historic events of Chinese-speaking countries. The course is conducted in Chinese. Middle School: credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

(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.

(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 interact orally and in writing. They participate in in-depth studies of major literary works and historical events and learn to recognize the various themes and conflicts involved. Students express abstract ideas while discussing literature, history, and current events.
material on familiar topics and produce short writing samples. Students continue to develop 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. 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.

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)

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

CHINESE 3 (583033)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Chinese 2 or equivalency test
(Fairfax Academy - transportation may be provided)

KOREAN 2 (587526)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Korean 1 or equivalency test
(Fairfax Academy - transportation may be provided)

KOREAN 3 (580026)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Korean 2 or equivalency test
(Fairfax Academy - transportation may be provided)

KOREAN 4 (588526)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Korean 3 or equivalency test.
(Fairfax Academy - transportation may be provided)