WEST SPRINGFIELD HIGH SCHOOL
Administrative Staff

Principal  Michael Mukai
Director of Student Services  Malicia Braxton
Assistant Principals
  Tara Charity ………… 10th Grade
  Becky Brandt ………… 12th Grade
  Shannon Matheny …… 9th Grade
  Johnny Pope ………… 11th Grade
  Betsy Fawsett

Director of Student Activities  Andy Muir
AP Coordinator  Elizabeth Jackson-Pettine

Student Services Staff

| 9th Grade Counselors | A – Be  
|----------------------|--------
| Daphne Vaccarello    |        
| Austin Hamill        | Bh – Do
| Nicole Moniz         | Dr – Gu
| Steven Myers         | Ha – Kr
| Kara Stamper         | Ku - Ne
| Katy Sokolove        | Nq – Ra
| Vanessa Hunter       | Re – Su
| Evelyn Clumpkens     | Sw – Z

| 10th – 11th Grade Counselors | A – B  
|-------------------------------|--------
| Daphne Vaccarello             |        
| Austin Hamill                 | C – D  
| Nicole Moniz                  | E – Hi 
| Steven Myers                  | Ho – Le
| Kara Stamper                  | Li – Ne
| Katy Sokolove                 | Ng – Ro
| Vanessa Hunter                | Ru – Th
| Evelyn Clumpkens              | Ti – Z 

Student Services Staff

<table>
<thead>
<tr>
<th>Career Center Specialist</th>
<th>Lisa Frederick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Assistant</td>
<td>Mary Halfhill</td>
</tr>
<tr>
<td>Student Information Assistant</td>
<td>Ronna Parrish</td>
</tr>
<tr>
<td>Transcript Administrative Assistant</td>
<td>Lois Kurth</td>
</tr>
</tbody>
</table>

The Course Selection Process

Dear Student:

We hope you will use this catalog as a reference and a guide as you plan your high school sequence of courses. Course selection is a serious matter that requires thorough research of the information in this catalog as well as discussion with your counselor, your parents/guardians and your teachers. When selecting courses, you should consider your interests, future educational pursuits and occupational goals. You should also reflect on your own achievements and areas in which you wish to improve. In other words, course selection involves important personal decisions that require your thoughtful attention. We suggest the following:

- Review requirements for each type of diploma
- Review course descriptions and prerequisites
- Consider your personal educational goals for the high school years and postsecondary years
- Discuss with your counselor, teachers and parents/guardians any concerns or questions you have about courses, credits, and types of diplomas available to you.

We hope that this guide will be helpful to you in selecting courses for the 2016-17 school year. Keep in mind that any changes to your course selections must be made prior to May 20, 2016. We look forward to working with you. Should you have any questions, please contact your counselor as soon as possible. We wish you a successful school year!

Malicia Braxton
Director of Student Services
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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.

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<thead>
<tr>
<th>Subject Area</th>
<th>Standard Credits</th>
<th>Verified Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Laboratory Science*</td>
<td>3</td>
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<td>Health and Physical Education</td>
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<tr>
<td>World Language, Fine Arts or Career and Technical Ed</td>
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<tr>
<td>Economics &amp; Personal Finance</td>
<td>1</td>
<td></td>
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<tr>
<td>Electives*</td>
<td>3</td>
<td></td>
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<tr>
<td>Student Selected Test*</td>
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<tr>
<td><strong>Total Credits</strong></td>
<td><strong>22</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

1 Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The Board of Education (Board) shall approve additional courses to satisfy this requirement.
2 Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines: earth sciences, biology, chemistry, or physics; or completion of the sequence of science courses required for the International Baccalaureate Diploma. The Board shall approve courses to satisfy this requirement.
3 Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and World History/Geography I and World History/Geography II. AP World History satisfies the requirement for World History/Geography II.
4 Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
5 A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education, economics, or other areas as prescribed by the Board in 8 VAC 20-131-110.
6 Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquires a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential, or license for (i) the student selected verified credit and (ii) either a science or history and social science verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board as an additional test to verify student achievement.
7 Pursuant to Section 22.1-253.13-4, Code of Virginia, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education.
ADVANCED STUDIES DIPLOMA
26 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

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

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

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

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<tr>
<td>Mathematics*</td>
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<td>2</td>
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<td>Laboratory Science*</td>
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<td>History and Social Sciences*</td>
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<td>World Language*</td>
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<tr>
<td>Health and Physical Education</td>
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<tr>
<td>Fine Arts or Career and Technical Ed</td>
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<tr>
<td>Economics &amp; Personal Finance</td>
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</tr>
<tr>
<td>Electives</td>
<td>3</td>
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</tr>
<tr>
<td>Student Selected Test*</td>
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</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>26</strong></td>
<td><strong>9</strong></td>
</tr>
</tbody>
</table>

1 Courses completed to satisfy this requirement shall include at least three different course selections from among:
Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. The Board of Education
(Board) shall approve 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 pursuing the Modified Standard Diploma are required to meet literacy and numeracy requirements on the 8th grade English reading and mathematics Standards of Learning (SOL) tests. Students may substitute a higher level high school SOL test for the 8th grade SOL tests for the literacy and numeracy requirements.

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

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

<table>
<thead>
<tr>
<th>Subject Area</th>
<th>Standard Credits</th>
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</thead>
<tbody>
<tr>
<td>English</td>
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<tr>
<td>Mathematics(^1)</td>
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<tr>
<td>Science(^2)</td>
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<tr>
<td>History and Social Sciences(^3)</td>
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<td>Health and Physical Education</td>
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<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.

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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.
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.

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<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Mathematics†</td>
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</tr>
<tr>
<td>Laboratory Science²</td>
<td>3</td>
<td>1</td>
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<td>History and Social Sciences³</td>
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<tr>
<td>Health and Physical Education</td>
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<td>Student Selected Test⁵</td>
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<tr>
<td>Career and Technical Education Credential⁶</td>
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<tr>
<td><strong>Total Credits⁸</strong></td>
<td><strong>22</strong></td>
<td><strong>6</strong></td>
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</table>

† 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.

‡ 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.

§ 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.
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.

Advanced Studies Diploma Course Requirements (8 VAC 20-131-50)

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</tr>
<tr>
<td>Mathematics</td>
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<td>Laboratory Science</td>
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<td>History and Social Sciences</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>World Language</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>
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<tr>
<td>Economics &amp; Personal Finance</td>
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<td>Electives</td>
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<tr>
<td>Student Selected Test</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Total Credits</td>
<td>26</td>
<td>9</td>
</tr>
</tbody>
</table>

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

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

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

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

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

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

Each high school in Fairfax County Public Schools provides a sequential postsecondary planning program that focuses on the acquisition of knowledge, skills, and self-understanding necessary to achieve postsecondary goals. As part of this planning, students develop and initiate a Student Learning Plan. This plan provides opportunities for students to identify strengths and interests, explore college and career options, and develop postsecondary goals. Students are counseled regarding opportunities for postsecondary education, financial aid, and employment prior to high school graduation. To assist regarding opportunities for postsecondary education, financial aid, and employment prior to high school graduation. To assist
students in the process of transition to postsecondary education, financial aid, and employment, high schools have staffed Career Centers with the school counseling program and are available online.

Additionally, each high school has a staffed Career Center with current college and career resources.

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 transferable 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.

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 course 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.

GRADE POINT AVERAGE

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

GRADING SYSTEM

<table>
<thead>
<tr>
<th>Grade</th>
<th>Quality Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>(93-100)</td>
</tr>
<tr>
<td>A-</td>
<td>(90-92)</td>
</tr>
<tr>
<td>B+</td>
<td>(87-89)</td>
</tr>
<tr>
<td>B</td>
<td>(83-86)</td>
</tr>
<tr>
<td>B-</td>
<td>(80-82)</td>
</tr>
<tr>
<td>C+</td>
<td>(77-79)</td>
</tr>
<tr>
<td>C</td>
<td>(73-76)</td>
</tr>
<tr>
<td>C-</td>
<td>(70-72)</td>
</tr>
<tr>
<td>D+</td>
<td>(67-69)</td>
</tr>
<tr>
<td>D</td>
<td>(64-66)</td>
</tr>
<tr>
<td>F</td>
<td>(below 64)</td>
</tr>
</tbody>
</table>

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.

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.

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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 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 pursing 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 visit: http://www.fcps.edu/is/collegecareer/collegecredit/index.shtml

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 IB subjects, and demonstrate world language development. IBCC candidates must also complete community service, take the Approaches to Learning course, and complete a reflective project related to their CTE course of study.

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

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

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


**CAREER AND TECHNICAL EDUCATION**

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

FCPS now offers students opportunities at four Governor’s Academies. Chantilly and Marshall Governor’s STEM Academies specialize in engineering and information technology. Falls Church and West Potomac Governor’s Health Sciences Academies focus on five pathways in the area of health care. FCPS has established articulation agreements with a variety of postsecondary organizations that allow students to take certain career and technical education classes in high school and receive college placement credit. In addition, FCPS has dual enrollment agreements with Northern Virginia Community College (NVCC) and Shenandoah University whereby students can earn college credits for select career and technical education classes. A full listing of Articulation and Dual Enrollment Agreements is available at http://www.fcps.edu/is/cte/index.shtml.
STUDENT FEES
Courses that require a student fee for consumable materials have been designated in this catalog. The schedule of divisionwide student fees to be charged for any elective course can be found in Notice 5922 at http://www.boarddocs.com/vsba/fairfax/Board.nsf/goto?open&id=B1CC2EDFD153A2958525706E00545AA9. Students eligible for the federal Free and Reduced Price meals program may have course and test fees waived. For more information, see your school counselor.

FULL DAY SCHEDULE
Students enrolled in FCPS are expected to maintain a full-day schedule. Students with personal, family, or economic needs may still request a waiver of full day schedule requirements by speaking with their school counselor. Transportation arrangements for a student on this modified schedule are the responsibility of the family. Students considering this option should discuss possible implications for college admissions and Virginia High School League (VHSL) eligibility with their school counselor prior to reducing their schedule. Schools will attempt to honor all requests; however, scheduling conflicts may prohibit some students from accessing this option. For additional information about full day schedule requirements, visit: http://www.boarddocs.com/vsba/fairfax/Board.nsf/files/9RX4N8700B88/$file/R2412.pdf

ONLINE COURSE OPTIONS FOR STUDENTS
High school students may take up to two online courses through the FCPS Online Campus in place of a face-to-face course for scheduling conflicts or personal reasons, including health. Transportation arrangements for a student on this modified schedule are the responsibility of the family. Students who wish to pursue this option should indicate their intent at the time of course registration and plan closely with their school counselor.

Notes:
FCPS Online Campus is a program designed to provide students with an online option for earning credits toward high school graduation. This program supports the Governor’s “Early College Scholars” program by providing advanced courses to students. Students registered in any Fairfax County Public School or alternative high school are eligible to apply to take up to two courses through the FCPS Online Campus for scheduling conflicts or personal reasons, including health. Tuition will be charged when a student is already scheduled to receive seven credits during the academic year or when a student enrolls in an FCPS online summer course. Students must meet all regular eligibility requirements to enroll in an FCPS online course. Students interested in enrolling in an FCPS Online Campus course should consult their school counselor for information regarding the registration process. For more information go to [http://www.fcps.edu/is/onlinecampus/](http://www.fcps.edu/is/onlinecampus/).

The following courses are currently available online:

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

*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

### CHANTILLY ACADEMY – A Governor’s STEM Academy
http://www.fcps.edu/ChantillyAcademy/
- Air Force JROTC
- Animal Science
- Automotive Collision Service
- Automotive Technology
- Carpentry
- Cosmetology
- Criminal Justice
- Culinary Arts
- Cyber: Computer Systems Technology – A+
- Cyber: Database Design & Management, Oracle

### EDISON ACADEMY
http://www.fcps.edu/EdisonAcademy
- Animal Science
- Automotive Collision Service
- Automotive Technology
- Cosmetology
- Criminal Justice
- Cyber: Computer Systems Technology – A+
- Cyber: Database Design & Management, Oracle

### FAIRFAX ACADEMY
http://www.fcps.edu/FairfaxAcademy/
- Academy Dance
- Chinese
- Fashion Careers
- Biotechnology Foundations
- Biomedical Technician
- Criminal Justice
- Dental Careers

### FALLS CHURCH ACADEMY – A Governor’s Health Sciences Academy
http://www.fcps.edu/fallschurchacademy/
- Biotechnology Foundations
- Biomedical Technician
- Criminal Justice
- Dental Careers
- Academy Dance
- Chinese
- Cosmetology
- Criminal Justice
- Cyber: Computer Systems Technology – A+
- Cyber: Database Design & Management, Oracle

### MARSHALL ACADEMY – A Governor’s STEM Academy
http://www.fcps.edu/MarshallAcademy/
- Aerospace Science
- Automotive Technology
- Chinese
- Cosmetology
- Criminal Justice
- Cyber: Network Administration
- Cyber: Routing and Switching, Cisco

### WEST POTOMAC ACADEMY – A Governor’s Health Sciences Academy
http://www.fcps.edu/WestPotomacAcademy/
- Academy Dance
- Biotechnology Foundations
- Biomedical Technician
- Criminal Justice
- Dental Careers
- Early Childhood Careers
- Exploring Health Sciences
- Exploring the Language of Medicine
- Fire and Emergency Medical Sciences

### OTHER SPECIALIZED CTE PROGRAMS

#### CLASSROOM ON THE MALL
at Fair Oaks Mall
- Fashion Marketing 2
- Marketing Management

#### FAIRFAX COUNTY SCHOOL OF PRACTICAL NURSING
Plum Center
- Practical Nursing

#### SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE
in Springfield, Virginia
- Construction Technologies

#### FAIRFAX COUNTY FIRE AND RESCUE ACADEMY
in Fairfax, Virginia
- Firefighting
BUSINESS & INFORMATION TECHNOLOGY

BUSINESS LAW (613232)  
Grades: 10, 11, 12  
Credit: one-half  
Business Law provides students with the basic knowledge to become a better informed citizen, consumer, and user. 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 business and consumer situations.  
Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal.

BUSINESS MANAGEMENT (613632)  
Grades: 10, 11, 12  
Credit: one-half  
Students study basic management concepts and leadership styles as they explore business ownership, planning, economics, international business, and human relations issues such as employee motivation and conflict resolution. Through engaging software simulations, students learn to utilize efficiently and effectively the basic management functions of planning, organizing, staffing, directing, and controlling, and their impact on human and capital resources. Upon completion of this course, students will develop a business plan for a real or simulated business.  
Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal.

ACCOUNTING (632000)  
Grades: 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 accESOL accounting software applications are used to enhance skills to analyze and evaluate financial situations. Internet learning activities are used to reinforce research, communication, and team building skills. Course topics include forms of ownership, accounts receivable/accounts payable systems, payroll, taxes, and banking activities. Upon completion of this course, students will be able to complete an accounting cycle from transactions to financial statements. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.  
Industry certification may be available as part of this course.

INFORMATION SYSTEMS (661200)  
Grades: 9, 10, 11, 12  
Credit: one  
Prerequisite: Computer Solutions, Digital Input Technologies, or equivalent skill  
Students develop problem-solving skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, integrated software activities and the use of the Microsoft IT Academy. Students work individually and in groups to explore concept computers, operating systems, networks, telecommunications, and emerging technologies. Keyboarding instruction will be a component of this course based on student need. Integrating lessons with real-life business applications and cross-curricular learning activities will enable the students to become better prepared for life-long learning and problem solving. Upon successful completion of Information Systems, students may elect to obtain industry-recognized professional certification by taking the Microsoft Office Specialist (MOS) exams. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.  
Industry certification may be available as part of this course.

ADVANCED INFORMATION SYSTEMS (661300)  
Grades: 10, 11, 12  
Credit: one  
Prerequisite: Information Systems (661200), Computer Solutions (615030, 31, 32), Digital Input Technologies (660932) or equivalent skill  
Advanced Information Systems provides students with the opportunity to develop professional technology skills in a project-oriented and student-centered environment. Working independently or in teams, students apply problem-solving, decision-making, creative-thinking, and communication skills to relevant, real-life situations through a series of software, the Microsoft IT Academy. Students develop problem-solving skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, integrated software activities and the use of the Microsoft IT Academy. Students work individually and in groups to explore concept computers, operating systems, networks, telecommunications, and emerging technologies. Keyboarding instruction will be a component of this course based on student need. Integrating lessons with real-life business applications and cross-curricular learning activities will enable the students to become better prepared for life-long learning and problem solving. Upon successful completion of Information Systems, students may elect to obtain industry-recognized professional certification by taking the Microsoft Office Specialist (MOS) exams. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.  
Industry certification may be available as part of this course.

BUSINESS COOPERATIVE INTERNSHIP (679920; 679921)  
(Formerly Cooperative Education-COE)  
Grades: 10, 11, 12  
Credit: one or more  
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.
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 or Transitional 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 reading 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, or English 9 Honors  
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 reading 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 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 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 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 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 publishable quality. Students who complete this course are required to take the Advanced Placement examination in English Language and Composition, and many earn college credit if a qualifying score is achieved. Completion of this course fulfills the English 11 course requirement.  Students are required to take the Standards of Learning End of Course Test.

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.  Students selected for Advanced Composition will participate in the School Writing Center.

ENGLISH 12 HONORS  (116036)  
Grades: 12  
Credit: one/weighted +.5  
Prerequisite: English 11  
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 oral communication skills to craft formal 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 develop 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 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 12 course requirement.

ADVANCED COMPOSITION 1  (117700)  
Prerequisite: application and selection by the Advanced Composition Committee  
Grades: 10, 11, 12  
Credit: one  
This course provides students an in-depth study of writing in the academic disciplines. Students improve their writing through intense word study, critical reading, and analytical thinking. Students expand and refine their ability to write through analyzing and evaluating their own writing and that of others.  Students must submit an application (available in the Writing Center) and be selected by the Advanced Composition Committee. Students selected for Advanced Composition will participate in the School Writing Center.

ADVANCED COMPOSITION 2  (117800)  
Grades: 11, 12  
Credit: one  
Prerequisite: Advanced Composition 1  
This course provides students the opportunity for further exploration of academic writing. Students hone their writing skills by further analyzing published texts and attempting more advanced work while also collaborating with other students on revision and critique. Students selected for Advanced Composition will participate in the School Writing Center.

ADVANCED COMPOSITION 3  (117900)  
Grades: 12  
Credit: one  
Prerequisite: Advanced Composition 2  
This course provides students an opportunity to study writing at an advanced level. Students continue to experiment with many forms of writing, using published works as models. Students work independently and in peer critique groups to refine their writing and develop a sense of voice.  Students selected for Advanced Composition will participate in the School Writing Center.

CREATIVE WRITING 1  (117100)  
Grades: 9, 10, 11, 12  
Credit: one  
This course provides students an opportunity for additional writing instruction beyond the standard English program. Experimentation with many forms of writing is encouraged, with an emphasis on poetry, short stories, plays, and all forms of descriptive writing. Students continue to expand and refine their ability to write through analyzing and evaluating their own writing and that of other students. Students may also participate in the layout, design, and overall production of a high school literary magazine.

CREATIVE WRITING 2  (117200)  
Grades: 10, 11, 12  
Credit: one  
Prerequisite: Creative Writing 1  
This course provides students an opportunity for further exploration of creative writing. Students continue to experiment with many forms of writing, with an emphasis on poetry, short stories, plays, and all forms of descriptive writing. Students hone their writing skills by attempting more advanced work while also working collaboratively with other students on revision and critique. Students may also participate in the layout, design, and overall production of a high school literary magazine.
CREATIVE WRITING 3 (117300)
Grades: 10, 11, 12
Credit: one
Prerequisite: Creative Writing 2
This course provides students an opportunity to study creative writing at an advanced level through a collaborative workshop approach. Students continue to experiment with many forms of writing, with an emphasis on poetry, short stories, plays, and all forms of descriptive writing. Students work independently and through peer critique groups to refine their writing and develop a sense of voice. Students may also participate in the layout, design, and overall production of a high school literary magazine.

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 or Instructor Permission
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 webpage. This course requires some after school time.

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 webpage staff. Students also learn business and circulation management. This course requires some after school time.

PHOTOJOURNALISM 1 (121500)
Grades: 10, 11, 12
Credit: one
Prerequisite: Journalism 3
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 or approval of instructor.
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. This course requires some after-school time.

PHOTOJOURNALISM 3 (121700)
Grades: 11, 12
Credit: one
Prerequisite: Photojournalism 2 or approval of instructor.
In Photojournalism 3, students refine their copywriting skills and advance their computer and photography skills, develop individual style, and may assume editorial leadership and responsibility for producing a high school newspaper and/or student produced webpage. Journalism 4 students will also take responsibility for being the chief spokesperson for the publication. Students also take responsibility for business and circulation management. This course requires some after school time.

LITERACY LAB 1 (118100)
Grades: 9
Credit: one
LITERACY LAB (Literacy Access Bridge) 1 provides students who are reading below expected proficiency with direct instruction of content area reading and writing skills.

LITERACY LAB 2 (118200)
Grades: 10, 11, 12
Credit: one
LITERACY LAB (Literacy Access Bridge) 2 provides focused intervention of reading and writing skills as well as English content included in the English 11 Program of Studies that are necessary to pass the EOC English Reading and/or Writing SOL tests, which students take in English 11. Successful completion of this course counts as a sequential elective when taken after Literacy Lab 1 or Developing Literacies.

LITERACY LAB 3 (118300)
Grades: 11, 12
Credit: one
Prerequisite: Expanding Literacies 1 or Literacy Lab 2
LITERACY LAB (Literacy Access Bridge) 3 provides focused intervention of reading and writing skills as well as English content included in the English 11 Program of Studies that are necessary to pass the EOC English Reading and/or Writing SOL tests. Successful completion of this course counts as a sequential elective when taken after Developing Literacies, Expanding Literacies 1, Literacy Lab 1 or Literacy Lab 2.

ENGLISH FOR SPEAKERS OF OTHER LANGUAGES

ENGLISH 9 for English Learners (ELP Levels 1-3) (572091; 572092; 573093)
Grades: 9, 10, 11
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 and improves students’ ability to recognize and use different levels of linguistic meaning and structure. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. Through narrative, expository, and persuasive writing, 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 (ELP Level 4)
Course Codes: 113000 (Preferred) or 113095 (Optional—English 9 Trans.)
Level 4 students should continue to take English 9 concurrently with 573000. The preference is for students to take English 9 in a section with their English-speaking peers.

ENGLISH 9 (113000)
Grades: 9
Credit: one
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.)

TRANSITIONAL ENGLISH 9 (113095)
Grades: 9
Credit: one
This course can be added to a school program only with the approval of the Office of High School Instruction and K-12 Curriculum Services. Transitional English 9 is intended to be taken concurrently with English for Speakers of Other Languages (ESOL) course number 5730. For ESOL students, Transitional English serves as a transition from ESOL to the mainstream English program as the ESOL and English teachers work together to provide support through a cohesive program of study based on the English POS. Students read a variety of literature, exploring the characteristics of different forms and relating life situations to literary themes. Language study includes spelling and vocabulary. Through varied and frequent writing assignments, students build on their understanding of writing as a process of prewriting, drafting, revising, and publishing. They practice oral communication skills in a variety of settings, including small groups, class discussions, and formal presentations. (This is a Standards of Learning aligned course which is tested in 11th grade.)

ENGLISH LANGUAGE DEVELOPMENT (ELD) (ELP Levels 1-4)
Course Codes: 572095; 572096; 572097; 573000
Grades: 9, 10, 11
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.
strategies, study skills, time management, organization, and self-advocacy skills to the Virginia State Board of Education's core curricular areas and to provide direct instruction in specific learning strategies, study skills, time management, organization, and self-advocacy skills to develop the habits necessary for academic success. Students will gain skills in personal development and socio-emotional awareness skills. In addition, this course will teach strategies to enhance English language development in the four language domains of reading, writing, listening, and speaking. Students will participate in building a strong classroom and school community through class meetings and intercultural communication. Students who successfully complete the course will earn an elective credit. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard Diploma.

**FAMILY & CONSUMER SCIENCES**

**CHILD DEVELOPMENT AND PARENTING (823200)**

Grades: 10, 11, 12  
Credit: one  
(Sites with collaborative education experiences for students through a preschool program.)

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

Industry certification may be available as part of this course.

**EARLY CHILDHOOD CAREERS 1 (828527)**

Grades: 11, 12  
Credit: two  
(Sites have collaborative education experiences for students through a preschool program.)

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  
(Sites have collaborative education experiences for students through a preschool program.)

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.

**GOURMET AND INTERNATIONAL FOODS (825900)**

Grades: 10, 11, 12  
Credit: one  
(Sites have collaborative education experiences for students through a preschool program.)

This course is designed to provide 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.
practical problem solving are emphasized through relevant life applications. The core content of mathematics, science, and communications will be reinforced when appropriate in the content.

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

**FITNESS AND FOOD** (822832)
Grades: 9, 10, 11, 12  Credit: one-half
This course is designed to focus on making choices that promote wellness and good health; analyzing relationships between psychological and social needs, and food choices; choosing foods that promote wellness; obtaining and storing food for self and family; preparing and serving nutritious meals and snacks; selecting and using equipment for food preparation; and, identifying strategies to promote optimal nutrition and wellness of our society. Students completing Fitness and Food with a 'B' or better may be eligible to articulate 25 hours towards the fulfillment of a Culinary Skills Externship at Stratford University.

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.

**FINE ARTS - MUSIC**

**BEGINNING BAND** (923215)
Grades: 9, 10, 11, 12  Credit: one
Students develop skills as individual musicians and as members of a musical group. Guidance will be given by the instructor in the selection of an instrument. Course content includes beginning level technical and ensemble skills necessary for performance. Some performance opportunities are provided.

Prerequisite: Beginning Band or successful audition

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

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

**INTERMEDIATE BAND** (923315)
Level 1
(Concert Band)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Beginning Band or successful audition

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

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

**ADVANCED BAND** (923415)
Level 1
(Symphonic Band)
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 included in this course. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

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

**ADVANCED BAND** (923416)
Level 2
(Wind Symphony 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 included in this course. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

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

**ADVANCED BAND** (923417)
Level 3
(Wind Symphony 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 included in this course. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

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

**JAZZ ENSEMBLE** (924015)
Level 1
This class meets after school.
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. WSHS Co-requisite: co-enrollment in a music performance class or permission of the instructor.

**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.

**BEGINNING ORCHESTRA** (923715)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Attainment of beginning level skills and permission of instructor

Corequisite: Participation in an intermediate or advanced band, chorus or orchestra class. Participation in marching band may be required for wind and/or percussion students.

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

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

**INTERMEDIATE ORCHESTRA** (923815)
Level 1
(String Ensemble)
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 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.

**INTERMEDIATE ORCHESTRA** (923816)
Level 2
(Concert Orchestra)
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 technical and ensemble skills necessary for performance. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.

This course requires a student materials fee as listed in FCPS Notice 5922.
ADVANCED ORCHESTRA (923915)
Level 1
(Symphonic Strings)
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.

ADVANCED ORCHESTRA (923916)
Level 2
(Chamber Strings)
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.

WOMEN'S CHORUS (926016)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: none
Students will participate in a chorus of women's voices. Emphasis is placed upon correct vocal performance techniques and sight-singing through the study of appropriate choral literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

MEN'S CHORUS (926017)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: none
Students will participate in a chorus of men's voices. Emphasis is placed upon correct vocal performance techniques and sight-singing through the study of appropriate choral literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. This course requires a student materials fee as listed in FCPS Notice 5922.

INTERMEDIATE WOMEN'S CHORUS (928516)
(Bel Canto) Prerequisite: Successful audition
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. Concerts are required.
This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED MIXED CHORUS (928915)
Level 1
(Madrigals)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition
Students are offered advanced choral experiences for mixed voices. Emphasis is placed on the development of musicianship and proficiency in ensemble performance. Course content includes a study of choral literature, vocal techniques, and sight-singing. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course. Concerts are required.
This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED ORCHESTRA (923915)
Level 1
(Symphonic Strings)
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.

GUITAR 1 (924515)
(Beginning)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition or successful completion of Guitar 1 or permission of the instructor
This course requires a student materials fee as listed in FCPS Notice 5922.

GUITAR 2 (924516)
(Intermediate)
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.
This course requires a student materials fee as listed in FCPS Notice 5922.

GUITAR 3 (924517)
(Advanced)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition or successful completion of Guitar 2 or permission of the instructor
Students continue to develop skills on the guitar. Guitar instruction emphasizes advanced 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 ENSEMBLE (924518)
Level 1
(Guitar Orchestra)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition or permission of the instructor
Students in this course form one of the representative performing guitar ensembles 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. 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 ENSEMBLE (924519)
Level 2
(Guitar Ensemble)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition or permission of the instructor
Corequisite: Schools may also require membership in intermediate or advanced band class, and may require participation in marching band.
Students in this course form the representative performing guitar ensemble 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. 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.

FINE ARTS - THEATRE ARTS

THEATRE ARTS 1 (141000)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: 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. The course emphasizes skills 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 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, theatre 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 requires a student materials fee as listed in FCPS Notice 5922.

THEATRE ARTS 3  (143000)
Develop Independent Skills in Theatre
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 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 projects related to the co-curricular theatre productions. Participation in major projects related to the co-curricular theatre productions may be required. Students must meet both the school day and after-school participation requirements to receive credit for the course. This course may be used to satisfy the graduation requirement for a credit in fine arts.
This course requires a student materials fee as listed in FCPS Notice 5922.

TECHNICAL THEATRE 1  (143511)
Grades:  9, 10, 11, 12  Credit:  one
Prerequisite:  Theatre Arts 1 and/or recommendation of theatre arts instructor.
Students explore various areas of technical theatre such as lighting, costumes, sound, scenery, makeup, properties, and theatre management. An analysis of dramatic literature leads students to an understanding of the design and production process. Participation in co-curricular productions is strongly encouraged.
This course requires a student materials fee as listed in FCPS Notice 5922.

TECHNICAL THEATRE 2  (143512)
Grades:  10, 11, 12  Credit:  one
Prerequisite:  Technical Theatre 1 and/or recommendation of theatre arts instructor.
Students apply technical theatre knowledge and skills by participating in a variety of theatre lab activities and practical projects. Emphasis is on script interpretation and execution of the design concept. Students will collaborate to effectively and safely create functional scenery, properties, lighting, sound, costumes and makeup, and to develop stage management, business and public relations skills. Students must meet both the school day and after-school participation requirements to receive credit for the course.
This course 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 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 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 AND DESIGN 3  (914000)
Grades:  11, 12  Credit:  one
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  Credit:  one
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, art portfolios, and professional applications.
This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED PLACEMENT ART: ART HISTORY  (915104)
Grades:  10, 11, 12  Credit:  one/weighted +1.0
Students develop an understanding of works of art within their historical context by examining issues such as politics, religion, patronage, gender, function, and ethnicity. The course also addresses visual analysis, aesthetics, and criticism. Students should demonstrate a high degree of commitment to academic work and possess academic skills needed to pursue a program designed to meet college standards. The course prepares students for the Advanced Placement Art History examination, for which college credit and/or placement may be awarded if a qualifying score is achieved. Objectives for Advanced Placement courses reflect the format and requirements in the Advanced Placement Course Description for Art published by the College Board. No prior experience in art studio or art history is assumed. All students are required to take the Advanced Placement Art History 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: DRAWING PORTFOLIO (915044)
Grades: 11, 12 Credit: one/weighted +1.0
Prerequisite: Studio Art and Design I 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.

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.
(Must have a digital camera)

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.
(Must have a digital camera)

GENERAL

ECONOMICS AND PERSONAL FINANCE (612000)
Grades: 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.

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. While students may receive assistance on core curricular assignments, the course is not designed to serve as a study hall and is meant to support the development of habits necessary for academic success. 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.

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.
All students must apply for the Computer Technology Assistance class.

LEADERSHIP TRAINING 1 (980800)
Grades: 11, 12 Credit: one
This course provides leadership training to interested students. It is especially appropriate for student body officers, organizational leaders, and class officers. The course includes understanding leadership, assessment of leadership styles, planning and organization skills, relationship building and problem solving. Focus will be placed on organization, time management, election processes, financial planning, opinion surveys, communication techniques, and becoming a community liaison. Student government and class activities will be the basis around which most of the course work is designed.
All students must apply for the Leadership class.

LEADERSHIP TRAINING 2 (980812)
Grades: 11, 12 Credit: one
This course provides leadership training to interested students. It is especially appropriate for student body officers, organizational leaders, and class officers. The course includes understanding leadership, assessment of leadership styles, planning and organization skills, relationship building and problem solving. Focus will be placed on organization, time management, election processes, financial planning, opinion surveys, communication techniques, and becoming a community liaison. Student government and class activities will be the basis around which most of the course work is designed.
All students must apply for the Leadership class.
PEER MEDIATION 1 (980900)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful completion of the selection procedures including application, recommendations, and interview. Approval by the peer mediation program instructors and the Director of Student Services is required.

This course is designed to train students to implement a peer mediation program in the high school. The training program develops students' interpersonal support, and leadership skills for the purpose of understanding conflict resolution so that they may serve as peer mediators and work with other students to resolve disputes. Students are taught the mediation process through intensive training sessions focusing on defining conflicts, identifying needs, understanding different points of view, examining methods of prejudice reduction, identifying conflict management styles, practicing collaborative problem solving, and developing communication skills.

PEER MEDIATION 2 (980912)
Grades: 10, 11, 12
Credit: one

This course is designed to build upon the skills taught in Peer Mediation. Through continuous skills refinement, students will learn how to facilitate more difficult mediation issues, support the training of new peer mediators, and serve as conflict resolution role models to the school community.

All students must apply for the Peer Mediation 2 class

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 learn to apply personal fitness planning concepts to individualized plans. One quarter of the course includes instruction in the health education topics of alcohol, tobacco, and other drug use prevention; emotional and social health; personal health; injury and violence prevention; disease prevention; and cardiopulmonary resuscitation and automated external defibrillation (CPR and AED).

HEALTH AND PHYSICAL EDUCATION 10 (740500)
Grades: 10
Credit: one
Prerequisite: Successful completion of Health and Physical Education, grade 9

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

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.

PERSONAL FITNESS - LEVEL 1 (760401)
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.

PERSONAL FITNESS - LEVEL 2 (760402)
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.

PERSONAL FITNESS - LEVEL 3 (760403)
Grades: 12
Credit: one
Prerequisite: Successful completion of health and physical education grades 9 and 10. Personal Fitness – Level 1 and/or teacher recommendation.

Personal Fitness 3 extends and enriches student's interdisciplinary body of knowledge grounded in the biological, psychological, physical, and social sciences. Units of study include anatomy and physiology, safety and fitness etiquette, motor learning, exercise programming, nutrition, and professional responsibilities and business fundamentals specific to the personal fitness profession. Students taking this course have the opportunity to become a certified personal trainer if they choose to take the certification exam (students are responsible for associated exam fee) and meet all of the certifying organization’s requirements. Students may not take this course in lieu of the grade 9 or grade 10 Health and Physical Education requirements.

MARKETING

MARKETING 1 (812000)
Grades: 9, 10, 11, 12
Credit: one

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

Industry certification may be available as part of this course.

ADVANCED MARKETING (813000)
Grades: 10, 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 prepare for a career 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.

GLOBAL MARKETING (813500)
Grades: 11, 12
Credit: one
Prerequisite: It is recommended that students be enrolled in a foreign language either concurrently or prior to enrollment in Global Marketing.

Global Marketing and Commerce is a specialized course for students with a career interest in the field of international trade. Students gain an understanding of the various careers in global trade, finance, distribution and marketing and consider fundamental concepts, principles, and theories of marketing in a global marketplace. Field trips, guest speakers, and DECA competitive events are used to enhance the course work. Course content blends economic theory with international culture, politics, legal issues, concepts, practices, and applications. 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. Academic knowledge and skills (mathematics, science, English, and history/social science) related to the content are a part of this course. Computer/technology applications supporting this course are studied.

Industry certification may be available as part of this course.

FASHION MARKETING 1 (814000)
Grades: 9, 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 a part of this course. Computer/technology applications supporting this course are studied. Marketing simulations, case studies, projects, teamwork, guest speakers, and DECA competitions provide many opportunities for application of instructional competencies. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Industry certification may be available as part of this course.
FASHION MARKETING 2 (814500)
Grades: 10, 11, 12 Credit: one
Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)
Students with a career interest in apparel and accessories marketing gain in-depth knowledge of the apparel and accessories industry and skills important for employment in apparel businesses. They develop advanced skills unique to fashion marketing and advanced general marketing skills applied to the apparel and accessories industry. Professional selling, sales promotion, buying, merchandising, marketing research, product/service technology, and supervision as well as academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course. Computer/technology applications supporting this course are studied. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. (Students interested in this course should also see Fashion Design 1 under Family and Consumer Sciences.)
Industry certification may be available as part of this course.

SPORTS AND ENTERTAINMENT MARKETING (817500)
Grades: 10, 11, 12 Credit: one
This introductory course helps students develop a thorough understanding of fundamental marketing concepts and theories as they relate to the sports, entertainment, and recreation industries. Students will investigate the components of branding, sponsorships and endorsements, as well as promotion plans needed for sports, entertainment and recreation events. The course also supports career development skills and explores career options. Academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course. Classroom instruction will be reinforced through the use of outside lectures, case studies, and field trip experiences. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.
Industry certification may be available as part of this course.

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, and 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.

MARKETING COOPERATIVE INTERNSHIP (CO-OP) (819290)
Grades: 10, 11, 12 Corequisite: Student must be concurrently enrolled in a Marketing or EFE course.
The Marketing Cooperative Internship (CO-op) option enhances classroom instruction by providing practical work experience that is relevant to students’ career goals. Students enrolled in Co-op attend at least one marketing or EFE class and work a minimum of 396 hours (10 hours per week) in an approved, supervised marketing-related, part-time job for one credit.

MARKETING COOPERATIVE INTERNSHIP (CO-OP) (819921)
Grades: 10, 11, 12 Corequisite: Student must be concurrently enrolled in a Marketing or EFE course.
The Marketing Cooperative Internship (CO-op) option enhances classroom instruction by providing practical work experience that is relevant to students’ career goals. Students enrolled in Co-op attend at least one marketing or EFE class and work a minimum of 720 hours (20 hours per week) in an approved, supervised marketing-related, part-time job for two credits.

GEOMETRY (314300)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Algebra 1
This course emphasizes two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. A variety of applications and some general problem-solving techniques, including algebraic skills, will be used to explore geometric relationships. Conjectures about properties and relationships are developed inductively and then verified deductively. Calculators, computers, graphing utilities, dynamic geometry software, and other appropriate technology tools will be used to assist in teaching and learning.
Students are required to take the Standards of Learning End of Course Test.

GEOMETRY HONORS (314336)
Grades: 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 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 (313500)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Algebra 1
Algebra 2 provides a thorough treatment of algebraic concepts through the study of functions, polynomials, rational expressions, complex numbers, exponential and logarithmic equations, arithmetic and geometric sequences and series, and data analysis. Emphasis is placed on the mechanics of algebra with real world applications and modeling. A transformational approach to graphing is used with families of related graphs. Numerical, graphical, and algebraic solutions are considered for all problems as applicable. Graphing utilities, especially graphing calculators, are integral to the course.
Students are required to take the Standards of Learning End of Course Test.

ALGEBRA 2 HONORS (313536)
Grades: 9, 10, 11, 12 Credit: one/weighted <.5
Prerequisite: Algebra 1
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, 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 (316056)
Grades: 10, 11, 12  Credit: one/weighted +.5
Prerequisite:  Geometry and Algebra 2
The purpose of PreCalculus with Trigonometry Honors is to prepare students to take the college-level level course as an alternative to AP Calculus. This course is an elective math course. This course is designed for students who have successfully completed the standards for Precalculus. Content includes a skill review and an introduction to differential and integral calculus topics. Students' abilities to work effectively with major topics from elementary functions are strengthened. This course does not carry a weighted grade. Grade calculating will be required for this course.

ADVANCED PLACEMENT CALCULUS AB (317004)
Grades: 11, 12  Credit: one/weighted +1.0
Prerequisite: Precalculus or Trigonometry with Precalculus or 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. Students must purchase the TI84 calculator.

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.

AP Computer Science Principles (318597)
Grades: 11, 12  Credit: one/weighted +1.0
Prerequisite:  College -level course in computer science
The AP Computer Science Principles course is equivalent to a first-year introductory college computer course. The course explores the big ideas of computing: creativity, abstraction, data and information, algorithms, computing, 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.

ADVANCED COMPUTER SCIENCE AB (320011)
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 to provide topics for programming assignments in which students can apply their knowledge. Java is the vehicle for implementing solutions to problems.
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 activities and laboratory activities focus on life processes that occur within organisms or cells as well as the characteristics of life including: reproduction, development, and adaptation to environment. Major topics of study include molecular biology, cells, genetics, organisms, evolution and ecology. The course includes a unit on human life education that addresses the topics of human reproduction and human development. Parents have the option of withdrawing their child from any or all topics included in the state-mandated Family Life Education portion. Students opting-out will be provided with alternative biology lessons. If dissections are a part of the laboratory experience, alternatives are available.

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

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

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

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

**ADVANCED PLACEMENT BIOLOGY** (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 biology content within four big ideas: 1) the process of evolution drives the diversity of life, 2) biological systems utilize energy and molecular building blocks to grow, reproduce and maintain homeostasis, 3) living systems retrieve, transmit, and respond to information essential to life processes, and 4) biological systems interact, and these interactions possess complex properties. If dissections are part of the laboratory experience, alternatives are available. Students are required to take the Advanced Placement exam for which college credit and/or placement may be given if a qualifying score is achieved.

**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 an 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.

**CHEMISTRY 1** (441000)
Grades: 10, 11, 12
Credit: one

Prerequisite: One laboratory science course, Algebra 1

Chemistry 1 provides students the opportunity to develop their critical thinking skills as they acquire a better understanding of the chemical nature of our world. Students investigate the composition, properties, and reactions 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. Recommended: Passing score on the Algebra I SOL test

**CHEMISTRY 1 HONORS** (441036)
Grades: 10, 11, 12
Credit: one/weighted +.5

Prerequisite: One laboratory science course, Algebra 1

Corequisite: Algebra 2

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

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

**ADVANCED PLACEMENT CHEMISTRY** (447004)
Grades: 11, 12
Credit: one/weighted +1.0

Prerequisite: Chemistry 1

Corequisite: Recommended: Physics or 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.

**ACTIVE PHYSICS** (451050)
Grades: 10, 11, 12
Credit: one

Prerequisite: One laboratory science course

Active Physics is a physics course for students who have not yet passed Algebra I or weak in geometry. 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 science and mathematics content knowledge and skills.

**PHYSICS 1** (451000)
Grades: 11, 12
Credit: one/weighted +1.0

Prerequisite: Two laboratory science courses

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

**ADVANCED PLACEMENT PHYSICS 1** (457306)
Grades: 11, 12
Credit: one/weighted +1.0

Corequisite: Precalculus with Trigonometry

AP Physics 1 is a first year physics course. The course is designed around 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 momentum; changes are described 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
Credit: one/weighted +1.0

Prerequisite: AP Physics 1

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

**ADVANCED PLACEMENT PHYSICS C - MECHANICS AND ELECTRICITY AND MAGNETISM** (457004)
Grades: 11, 12
Credit: one/weighted +1.0

Prerequisite: Physics I or other advanced physics course

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.

**GEOSYSTEMS** (422000)
Grades: 11, 12
Credit: one

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

ASTRONOMY (426000)
Grades: 11, 12
Credit: one
Prerequisite: Two laboratory science courses
Students are required to take the Advanced Placement exam, and may be given college credit and/or placement if a qualifying score is achieved.

OCEANOGRAPHY (425000)
Grades: 11, 12
Credit: one
Prerequisite: Two laboratory science courses
This course deals with such topics as the universe, universal laws, galaxies, stellar evolution, the solar system and its motion, and the exploration of space. This course is designed to be an in-depth and mathematical treatment of astronomy concepts. This course does not count as one of the science credits for the standard diploma. It can be used as the fourth credit for an advanced studies diploma, if the student has already taken three science courses from three different disciplines.

SOCIAL STUDIES

WORLD 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 examine the political, economic, social, and cultural growth of the United States, including the role of Virginia. Students study major historical developments and their impact on contemporary society and on the individual. Map and globe reading, critical thinking, writing, research, and group-process skills are refined. Virginia and United States History is required for graduation.

WORLD HISTORY AND GEOGRAPHY 1 HONORS (221936)
Grades: 9
Credit: one/weighted +.5
This is the first of a two-year, chronologically and thematically organized study of world history and geography. In this first year, students study the world from ancient times to 1500 CE. The course highlights relationships between the geography and history of Europe, Africa, Asia, and Latin America. Students examine the political, economic, social, and cultural growth of the United States, including the role of Virginia. Students study major historical developments and their impact on contemporary society and on the individual. Map and globe reading, critical thinking, writing, research, and group-process skills are refined. Virginia and United States History is required for graduation. Students are required to take the Standards of Learning End of Course Test.

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

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

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

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

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

VIRGINIA AND US GOVERNMENT (244000)
Grades: 11
Credit: one/weighted +.5
This course is designed to provide the student with a hands-on practical approach to the study of history. First semester topics such as historiography, archival work, museum studies, historic preservation, and history through film and heritage education will be presented. Speakers from federal, state, and local history related agencies will round out the first semester course of studies. During the second semester until the end of May, students participate in internships at local historic sites, historic house museums, or history related agencies, in a co-op type arrangement. Students must be able to secure their own transportation to their respective intern sites.

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

APPLIED HISTORY (238700)
Grade: 11/12
Credit: one
This course is designed to provide the student with a hands-on practical approach to the study of history. First semester topics such as historiography, archival work, museum studies, historic preservation, and history through film and heritage education will be presented. Speakers from federal, state, and local history related agencies will round out the first semester course of studies. During the second semester until the end of May, students participate in internships at local historic sites, historic house museums, or history related agencies, in a co-op type arrangement. Students must be able to secure their own transportation to their respective intern sites.

APPLIED HISTORY (238700)
Grade: 11/12
Credit: one
This course is designed to provide the student with a hands-on practical approach to the study of history. First semester topics such as historiography, archival work, museum studies, historic preservation, and history through film and heritage education will be presented. Speakers from federal, state, and local history related agencies will round out the first semester course of studies. During the second semester until the end of May, students participate in internships at local historic sites, historic house museums, or history related agencies, in a co-op type arrangement. Students must be able to secure their own transportation to their respective intern sites.
ADVANCED PLACEMENT US GOVERNMENT AND POLITICS (244504)
Grades: 10, 11, 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.

ADVANCED PLACEMENT COMBINED US AND COMPARATIVE GOVERNMENT (244567)
Grades: 12  Credit: one/weighted +1.0
This course includes a study of comparative government as well as American government and politics. In the study of American government, students interpret national, state, and local government and politics through a study of both general concepts and specific case studies. In the study of comparative government, emphasis is placed on understanding the world's diverse political structures and practices, as well as on interpreting and analyzing the key political relationships found in national governments. This course prepares students to take both the Advanced Placement examination for United States Government and Politics and the Advanced Placement examination for Comparative Government, for which college credit and/or placement may be given if qualifying scores are made. Completion of this course fulfills the graduation requirement for one credit in Virginia and United States Government. All students in this course are required to take both AP (US and Comparative) Government exams.

ADVANCED PLACEMENT MACRO AND MICRO ECONOMICS (280404)
Grades: 11, 12  Credit: one/weighted +1.0
This course is designed to provide students with an understanding of the economic principles which apply to an economic system as a whole. This course is designed to provide students with an understanding of the principles of economics which apply to the functions of decision-makers, both consumers and producers, within economic systems. Topics include, national economics, international economics, the nature and functions of product markets, the study of factor markets, and the role of government in promoting greater efficiency and equity in the economy. All students are required to take both Advanced Placement examinations in Macro and Micro Economics, 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 virtual graduation requirements.

TECHNOLOGY AND ENGINEERING
EDUCATION

DESIGN AND TECHNOLOGY (840300)
Grades: 9, 10, 11, 12  Credit: one
Design and Technology is designed as a foundation high school course in technology education. Students use core technology knowledge to solve open-ended problems and create systems. Laboratory activities engage students in the design process through projects that integrate mathematics, science, and other core subjects. Working in groups, students build and control systems in the development of technology. Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal. Students successfully completing this course in conjunction with another one credit course within the same program area will satisfy the sequential elective requirement for the standard or modified standard diploma. This course requires a student materials fee as listed in FCPS Notice 5922.

TECHNOLOGY TRANSFER (840500)
Grades: 10, 11, 12  Credit: one
Prerequisite: Design and Technology (840300)
Technology Transfer is the study of various technologies working together as a system. The central theme of Technology Transfer is the integration of the technological systems of production, energy, communication, transportation, and other related current or emerging technologies. Students work on individual and group activities that are integrated with core subjects and reinforce mathematics, science, and technical writing. Integrated or thematic activities in this course challenge students to use the technological method to solve practical and critical thinking skills problems in a variety of systems or subsystems.
Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

TECHNOLOGY ASSESSMENT (840700)
Grades: 11, 12  Credit: one
Prerequisite: Technology Transfer (840500)
Technology Assessment is designed as the capstone course for the Design and Technology Program. Students learn a variety of assessment techniques which they will use to identify and evaluate the effectiveness and appropriateness of technologies. Students develop analytical skills and apply these to the assessment and improvement of proposed, current, and emerging technologies. Students activities foster integration of mathematics, science, and language arts and promote critical thinking and practical problem solving. Students are focused on the methods to assess technology systems to optimize their results.
Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ELECTRONICS 1 (841600)
Grades: 9, 10, 11, 12  Credit: one
Students explore career fields in electricity and electronics. The course includes information on electrical and electronic theory and applications, computer-aided instruction and circuit simulation, components, circuitry troubleshooting, use of test instruments and lab training devices, consumer information, and career opportunities. The course covers the fundamentals of basic electronics through complex AC and DC circuit theory. Students interested in engineering or related careers will benefit from the course.
Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

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ELECTRONICS 2 (841200)
Grades: 10, 11, 12 Credit: one
Prerequisite: Electronics 1 (841600)
Students learn theory and circuitry of more complex systems. Semiconductor, linear, and analog electronic circuits are explored. Numerical. Students develop an advanced understanding of electrical theory, develop a measure of skill in the application of electrical theory as it applies to electronics circuit development, and learn safe practices for working with electricity and electronics.
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 ELECTRONICS AND ROBOTICS HONORS (841300)
Grades: 11, 12 Credit: one-weighted +.5
Prerequisite: STEM Engineering (845000) or Electronics 2 (841200)
Students investigate computer circuits, digital electronics and microprocessor theory and operation using analytical and hands-on techniques. Topics include: microprocessor architecture, computer logic, digital logic circuits, machine language programming, and microprocessor interfacing. Special topics include hands-on robotics and advanced electronics systems control and manufacturing. Course is STEM based and will incorporate aspects of Science, Technology, Engineering, and Mathematics.
Industry certification may be available as part of this course.

ADVANCED DRAWING (843600)
Grades: 10, 11, 12 Credit: one
Prerequisite: Basic Technical Drawing (843500)
Students gain an understanding of technical drawing careers in modern industry. Course includes drafting-related problems, use of Computer-Assisted Drafting (CAD) equipment, and drafting skills and techniques. Students use Inventor software and specifications along with other resource materials. Students interested in engineering or related careers will benefit from this course.
Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ARCHITECTURAL DRAWING (843700)
Grades: 10, 11, 12 Credit: one
Prerequisite: Basic Technical Drawing (843500)
Students study the history of architecture, examine various construction techniques, use Computer-Assisted Drafting (CAD) equipment, and design elements of living and industrial structures. They develop working drawings and specifications as well as a scale model. Students interested in architecture or related careers will benefit from this course.
Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED DRAWING (843800)
Grades: 11, 12 Credit: one
Prerequisite: Engineering Drawing (843600) or Architectural Drawing (843700)
Students use a graphic language for product design and technical illustration. They increase their understanding of drawing techniques learned in the prerequisite courses. Students will research design-related fields while identifying the role of advanced drawing and design in manufacturing and construction industry processes. They apply the design process, analyze design solutions, reverse engineer products, create 3-D solid models using Computer-Assisted Drafting (CAD), construct physical models, and create multimedia presentations of finished designs. Students will complete a work portfolio based on a chosen graphic project using advanced software such as Autodesk Inventor, Revit and 3D Studio Max.
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 1 (848726)
Grades: 10, 11, 12 Credit: one
Prerequisite: Recommended: STEM Engineering (845000)
Aerospace Science 1 is a course that allows students to study aerodynamic principles, flight history, electrical and mechanical systems, instrumentation, flight operations, safety and security, air traffic control, airport design, economic impacts, rocketry, and satellite and space operations. Numerous lab activities include computer simulators, and model aircraft design and testing. Leading national institutions and commercial businesses provide valuable resources and career experiences to participating students. For more information, visit the CTE web site.
Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.

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.

WORLD LANGUAGES

AMERICAN SIGN LANGUAGE (ASL) 1 (599000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: ASL 1 or equivalency test
Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in signing, receiving signs and non-manual gestures, and reading. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. This course may be counted as a world languages course in fulfilling requirements for the Advanced Studies Diploma.

AMERICAN SIGN LANGUAGE (ASL) 2 (599500)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: ASL 1 or equivalency test
Students continue to develop proficiency in American Sign Language. They learn to function in real-life situations using more complex language structures and a wider range of vocabulary. Students continue to explore as they study the themes of Home Life, Student Life, Leisure Time, and Vacation and Travel. This course may be counted as a world languages course in fulfilling requirements for the Advanced Studies Diploma.

AMERICAN SIGN LANGUAGE (ASL) 3 (599700)
Grades: 10, 11, 12 Credit: one
Prerequisite: ASL 2 or equivalency test
Students continue to develop and refine their proficiency in American Sign Language. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students add vocabulary and idiomatic expressions in the context of everyday interactions and social relationships. 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 may be counted as a world languages course in fulfilling requirements for the Advanced Studies Diploma.

AMERICAN SIGN LANGUAGE (ASL) 4 (599800)
Grades: 10, 11, 12 Credit: one
Prerequisite: ASL 3 or equivalency test
Students continue to develop and refine their proficiency in American Sign Language. They communicate using complex language structures on a variety of topics, moving from concrete to abstract concepts. At this level, students add vocabulary and idiomatic expressions in the context of everyday interactions and social relationships. Students begin to explore the world of interpretation. Students gain a deeper understanding of the world around them while studying Deaf Culture, Globalization and Communication, Science, and Social Issues.
FRENCH 1 (510000)
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: Level 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: Level 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. They read material on familiar topics and produce short writing samples. They read authentic materials, which may include readings from contemporary authors. Materials will include recordings, films, newspapers, and magazines. All students are required to take the Advanced Placement French Language exam.

GERMAN 2 (522000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Level 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.

GERMAN 3 (523000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Level 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.

GERMAN 4 (524000)
Grades: 10, 11, 12 Credit: one
Prerequisite: German 3 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. 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.

GERMAN 5 (525015)
Grades: 11, 12 Credit: one/weighted +5
Prerequisite: German 4, or Advanced Placement Language, or equivalency test
Students study selected upper levelPOS themes and topics using more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. They participate in in-depth studies of major literary works and historical events and learn to recognize the various themes and conflicts involved. Students express abstract ideas while discussing literature, history, and current events.

ADVANCED PLACEMENT FRENCH LANGUAGE (517004)
Grades: 11, 12 Credit: one/weighted +1.0
Prerequisite: French 4 or equivalency test
The purpose of this course is to prepare students to take the Advanced Placement Language examination given each spring, for which placement and/or credit may be awarded at the college level if a qualifying score is obtained. Students study the use of language for active communication. Specifically, they understand the spoken target language in both formal and conversational situations. They express ideas accurately and resourcefully, both orally and in writing, with reasonable fluency, and they develop a vocabulary sufficiently ample for reading newspaper and magazine articles, contemporary literature, and other nontechnical writings. They receive extensive training in the organization and writing of compositions, review syntax, and study selected works by contemporary authors. Materials will include recordings, films, newspapers, and magazines. All students are required to take the Advanced Placement French Language exam.

LATIN 1 (531000)
Grades: 8, 9, 10, 11, 12 Credit: one
Prerequisite: French 4 or equivalency test
Students learn basic language structures and essential elements of Latin pronunciation in order to be able to read simple passages in Latin. The relationship of English to Latin is emphasized in vocabulary building, word derivation, and meanings of prefixes and suffixes. Language structures and syntax are developed through the study of literary passages. The geography, history, government and the culture of the Roman Empire are studied. For middle school students, this credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

LATIN 2 (532000)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Level 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 prose 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, connotation of words and author’s style. Students study the life and times of Vergil, his influence on later writers, his poetic devices, and his Aeneid as a literary work.

ADVANCED PLACEMENT LATIN   (537004)  
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 Latin 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.

SPANISH 1   (551000)  
Grades:  9, 10, 11, 12 Credit:  one  
Prerequisite: none  
Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. 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 may also explore as they study the POS themes of Home Life, Student Life, Leisure Time, and Vacation and Travel.

SPANISH 2   (552000)  
Grades:  9, 10, 11, 12 Credit:  one  
Prerequisite: Level 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 may also 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: Level 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 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 may also explore as they study the POS themes of Home Life, Student Life, Leisure Time, and Vacation and Travel.

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 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 FOR CAREER APPLICATIONS   (554060)  
Grades:  10, 11, 12 Credit:  one  
Prerequisite: Level 3 or equivalency test  
The course is intended for students who have completed Spanish 3 and are interested in exploring applications of Spanish in a career cluster. Students will explore the cross-disciplinary focus, preparing them to exit high school with communicative competence in business, law enforcement, health science, and government/public administration. This course will improve students' Spanish proficiency as they deepen their understanding of more complex syntax in business writing and sharpen their communicative skills; will foster cultural competency for today's multicultural world; and will enhance their ability to apply their language skills in specific fields of study. Classes will be conducted entirely in Spanish.

SPANISH 5   (555015)  
Grades:  11, 12 Credit:  one/weighted +5  
Prerequisite: Spanish 4, or Advanced Placement Languages, 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 Spanish 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 newspapers and magazine articles, contemporary literature, and other nontechnical writings. They receive extensive training in the organization and writing of compositions, review syntax, and study selected works by contemporary authors. Materials will include recordings, films, newspapers, and magazines. All students are required to take the Advanced Placement Spanish Language exam.

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.

SPANISH FOR FLUENT SPEAKERS 3   (553100)  
Grades:  9, 10, 11, 12 Credit:  one  
Prerequisite: Spanish for Fluent Speakers 2 or permission from instructor  
This course, designed for speakers of Spanish, continues to emphasize the refinement of proficiency in reading, writing, and speaking Spanish. Students develop research skills through the reading and critiquing of literary works. The influence of Hispanic culture in contemporary American society is highlighted. The course is conducted in Spanish and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma.

SPECIAL EDUCATION

INDIVIDUALIZED MATHEMATICS   (312181)  
Grades:  9, 10, 11, 12 Credit:  one  
Prerequisite: None  
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.

ALGEBRA 1 PART I/ALGEBRA 1   (313141; 313041)  
Grades:  9, 10 Credit:  one (Math) & one (elective)  
Prerequisite: Middle School Mathematics  
Algebra 1 / Part I extends students' understanding of the real number system and its properties through the study of variables, expressions, equations, inequalities, and analysis of data derived from real-world phenomena. Topics include linear equations and inequalities, linear relations and functions, measures of central tendency (mean, median, mode), data analysis and middle school objectives as needed. Algebra 1 / Part I includes approximately sixty percent of the Virginia Standards of Learning for Algebra 1. Students who began 9th grade during the 2009-2010 school year or earlier must pass approximately sixty percent of the Virginia Standards of Learning for Algebra 1 to receive mathematics graduation credit for Algebra 1 / Part I. This course will not count towards a mathematics graduation credit for students who start 9th grade during the 2010-2011 school year or later. (If the IEP team determines that a student is working toward a Standard Diploma, but the student requires credit
accommodations, this course may be used as a math elective. — However this course must be taken in sequence.)

Algebra 1 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.

Students should purchase a TI-83 or TI-84 calculator.

PERSONAL DEVELOPMENT (798800) Grades: 9, 10, 11, 12 Credit: one

This comprehensive individualized program is designed to prepare students for a style of living that will require a minimum of dependence on family. The course is geared to meet the needs of the students as they prepare to enter employment and emphasizes developing interpersonal skills, following directions, working independently, completing a task, and developing self-advocacy and other community living skills.

WORK AWARENESS AND TRANSITION (907161) 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. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard or Modified Standard diploma.

WORK AWARENESS AND TRANSITION (907162) 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. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard or Modified Standard diploma.
ACADEMY COURSES

BUSINESS & INFORMATION TECHNOLOGY

A+ LEVEL 1 (862236)
Grades: 10, 11, 12
Credit: one
Prerequisite: Computer related course or equivalent skill
(Edison Academy—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. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

CYBER: ROUTING AND SWITCHING 2A, CISCO (854332)
Grades: 11, 12
Credit: one-half
Prerequisite: Cyber: Routing and Switching 1A and 1B, Cisco
(Chattily and Marshall Academies - transportation may be provided)
This is part A of a full year course. Part A is taken in the fall semester. Students also register and take Cyber: Routing and Switching 2B, Cisco in the spring semester. This course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switch networks, IP Telephony requirements, and security. It also introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and Open Shortest Path First (OSPF) Protocol. Hands-on exercises, including configuration, installation, and troubleshooting, reinforce student learning. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site.

Industry certification may be available as part of this course.

CYBER: ROUTING AND SWITCHING 2B, CISCO (854332)
Grades: 11, 12
Credit: one-half
Prerequisite: Cyber: Routing and Switching 1A and 1B, Cisco
(Chattily and Marshall Academies - transportation may be provided)
This is part B of a full year course. Part B is taken in the spring semester. Students also register and take Cyber: Routing and Switching 2A, Cisco in the fall semester. This course is designed for students interested in pursuing a career in the computer industry. Students will install, configure, upgrade, diagnose, troubleshoot and perform preventive maintenance on computer motherboards, processors, and memory chips. Other areas of study will include basic networking, software operation of Windows and DOS, memory management, and preventive maintenance. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site.

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

CYBER: COMPUTER SYSTEMS TECHNOLOGY 2 A+ (862232)
Grades: 10, 11, 12
Credit: one
Prerequisite: Computer related course or equivalent skill
(Corequisite: Computer: Systems Technology 2 A+)
(Edison Academy - transportation may be provided)
Students also register for the Cyber: Computer Systems Technology 2 A+ in the spring. Students enter the world of computer technology and gain practical experience in assembling a computer system, installing an operating system, troubleshooting computers and peripherals, and using system tools and diagnostic software. They develop skills in computer networking and resource sharing. In addition, students explore the relationships between internal and external computer components. Emphasis is placed on customer service skills and career exploration. Upon successful completion of the course, students may qualify to take the A+ certification exam. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site.

Industry certification may be available as part of this course.

CYBER: COMPUTER SYSTEMS TECHNOLOGY 3 A+ (862232)
Grades: 10, 11, 12
Credit: one
Prerequisite: Computer related course or equivalent skill
(Corequisite: Computer: Systems Technology 3 A+)
(Edison Academy - transportation may be provided)
Students also register for Computer Systems Technology 3 A+ in the fall. 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 jobs as network technicians and help desk technicians. It provides a broad overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide e-mail services, Web space, and authenticated access. Students learn about the soft skills required for help desk and customer service positions, and the final chapter helps them prepare for the CCENT certification exam. Network monitoring and basic troubleshooting skills are taught in context. The cooperative education (Business Cooperative Internship—679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site.

Industry certification may be available as part of this course. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.
IT SEMINAR (662126)
Grades: 10, 11, 12 Credit: one
Prerequisite: IT Academy Course
Corequisite: IT Academy Course
Student enrolled in Lockheed Martin Internship only
Students will study IT workplace skills to include communication, office procedures, managing of information, financial functions, information and data processing, organization, and supervision. Students have the opportunity to complete workplace readiness assessments and IT related industry certifications in their field. In addition, students will participate in IT internships.
Industry certification may be available as part of this course. Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal. Students successfully completing this course in conjunction with another one credit course within the same program area will satisfy the sequential elective requirement for the standard or modified standard diploma. Successful completion of this course in conjunction with a corresponding industry certification may qualify for a student selected verified credit.

CYBER: NETWORK ADMINISTRATION 1 (665032)
Grades: 10, 11, 12 Credit: one
Prerequisite: Computer related course, Algebra 1, or equivalent skill
(Edison Academy - 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: 10, 11 Credit: one
Prerequisite: Cyber: Network Administration 1 (Edison Academy-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.

ORACLE 1 (666026)
Grades: 10, 11, 12 Credit: one
Prerequisite: Computer related course or equivalent skill
(Edison Academy-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 1, ORACLE (666032)
Grades: 10, 11, 12 Credit: one
Prerequisite: Computer related course or equivalent skill
(Edison Academy-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 (666232)
Grades: 11, 12 Credit: one
Prerequisite: Oracle 1
(Edison Academy-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.

FAMILY AND CONSUMER SCIENCES

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.
(Edison Academy - 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. These skills 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. This course requires a student materials fee as listed in FCPS Notice 5922. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.

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

FINE ARTS: DANCE

ACADEMY DANCE 1 (931126)
Grades: 11, 12 Credit: one
Prerequisite: Successful Audition
(Edison Academy)
Students will develop skills in basic movement fundamentals, placement and alignment, and beginning dance technique for selected dance forms (modern, jazz, and ballet). Students will also develop dance vocabulary, stage dance history, gain competence in critiquing skills, learn improvisational skills, and develop further 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
(Edison Academy)
Students will focus on intensive work and proficiency in alignment, selected techniques, flexibility, and strength. Students will broaden knowledge of dance history, anatomy, theory, vocabulary, criticism, and composition. Students will continue to develop choreographic and performance skills including the use of improvisation. For more information, visit the academy web site.
This course requires a student materials fee as listed in FCPS Notice 5922.
ACADEMY DANCE 3  (931527)
Grades: 11, 12  Credit: two
Prerequisite: Dance 2 or Successful Audition
(Potomac Academy)

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

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

ACADEMY DANCE 4  (931927)
Grades: 12  Credit: two
Prerequisite: Dance 3 or successful audition.
(West Potomac Academy)

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

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

FINE ARTS: MUSIC

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

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 sites.

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
(West Potomac Academy - transportation may be provided.)

Students will expand on the use of computers and other electronic technologies developed in Music and Computer Technology 1. They will build on skills developed in Music and Computer Technology I, including: Musical Instrumental Digital Interface (MIDI), analog and digital synthesis, sequencing, acoustics, sound processing, and electronic musical composition using the latest music industry software and the internet. For more information, visit the academy web sites.

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

FINE ARTS: THEATRE ARTS

PROFESSIONAL MUSICAL THEATRE AND ACTOR'S STUDIO 1  (143027)
Grades: 11, 12  Credit: two
Prerequisite: Professional Musical Theatre and Actor's Studio 2 or teacher recommendation
(West Potomac Academy - transportation may be provided.)

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 theatre auditions, interviewing area professionals will be required. Also required will be in-class presentations on topics of interest or an area of expertise. For more information, visit the academy web sites.

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

PROFESSIONAL MUSICAL THEATRE AND ACTOR'S STUDIO 2  (144027)
Grades: 12  Credit: two
Prerequisite: Professional Musical Theatre and Actor's Studio 1
(West Potomac Academy - transportation may be provided.)

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 sites.

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
(West Potomac Academy - transportation may be provided.)

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 sites.

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

HEALTH & MEDICAL

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

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

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. 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)
(Edison Academy - transportation may be provided)

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

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.
Prerequisite: Exploring Health Sciences and Exploring the Language of Medicine

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

(West Potomac Academy - 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. Students also receive a pursuit-oriented laboratory instruction that prepares them for the management of the office as well as the dental specialties of oral surgery, 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 academy web site.

Students successfully completing this course may be eligible to earn a Career and Technical Education (CTE) certificate. Students successfully completing this course will satisfy the sequential elective requirement for the standard or modified standard diploma. This course requires a student materials fee as listed in FCPS Notice 5922.

DENTAL CAREERS 1  (832827)

Grades: 11, 12  Credit: two

(West Potomac Academy - 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 academy web site.

Students successfully completing this course may be eligible to earn a Career and Technical Education (CTE) certificate. Students successfully completing this course will receive the sequential elective requirement for the standard or modified standard diploma. This course requires a student materials fee as listed in FCPS Notice 5922.

DENTAL CAREERS 2  (832927)

Grades: 11, 12  Credit: one

Prerequisite: Dental Careers 1 (832827)

(West Potomac Academy - 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.

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.

(West Potomac Academy - transportation may be provided.)

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Fire and Emergency Medical Sciences 2 for the spring semester. Fire and Emergency Medical Sciences prepares the student to work under the direct supervision of a certified EMT instructor. The curriculum consists of planned learning experiences in the classroom, laboratory, and faculty supervised clinical settings. Students will have the opportunity to observe and interact with a variety of patients experiencing varying degrees of injury or disease that are carefully selected to provide appropriate clinical learning experiences. As preparation, students will be provided with ample lab practice to fully prepare them for clinical experiences.

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)

(West Potomac Academy - transportation may be provided.)

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Fire and Emergency Medical Sciences 1 for the fall semester. Fire and Emergency Medical Sciences prepares the student to enter the workforce or pursue further education in the field of Emergency Medical Services (EMS) and Fire Science. The principles and practices of emergency response and firefighting will be explored under the direct supervision of a certified EMT instructor. The curriculum consists of planned learning experiences in the classroom, laboratory, and faculty supervised clinical settings. Students will have the opportunity to observe and interact with a variety of patients experiencing varying degrees of injury or disease that are carefully selected to provide appropriate clinical learning experiences. As preparation, students will be provided with ample lab practice to fully prepare them for clinical experiences. 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.

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 foundational 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: two

Prerequisite: Exploring Health Sciences and Exploring the Language of Medicine are strongly recommended.

(West Potomac Academy - transportation may be provided.)

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, 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 as part of the course. Successful completion of the program may lead to employment in physicians’ offices or clinics. Students have the opportunity to earn Healthcare Provider CPR and NOCIT’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.

MEDICAL ASSISTANT 2  (834626)

Grades: 12  Credit: two

Prerequisite: Medical Assistant 1

(West Potomac Academy - transportation may be provided.)

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Medical Assistant 1 for the fall semester. Students further develop medical-assisting skills and techniques learned in Medical Assistant 1. They also learn more about the role of patient care, as well as the importance of reimbursement care and common 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 NOCIT’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.

PHARMACY TECHNICIAN 1  (830526)

Grades: 11, 12  Credit: one

Prerequisite: Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required.

(West Potomac Academy - transportation may be provided.)

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Pharmacy Technician 2 for the spring semester. The Pharmacy Technician course incorporates both classroom and clinical lab pharmacy experiences. The student will be given the opportunity to meet state pharmacy technician competencies as well as be exposed to the larger arena of pharmacy careers. Students may have the opportunity to participate in a clinical experience. Students must purchase liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

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

PHARMACY TECHNICIAN 2  (830626)

Grades: 11, 12  Credit: one

Prerequisite: Pharmacy Technician 1

(West Potomac Academy - transportation may be provided.)

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

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

(Plum Center for Lifelong Learning - transportation may be provided)

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

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

**PHYSICAL THERAPY/OCCUPATIONAL THERAPY 2** (836627)

**Grades:** 11, 12  
**Credit:** two  
**Prerequisite:** Physical Therapy/Occupational Therapy 1 (836527)

(Plum Center for Lifelong Learning - transportation may be provided)

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

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

**PRACTICAL NURSING 1** (835726)

**Grades:** 12  
**Credit:** one  
**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 (835727) for the spring semester. This course offers preclincial 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 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. Eligibility for acceptance into nursing program includes strong algebra 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 COLLISION SERVICE 1** (867626)

**Grades:** 11, 12  
**Credit:** one  
**Prerequisite:** Auto Collision Service 1 (867627)

(Edison Academy - transportation may be provided)

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

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

**PRACTICAL NURSING 2** (835727)

**Grades:** 11, 12  
**Credit:** two  
**Prerequisite:** Auto Collision Service 1 (867627)

(Edison Academy - transportation may be provided)

Students participating in Automotive Collision 2 will strive towards independence and quality workmanship as they become more proficient in their individual skill set 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 (867627)

(Edison Academy - 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 1** (850626)

**Grades:** 11, 12  
**Credit:** one  
**Prerequisite:** Automotive Servicing (871026) (where offered at base high schools); Algebra 1

(Edison Academy - 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 (850627)

(Edison Academy - 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 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 3** (850827)

Grades: 11, 12  
Credit: two  
Prerequisite: Automotive Technology 2 (850727)  
(Edison Academy - transportation may be provided)

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

**CONSTRUCTION TECH 1 - SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE** (851562)

Grades: 10, 11, 12  
Credit: one  
Prerequisite: Construction Technologies 1  
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.

**CONSTRUCTION TECH 2 - SPRING VILLAGE RESIDENTIAL CONSTRUCTION SITE** (851662)

Grades: 11, 12  
Credit: two  
Prerequisite: Construction Technologies 1  
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: 11, 12  
Credit: one  
(Foray Secondary School - 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)  
(Foray Secondary School - transportation may be provided)

Students use a laboratory setting for the study of skin, hair, nails, and cosmetic chemistry. 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.

(Foray Secondary School - transportation may be provided)

Students will focus on management and supervisory skills in their area of concentration. Opportunities will be provided to enhance any skills and competencies not mastered in the second year of instruction. Student internship experiences are an option for this course. For more information, visit the CTE web site.

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

**CRIMINAL JUSTICE 1** (870226)

Grades: 10, 11, 12  
Credit: one  
(Foray Potomac Academy - transportation may be provided)

This course is designed for students who are considering a career in criminal justice. The course prepares students for career opportunities within the criminal justice system as well as entrance into institutions of higher learning. Specific areas of training will be provided in criminal law and investigation, security training, communications, emergency response, crimes, search and seizures, arrests, crime prevention, court procedure, and police operations. The program is structured to give students a strong academic background with the skills and knowledge necessary to meet the needs of a career in any of the cited fields. In addition, experts from various agencies provide in-depth information and experiences. For more information, visit the CTE web site.

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

**CRIMINAL JUSTICE 2** (870327)

Grades: 11, 12  
Credit: two  
Prerequisite: Criminal Justice 1  
(Foray Potomac Academy - transportation may be provided)

Students in this course will further their study of the American criminal justice system and global law enforcement. The course will involve in-depth case studies and role playing scenarios. Students will learn advance crime scene processing and handling techniques, case preparation, and criminal justice management. The course will also examine corporate emergency preparedness and workplace violence issues. A major component of level 3 will include the work-experience component, i.e., shadowing, mentorship, etc. For more information, visit the CTE web site.

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

**ELECTRICAL CONSTRUCTION AND ENGINEERING 1** (853326)

Grades: 10, 11, 12  
Credit: one  
(Foray Academy - transportation may be provided)

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

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

**ELECTRICAL CONSTRUCTION AND ENGINEERING 2** (853427)

Grades: 11, 12  
Credit: two  
Prerequisite: Electrical Construction and Engineering 1 (853327)  
(Foray Academy - transportation may be provided)

Further study of electrical wiring and power distribution techniques is offered, including direct- and alternating-current machines, such as motors and generators, and magnetic controls and transformers in both single- and two- or three-phase systems. National Electrical Codes, as well as state and power company policies pertaining to electrical power distribution, are studied. Major appliance repair is also taught. Student internship experiences are an option for this course. For more information, visit the academy web site.

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

**ELECTRICAL CONSTRUCTION AND ENGINEERING 3** (853527)

Grades: 12  
Credit: two  
Prerequisite: Electrical Construction and Engineering 2 (853427)  
(Foray Academy - transportation may be provided)

Students will further their electrical study to learn about layout, planning, and installation of wiring systems in commercial facilities. An introduction to Programmable Logic Controllers (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.
CARPENTRY 1 (860126)
Grades: 10, 11, 12  Credit: one
(Edison Academy - Transportation may be provided)
Students will have an opportunity to study and design 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, 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 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 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 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)
The first year of the heating, ventilation and air conditioning (HVAC) program students will learn to use a verity of hand tools including wrenches, pliers, screw drivers, hammers as well as specialty tools of the HVAC trade which include digital multi-meters, thermometers, scales, vacuum pumps and refrigerant recovery equipment. Students will complete projects utilizing copper tubing, PVC and black iron pipe with ACR tubing cutters, flaring, swaging and threading tools. Students will also master the use of various types of torches for soldering and brazing and build a basic mechanical refrigeration cycle. Students will also learn the concepts of electricity and complete a series of electrical projects and also be introduced to the sheet metal arts. For more information, visit the CTE 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 completing 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 site.

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

LANDSCAPE ARCHITECTURE AND TURF MANAGEMENT 1 (803626)
Grades: 11, 12  Credit: one
(Edison Academy - Transportation may be provided)
This course, students develop the necessary knowledge, skills, and habits for employment and advancement in areas such as landscape design, landscape construction, landscape maintenance, turf grass installation, and turf grass management. Students work in the areas of sketching and drawing, analyzing a landscape site, designing for function and aesthetics, identifying and selecting landscape plants, purchasing and installing plants, and maintaining the landscape by watering, fertilizing, mulching, pruning, and controlling pests. This class is both classroom instruction as well as field work. For more information, visit the CTE website.

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

LANDSCAPE ARCHITECTURE AND TURF MANAGEMENT 2 (803527)
Principles of Landscaping 2
Grades: 11, 12  Credit: two
Prerequisite: Landscape Architecture and Turf Management 1 (803626)
(Edison Academy - transportation may be provided)
In this course, students continue to develop the necessary knowledge, skills, and habits for employment and advancement in areas such as landscape design, landscape construction, landscape maintenance, turf grass installation, and turf grass management. Students work in the areas of sketching and drawing, analyzing a landscape site, designing for function and aesthetics, identifying and selecting landscape plants, purchasing and installing plants, and maintaining the landscape by watering, fertilizing, mulching, pruning, and controlling pests. This class is both classroom instruction as well as field work. For more information, visit the CTE 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 1 (868826)
Grades: 10, 11, 12  Credit: one
(Chantilly Academy - 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 production outside of the classroom, and professional studio cameras, audio equipment, special effect generators, and character generators for use in the fully outfitted studio. With parental permission, equipment may be checked out and used for on-location shots. Students learn postproduction skills on cutting edge non-linear editing equipment, and finalize their projects to DVD. Toward the end of the first year, students may be present with internship and professional work opportunities. For more information, visit the CTE 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: 10, 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 site.

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

PROFESSIONAL TELEVISION PRODUCTION 3 (869027)
Grades: 10, 11, 12  Credit: two
Prerequisite: Professional Television Production 2 (868927)
(Fairfax and West Potomac Academies - transportation may be provided)
Students will demonstrate mastery of media production knowledge and skills. They will function as media producers by creating original productions developed and marketed toward target audiences. Students will assemble a professional digital portfolio to advance postsecondary and career goals. They will investigate the dynamic media production industry and identify opportunities for real-world experiences (e.g., internship, job shadowing). Students will research postsecondary opportunities and formulate strategies for both college and career success. For more information, visit the CTE site.

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

SMALL ENGINE REPAIR (872426)
Grades: 10, 11, 12  Credit: one
(Edison Academy - Transportation may be provided)
Students will receive advanced instruction and experiences in the areas of small engine repair, small engine maintenance, welding, and servicing. Topics will range from lifecycle, economics, and funding. An emphasis will be placed on entrepreneurship and project management. Student internship experiences are an option for this course. For more information, visit the CTE site.

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