Mount Vernon High School
2015-2016 Course Catalog
MOUNT VERNON HIGH SCHOOL
Administrative Staff

Principal
Nardos King

Director of Student Services
Malicia Braxton

Assistant Principals
Karin Boyd
James Oberndorf
Esther Manns
Kyle Hill
Mary Beth Cunningham

Director of Student Activities
Bob Maxey

IBMYP Coordinator
Karen Hertel

IB Coordinator
Daniel Coast

Student Services Staff

Counselors

<table>
<thead>
<tr>
<th>9th Grade Counselors</th>
<th>10th – 11th Grade Counselors</th>
<th>12th Grade Counselors</th>
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</thead>
<tbody>
<tr>
<td>Christine Young</td>
<td>A - I</td>
<td>Matthew Johnson</td>
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<tr>
<td>Melissa Mentzel</td>
<td>J - Z</td>
<td>Danielle Flournoy</td>
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<td>Andrew Knoblich</td>
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<td>Niasharee Frater</td>
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<td></td>
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<td>Niasharee Frater</td>
</tr>
</tbody>
</table>

Student Services Staff

Career Center Specialist
Audrey Jones

Administrative Assistant
Lorraine Fetterolf

Student Information Assistant
Fatima Lopez

Transcript Administrative Assistant
Sharon Siira

The Course Selection Process

Dear Student:

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 2015-16 school year. Keep in mind that any changes to your course selections must be made prior to May 15, 2015. 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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The International Baccalaureate Program is a rigorous, advanced level, college preparatory program offered in the final two years of high school. The program was developed by the International Baccalaureate Organization in Geneva, Switzerland, in the 1960s. Students can take IB courses if prerequisites have been successfully completed for specific subjects, if they are highly motivated, and if they are willing to put in additional time and effort. Each student registered in an IB course with an exam is expected to take that exam. IT SHOULD BE EMPHASIZED THAT A STUDENT MAY BE ELIGIBLE TO TAKE INDIVIDUAL IB COURSES OR THE FULL IB DIPLOMA. Students who take the full IB Diploma will also receive the State of Virginia Advanced Studies Diploma. THE DECISION TO TAKE THE FULL IB DIPLOMA PROGRAM IS A SERIOUS ONE THAT IS BEST MADE IN CONSULTATION WITH THE MOUNT VERNON IB COORDINATOR, THE STUDENT’S PARENTS/GUARDIANS, AND THE STUDENT’S COUNSELOR.

Leading universities throughout the United States award advanced placement credit or advanced standing in college courses for IB exams that are successfully passed. Students are internally assessed by their IB teachers and, as on Advanced Placement exams, they are assessed through an external exam. Exams are developed and graded by the IB Office in Cardiff, Wales. To complete a full IB Diploma program, a student must successfully pass courses in six subject areas (subject areas are also referred to as “groups”). Three of the subjects must be at the Higher Level (HL) and three must be at the Standard Level (SL). The six groups or subjects include IB English, IB History, IB Science, IB Foreign Language, and IB Mathematics. The sixth subject may be chosen from IB Art, IB Music, IB Theatre Arts, IB Computer Science, IB Business and Management, IB Social and Cultural Anthropology, IB Environmental Systems and Societies or an additional IB offering from foreign language or science.

The following is a recommended course sequence for IB Diploma candidates. Please contact Mr. Daniel Coast, IB Coordinator at Mount Vernon High School, for further information (703-619-3137).

**Grade 8**
- Algebra I
- Spanish I, French I, or German I

**Grade 9**
- Honors English 9
- Honors World History
- Spanish 2, French 2, or German 2
- Honors Biology
- Honors or Regular Geometry
- Health and PE 9
- Elective (Art I, Band, Chorus, etc.)

**Grade 10**
- Honors English 10
- Honors Comparative Government
- Spanish 3, French 3, or German 3
- IB Chemistry 1 or IB Physics I
- Algebra 2 Honors or Regular Algebra 2
- Health and PE 10
- Elective

**Grade 11**
- IB English I
- IB History of the Americas I
- IB Spanish I, IB French I, or IB German I
- IB Math SL I, IB Math HL I
- IB Biology I, IB Chemistry I, IB Physics I, or IB Physics II SL
- IB Theory of Knowledge
- Elective

**Grade 12**
- IB English II HL
- IB Topics in 20th Century World History II HL
- IB Spanish II SL/HL, IB French II SL/HL, or IB German II SL/HL
- IB Mathematics II HL, IB Mathematics II SL, or IB Math Studies SL
- IB Biology II SL/HL, IB Chemistry II SL/HL, or IB Physics II SL
- IB Theory of Knowledge
- Elective

**IB COURSE OFFERINGS**

**ENGLISH**
- IB English I
- IB English HL II

**MATHEMATICS**
- IB Mathematics HL I and HL II
- IB Mathematics SL I and SL II
- IB Mathematical Studies SL
- IB Computer Science SL

**FINE & PERFORMING ARTS**
- IB Theatre Arts I
- IB Theatre Arts II SL or HL
- IB Visual Arts I
- IB Visual Arts II SL or HL
- IB Music I
- IB Music II SL or HL

**Business & General Study**
- IB Business and Management I SL
- IB Business and Management II HL
- IB Theory of Knowledge

**Technology Engineering Education**
- IB Design Tech SL

**SOCIAL STUDIES**
- IB History of the Americas I
- IB Topics in 20th Century World History II HL
- IB Psychology SL

**FOREIGN LANGUAGE**
- IB French I
- IB French II SL or HL
- IB French Fluent Sp A2 SL or HL
- IB German I
- IB German II SL or HL
- IB Spanish I
- IB Spanish II SL or HL
- IB Spanish Fluent Sp A2 SL or HL
- IB Spanish A1 Language and Literature SL or HL

**SCIENCE**
- IB Biology I
- IB Biology II SL or HL
- IB Chemistry I
- IB Chemistry II SL or HL
- IB Physics I
- IB Physics II SL
- IB Environmental Systems SL
STANDARD DIPLOMA
22 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

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

To graduate from high school, students shall meet the minimum requirements for the Standard Diploma as outlined below, including 22 standard credits, 6 of which must be verified credits. A standard credit is earned when a student passes a course. A verified credit is earned when a student passes a course and the associated end-of-course SOL test. In some cases, students may utilize substitute tests, certifications, or the appeal process to earn verified credits. State guidelines prescribe the number of verified credits required for graduation for students entering a Virginia public high school for the first time during the tenth grade or after. In 2013, the Virginia Board of Education voted to amend the graduation requirements for students with disabilities. The changes in graduation requirements provide eligible students with disabilities the opportunity to use credit accommodations to earn a Standard Diploma. Students must be found eligible for these accommodations. Consult your school counselor for specific information.

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

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<th>Subject Area</th>
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<td>4</td>
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<td><strong>Total Credits</strong></td>
<td><strong>22</strong></td>
<td><strong>6</strong></td>
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</tbody>
</table>

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

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

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

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

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

6 Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association, or acquires a professional license in a career and technical 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 sciences verified credit when the certification, license, or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board as an additional test to verify student achievement.
The requirements for a student to earn a diploma shall be those in effect when the student enters the 9th grade for the first time. The following applies to students who entered 9th grade prior to 2011-2012.

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

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

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

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

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

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

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

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

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

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

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

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

<table>
<thead>
<tr>
<th>Subject Area</th>
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<tr>
<td>English</td>
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<tr>
<td>Mathematics¹</td>
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<tr>
<td>Science²</td>
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<td>History and Social Sciences³</td>
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<td>Electives⁴</td>
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<tr>
<td><strong>Total Credits</strong></td>
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¹ Courses completed to satisfy this requirement shall include content from among applications of algebra, geometry, personal finance, and probability and statistics in courses that have been approved by the Board of Education (Board).
² Courses completed shall include content from at least two of the following: applications of earth science, biology, chemistry, or physics in courses approved by the Board.
³ Courses completed to satisfy this requirement shall include one unit of credit in U.S. and Virginia History and one unit of credit in U.S. and Virginia Government in courses approved by the Board.
⁴ Courses to satisfy this requirement shall include at least two sequential electives in the same manner required for the Standard Diploma.

Declaration of Nondiscrimination
No student in Fairfax County Public Schools shall on the basis of race, color, sex (including sexual harassment, Title IX, and pregnancy), marital status, religion, national origin, age, disability, or genetic information be excluded from or denied enrollment in any academic activity or course. The director of the Office of Equity and Compliance has been designated to handle inquiries and complaints regarding nondiscrimination policies to include those covered under Title IX and can be reached at 571-423-3050. For concerns regarding compliance under Section 504 of the Rehabilitation Act of 1973, please contact the coordinator of Due Process and Eligibility at 703-317-3000.
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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<td>Health and Physical Education</td>
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<td>Economics &amp; Personal Finance</td>
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<td>Electivesd</td>
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<td>Student Selected Testd</td>
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<tr>
<td><strong>Total Credits</strong></td>
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</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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</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 § 20-131-110.
The requirements for a student to earn a diploma shall be those in effect when the student enters the 9th grade for the first time. The following applies to students who entered 9th grade between 2000-2001 and 2012-2013.

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

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

<table>
<thead>
<tr>
<th>Modified Standard Diploma Course Requirements (8 VAC 20-131-50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject Area</strong></td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Mathematics&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Science&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>History and Social Sciences&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
<tr>
<td>Health and Physical Education</td>
</tr>
<tr>
<td>Fine Arts or Career and Technical Ed</td>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
</tr>
</tbody>
</table>

<sup>1</sup>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).

<sup>2</sup>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.

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

**Declaration of Nondiscrimination**

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

Students shall earn a career and technical education credential appropriate to the middle or high school the student will attend the following year, prior to the end of the first nine weeks. A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education, or economics, or other areas as required by the Board in 8 VAC 20-131-110.

<table>
<thead>
<tr>
<th>Standard Diploma Course Requirements</th>
<th>(8 VAC 20-131-50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Credits</strong></td>
<td><strong>Verified Credits</strong></td>
</tr>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>Laboratory Scienceobiles</td>
<td>3</td>
</tr>
<tr>
<td>History and Social Sciences</td>
<td>4</td>
</tr>
<tr>
<td>Health and Physical Education</td>
<td>2</td>
</tr>
<tr>
<td>World Language, Fine Arts or Career and Technical Education</td>
<td>2</td>
</tr>
<tr>
<td>Economics &amp; Personal Finance</td>
<td>1</td>
</tr>
<tr>
<td>Electives</td>
<td>3</td>
</tr>
<tr>
<td>Student Selected Test</td>
<td>1</td>
</tr>
<tr>
<td>Career and Technical Education Credential</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
<td><strong>22</strong></td>
</tr>
</tbody>
</table>

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

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

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

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

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

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

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

8 Students shall earn a career and technical education credential approved by the Board that could include, but not be limited to, the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia Workplace Readiness Assessment.

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

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

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

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

<table>
<thead>
<tr>
<th>Advanced Studies Diploma Course Requirements (8 VAC 20-131-50)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subject Area</strong></td>
</tr>
<tr>
<td>English</td>
</tr>
<tr>
<td>Mathematics</td>
</tr>
<tr>
<td>Laboratory Science</td>
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<tr>
<td>History and Social Sciences</td>
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<tr>
<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>
</tr>
<tr>
<td>Electives</td>
</tr>
<tr>
<td><strong>Student Selected Test</strong></td>
</tr>
<tr>
<td><strong>Total Credits</strong></td>
</tr>
</tbody>
</table>

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

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

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

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

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

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

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

STATE DIPLOMA SEALS

1. The Governor’s Seal shall be awarded to students who complete the requirements for an Advanced Studies Diploma with an average grade of “B” or better and successfully complete college-level coursework that will earn the student at least nine transferrable college credits in Advanced Placement (AP), International Baccalaureate (IB), Cambridge, or Dual Enrollment courses.

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

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

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

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

GRADE POINT AVERAGE

Grade point average (GPA) is calculated on the basis of all courses for which high school credit has been earned or attempted, including repeated courses previously passed. All classes appearing on the high school transcript including high school classes taken in summer school, middle school, elementary school, or online are included when calculating GPA.

Advanced Placement (AP) courses, specified International Baccalaureate (IB) courses, and other courses approved through the annual course review process receive an additional 1.0 added to the final grade upon successful completion of the course. Successful completion is defined as completing the course with a passing grade and, where applicable, completing the externally moderated exam. For example, a final grade of “A” in an AP/IB course shall receive 5.0 quality points for purposes of calculating grade point average. The score on the externally moderated exam does not impact a student’s GPA.

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

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

GRADING SYSTEM

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Grade 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>C+</td>
<td>2.7</td>
</tr>
<tr>
<td>C</td>
<td>2.3</td>
</tr>
<tr>
<td>D+</td>
<td>2.0</td>
</tr>
<tr>
<td>D</td>
<td>1.7</td>
</tr>
<tr>
<td>F</td>
<td>1.3</td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>To be placed in grade:</th>
<th>The student must:</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Be promoted from 8th grade</td>
</tr>
<tr>
<td>10</td>
<td>Be promoted from 9th grade and have earned at least 5 standard units of credit.</td>
</tr>
<tr>
<td>11</td>
<td>Have earned at least 10 standard units of credit.</td>
</tr>
<tr>
<td>12</td>
<td>Have a planned program providing sufficient credits to ensure graduation the following June or August.</td>
</tr>
</tbody>
</table>

WORLD LANGUAGES PROFICIENCY CREDIT

The Credit Exam for World Languages is given 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, Tigrinina, Twi, Urdu, or Vietnamese. Students who are successful on the exam receive two world languages credits which may be used to fulfill the world languages requirements/electives of the Advanced Studies or Standard Diplomas. In addition, middle school students in grades 6-8 enrolled in certain ESOL 5720-5730 courses may receive up to two world languages credits towards high school graduation requirements in the two-plus-two option for fulfilling the world languages requirement. High school students enrolled in ESOL 5720 courses may receive elective or up to two world languages credits toward high school graduation requirements in the two-plus-two option for fulfilling the world languages requirement. For more information on the exam, go to: http://www.fcps.edu/is/worldlanguages/creditexam/index.shtml or contact the World Languages Team at 571-423-4602.

COURSES TAKEN OUTSIDE OF FCPS

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

EARNING COLLEGE CREDITS IN HIGH SCHOOL

FCPS provides a college readiness curriculum to students through standard and honors level courses. In addition, students may take advantage of opportunities to earn college credit while enrolled in high school through Advanced Placement (AP), International Baccalaureate (IB), and Dual Enrollment Courses. Dual Enrollment courses are courses taught at the high school by an FCPS teacher that offer high school and college credit through agreements with a college or university. The number of college credits the student will earn through a dual enrollment course is determined by the college or university. Students enrolled in a dual enrollment course pay college tuition; however, because FCPS provides the instructor as well as the facility, the tuition may be significantly discounted from what a student would pay if they took the course at the college or university. Students who wish to take a dual enrollment course must meet criteria set by the college or university for admission into the course. Students enrolling in a dual enrollment course will work directly with their high school to register for the course. With the exception of highly specialized Career and Technical Education (CTE) courses offered only at high school academy sites, individual high schools determine if they will offer dual enrollment courses based on teacher endorsement requirements, existing course offerings, and student interest. For more information on dual enrollment opportunities and the opportunity to earn a General Education Certificate, speak with your school counselor or 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 Programme (IBCP). To qualify for the IBCP students must complete a two-year CTE sequence, two IBDP courses, and demonstrate world language development. IBCP 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: http://www.fcps.edu/pla/TJHSST_Admissions/index.html.

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

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

FCPS has established articulation agreements with a variety of postsecondary organizations that allow students to take certain career and technical education classes in high school and receive college placement credit. In addition, FCPS has dual enrollment agreements with Northern Virginia Community College (NVCC) and Shenandoah University whereby students can earn college credits for select career and technical education classes. A full listing of Articulation and Dual Enrollment Agreements is available at http://www.fcps.edu/is/cte/index.shtml.
STUDENT FEES

Courses that require a student fee for consumable materials have been designated in this catalog. The schedule of divisionwide student fees to be charged for any elective course can be found in Notice 5922 at http://www.boarddocs.com/vsba/fairfax/Board.nsf/goto?open&id=B1CC2EDFD153A2958525706E00545AA9. Students eligible for the federal Free and Reduced Price meals program may have course and test fees waived. For more information, see your school counselor.
FCPS ONLINE COURSES

FCPS Online Campus is a program designed to provide students with an online option for earning credits toward high school graduation. This program supports the Governor’s “Early College Scholars” program by providing advanced courses to students. Students registered in any Fairfax County Public School or alternative high school are eligible to apply to take a course through the FCPS Online Campus. These courses are for students who have scheduling conflicts or have special needs requiring web-based instruction. 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 Level</th>
<th>Course Name</th>
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<tbody>
<tr>
<td></td>
<td>Algebra 1</td>
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<td>Algebra 1 Honors</td>
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<td>Economics and Personal Finance</td>
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<td>Geometry</td>
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<td>Spanish 1</td>
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<td>Geometry Honors</td>
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<td>Spanish 2</td>
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<td>Precalculus with Trigonometry</td>
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<td>AP Spanish Literature</td>
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<td>AP Calculus AB</td>
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<td>Korean 1</td>
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<td></td>
<td>AP Statistics</td>
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<td>Korean 2</td>
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<td></td>
<td>Creative Writing 1</td>
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<td>Korean 3</td>
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<tr>
<td></td>
<td>Creative Writing 2</td>
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<td>Health and Physical Education 9</td>
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<td>English 12 Honors</td>
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<td>English 12 Dual Enrollment</td>
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<td></td>
<td>AP English Language</td>
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<td></td>
<td>AP English Literature</td>
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### 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.

#### 2015-2016 HIGH SCHOOL ACADEMY COURSE OFFERINGS

<table>
<thead>
<tr>
<th>CHANTILLY ACADEMY – A Governor’s STEM Academy</th>
<th><a href="http://www.fcps.edu/ChantillyAcademy/">http://www.fcps.edu/ChantillyAcademy/</a></th>
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<tbody>
<tr>
<td>Air Force JROTC</td>
<td>Cyber: Network Administration</td>
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<tr>
<td>Animal Science</td>
<td>Exploring the Language of Medicine</td>
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<tr>
<td>Automotive Collision Service</td>
<td>Geographic Information Systems</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>Math Capstone (Dual Enrollment) with Chantilly course</td>
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<tr>
<td>Carpenter</td>
<td>Medical Assistant</td>
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<tr>
<td>Cosmetology</td>
<td>Pre-Calculus (Dual Enrollment) with Chantilly course</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Pharmacy Technician</td>
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<tr>
<td>Culinary Arts</td>
<td>STEM Engineering</td>
</tr>
<tr>
<td>Cyber: Computer Systems Technology – A+</td>
<td>STEM Robotic Systems</td>
</tr>
<tr>
<td>Cyber: Database Design &amp; Management, Oracle</td>
<td>Teachers for Tomorrow</td>
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<tr>
<th>EDISON ACADEMY</th>
<th><a href="http://www.fcps.edu/EdisonAcademy">http://www.fcps.edu/EdisonAcademy</a></th>
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<tr>
<td>Animal Science</td>
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<td>Automotive Technology</td>
<td>Pre-Calculus (Dual Enrollment) with Chantilly course</td>
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<tr>
<td>Cyber: Computer Systems Technology – A+</td>
<td>Pharmacy Technician</td>
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<tr>
<td>Cyber: Database Design &amp; Management, Oracle</td>
<td>Small Engine Repair</td>
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<tr>
<td>Culinary Arts</td>
<td>Social Media Marketing</td>
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<tr>
<th>FAIRFAX ACADEMY</th>
<th><a href="http://www.fcps.edu/FairfaxAcademy/">http://www.fcps.edu/FairfaxAcademy/</a></th>
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<tbody>
<tr>
<td>Chinese</td>
<td>Electrical Construction &amp; Engineering</td>
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<tr>
<td>Dance</td>
<td>Heating, Ventilation, AC, &amp; Refrigeration</td>
</tr>
<tr>
<td>Fashion Careers</td>
<td>Landscape Architecture &amp; Turf Management</td>
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<tr>
<th>FALLS CHURCH ACADEMY – A Governor’s Health Sciences Academy</th>
<th><a href="http://www.fcps.edu/fallschurchacademy/">http://www.fcps.edu/fallschurchacademy/</a></th>
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<tbody>
<tr>
<td>Biotech Foundations</td>
<td>Exploring Health Sciences</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>Exploring the Language of Medicine</td>
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<tr>
<td>Dental Careers</td>
<td>Fire and Emergency Medical Sciences</td>
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<tr>
<td>Early Childhood Careers</td>
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<tr>
<th>MARSHALL ACADEMY – A Governor’s STEM Academy</th>
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<td>Aerospace Science</td>
<td>Cosmetology</td>
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<td>Criminal Justice</td>
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<td>Automotive Technology</td>
<td>Culinary Arts</td>
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<tr>
<td>Chinese</td>
<td>Cyber: Computer Systems Technology – A+</td>
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<th>WEST POTOMAC ACADEMY – A Governor’s Health Sciences Academy</th>
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<tr>
<th>OTHER SPECIALIZED CTE PROGRAMS</th>
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### CLASROOM ON THE MALL

- Plumbing Site on the Mall at Fair Oaks Mall and Tysons Corner Center
- Destination Marketing
- Fashion Marketing 2
- Marketing Management

### FAIRFAX COUNTY SCHOOL OF PRACTICAL NURSING

- Plum Center for Lifelong Learning
- 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

ACCOUNTING (632000)
Grades: 9, 10, 11, 12  Credit: one
Accounting is the language of business and beneficial for any student planning on studying business in a postsecondary school. This course is for students who want to learn about basic financial elements of modern businesses and prepare them to make better financial decisions for the future. Students study accounting concepts for sole proprietors, partnerships, and corporations to understand the fundamental accounting equation, the business transaction analysis process, and the elements of financial reporting. Interpretation of accounting information is mastered through decision-making and problem-solving approaches that include source documents, case studies, and simulations. Technology integration and related accounting software applications are used to enhance skills to analyze and evaluate financial situations. Internet learning activities are used to reinforce research, communication, and teamwork building skills. Course topics include forms of ownership, accounts receivable/accounts payable systems, payroll, taxes, and banking activities. Upon completion of this course, students will be able to complete an accounting cycle from transactions to financial statements. The cooperative education (Business Cooperative Internship–679920) method is available for this course.

Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Industry certification may be available as part of this course.

ADVANCED ACCOUNTING (632100)
Grades: 10, 11, 12  Credit: one
Prerequisite: Accounting (632000)
Students continue to master accounting principles and procedures, adding new topics about managerial accounting, cost accounting, financial analysis, and business ethics. Content areas include property, plant and equipment, corporate investments, bonds, notes, and receivables, amortizations, cash flow statements, and ratio analysis for the corporate entity. Spreadsheet analysis and software applications provide the opportunity for higher-level thinking skills and authentic simulations enhance teamwork, decision making, and communication skills. Students also develop an understanding of career opportunities as they complete career-related activities.

Upon completion, students should be able to demonstrate an understanding of the principles of decision making, problem solving and critical thinking, and apply them to both business and personal financial situations. The cooperative education (Business Cooperative Internship–679920) method is available for this course.

Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. This course is also available online.

Industry certification may be available as part of this course.

ADVANCED INFORMATION SYSTEMS (661300)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Information Systems (661200), Computer Solutions (615030, 31, 32), Digital Input Technologies (660932) or equivalent skill
Advanced Information Systems provides students with the opportunity to develop professional technology skills in a project-oriented and student-centered environment. Working independently or in teams, students apply problem-solving, decision-making, creative-thinking, and communication skills to relevant, real-life situations through a series of software, the Microsoft IT Academy, and peripheral applications. Instruction in current and emerging technology includes operating systems, networking and hardware principles, document preparation, presentation tools, spreadsheet analysis and charts preparation, relational database management, technical writing, desktop publishing, and web page design. Upon completion of this course, students will be able to apply technology to analyze and solve problems and to complete technology tasks efficiently and effectively. Upon successful completion of Advanced Information Systems, students may elect to obtain industry-recognized professional certification by taking the Microsoft Office Specialist (MOS) exams. The cooperative education (Business Cooperative Internship–679920) method is available for this course.

Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.

BUSINESS COOPERATIVE INTERNSHIP (679920: 679921)
(Formerly Cooperative Office 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 186 hours of supervised on-the-job training in a related occupation will earn one unit of credit. Students who successfully complete 720 hours of supervised on-the-job training in a related occupation will earn two credits.

BUSINESS LAW (613322)
Grades: 10, 11, 12  Credit: one-half
Business Law provides students with the basic knowledge to become a better informed citizen, employee, and consumer. The course offers students the opportunities to study the nature and function of our legal system, courts, and procedures. Topics include contracts, sales agreements, torts, constitutional law, criminal law, and family law. Students focus on consumer rights and responsibilities, examine legal aspects of employment, research careers in law, and discuss the impact of laws on travelers and those living abroad. Enriched with student projects, debates, mock trials, field trips, guest speakers, and Internet activities, the course helps students understand the laws affecting businesses and consumers.

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.

DESIGN, MULTIMEDIA, AND WEB TECHNOLOGIES (663000)
Grades: 9, 10, 11, 12  Credit: one
Prerequisite: Information Systems (661200) or equivalent skill
This product-oriented course introduces the student to multimedia presentations, desktop publishing, and web page creation. Hands-on activities are used as students develop advanced skills for creating desktop-published, interactive multimedia, and Web-site projects. Students work with sophisticated hardware and software, applying skills to real-world projects. Internet research and copyright laws are emphasized. Upon successful completion of Design Multimedia, students may elect to obtain industry-recognized professional certification by taking the Microsoft Office Specialist (MOS) or the Adobe Certified Expert (ACE) exams. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Industry certification may be available as part of this course.

ECONOMICS AND PERSONAL FINANCE (612000)
Grades: 9, 10, 11, 12  Credit: one
effectively as consumers, savers, investors, entrepreneurs, and active citizens. Students learn how economies and markets operate and how the United States' economy is integrated with the global economy. On a personal level, students learn about the financial operations of modern businesses, how to invest to ensure the future, and how to develop a budget and plan for the future. Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal.

Students are required to take the Standards of Learning End of Course Test. Students who choose an EPF option that requires payment will not be reimbursed should additional options become available.

IB BUSINESS AND MANAGEMENT SL (613508)
Grades: 10, 11, 12  Credit: one/weighted +1.0
The IB Business and Management SL course is designed to provide a broad introduction to the basic principles and practices of businesses and other organizations, both profit-making and nonprofit in nature. Fundamental principles and skills are studied in local, national and international context, thus affording the opportunity to reflect the differences in perspectives and cultures that are involved and to extend the students' knowledge of business, marketing, finance, accounting, and human resource management. For students attending base schools that have the IB program, this course may serve as an elective (“Sixth Subject”) in the IB Diploma program or may be taken independently for an IB certificate. These IB students are required to take the IB exam, and the course carries a weighted credit of 1.0 on the student’s GPA. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. This course fulfills the Economics and Personal Finance and the virtual course graduation requirements.

Industry certification may be available as part of this course.

IB BUSINESS AND MANAGEMENT HL (613509)
Grades: 11, 12  Credit: one/weighted +1.0
Prerequisite: IB Business and Management SL (613508)
This course is the second segment of a two-year series. It will continue and expand the curriculum of the first-year course and will require a written research project. The class is designed to provide a broad introduction to the business principles and practices of businesses and other organizations, both profit-making and nonprofit in nature. Fundamental principles and skills are studied in local, national and international context, thus affording the opportunity to reflect the differences in perspectives and cultures that are involved and to extend the students' knowledge of business, marketing, finance, accounting, and human resource management. For students attending base schools that have the IB program, this course may serve as an elective (“Sixth Subject”) in the IB Diploma program or may be taken independently for an IB certificate. These IB students are required to take the IB exam, and the course carries a weighted credit of 1.0 on the student’s GPA. 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.
PROGRAMMING  (664000)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Keyboarding skills and Microsoft Windows knowledge
Students explore computer concepts, apply logic procedures, and implement programming procedures with one or more languages, such as Visual Basic. Graphical User Interfaces may be used as students design and develop interactive multimedia applications. In addition, HTML or JavaScript may be employed to create Web pages. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.
Industry certification may be available as part of this course.

WEB PAGE DEVELOPMENT  (663100)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Information Systems (661200) or equivalent skill
This course provides students the opportunity to study, develop and design sophisticated web pages in a client-based business environment. Basics of HTML, DHTML, scripting, and the use of authoring software are covered. Students are also provided instruction in preparing and editing Web page images, applying advanced design techniques and features, creating vector animations, and managing web site directory structures. Skill development will be achieved through hands-on activities that help students to design web pages for various audiences and uses. Upon successful completion of Web Page Development, students may elect to obtain industry-recognized professional certification by taking the Adobe Certified Expert (ACE) exams. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.
Industry certification may be available as part of this course.

CYBER: NETWORK ADMINISTRATION 1  (665032)
Grades: 10, 11, 12
Credit: one
Prerequisite: Computer related course, Algebra I, or equivalent skill
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 network 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, 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, 12
Credit: one
Prerequisite: Cyber: Network Administration 1
Cyber: Network Administration 2 is designed to continue teaching aspects of network administration focusing on network management and support for work 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 communication. Students learn communication troubleshooting techniques for systems and client server networks, web site management and other advanced networking topics. Upon successful completion of Network Administration, students may elect to obtain industry-recognized professional certification. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site.
Industry certification may be available as part of this course.

CYBER: COMPUTER SYSTEMS TECHNOLOGY 1 A+  (862232)
Grades: 10, 11, 12
Credit: one
Prerequisite: Computer related course or equivalent skill
Corequisite: Cyber: Computer Systems Technology 2 A+
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 this course, students may qualify to take the A+ certification exam. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site.
Industry certification may be available as part of this course.

CYBER: COMPUTER SYSTEMS TECHNOLOGY 2 A+  (862332)
Grades: 10, 11, 12
Credit: one
Prerequisite: Computer related course or equivalent skill
Corequisite: Cyber: Computer Systems Technology 1 A+
Students also register for Computer Systems Technology 1 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 postsecondary education and training, and a successful career in information technology. Upon successful completion of the course, students may qualify to take the A+ Certification exam. The cooperative education (Business Cooperative Internship–679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the CTE web site.
Industry certification may be available as part of this course.

ENGLISH

ENGLISH 9  (113000)
Grades: 9
Credit: one
Prerequisite: English 8
Students read and analyze a variety of literary and nonfiction texts, exploring the characteristics of different forms and the techniques authors use to achieve their intended purpose. Language study extends students’ vocabulary through learning about connotations, denotations, word origins, and structures. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. Through narrative, expository, and persuasive writings, students build on their understanding of writing as a process of prewriting, drafting, revising, and publishing. In the research process, students find, evaluate, and select appropriate sources to access information to create a research product. They also develop communication skills through listening to and practicing oral presentations. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

ENGLISH 9 HONORS  (113036)
Grades: 9
Credit: one/weighted +.5
Prerequisite: English 8
English 9 Honors deepens and advances the curriculum of English 9. Students read and analyze a variety of literary and nonfiction texts, exploring the characteristics of different forms and the techniques authors use to achieve their intended purpose. Language study extends students’ vocabulary through learning about connotations, denotations, word origins, and structures. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. Through narrative, expository, and persuasive writings, students build on their understanding of writing as a process of prewriting, drafting, revising, and publishing. In the research process, students find, evaluate, and select appropriate sources to access information to create a research product. They also develop communication skills through listening to and practicing oral presentations. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

ENGLISH 10 (114000)
Grades: 10
Credit: one
Prerequisite: English 9 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 writing as a process and develop their skills in revising to address a specific audience and purpose. In the research process, students collect, evaluate, organize, and present accurate and valid information to create a research product. They also improve communication and collaboration skills through small and large group discussions and presentations. (This is a Standards of Learning aligned course, which is tested in 11th grade.)

ENGLISH 10 HONORS (114036)
Grades: 10
Credit: one/weighted +.5
Prerequisite: English 9, 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 writing as a process and develop their skills in revising to address a specific audience and purpose. In the research process, students collect, evaluate, organize, and present accurate and valid information to create a research product. They also improve communication and collaboration skills through small and large group discussions and presentations. (This is a Standards of Learning aligned course, which is tested in 11th grade.)
ENGLISH 11 (115000)
Grades: 11
Credit: one
Prerequisite: English 10
Students read and analyze a variety of literary and nonfiction texts, comparing themes of various works and analyzing expository materials to draw conclusions. Language study extends students’ vocabulary through applying understanding of connotations, denotations, word origins, and structures. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. With an emphasis on persuasive writing, students apply their skills and adapt content, vocabulary, voice, and tone to a specific audience and purpose. In the research process, students analyze, evaluate, synthesize, and organize information from a variety of sources to produce a research product. They also refine their oral communication skills through gathering and organizing evidence to support a position in informative and persuasive presentations.

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

ENGLISH 11 HONORS (115036)
Grades: 11
Credit: one/weighted +5
Prerequisite: English 10
English 11 Honors deepens and advances the curriculum of English 11. Students read and analyze a variety of literary and nonfiction texts, comparing themes of various works and analyzing expository materials to draw conclusions. Language study extends students’ vocabulary through applying understanding of connotations, denotations, word origins, and structures. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. With an emphasis on persuasive writing, students apply their skills and adapt content, vocabulary, voice, and tone to a specific audience and purpose. In the research process, students analyze, evaluate, synthesize, and organize information from a variety of sources to produce a research product. They also refine their oral communication skills through gathering and organizing evidence to support a position in informative and persuasive presentations.

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

ENGLISH 12 (116000)
Grades: 12
Credit: one
Prerequisite: English 11
Students read and analyze a variety of literary texts, recognizing major forms and their stylistic elements. Using nonfiction texts, students will analyze and synthesize information to solve problems. Language study expands students’ general and specialized vocabulary through speaking, listening, reading, and viewing. Writing includes the production of informational, expository, and persuasive/argumentative essays, logically organized demonstrating knowledgeable judgments, and effective conclusions. They also apply their oral communication skills to craft formal presentations and their listening skills to analyze the relationships among purpose, audience, and content of presentations.

ENGLISH 12 WITH SOL REMEDIATION FOCUS (116060)
Grades: 12
Credit: one
Prerequisite: English 11
Students read and analyze a variety of literary texts, recognizing major forms and their stylistic elements. Using nonfiction texts, students will analyze and synthesize information to solve problems. Language study expands students’ general and specialized vocabulary through speaking, listening, reading, and viewing. Writing includes the production of informational, expository, and persuasive/argumentative essays, logically organized demonstrating knowledgeable judgments, and effective conclusions. They also apply their oral communication skills to craft formal presentations and their listening skills to analyze the relationships among purpose, audience, and content of presentations.

ENGLISH 12 HONORS (116036)
Grades: 12
Credit: one/weighted +5
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 oral presentations and their listening skills to analyze the relationships among purpose, audience, and content of presentations.

ENGLISH 12 Dual Enrollment (1160DE)
Grades: 12
Credit: one
Prerequisite: English 11
This course provides the opportunity for students to earn credit for English 111 and 112 (College Composition I and II) through Northern Virginia Community College. During the first semester, students enroll in English 111 to deepen their understanding of the writing process and research skills through the creation of effective texts for college and the workplace. During second semester, students enroll in English 112 to extend these skills with increased emphasis on critical essays, argumentation, and research. To enroll in this course, students must meet the college’s admission criteria and pay tuition for the course. For more information about dual enrollment courses, visit http://www.fcps.edu/is/collegenear/collegecredit/de.shtml. There is a fee for this course.

IB LANGUAGE A: LANGUAGE AND LITERATURE – English (HL)
Grades: 11
Credit: one/weighted +1.0
Prerequisite: English 10
This course offers a study of American, British, and world literature. The course offers students an introduction to the elements of rhetoric and cultural studies through study of a variety of fiction and non-fiction, poetry, and drama. The works of selected authors are offered for in-depth study, in addition to selected poetry and essays. The course focuses on rhetorical analysis through written and oral communication. The assessments encompass expository and persuasive essays, literary analysis, compare/contrast essays, close passage analysis, commentary, research, and oral assignments. Materials for internal and external assessments (both oral and written) for the IB Diploma Programme are prepared. The second year of this course is completed in 12th grade.

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

IB ENGLISH HL II (116009)
Grades: 12
Credit: one/weighted +1.0
This is the second year of a two-year course in which students continue a rigorous study of language and literature in English. They demonstrate an increasing proficiency in creative and analytical thinking skills through reading, writing and speaking. They develop an understanding of the techniques involved in literary study and criticism, and engage in a detailed and critical examination of written works from world literature. Students develop an appreciation for, and lifelong interest in literature and language. Students are required to take the higher level English A1 IB exam.

IB LANGUAGE AND LITERATURE SL II (116018)
Grades: 11, 12
Credit: one/weighted +1.0
This is the second year of a two-year intensive study of language and literature. Over these two years, students engage in close reading of literary texts, focusing on the relationship between literature and broader societal issues while analyzing the rich complexities and intricacies of the works. Students demonstrate an increasing proficiency in specific cultural contexts, and how it impacts the world and our understanding of world issues. They also develop an understanding of the techniques involved in literary study and criticism. IB Language and Literature SL I, together with IB Language and Literature SL II prepares students for the standard level exam.

SHAKESPEARE STUDY (116500)
Grades: 10, 11, 12
Credit: one
From The Lion King to West Side Story to Mumford and Sons, the influence of William Shakespeare abounds in the literature and art of Western Civilization. This course will provide a broad overview of his plays, with a focus on comparing filmed versions and performances, in addition to learning about the many shows inspired by his plays. Students will also gain understanding about the rough and rowdy world of Elizabethan London in which Shakespeare wrote his plays, as well as the ongoing controversy about the authenticity of Shakespeare’s authorship. Assignments are completed in class with assistance of the instructor. The course will fulfill the graduation requirement for a credit in fine and practical arts.

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 production; and become more critical readers and viewers of media. This course prepares students for continued study in journalism, photojournalism, and broadcast journalism.

JOURNALISM 2 (121000)
Grades: 10, 11, 12
Credit: one
Prerequisite: Journalism 1
In Journalism 2 students learn and apply techniques of layout, design and desktop publishing. Students develop a more sophisticated level of journalistic writing and participate in the operation and production of the high school newspaper and/or student produced 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.

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

**PHOTOJOURNALISM 1 (121500)**

**Grades:** 10, 11, 12  
**Credit:** one  
**Prerequisite:** Journalism 1 or instructor permission

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

**PHOTOJOURNALISM 2 (121600)**

**Grades:** 11, 12  
**Credit:** one  
**Prerequisite:** Photojournalism 1 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 leadership roles as members of the yearbook staff's editorial board. This course requires some after-school time.

**CREATIVE WRITING (117100)**

**Grades:** 9, 10, 11, 12  
**Credit:** one  
**Prerequisite:** Creative Writing

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

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 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.

**FILM STUDY (144600)**

**Grades:** 9, 10, 11, 12  
**Credit:** one  
**Prerequisite:** Film Study

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

**DEVELOPING LITERACIES (118060)**

**Grades:** 9  
**Credit:** one  
**Prerequisite:** Developing Literacies

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

**EXPANDING LITERACIES 1 (151500)**

**Grades:** 10  
**Credit:** one  
**Prerequisite:** Expanding Literacies 1 (151590)

Expanding Literacies provides direct remediation of reading skills and English content necessary to pass the EOC English: Reading/Literature and Research and/or the EOC English: Writing SOL tests, which are given in eleventh grade. Verified credit on both tests is required in order to earn a Standard Diploma. Counts as a sequential elective when taken after Developing Literacies.

**EXPANDING LITERACIES 2 (151600)**

**Grades:** 11  
**Credit:** one  
**Prerequisite:** Expanding Literacies 2 (151590)

Expanding Literacies provides direct remediation of reading skills and English content necessary to pass the EOC English: Reading/Literature and Research and/or the EOC English: Writing SOL tests, which are given in the eleventh grade. Verified credit on both tests is required in order to earn a Standard Diploma. This course is for students who are continuing focused remediation in Expanding Literacies for a second year. Counts as a sequential elective when taken after Developing Literacies and/or Expanding Literacies (1515).

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**ENGLISH FOR SPEAKERS OF OTHER LANGUAGES**

**WORLD CONCEPTS (299660)**

**Grades:** 9, 10, 11  
**Credit:** one  
**Prerequisite:** World Concepts

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

**ESOL LEVEL 1 ENTERING (571011)**

**Grades:** 9, 10, 11  
**Credit:** one  
**Prerequisite:** English: Writing SOL tests, which are given in eleventh grade. Verified credit on both tests is required in order to earn a Standard Diploma. Counts as a sequential elective when taken after Developing Literacies and/or Expanding Literacies.

**ESOL LEVEL 2 BEGINNING (571014)**

**Grades:** 9, 10, 11  
**Credit:** one  
**Prerequisite:** English: Writing SOL tests, which are given in eleventh grade. Verified credit on both tests is required in order to earn a Standard Diploma. Counts as a sequential elective when taken after Developing Literacies and/or Expanding Literacies.

**ESOL LEVEL 3 DEVELOPING (572091)**

**Grades:** 9, 10, 11  
**Credit:** one  
**Prerequisite:** English: Writing SOL tests, which are given in eleventh grade. Verified credit on both tests is required in order to earn a Standard Diploma. Counts as a sequential elective when taken after Developing Literacies and/or Expanding Literacies.

**ESOL LEVEL 4 EXPANDING (573000)**

**Grades:** 9, 10, 11  
**Credit:** one  
**Prerequisite:** English: Writing SOL tests, which are given in eleventh grade. Verified credit on both tests is required in order to earn a Standard Diploma. Counts as a sequential elective when taken after Developing Literacies and/or Expanding Literacies.

**CONCEPTS SCIENCE (462260)**

**Grades:** 9, 10, 11  
**Credit:** one  
**Prerequisite:** Concepts Science

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

**INDIVIDUALIZED MATH (FYST MATH 3) (312190)**

**Grades:** 9, 10, 11  
**Credit:** one  
**Prerequisite:** Individualized Math

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

**ALGEBRA 1 / PART 1 (313194)**

**Grades:** 9, 10  
**Credit:** one  
**Prerequisite:** Middle School Mathematics

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

INFORMATION SYSTEMS (661290)
Grades: 9, 10, 11  Credit: one
Keyboarding instruction will be a component of this course based on student need. This computer-based course teaches students to use technology efficiently and effectively to gather and organize information, and problem-solve tasks. Through a series of software applications and activities, students will establish a strong foundation in keyboarding techniques and proficiency, manage computer systems, produce word processing documents, develop spreadsheets, databases, and multimedia presentations; and work with telecommunications and networks. 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.

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 the stories to 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.)

FAMILY & CONSUMER SCIENCES

CHILD DEVELOPMENT AND PARENTING (823200)
Grades: 10, 11, 12  Credit: one
This course is designed to focus on analyzing parenting roles and responsibilities, ensuring a healthy start for mother and child, evaluating support systems that provide services for parents, and evaluating parenting practices that maximize human growth and development. Critical thinking, practical problem solving using case studies, and entrepreneurship opportunities within the area of parenting responsibilities and child development are emphasized. Teachers highlight the basic skills of mathematics, science, and technology when appropriate in the content.

INTRODUCTION TO CULINARY ARTS (825026)
Grades: 10, 11, 12  Credit: one
The course focuses on identifying and exploring the individual careers within the food service industry. Units of study include food science and technology, dietetics and nutrition services, diverse cuisines and service styles, current trends, food and beverage production and preparation, and food safety and sanitation.

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

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

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

CULINARY ARTS 2 (827627)
Grades: 11, 12  Credit: two
Prerequisite: Culinary Arts 1 (827527)
This course builds on the skills learned in Culinary Arts 1. Further advanced instruction in table service, baking, pastries, and management techniques is emphasized. Students create a plan for establishing a restaurant that includes menu selection and preparation, facilities design, and management components. Selected students may participate in internship activities as an option in cooperation with the local business community. For more information, visit the CTE web site.

INTRODUCTION TO EARLY CHILDHOOD CAREERS (823426)
Grades: 10, 11, 12  Credit: one
Students focus on the principles of child growth and development; development of self-concepts and building self-esteem; appreciation of diversity; learning experiences for children; principles of guiding children in a positive manner; healthy and safe environments; career development; and careers related to early childhood professionals through hands-on exploration, projects, and group learning.

Industry certification may be available as part of this course.

EARLY CHILDHOOD CAREERS 1 (828527)
Grades: 10, 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 early childhood fields (e.g., early childhood services, and/or education). Students enrolling in this course may be required to complete an application and/or have approval of the instructor. For more information please visit the CTE website.

Industry certification may be available as part of this course.

EARLY CHILDHOOD CAREERS 2 (828627)
Grades: 11, 12  Credit: two
Prerequisite: Early Childhood Careers 1 (Sites have collaborative education experiences for students through a preschool program.)
This course is a double-period course with classroom instruction and child development-preschool laboratory experience. Students focus on occupational skills needed by personnel employed in early childhood-related fields, such as workforce development education, medical/health care, social services, counseling, psychology, and entrepreneurship. Class instruction expands on the skills of Early Childhood Careers 1 and includes development of employment strategies. Individual projects and training plans are required for school laboratory work experiences. Students enrolling in this course may be required to complete an application and/or have approval of the instructor. For more information please visit the CTE website.

Industry certification may be available as part of this course.

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. The basic skills of mathematics, science, and communications will be highlighted when appropriate in the content. Students completing Fitness and Food with a "B" or better may be eligible to articulate up to two credits at Stratford University.

This course requires a student materials fee as listed in FCPS Notice 5922. $35.00 fee for food labs.

INTRODUCTION TO INTERIOR DESIGN (825432)
Grades: 9, 10, 11, 12  Credit: one-half
This course focuses on the principles of design, design types and vocabulary, color theory, psychological and physiological aspects of color, cultural impact on the environment, decision-making skills, utilization of space, and development of artistic skills. In the interior design component—environmental components, lighting, accessories, energy conservation, furnishings, and equipment selection are studied. In the fashion design component—all aspects of clothing, apparel, and textiles are experienced through garment design. Career development and careers related to design are explored. The basic skills of mathematics, science, communications, and the arts will be highlighted when appropriate in the content.

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

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

LIFE PLANNING (822700)
Grades: 9, 10, 11, 12
Credit: one
This course is designed to focus on managing resources to achieve personal goals; making informed consumer choices; creating and maintaining a sustainable living environment that supports the well-being of self and family; and evaluating types of housing. Critical thinking and practical problem solving are emphasized through relevant life applications. Focus is placed on developing a life-management plan which includes developing strategies for lifelong career planning and applying the appropriate resources to life situations. The core content of mathematics, science, and communications will be reinforced when appropriate in the content.

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

TEACHERS FOR TOMORROW I (906226)
Grades: 11, 12
Credit: one
The Teacher's for Tomorrow course introduces juniors and seniors to a career in teaching and education. The primary elements of the curriculum components are the learner, the school, the teacher, and teaching. The components are intentionally broad in scope and provide a great deal of flexibility based on the career interest of a student. In addition to the fundamental curriculum components, all students are required to observe and participate in an internship with the teachers for tomorrow classroom. Internships may involve the preschool level through 12th grade. Students enrolling in this course should have a GPA of 3.0 or higher, teacher recommendations, and/or approval of the instructor.

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.

TEACHERS FOR TOMORROW II (907226)
Grades: 11, 12
Credit: one
Prerequisite: Teachers for Tomorrow
In this advanced level course, students will continue to pursue their interest in careers in education. The primary focus of the class is the teacher and teaching, reinforcing the skills and knowledge needed to prepare students to become future educators. Students will have the opportunity to gain teaching experience through participation in supervised internships outside the teacher cadet classroom. The internships may involve the preschool level through grade 12. Research will also be conducted on available college programs with education endorsement and possible scholarship opportunities.

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 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.

FINE ARTS - MUSIC

INTERMEDIATE BAND (923315)
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 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. Students must own or rent an instrument.

ADVANCED BAND (923415)
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. Students must own or rent their own instrument.

INTERMEDIATE ORCHESTRA “Symphony” (923815)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Beginning level skills and permission of instructor
Students continue developing as individual musicians and as members of a musical group. Emphasis is placed on the development of intermediate level technical and ensemble skills necessary for performance. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.
This course requires a student materials fee as listed in FCPS Notice 5922. Prerequisite: audition or interview

ADVANCED ORCHESTRA “Chamber” (923915)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition
Students in this course form the representative string performing group for the school. Emphasis is placed on the sequential development of advanced technical, ensemble, and disciplinary skills necessary for refined rehearsal and performance both in and out of school. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and outside of the school day participation requirements to receive credit for the course.
This course requires a student materials fee as listed in FCPS Notice 5922.

INTERMEDIATE WOMEN’S CHORUS “Metamorphosis” (928516)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Beginning level chorus
Intermediate level women's chorus will provide for the continued study of correct vocal production and development of musicianship through the study of appropriate choral literature. Rehearsals and performances, both in and out of school, are required.
This course requires a student materials fee as listed in FCPS Notice 5922.

INTERMEDIATE MEN’S CHORUS “Majestics” (928517)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Beginning level chorus
Intermediate level men's chorus will provide for the continued study of correct vocal production and development of musicianship through the study of appropriate choral literature. Rehearsals and performances, both in and out of school, are required.
This course requires a student materials fee as listed in FCPS Notice 5922.

ADVANCED WOMEN’S CHORUS “Mirage” (928916)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition
Students are offered advanced choral experiences for women's voices. Emphasis is placed on the development of musicianship and proficiency in ensemble performance. Course content includes a study of choral literature, vocal techniques, and sight-singing. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Rehearsals and performances both in and out of school are required.
Students are expected to have a clear understanding and ability to sight sing at an intermediate level before auditioning.
This course requires a student materials fee as listed in FCPS Notice 5922.

VOCAL ENSEMBLE “Madrigals” (928015)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Successful audition
This class is designed to meet specific needs and/or interests. Content includes study of the appropriate ensemble literature, and rehearsal and performance techniques from the various areas of musical composition. Performances and rehearsals, both in and out of school, may be required. Schools may also require membership in intermediate or advanced choral class.
Students are expected to have a clear understanding and ability to sight sing at an intermediate level or above before auditioning.
Voicing of the group is at the discretion of the instructor.
This course requires a student materials fee as listed in FCPS Notice 5922.

MUSIC THEORY (922500)
Grades: 9, 10, 11, 12
Credit: one
Prerequisite: Recommendation of the instructor
Emphasis is placed on developing and understanding basic music theory skills. Course content includes recognizing and notating: all major and minor scales, rhythms in simple and compound meters, and triadic chord structures. Composition skills in standard notation of simple melodies, with accompanying chords and keyboard performance of simple tunes, may also be included. Students will become acquainted with appropriate musical terms.
This course requires a student materials fee as listed in FCPS Notice 5922.

IB MUSIC 1 (922508)
Standard Level Year 1
Grades: 11
Credit: one/weighted +1.0
Prerequisite: Students will audition for higher level ensembles within the music department if appropriate; recommendation of previous music teacher; completion of announced summer assignment.
Corequisite: Advanced level performance ensemble
Students engage in advanced study of musical performance. An in-depth study of the harmonic perspective of music including Western society and other world societies is included. Students study cultures and traditions of various regions of the world and gain an insight into the political, social, and economic conditions that impact composers and performers. The study of traditional music in Western society focuses on broad periods of history and includes specific style, form, and structure of vocal and instrumental music with analyses of specific works from those periods. This course also provides a solid foundation in the fundamentals of music including: intervals, pitch and rhythmic patterns, chords and chord progressions, and musical terms applicable to listening to and performance of musical literature. It is recommended for a student to be a member of an
advanced level performance ensemble to participate in the course if the ensemble instrumentation is appropriate, as performance is a required component of the IB assessments. Students are required to take the standard level exam at the end of year 2.

IB MUSIC SL II (922608)

Standard Level year 2
Grades: 12
Credit: one weighted +1.0
Prerequisite: Students will audition for higher level ensembles within the music department if appropriate; recommendation of previous music teacher; completion of announced summer assignment.
Corequisite: Enrollment in advanced level performance ensemble course
Students engage in advanced study of musical performance. An in-depth study of the historical perspective of music including Western society and other world societies is included. Students study cultures and traditions of various regions of the world and gain an insight into the political, social, and economic conditions that impact composers and performers. The study of traditional music in western society focuses on broad periods of time in history and includes specific style, form, and structure of vocal and instrumental music with analyses of specific works from those periods. This course also provides a solid foundation in the fundamentals of music including: intervals, pitch and rhythm patterns, chords and chord progressions, and musical terms applicable to listening to and performance of musical literature. Students are required to be a member of an advanced level performance ensemble to participate in the course if the ensemble instrumentation is appropriate. Students are required to take the standard level exam at the end of year 2.
This course requires a student materials fee as listed in FCPS Notice 5922.
Recommended: Successful completion of Music Theory

IB MUSIC HL II (922609)

Higher Level year 2
Grades: 12
Credit: one weighted +1.0
Prerequisite: Students will audition for higher level ensembles within the music department if appropriate; recommendation of previous music teacher; completion of announced summer assignment.
Corequisite: Enrollment in advanced level performance ensemble course
Students engage in advanced study of musical performance. An in-depth study of the historical perspective of music including Western society and other world societies is included. Students study cultures and traditions of various regions of the world and gain an insight into the political, social, and economic conditions that impact composers and performers. The study of traditional music in western society focuses on broad periods of time in history and includes specific style, form, and structure of vocal and instrumental music with analyses of specific works from those periods. This course also provides a solid foundation in the fundamentals of music including: intervals, pitch and rhythm patterns, chords and chord progressions, and musical terms applicable to listening to and performance of musical literature. Students are required to be a member of an advanced level performance ensemble to participate in the course if the ensemble instrumentation is appropriate. Students are required to take the highest level exam at the end of year 2.
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 skill development and provides theatrical opportunities that enable students to determine personal areas of interest. Participation in co-curricular theatrical 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 2 integrates and builds upon concepts and skills from Theatre Arts 1. Through various modes of expression and performance, students investigate dramatic literature, theatrical styles, and historical periods. Students will study and respond to a variety of theatre experiences that will refine their communicative, collaborative, analytical, interpretive, and problem solving skills. Students will expand their artistic abilities and appreciation of the theatrical arts. Students must meet both the school day and after-school participation requirements to receive credit for the course.
This course 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.
This course requires a student materials fee as listed in FCPS Notice 5922.

THEATRE ARTS 4 (144000)
Grades: 12
Credit: one
Prerequisite: Theatre Arts 3 and/or recommendation of the theatre arts instructor.
Students identify areas of special interest in theatre arts, and initiate and complete major research and/or creative projects, such as playwriting, producing, directing, designing, and stage-managing. Emphasis is placed on in-depth study and completion of projects. Prerequisite: Leadership roles, and expansion of criteria for self-evaluation. 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 & DESIGN 1** (912000)

Grades: 9, 10, 11, 12  
Credit: one  
Prerequisite: Technical Theatre 3 or permission of the instructor  
Students are required to assume leadership positions in co-curricular theatre productions. Participation in major projects related to the co-curricular theatre productions may be required. Students must meet both the school day and after-school participation requirements to receive credit for the course.  
This course requires a student materials fee as listed in FCPS Notice 5922.

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

Grades: 10, 11, 12  
Credit: one  
Prerequisite: ART 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 thinking, art history, criticism, aesthetics, and studies in visual culture.  
This course requires a student materials fee as listed in FCPS Notice 5922.

**STUDIO ART & DESIGN 4: PORTFOLIO PREPARATION GENERAL** (914700)

Grades: 12  
Credit: one  
Prerequisite: ART 3  
Engage in advanced study of art production, art history, aesthetics, and art criticism while maintaining the attitude and self-discipline of a working artist. Practice and exhibit technical proficiency and personal style, work in advanced media, and apply professional presentation techniques to develop and prepare artwork for exhibitions and portfolios. Demonstrate quality, concentration, and breadth of experience in a body of work and select work for personal exhibitions, exit portfolios, and present portfolio.  
This course requires a student materials fee as listed in FCPS Notice 5922.

**COMPUTER GRAPHICS 1** (918011)

Grades: 9, 10, 11, 12  
Credit: one  
Prerequisite: COMPUTER GRAPHICS 1  
Expand knowledge in the application of computer hardware and software to create personally expressive, original art. Solve complex visual problems within the areas of multimedia, presentations, motion graphics/animation, graphic design, and digital imaging using Adobe Photoshop, Adobe Illustrator, Bryce 3-D, and Adobe Flash. Prepare a final required portfolio for evaluation.  
This course requires a student materials fee as listed in FCPS Notice 5922.

**COMPUTER GRAPHICS 2** (918111)

Grades: 10, 11, 12  
Credit: one  
Prerequisite: COMPUTER GRAPHICS 1  
Expand knowledge and ability in the application of hardware and software to create personally expressive original art. Create visual solutions using a variety of media, including motion graphics/animation, graphic design, game development, web design and print design. A final portfolio or demo reel is required for evaluation.
This course requires a student materials fee as listed in FCPS Notice 5922.

COMPUTER GRAPHICS 4: PORTFOLIO PREPARATION (919911)
Grades: 12
Credit: one
Prerequisite: Computer Graphics 3
Engage in advanced study and application of computer graphics while developing the attitude and self-discipline of a working artist. Integrate advanced knowledge of software with creative thinking skills to produce a portfolio of artworks that shows evidence of expressive content, quality, concentration, and breadth of experience.

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

ANIMATION (918100)
Grades: 10, 11, 12
Credit: one
Prerequisite: COMPUTER GRAPHICS 1
Learn to use 2-D and 3-D computer software to create animation. Create personally expressive animations and communicate visually in effective ways through the use of modeling, story and character development, and lifelike motion. Become familiar with animation related careers such as game design, animation, film and television special effects.

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

PHOTOGRAPHY 1 (919311)
Grades: 9, 10, 11, 12
Credit: one
Explore and practice standard black and white photographic processes through the use of cameras, films, light effects, and the application of basic darkroom techniques. Explore and practice digital photographic processes. Produce meaningful photographs that express ideas about experiences and observations of the world. Study the history of photography and the work of well known photographers to inform artmaking. Develop a beginning portfolio.

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

PHOTOGRAPHY 2 (919411)
Grades: 10, 11, 12
Credit: one
Prerequisite: PHOTOGRAPHY 1
Expand on the study of black and white photography and digital processes. Acquire and apply in-depth knowledge of photographic equipment, films, and specialized processes to include digital applications. Investigate leading exponents, equipment, and techniques from an historical perspective. Learn to critique, and evaluate personal artwork and photographic works of others. Examine photography and its relationship to other art forms. Prepare a portfolio of meaningful artworks that demonstrate expressive content and quality of craftsmanship.

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

PHOTOGRAPHY 3 (919511)
Grades: 11, 12
Credit: one
Prerequisite: PHOTOGRAPHY 2
Develop a thematic path that integrates an in-depth exploration of film and digital processes. Explore various career paths in photography such as Photo Journalism, Commercial and Fine Art Photography. Apply professional exhibition techniques to present own work. Develop a quality portfolio that effectively illustrates a personal voice.

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

PHOTOGRAPHY 4: PORTFOLIO PREPARATION (919914)
Grades: 12
Credit: one
Prerequisite: PHOTOGRAPHY 3
Engage in advanced study of photographic processes. Practice the attitude and self-discipline of a working artist. Apply professional exhibition techniques to exhibit personal work. Meet expectations by demonstrating initiative and commitment to communication of ideas through the use of the photographic medium. Prepare a final, required portfolio evidencing technical proficiency, quality, concentration, and breadth of experience.

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

CERAMICS 1 (917560)
Grades: 9, 10, 11, 12
Credit: one
Practice and apply three-dimensional design techniques to jewelry making. Explore a variety of materials and approaches to create functional and decorative ceramic objects. Think creatively and critically to meet challenges and solve problems in innovative ways. Study the history of ceramics and leading contemporary ceramic artists to inform artmaking. Compile and maintain a required ceramic art portfolio.

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

CERAMICS 2 (917660)
Grades: 10, 11, 12
Credit: one
Prerequisite: Ceramics 1
Engage in advanced study of ceramics to acquire and apply in-depth knowledge of ceramic processes. Explore form and material to sharpen techniques and to create original ceramic objects. Study historical and cultural styles and leading practitioners to inform artmaking. Improve understanding and production through critique and evaluation processes. Use professional exhibition techniques to arrange a comprehensive display of personal work and the work of others. Compile a culminating ceramic art portfolio evidencing expressive content, quality, concentration, and breadth of experience.

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

JEWELRY (3-D STUDIO ART) (919765 & 919766)
Grades: 9, 10, 11, 12
Credit: one
Practice and apply three-dimensional design techniques to jewelry making. Explore a variety of materials and approaches to create exciting jewelry. Think creatively and critically to meet challenges and solve problems in innovative ways. Study the history of jewelry making and leading contemporary artisans to inform personal development of craft. Compile and maintain a required jewelry making portfolio.

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

IB VISUAL ARTS I (914908)
Standard Level year 1
Grades: 11
Credit: one/weighted +1.0
Prerequisite: ART 1 and ART 2 or permission of instructor
Students engage in advanced study of art processes, aesthetic issues, art criticism, and art history and culture while maintaining the self-discipline of the working artist. They exhibit technical proficiency and personal style while working in advanced media, and arrange an art show of their own work using professional exhibiting techniques. A culminating portfolio evidencing quality, a thematic series, breadth of work, progress over time, and highest level of achievement will be required. An investigation workbook which evidences critical research in an area agreed upon by the teacher and the student is required. Students are required to take the standard level exam at the end of year 2. Standard level students must complete the IB Visual Arts I requirements within a two-year period.

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

IB VISUAL ARTS SL II (915108)
Standard Level year 2
Grades: 12
Credit: one/weighted +1.0
Prerequisite: IB VISUAL ARTS I Standard Level Year 1
Students engage in advanced study of art processes, aesthetic issues, art criticism, and art history and culture while maintaining the self-discipline of the working artist. They exhibit technical proficiency and personal style while working in advanced media, and arrange an art show of their own work using professional exhibiting techniques. A culminating portfolio evidencing quality, a thematic series, breadth of work, progress over time, and highest level of achievement will be required. An investigation workbook which evidences critical research in an area agreed upon by the teacher and the student is required. Designed for the highly motivated visual arts student with imaginative and creative abilities, who may wish to pursue the visual arts at the university or college level. Students are required to take the higher level exam at the end of year 2. Higher level students must complete the IB Visual Arts II requirements within a two-year period.

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

IB VISUAL ARTS HL II (915109)
Higher Level year 2
Grades: 12
Credit: one/weighted +1.0
Prerequisite: IB VISUAL ARTS HL I year 1
Students engage in advanced study of art processes, aesthetic issues, art criticism, and art history and culture while maintaining the self-discipline of the working artist. They exhibit technical proficiency and personal style while working in advanced media, and arrange an art show of their own work using professional exhibiting techniques. A culminating portfolio evidencing quality, a thematic series, breadth of work, progress over time, and highest level of achievement will be required. An investigation workbook which evidences critical research in an area agreed upon by the teacher and the student is required. Designed for the highly motivated visual arts student with imaginative and creative abilities, who may wish to pursue the visual arts at the university or college level. Students are required to take the higher level exam at the end of year 2. Higher level students must complete the IB Visual Arts II requirements within a two-year period.

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

GENERAL

STRATEGIES FOR SUCCESS (788900)
Grades: 10
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.

**IB THEORY OF KNOWLEDGE (11, 12)**

Grades: 11, 12  
Credit: one/weighted +1.0  
Prerequisite: Enrollment in the IB Program

The IB Theory of Knowledge (TOK) course challenges students in the areas of critical thinking and integration of knowledge. The focus of the TOK course is studying what we know in the various fields of knowledge and how we know it. Students are led to make connections among their classroom and non-classroom knowledge and experience, and they examine the ethics, value judgments, and belief systems of the various disciplines.

Students develop a critical awareness of the fields of knowledge; study the procedures, processes, and methodologies of each field; recognize the biases inherent in each discipline; understand and appreciate the importance of inquiry as a basis for knowledge; and apply standards of logic and reasoned argument to intellectual problems. Topic of study include comparing four ways of knowing, reason, sense perception, language and emotion; understanding different knowledge systems: mathematics, natural sciences, human sciences, and history; and understanding value judgment, bias, and culture across disciplines. This course carries a weighted grade.

**IB APPROACHES TO LEARNING 1 (984011)**

Grades: 11  
Credit: non-credit  

The IB Approaches to Learning (ATL) course challenges IB Career-related Programme (IBCP) students in the areas of thinking, intercultural understanding, communication, and personal development. The focus of the ATL course is studying what we know in a specified career and technical field of knowledge and how we know it. Students are led to make connections among their classroom and non-classroom knowledge and experience, and they examine the ethics, value judgments, and belief systems of the various disciplines. Through the ATL course, students will develop good intellectual habits; practical problem-solving skills; ethical, creative and lateral thinking skills; self-awareness; individual strengths and limitations; intercultural awareness; coordination skills; personal and interpersonal skills for the workplace and beyond; the skills of reflection and critical thinking in personal, social and professional situations; and an understanding that many questions, issues or problems do not always have simple right or wrong answers. IBCP students will produce a reflective project that investigates and focuses on an ethical dimension of an issue arising from the student's career/vocational studies. The reflective project is intended to promote high-level research and writing skills, intellectual discovery and creativity. This course carries a weighted grade.

**IB APPROACHES TO LEARNING 2 (984012)**

Grades: 12  
Credit: one-half/weighted +.5  
Prerequisite: Enrollment in the IB Program

The IB Approaches to Learning (ATL) course challenges IB Career-related Programme (IBCP) students in the areas of thinking, intercultural understanding, communication, and personal development. The focus of the ATL course is studying what we know in a specified career and technical field of knowledge and how we know it. Students are led to make connections among their classroom and non-classroom knowledge and experience, and they examine the ethics, value judgments, and belief systems of the various disciplines. Through the ATL course, students will develop good intellectual habits; practical problem-solving skills; ethical, creative and lateral thinking skills; self-awareness; individual strengths and limitations; intercultural awareness; coordination skills; personal and interpersonal skills for the workplace and beyond; the skills of reflection and critical thinking in personal, social and professional situations; and an understanding that many questions, issues or problems do not always have simple right or wrong answers. IBCP students will produce a reflective project that investigates and focuses on an ethical dimension of an issue arising from the student's career/vocational studies. The reflective project is intended to promote high-level research and writing skills, intellectual discovery and creativity. This course carries a weighted grade.

**MARINE CORPS JUNIOR RESERVE OFFICERS TRAINING CORPS I (MCJROTC) (791313)**

Grades: 9, 10, 11, 12  
Credit: one  
Prerequisite: Leadership Education MCJROTC (N102)

Leadership Education MCJROTC (N102) is designed to acquaint the student with the scope and nature of the MCJROTC program. Subject matter includes effective study techniques, leadership traits and fundamentals, ethical standards, and goal setting. Critical thinking skills and problem-solving are introduced as well as written and oral communication. Military organization study includes unit organization; Marine Corps history, customs and traditions; the role of the unit, enlisted and commissioned officer. The student fires and qualifies in marksmanship training and studies health, first aid, and substance abuse, in addition to weekly physical training activities. This program is only offered on-site at Mount Vernon High School. Students may be granted pupil placement if course enrollment is desired. 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.

**MARINE CORPS JUNIOR RESERVE OFFICERS TRAINING CORPS II (MCJROTC) (791613)**

Grades: 10, 11, 12  
Credit: one  
Prerequisite: JROTC1

Leadership Education MCJROTC (N202) builds upon the material presented in N102. Follow-up topics in leadership include an examination of leadership styles and principles to include leadership motivation, authority, and responsibility. Leadership dynamics, human behavior, problem-solving, and role playing are stressed. Intermediate level public speaking, advanced first aid, drill, and the preparation and conduct of training are presented. Military organization study includes the mission of the Marine Corps’ ground, aviation, and logistics units. Land navigation, military ceremonies, marksmanship training, and physical fitness assist the student in building self-confidence. This program is only offered on-site at Mount Vernon High School. Students may be granted pupil placement if course enrollment is desired. Students successfully completing this course will satisfy the sequential elective requirement for the standard or modified standard diploma.

**MARINE CORPS JUNIOR RESERVE OFFICERS TRAINING CORPS III (MCJROTC) (791813)**

Grades: 11, 12  
Credit: one  
Prerequisite: JROTC II

Leadership Training MCJROTC (N302) emphasizes leadership instruction and application. Leadership topics include fundamentals of command and management techniques as well as leadership application. The student learns techniques of instruction, conducts classroom instruction, and develops training formats. Problem-solving skills emphasis group dynamics, critical thinking, resolution of conflicts, and counseling. Research papers encourage study of current affairs, world ideologies, and current world leaders. The student receives advanced marksmanship training, physical fitness, and drill. Organizational studies include the role of the National Security Organization. This program is only offered on-site at Mount Vernon High School. Students may be granted pupil placement if course enrollment is desired.

**LEADERSHIP TRAINING 1, 2, 3, 4**

Students successfully completing this course will satisfy the sequential elective requirement for the standard or modified standard diploma.

**LEADERSHIP TRAINING I (980800)**

Credit: one  
Prerequisite: Participants selected through application and interview process

Corequisite: Concurrent enrollment in Algebra I or higher, world language, and at least one honors, or IB course

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

**HEALTH & MEDICAL SCIENCES**

**EXPLORING HEALTH SCIENCES (830226)**

Grades: 10, 11, 12  
Credit: one  

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

Industry certification may be available as part of this course.

**EXPLORING THE LANGUAGE OF MEDICINE (838326)**

Grades: 10, 11, 12  
Credit: one  
Prerequisite: Exploring Health Sciences is recommended

Students must also register for part one, Exploring Health Sciences for the fall semester. This course builds on the foundations of the Exploring Health Sciences course. Exploring the Language of Medicine is designed to help students learn medical terminology. It is presented in a logical order, beginning with the basic anatomy, physiology, and pharmacology. Concepts, terms, and abbreviations are also presented to the students.
Dual enrollment with Northern Virginia Community College may be available. For Academies this is part two (spring semester) of a two-part, full-year course. For base schools this is a full year course. For more information, visit the CTE web site. For more information, visit the CTE web site.

Industry certification may be available as part of this course.

HEALTH and PHYSICAL EDUCATION

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

HEALTH AND PHYSICAL EDUCATION 10 (740500)
Grades: 10
Credit: one
Prerequisite: Successful completion of Health and Physical Education, grade 9
Students continue to learn and master or refine lifetime sports activities with emphasis on health and related fitness, as they relate to attainment of a healthy lifestyle. Grades from all quarters are averaged to determine the final course grade.

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

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

SPORTS MEDICINE (763000)
Grades: 10, 11, 12
Credit: one
Prerequisite: Successful completion or concurrent enrollment in biology.
Topics include medical and physical 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 (764011) (764061; 764062-semester)
Grades: 10, 11, 12
Credit: one-half or one
Prerequisite: Successful completion of Health and Physical Education, grade 9
Students study and apply concepts related to human anatomy and physiology, kinesiology, nutrition, and personal fitness planning. Students will develop and participate in a personal fitness program to improve cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition. Students may not take this course in lieu of the grade 9 or grade 10 Health and Physical Education requirements.

PERSONAL FITNESS - LEVEL 2 (764012) (764063; 764064-semester)
Grades: 11, 12
Credit: one-half or 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 (764013)
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 will extend and enrich student's interdisciplinary body of knowledge grounded in the biological, psychological, physical and social sciences. Students taking this course have the opportunity to get a personal training certification after completing the program and the appropriate assessments. 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: 10, 11, 12
Credit: one
Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)
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.

GLOBAL MARKETING (813500)
Grades: 10, 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: 10, 11, 12
Credit: one
Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)
In this specialized course, students gain basic knowledge of the apparel and accessories industry and skills necessary for successful employment in apparel businesses. Students develop general marketing skills necessary for successful employment in fashion marketing. General marketing skills applicable to the apparel and accessories industry, and specialized skills unique to fashion marketing. Personal selling, sales promotion, purchasing, physical distribution, market planning, and product/service technology as well as academic skills (mathematics, science, English, and history/social science) related to the content are part of this course. Computer/technology applications supporting this course are studied. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

Industry certification may be available as part of this course.

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

Industry certification may be available as part of this course.

SPORTS AND ENTERTAINMENT MARKETING (817500)
Grades: 10, 11, 12
Credit: one
Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)
The 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 that is feasible and profitable, and establish a sports, entertainment, or recreation marketing product/business. Academic skills (mathematics, science, English, and history/social science) related to the content are a part of this course. Computer/technology applications supporting the course are studied. Classroom instruction will be reinforced through the use of case studies, guest lecturers, and field trips. DECA, the co-curricular student organization, offers opportunities in leadership, community, and competitive events. Marketing Cooperative Internship is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Industry certification may be available as part of this course.

EDUCATION FOR EMPLOYMENT 1 (EFE) FOR MARKETING (902000)
Grades: 9, 10, 11 Credit: one or two
This course extends students’ knowledge and understanding of the real number system, sets, and functions, the role of variables, expressions, equations, inequalities, and the analysis of data derived from real-world phenomena. Emphasis is placed on making connections in algebra to geometry and statistics. Calculators and computer technologies will be used as tools wherever appropriate. Use of a graphing calculator is considered essential to provide a graphical and numerical approach to topics in addition to a symbolic approach. Topics include linear equations and inequalities, systems of linear equations, relations, functions, polynomials, and statistics.

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

ALGEBRA 1 HONORS (313086)
Grades: 9 Credit: one/weighted +.5
Prerequisite: Mathematics 7 and/or Mathematics 8
The depth and level of understanding expected in Algebra 1 Honors is beyond the scope of Algebra 1. Students are expected 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. Students extend knowledge and understanding of the real number system and its properties through the study of variables, expressions, equations, inequalities, and the analysis of data from real world phenomena. Emphasis is placed on algebraic connections to arithmetic, geometry, and statistics. Calculators and computer technologies are integral tools. Graphing calculators are an essential tool for every student to explore graphical, numerical, and symbolic relationships.

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

GEOMETRY (314300)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Algebra 1
This course extends students’ knowledge and understanding of the real number system, sets, and functions, the role of variables, expressions, equations, inequalities, and the analysis of data derived from real-world phenomena. Emphasis is placed on making connections in algebra to geometry and statistics. Calculators and computer technologies will be used as tools wherever appropriate. Use of a graphing calculator is considered essential to provide a graphical and numerical approach to topics in addition to a symbolic approach. Topics include linear equations and inequalities, systems of linear equations, relations, functions, polynomials, and statistics.

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

GEOMETRY HONORS (314336)
Grades: 9, 10 Credit: one/weighted +.5
Prerequisite: Algebra 1
This course extends students’ knowledge and understanding of the real number system, sets, and functions, the role of variables, expressions, equations, inequalities, and the analysis of data derived from real-world phenomena. Emphasis is placed on making connections in algebra to geometry and statistics. Calculators and computer technologies are integral tools. Graphing calculators are an essential tool for every student to explore graphical, numerical, and symbolic relationships.

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

ALGEBRA 2 STRATEGIES (011035)
Grades: 9, 10, 11, 12 Credit: one
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 proficiency. The materials in this course support the core curriculum in Algebra 2. Algebra 2 strategies is to be taken concurrently with Algebra 2.

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

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

ALGEBRA 2 HONORS (313536)
Grades: 9, 10, 11, 12 Credit: one/weighted +.5
Prerequisite: Algebra 1
This course extends students’ knowledge and understanding of the real number system, sets, and functions, the role of variables, expressions, equations, inequalities, and the analysis of data derived from real-world phenomena. Emphasis is placed on making connections in algebra to geometry and statistics. Calculators and computer technologies are integral tools. Graphing calculators are an essential tool for every student to explore graphical, numerical, 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)
Considered for all problems are transformations and matrix representation, orthogonal characteristics of life including: reproduction, development, and adaptation to environment. 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.

**IB COMPUTER SCIENCE HL (318509)**

*Grades: 11, 12*

*Credit: one/weighted +1.0*

*Prerequisite: IB Computer Science SL*

This is the second year of a two-year course sequence. This course requires applications of concepts taught in IB Computer Science SL. The content of this course includes computer mathematics and logic, advanced data structures and algorithms, further system fundamentals, system life cycle, and file organization. The understanding of a case study will be included. Students will complete an in-depth project that demonstrates mastery of all Higher Level required aspects. Students are required to take the IB Higher Level exam.

**ADVANCED PLACEMENT STATISTICS (319204)**

*Grades: 10, 11, 12*

*Credit: one/weighted +1.0*

*Prerequisite: Geometry and Algebra 2*

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

**MULTIVARIABLE CALCULUS (317860)**

*Grades: 11, 12*

*Credit: one-half/weighted +.5*

*Prerequisite: AP Calculus BC or IB Mathematics HL II*

A one-semester college-level course, Multivariable calculus is the calculus of three dimensions and includes the study of partial differentiation, multiple integrals, and line integrals. This course will receive a weighted grade and may be taken for college credit.

**MATRIX ALGEBRA (319800)**

*Grades: 11, 12*

*Credit: one/weighted +1.0*

*Prerequisite: AP Calculus AB or AP Calculus BC or IB Mathematics HL II*

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

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**SCIENCE**

**BIOLOGY 1 (431000)**

*Grades: 9, 10, 11, 12*

*Credit: one*

In Biology 1, students engage in scientific inquiry through lab work as they explore biological processes. All class and laboratory activities focus on life processes that occur within organisms or cells as well as the characteristics of life including: reproduction, development, and adaptation to environment. Major topics of study include molecular biology, cells, genetics, organisms, evolution and ecology. 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.

**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 a 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.

**IB BIOLOGY 1 (438008)**

*Grades: 11*

*Credit: one/weighted +1.0*

*Prerequisite: Chemistry I*

IB Biology I is the first year of a two-year sequence wherein students study biology in depth. During this course, students will study such topics as cell structure, nuclear acids and proteins; cellular respiration and photosynthesis; genetics; human reproduction, defense against infectious disease; classification and diversity; nerves, muscles, and
The part of the laboratory experience, alternatives are available.

IB BIOLOGY SL (439008)

Grades: 10, 11, 12
Credit: one/weighted +1.0
Prerequisite: Biology I and Chemistry 1
IB Biology SL covers the core standard level topics of the IB Biology program. During this course, students will study such topics as cell structure, nucleic acids and proteins, cellular respiration and photosynthesis; genetics; human reproduction, defense against infectious disease; classification and diversity; nerves, muscles, and movement; and plant science. Participation in an interdisciplinary science research (Group 4) project is required. Laboratory investigations form a major component of the course and all students must maintain a portfolio of laboratory work that is presented to the IB examiners. If dissections are part of the laboratory experience, alternatives are available.

IB Biology SL prepares students for IB standard level exam. Students are required to participate in the local Science Fair.

HUMAN ANATOMY AND PHYSIOLOGY: AN INTRODUCTION TO THE MEDICAL SCIENCES (433000)

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

CHEMISTRY 1 (441000)

Grades: 10, 11, 12
Credit: one
Prerequisite: One laboratory science course, Algebra 1
Chemistry I 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

IB CHEMISTRY 1 (441007)

Grades: 10, 11, 12
Credit: one/weighted +0.5
Prerequisite: Biology I, Algebra 1
Corequisite: Algebra 2
This course provides a general introduction to chemistry. The topics of study include atomic structure, ionic and covalent compounds, chemical equations, stoichiometry, gases, solutions, and acids and bases. The history and nature of science are included throughout the course. Students learn to design experiments, to collect data, and to analyze data using graphical and statistical methods. They design and conduct experimental research projects. Students will be involved in an externally-moderated experimental/research project, either independently or in teams. Laboratory investigations form a major component of the course, and all students must maintain a portfolio of laboratory work that is presented to the IB examiners. IB Chemistry I meets the course requirements of Chemistry I Honors. Students are expected to participate in the local Science Fair.

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

IB CHEMISTRY II SL (449008)

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: IB Chemistry 1
This second level course provides students with hands-on laboratory experiences and a comprehensive study of introductory chemistry. Students study atomic theory, structure and bonding, energetics, equilibrium kinetics, periodicity, and carbon chemistry. A more thorough study is made of topics in organic chemistry than is traditionally done in high school chemistry. Participation in an interdisciplinary science research (Group 4) project is required. Laboratory investigations form a major component of the course and all students must maintain a portfolio of laboratory work that is presented to the IB examiners. Students are required to take the IB Chemistry standard level exam. Students are required to participate in the local Science Fair.

IB CHEMISTRY II HL (449009)

Grades: 12
Credit: one/weighted +1.0
Prerequisite: IB Chemistry 1
The college level course provides students with hands-on laboratory experiences and a comprehensive study of introductory chemistry. Students study atomic theory, structure and bonding, energetics, equilibrium kinetics, periodicity, and carbon chemistry. A more thorough study is made of topics in organic chemistry than is traditionally done in high school chemistry. Participation is required to complete an interdisciplinary science project. Students are required to take the IB Chemistry higher level exam. Students are expected to participate in the local Science Fair.

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
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.

IB PHYSICS I (451007)

Grades: 10, 11
Credit: one/weighted +0.5
Prerequisite: Two laboratory science courses
Corequisite: Algebra 2 or Precalculus with Trigonometry or IB Mathematics I
IB Physics I topics include mechanics, electricity, magnetism, waves, thermodynamics, atomic physics, climate change, and alternative energy sources. Laboratory investigations form a major component of the course, and all students must maintain a portfolio of laboratory work that is presented to the IB examiners. At the end of the first year, students may choose to continue with either standard or higher level IB physics studies, according to the student's and the local school's offerings. This course is the first in a two-year sequence designed to prepare students for either the IB standard level or higher level examination in physics. Students will be involved in an externally-moderated experimental/research project. IB Physics I meets the course requirements of Physics I Honors. Students are expected to participate in the local Science Fair.

IB PHYSICS II SL (459008)

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: IB Physics I
Corequisite: IB Mathematics SL or IB Mathematics HL
IB Physics II topics include mechanics, electricity and magnetism, waves, thermodynamics, climate, and atomic physics—addressed in IB Physics I are revisited in more depth and breadth. Additionally, students will study two topics from among sight & wave phenomena, quantum & nuclear physics, digital technology, relativity & particle physics, astrophysics, communications, or electromagnetic waves. Students are required to complete an interdisciplinary science project. Students are required to take the IB Physics standard level exam. Students are expected to participate in the local Science Fair.

IB PHYSICS II HL (459009)

Grades: 10, 11, 12
Credit: one/weighted +0.5
Prerequisite: IB Physics I
Corequisite: IB Mathematics SL or IB Mathematics HL
IB Physics II topics include mechanics, electricity and magnetism, waves, thermodynamics, climate, and atomic physics—addressed in IB Physics I are revisited in more depth and breadth. Additionally, students will study two topics from among sight & wave phenomena, quantum & nuclear physics, digital technology, relativity & particle physics, astrophysics, communications, or electromagnetic waves. Students are required to complete an interdisciplinary science project. Students are required to take the IB Physics standard level exam. Students are expected to participate in the local Science Fair.

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.

GEOSYSTEMS HONORS (422036)

Grades: 11, 12
Credit: one/weighted +0.5
Prerequisite: Biology I and Chemistry 1
Geosystems Honors utilizes content from geology, astronomy, oceanography, and meteorology to investigate, both qualitatively and quantitatively, the major earth systems (atmosphere, hydrosphere, lithosphere, biosphere) and their dynamic inter-relationships. Students explore concepts with the same tools professional scientists use including computers, Geographic Information Systems (GIS), Global Positioning System (GPS), image processing software, and probeware. Students will investigate some topics at a deeper level and participate in an externally-moderated experimental/research project. Students are required to take the Standards of Learning End of Course Test. Students are expected to participate in the local Science Fair.

Students are required to take the Standards of Learning End of Course Test.
IB ENVIRONMENTAL SYSTEMS AND SOCIETIES SL (423008)

Grades: 11, 12  
Credit: one/weighted +1.0  
Prerequisite: Biology I and Chemistry I  

The purpose of this course is to provide students with a coherent perspective on the environment that is essentially scientific and above all enables them to adopt an informed and responsible stance on a wide range of pressing environmental issues they will inevitably face. The course focuses on the fundamental structure and functioning of natural systems and the broad impacts of human activities. Students examine systems and models, the ecosystem, global cycles and physical systems, and human population and carrying capacity. They analyze a specific ecosystem as well as the impacts of resource exploitation, conservation and biodiversity, and pollution. Laboratory investigations, including field studies, form a major component of the course and all students must maintain a portfolio of laboratory work that is presented to the IB examiners. Students are required to take the IB Environmental Systems and Societies standard level exam. Students are expected to participate in the local Science Fair.

ASTRONOMY (426000)

Grades: 11, 12  
Credit: one  
Prerequisite: Two laboratory science courses  

Astronomy 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 refine and expand critical thinking skills, practice decision making and problem solving, and formulate questions to guide research. World History and Geography I is required for graduation. Students are required to take the Standards of Learning End of Course Test.

WORLD HISTORY AND GEOGRAPHY 1 HONORS (221936)

Grades: 12  
Credit: one/weighted +.5  

This is the first of a two-year, chronologically and thematically organized study of world history and geography. In this first year, students study the world from ancient times to 1500 CE. The course highlights the relationship between the geography and history of Europe, Africa, Asia, and Latin America. Students examine the relationship among social, economic and geopolitical developments across time and place. They use the processes of conceptual and critical thinking to analyze historical and contemporary issues. Students are encouraged to think independently while developing group process skills. World History and Geography 1 Honors satisfies the World History and Geography 1 graduation requirement. Students in this course will be expected to complete a National History Day Project for competition. 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 (222107)

Grades: 9  
Credit: one/weighted +.5  

This is a chronologically organized study of world history and geography with an emphasis on the modern era devoted to the geography and history of Europe, Africa, Asia and the Americas form 1500 to the present. Students examine the relationship among social, economic and geopolitical developments across time and place. They use the process of conceptual and critical thinking to analyze historical and contemporary issues. Students engage in intensive analytical reading, writing and discussion. This is the first of four-year history and social sequence for IB History. Honors World History 2 meets the course requirements of World History and Geography 2. This course has an end-of-course Standards of Learning test for World History and Geography 2.

WORLD HISTORY AND GEOGRAPHY 2 HONORS (222136)

Grades: 10  
Credit: one/weighted +.5  

This is the second of a two-year, chronologically and thematically organized study of world history and geography. In this second year, students study the world from 1500 CE through the present. The course weaves together the skills and content of both history and geography so that students may learn how both affect the world around them. Regions of study include North and South America, Europe, Asia, and Africa. Students continue to examine the relationship among social, economic, and geopolitical developments across time and place. Students are encouraged to think independently while developing group process skills. World History and Geography 2 is required for graduation. Students are required to take the Standards of Learning End of Course Test. Students are required to take the Standards of Learning End of Course Test.

WORLD HISTORY AND GEOGRAPHY 2 HONORS (222166)

Grades: 11  
Credit: one/weighted +.5  

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

WORLD HISTORY AND GEOGRAPHY 2 HONORS (236036)

Grades: 11, 12  
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. Students are required to take the Standards of Learning End of Course Test.

WORLD HISTORY AND GEOGRAPHY 2 HONORS (244036)

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

Virginia and United States Government Honors deepens and advances the curriculum of Virginia and United States Government. Students examine both the structure and function of American government at the national, state, and local levels. The course focuses on political decision-making, comparative political and economic systems, and the student's role as a citizen. Critical thinking, writing, research, and group-process skills are refined. Virginia and United States Government is required for graduation.

ADVANCED PLACEMENT US GOVERNMENT AND POLITICAL SCIENCE (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.

IB HISTORY I: HISTORY OF THE AMERICAS (236009)

Grades: 11  
Credit: one/weighted +1.0  
Prerequisite: Honors World History and Geography and Honors Government or World History and Geography I and World History and Geography II  

Students study political, social, economic and cultural history of the nations of the Western Hemisphere with an emphasis placed on the history of the United States and are introduced to history as a discipline, the nature and variety of historical sources, and the historian's methods. The narrative begins with the fifteenth century encounter by Europeans with American cultures and concludes with the entrance of the United States upon the world stage in the early years of the twentieth century. Topics for study include encounter and exchange, colonial institutions, collapse of imperial regimes, evolution of nineteenth century institutions, and the Americas in the industrial age. Students are expected to perceive past events and issues as they were experienced by people of the time, to acquire a comprehension both of diverse cultures and of shared humanity, and to understand the significance of the past to their own lives. IB History I together with IB History II prepares students to take the higher level exam. Students are required to take the Standards of Learning End of Course Test. Students are required to take the Standards of Learning End of Course Test.

IB HISTORY II: TOPICS IN 20TH CENTURY WORLD HISTORY HL (236109)

Grades: 12  
Credit: one/weighted +1.0  
Prerequisite: IB History I: History of the Americas
This course offers students an opportunity to study selected twentieth century topics in World History in an international dimension. Case studies of the major events and issues of the twentieth century are studied. Students read widely, acquiring the skills to evaluate, to interpret, and to use source material critically as historical evidence. These skills are specifically examined in the IB final. Additionally, students are expected to demonstrate an awareness of historical perspective and a consistently high level of critical analysis and handling of evidence in expository writing. A significant part of the final grade is an independent research project. Students are required to take either the standard level or the higher level exam. IB History II, together with IB History I, prepares students to take the higher level exam.

**PSYCHOLOGY (290000)**

Grades: 11, 12  
Credit: one

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

**IB PSYCHOLOGY SL (290108)**

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

The IB Psychology standard level program is a one-year study of six of thirteen authors from four compulsory subject areas: developmental psychology, social psychology, cognition and learning, and personality. Each of these areas is approached through four themes: biological and physiological, behavioral, humanistic and phenomenological. Students undertaking the course can expect to develop an understanding of how psychological knowledge is generated, developed and applied. This will allow them to have a greater understanding of themselves and appreciate the diversity of human behavior. Students are required to take the standard level exam or continue to the second year higher level course.

**SOCIOLOGY (250000)**

Grades: 11, 12  
Credit: one

Students study the ways people behave in groups. They examine ways that groups function in society and analyze these functions. Students develop hypotheses about people in groups and gather information to test these hypotheses.

**TECHNOLOGY ENGINEERING EDUCATION**

**BASIC TECHNICAL DRAWING (843500)**

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

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.

$20.00 materials fee

**DESIGN AND TECHNOLOGY (840500)**

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 creative 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.

**STEM ENGINEERING (845000)**

Grades: 10, 11, 12  
Credit: one/weighted +5.0

Emphasis on Science, Technology, Engineering and Math (STEM) Initiative

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 projects in these areas while working in 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. 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.

$20.00 materials fee

**ENGINEERING DRAWING (843600)**

Grades: 10, 11, 12  
Credit: one

Prerequisite: Basic Technical Drawing (843500)

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

$20.00 materials fee

**IB DESIGN TECHNOLOGY SL (846508)**

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

Prerequisite: IB Design Technology SL 846508

The IB Design Technology SL course and related project, continues to unify all aspects of the IB design technology course, is based on the design cycle and is a compulsory element of the practical course of work and assessment. Each student must submit a project summary report, which identifies the key stages of the project development. The report may contain information in the form of text, diagrams, photographs, and so on, and should explain the process followed and the decisions taken. The design project must be assessed against the design technology criteria: planning, research, development, evaluation, and manipulative skills.

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

**IB DESIGN TECHNOLOGY HL (846509)**

Grades: 12  
Credit: one/weighted +1.0

Prerequisite: IB Design Technology SL 846508

The IB Design Technology HL course and related project, continues to unify all aspects of the IB design technology course, is based on the design cycle and is a compulsory element of the practical course of work and assessment. Each student must submit a project summary report, which identifies the key stages of the project development. The report may contain information in the form of text, diagrams, photographs, and so on, and should explain the process followed and the decisions taken. The design project must be assessed against the design technology criteria: planning, research, development, evaluation, and manipulative skills.

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**

**FRENCH 1 (511000)**

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

Prerequisite: none

Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. 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 and 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.

**IB FRENCH 1 (514209)**

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

Students undertake the course can expect to develop an understanding of how 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.

**IB FRENCH 2 (514210)**

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

Prerequisite: IB French 1 514209

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.
Prerequisite: Three years of French or equivalency test and permission of instructor.

In this course students continue their development of proficiency in listening, speaking, reading and writing French. Emphasis is placed on using these skills in realistic contexts utilizing authentic materials, to include recordings, films, newspapers and magazines, in addition to selected literary works. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. IB French, Part 1, together with IB French, Part 2, prepares students to take the IB French higher level examination.

IB FRENCH SL II (515208)

FRENCH IB STANDARD LEVEL

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Four years of French or equivalency test and permission of instructor.

IB French, Part 1 is preferred immediately prior to this course.

IB French, Part 2 is the second segment of a two-year series that prepares students to take the IB French Exam. The development of all language skills—listening, speaking, reading, writing—continues, with emphasis on using the language in realistic contexts with authentic materials, to include films, recordings, newspapers and magazines. Selected literary works are included. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. Students are required to take the standard level examination.

IB FRENCH HL II (515209)

FRENCH IB HIGHER LEVEL

Grades: 12
Credit: one/weighted +1.0
Prerequisite: Four years of French or equivalency test and permission of instructor.

IB French, Part 1 is preferred immediately prior to this course.

IB French, Part 2 is the second segment of a two-year series that prepares students to take the IB French Exam. The development of all language skills—listening, speaking, reading, writing—continues, with emphasis on using the language in realistic contexts with authentic materials, to include films, recordings, newspapers and magazines. Selected literary works are included. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. Students are required to take the higher level examination.

IB GERMAN 1 (521000)

GERMAN IB STANDARD LEVEL

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, 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.

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.

IB GERMAN 1 (524209)

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Three years of German and equivalency test and permission of instructor.

Students continue to develop proficiency in speaking, listening, reading, and writing German. Emphasis is placed on using these skills in realistic contexts utilizing authentic materials, to include recordings, films, newspapers and magazines, in addition to selected literary works. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. IB German, Part 1, together with IB German, Part 2, prepares students to take the IB German higher level examination.

IB GERMAN SL II (525208)

GERMAN IB STANDARD LEVEL

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Four years of German or equivalency test and permission of instructor.

IB German, Part 1 is preferred immediately prior to this course.

IB German, Part 2 is the second segment of a two-year series that prepares students to take the IB German Exam. The development of all language skills—listening, speaking, reading, writing—continues, with emphasis on using the language in realistic contexts with authentic materials, to include films, recordings, newspapers and magazines. Selected literary works are included. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. Students are required to take the standard level examination.

IB GERMAN HL II (525209)

GERMAN IB HIGHER LEVEL

Grades: 12
Credit: one/weighted +1.0
Prerequisite: Four years of German or equivalency test and permission of instructor.

IB German, Part 1 is preferred immediately prior to this course.

IB German, Part 2 is the second segment of a two-year series that prepares students to take the IB German Exam. The development of all language skills—listening, speaking, reading, writing—continues, with emphasis on using the language in realistic contexts with authentic materials, to include films, recordings, newspapers and magazines. Selected literary works are included. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. Students are required to take the higher level examination.

SPANISH 1 (551000)

SPANISH IB STANDARD LEVEL

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

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

SPANISH 2 (552000)

Grades: 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 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 continue to explore as they study the POS themes of Home Life, Student Life, Leisure Time, and Vacation and Travel.

SPANISH 3 (553000)

Grades: 9, 10, 11, 12
Credit: one
Prerequisite: 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.

IB SPANISH 1 (554209)

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Three years of Spanish or equivalency test and permission of instructor.

In this course students continue their development of proficiency in listening, speaking, reading and writing Spanish. Emphasis is placed on using these skills in realistic contexts utilizing authentic materials; to include recordings, films, newspapers and magazines. Selected literary works are included. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. IB Spanish, Part 1, together with IB Spanish, Part 2, prepares students to take the IB Spanish higher level examination.

IB SPANISH SL II (555208)

SPANISH IB STANDARD LEVEL

Grades: 11, 12
Credit: one/weighted +1.0
Prerequisite: Four years of Spanish or equivalency test and permission of instructor.

IB Spanish, Part 1 is preferred immediately prior to this course.

IB Spanish, Part 2 is the second segment of a two-year series that prepares students to take the IB Spanish Exam. The development of all language skills—listening, speaking, reading, writing—continues, with emphasis on using the language in realistic contexts with authentic materials, to include films, recordings, newspapers and magazines. Selected literary works are included. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. Students are required to take the standard level examination.

IB SPANISH HL II (555209)

SPANISH IB HIGHER LEVEL

Grades: 12
Credit: one/weighted +1.0
Prerequisite: Four years of Spanish or equivalency test and permission of instructor.

IB Spanish, Part 1 is preferred immediately prior to this course.

IB Spanish, Part 2 is the second segment of a two-year series that prepares students to take the IB Spanish Exam. The development of all language skills—listening, speaking, reading, writing—continues, with emphasis on using the language in realistic contexts with authentic materials, to include films, recordings, newspapers and magazines. Selected literary works are included. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. Students are required to take the higher level examination.
Grades: 12 Credit: one/weighted +1.0
IB Spanish, Part 2, is the second segment of a two-year series that prepares students to take the IB Spanish Exam. The examination of all language skills—listening, speaking, reading, writing—continues, with emphasis on using the language in realistic contexts with authentic materials, to include films, recordings, newspapers and magazines. Selected literary works are analyzed. Examples and questions from past IB exams are used as learning tools at appropriate times throughout the course. Students are required to take the higher level examination.

SPANISH FOR FLUENT SPEAKERS 1 (551100)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Permission from instructor
This course offers fluent speakers of Spanish the opportunity to strengthen their basic skills in reading and writing Spanish. Students learn about the Hispanic contributions to the English language and American culture. The students also study the major historical figures and events of Spanish-speaking countries. The course is conducted in Spanish and counts toward fulfilling the world language requirement. Middle School: credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

SPANISH FOR FLUENT SPEAKERS 2 (552100)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Spanish for Fluent Speakers 1 or permission from instructor
This course, designed for fluent speakers of Spanish, continues to emphasize the improvement of students' skills in speaking, reading, and writing in Spanish. Students read and critique contemporary short stories and make oral presentations. The writing and reading processes are emphasized to ensure growth in both skills. The students will also study various Hispanic personalities and historical 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 requirement of the high school Advanced Studies diploma.

IB SPANISH FOR FLUENT SPEAKERS 1 (551409)
IB SPANISH A2 HIGHER LEVEL
Grades: 11, 12 Credit: one/weighted +1.0
Prerequisite: Spanish for Fluent Speakers 3 or the equivalent and permission of the instructor.
In this course, fluent speakers of Spanish continue a focus on language and literature following the prescribed IB guidelines for Language A2. They further develop their creative and critical thinking abilities, increasing the skills and knowledge necessary to be contributing world citizens and life-long learners. IB Diploma candidates can qualify for the Bilingual IB Diploma upon successful completion of this course and the A2 Spanish exam. This course along with IB Spanish for Fluent Speakers, Part 2, prepares students to take the IB A2 higher level exam in Spanish.

IB SPANISH FOR FLUENT SPEAKERS SL, II (555108)
IB SPANISH A2 STANDARD LEVEL
Grades: 12 Credit: one
Prerequisite: IB Spanish for Fluent Speakers, Part I
This course is the second of a two-year series in the IB A2 program in Spanish. The IB A2 program gives students the opportunity to reach a high level of competence in a second language while at the same time learning to appreciate the range of issues generated by the study of language and culture. IB A2 Spanish is designed for students with a high level of competency in Spanish and continues with the study of the Topic Options and the Literary Text Options begun in the first year. The course also extends the personal dossier of work as required by IB. IB Diploma candidates may qualify for the Bilingual IB Diploma upon successful completion of this course and the IB exam. Students are required to take the standard level examination.

IB SPANISH FOR FLUENT SPEAKERS HL, II (555109)
IB SPANISH A2 HIGHER LEVEL
Grades: 12 Credit: one/weighted +1.0
Prerequisite: IB Spanish for Fluent Speakers, Part I
This course is the second of a two-year series in the IB A2 program in Spanish. The IB A2 program gives students the opportunity to reach a high level of competence in a second language while at the same time learning to appreciate the range of issues generated by the study of language and culture. IB A2 Spanish is designed for students with a high level of competency in Spanish and continues with the study of the Topic Options and the Literary Text Options begun in the first year. The course also extends the personal dossier of work as required by IB. IB Diploma candidates may qualify for the Bilingual IB Diploma upon successful completion of this course and the IB exam. Students are required to take the higher level examination.

SPECIAL EDUCATION
INDIVIDUALIZED MATHEMATICS (312180)
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 1 (313100)
Grades: 9, 10 Credit: one
Prerequisite: Middle School Mathematics
Algebra 1 / Part 1 extends students’ understanding of the real number system and its properties through the study of variables, expressions, equations, inequalities, and analysis of data derived from real-world phenomena. Topics include linear equations and inequalities, linear relations and functions, measures of central tendency (mean, median, mode), data analysis and middle school objectives as needed. Algebra 1 / Part 1 includes approximately sixty percent of the Virginia Standards of Learning for Algebra 1. Students who began 9th grade during the 2009-2010 school year or earlier must pass Algebra 1 / Part 1 to receive mathematics graduation credit for Algebra 1 / Part 1. This course will not count towards a mathematics graduation credit for students who start 9th grade during the 2010-2011 school year or later.

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

ADAPTED PHYSICAL EDUCATION (770003)
Grades: 11, 12 Credit: one
Prerequisite: Students must have an Individual Education Plan (IEP) for course enrollment.
Adapted physical education is a developmental course for general education and/or special education students. The course serves students who are temporarily or permanently physically disabled or have deficiencies in motor coordination and/or physical fitness. The program is individualized and is directed toward improvement of deficiencies.

STRATEGIES FOR SUCCESS (LD) (788980) (788981)
Grades: 9, 10, 11, 12 Credit: one
This elective course is designed to provide support to a student in core curricular areas and to provide direct instruction in specific learning strategies, study skills, time management, organization, and self-advocacy skills. Time is also allotted to address individual areas of need as identified in a student's Individual Educational Plan (IEP). While students may receive assistance on core curricular assignments, the course is not designed to serve as a study hall. Students enrolled in the course receive the equivalent of one period of instruction each day and earn an elective credit. This course may be taught for an elective credit all four years or more, as appropriate. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard and Modified Standard Diploma. (Students may be awarded a half-credit upon completion of a full semester of placement in the Basic Skills course. Such a decision is made by the school counselor in conjunction with the special education department chair.)

EDUCATION FOR EMPLOYMENT 1 (902000)
Grades: 9, 10, 11, 12 Credit: one
This course is for students with disabilities. Students learn about the world of work and may participate in a work experience as part of the instructional program.

EDUCATION FOR EMPLOYMENT 2 (902100)
Grades: 9, 10, 11, 12 Credit: one
Prerequisite: Education for Employment 1
This course is for students with disabilities. Students learn about the world of work and may participate in a work experience as part of the instructional program. Students successfully completing this course will satisfy the sequential elective requirement for the Standard or Modified Standard diploma.

FUNDATION OF BIOLOGY (781180)
Grades: 9, 10, 11, 12 Credit: one
Foundations of Biology is a one-credit elective course designed to provide students with a fundamental understanding of living organisms and the processes of life. Emphasis is placed on scientific procedures and study of living things, cell parts and functions, plant classification and the functions of their various structures, animal classification, ecology,
the human body, and the ways by which life forms reproduce, develop, and adapt to conditions in their environment. This course includes instruction on understanding the functioning and maintenance of the human body and Family Life Education. Parents have the option of withdrawing their children from any and all topics included in the Family Life Education portion. The course may be taught for elective credit for two years, as appropriate.

FOUNDATIONS OF ENGLISH 9-12  (781380)
Grades: 9, 10, 11, 12  
Credit: one
Foundations of English, 9-12, is a one-credit elective course designed to provide students with the opportunities to achieve competencies in reading and writing, and to establish connections between classroom activities and post-secondary life experiences. Attention will be given to refining oral communication skills and written composition skills. Students will read a variety of literature, exploring literary themes in relation to real-life situations. This course may be taught for elective credit for four years or more, as appropriate.

FOUNDATIONS OF WORLD HISTORY/GEOGRAPHY  (781080)
Grades: 9, 10, 11, 12  
Credit: one
Foundations of World History/Geography is a one-credit elective course designed to provide students with a fundamental understanding of how past events influence the present day. Students explore the geography and history of Europe, Asia, Africa and Latin America through compare/contrast, inquiry/research, technology, reading comprehension and problem solving. This course may be taught for elective credit for two years, as appropriate.

FOUNDATIONS OF UNITED STATES AND VIRGINIA HISTORY  (781480)
Grades: 9, 10, 11, 12  
Credit: one
Foundations of United States and Virginia History is a one-credit elective course designed to provide students with a fundamental understanding of the political, economic, social and cultural growth of the United States, including the role of Virginia in this development. The material is taught through the following techniques: compare/contrast, inquiry/research, technology, reading comprehension, and problem-solving. This course may be taught for elective credit for 2 years, as appropriate.

DEVELOPMENTAL READING  (118081)
Grades: 9, 10, 11, 12  
Credit: one
This elective course offers students an opportunity to improve their reading, listening, and study skills. A wide range of materials, both fiction and nonfiction, is used to extend vocabulary and comprehension. Students apply reading strategies to content materials and textbooks are provided. Both fiction and nonfiction, are used to improve vocabulary and comprehension. Students concentrate on reading for meaning through a variety of literature and content materials. This elective course offers students opportunities for reading improvement. Instruction is based on diagnosis of each student's needs. Reading competencies addressed in the Virginia Standards of Learning are incorporated into the course objectives. (With approval, schools may offer an alternate plan for incorporating reading instruction into other courses.)

PERSONAL LIVING AND FINANCE  (312080)
Grades: 11, 12  
Credit: one
Prerequisite: One high school mathematics course
Students learn how to navigate the financial decisions they must face and to make informed decisions related to budgeting, banking, credit, insurance, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. Instruction in personal finance prepares students to function effectively as consumers, savers, investors, entrepreneurs, and active citizens. This course has been augmented to include the 21st Workplace Readiness Skills (WRS) and upon completion of this course, students may take the WRS assessment, and if successful, receive a Career and Technical Education (CTE) credential. This course is an allowable credit accommodation for students pursuing a standard diploma and may satisfy the Economics and Personal Finance requirement if the student has earned at least 3 credits in history and social sciences.

LIFE SKILLS  (798800)
Grades: 9, 10, 11, 12  
Credit: one
This comprehensive individualized program is designed to prepare students for a style of living that will require a minimum of dependence on family. The course is geared to meet the needs of the students as they prepare to enter employment and emphasizes developing interpersonal skills, following directions, working independently, completing a task, and developing self-advocacy and other community living skills.

MUSIC SAMPLER I  (921415)
Level 1
Grades: 9, 10, 11, 12  
Credit: one
Students are provided the opportunity to sample a variety of musical experiences in a non-performing music class. Course content includes beginning guitar and class piano experience, as well as various modules designed to assist students in developing music reading and composing skills. Selected composers and musical compositions will be studied as a part of this course.

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

MUSIC SAMPLER II  (921416)
Level 2
Grades: 9, 10, 11, 12  
Credit: one
Students continue to sample a variety of musical experiences in a non-performing music class. Course content includes guitar and class piano experience, as well as various modules designed to assist students in developing music reading and composing skills. Selected composers and musical compositions will be studied as a part of this course.

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

A+ LEVEL 2  (862226)
Grades: 10, 11, 12  
Credit: one
Prerequisite: Computer related course or equivalent skill
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  (907163)
Grades: 9, 10, 11, 12  
Credit: three
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  (862226)
Grades: 10, 11, 12  
Credit: one
Prerequisite: Computer related course or equivalent skill
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 Edison Academy web sites at: http://www.fcps.edu/EdisonAcademy/.

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 one course in conjunction with a corresponding industry certification may qualify for a student selected verified credit.

A+ LEVEL 2  (862326)
Grades: 10, 11, 12  
Credit: one
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 aspects of storage 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 1 A+ (862322)**

**Grades: 10, 11, 12**  
**Credit: one**  
**Prerequisite:** Computer related course or equivalent skill  
Corequisite: Cyber: Systems Technology 1 A+ (Edison Academy - transportation may be provided)  
Students also register for the Cyber: Computer Systems Technology 1 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 memory, the role of computer memory and operating systems, computer 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.

**IT SEMINAR (662126)**

**Grades: 10, 11, 12**  
**Credit: one**  
**Prerequisite:** IT Academy Course  
Corequisite: IT Academy Course  
Students engaged in a 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 for articulated credit with approved colleges or universities.

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 aspects of storage 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.
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.
(West Potomac Academy - transportation may be provided)
The Fashion Design 1 students will begin to develop technical and presentation skills in the field of fashion design. The program will emphasize the creative process of design concepts, sketching, draping, pattern making, and garment construction. 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.
(West Potomac 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 concept 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 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, study 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 (931236)
Grades: 11, 12 Credit: one
Prerequisite: Successful Audition
(West Potomac Academy)
Students 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, study 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 3 (931527)
Grades: 11, 12 Credit: two
Prerequisite: Dance 2 or Successful Audition
(West Potomac Academy)
Students continue to develop choreographic and performance skills including the use of improvisation. For more information, visit the CTE web site.
This course requires a student materials fee as listed in FCPS Notice 5922.

ACADEMY DANCE 4 (931927)
Grades: 11, 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.
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
(Edison 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 theatres, scene directing, reviewing performances in the area, and interviewing area professionals will be required. In addition, in-class presentations on topics of interest or areas of expertise will be required. For more information, visit the academy web site.

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

FAGEARTS: THEATRE ARTS

PROFESSIONAL MUSICAL THEATRE AND ACTOR’S STUDIO 1 (143027) Grades: 11, 12 Credit: two
Prerequisite: One of the following: Theatre Arts, Chorus, or Dance. Audition is also required of all applicants. (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 I. 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.

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

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

DENTAL CAREERS 1 (831127) Grades: 10, 11, 12 Credit: two
Prerequisite: Dental Careers 1 (832827)

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

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.

DENTAL CAREERS 2 (832827) Grades: 11, 12 Credit: two
Prerequisite: Dental Careers 1 (832827)

(Edison Academy - transportation may be provided)

This course 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 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.
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.

PHARMACY TECHNICIAN 1 (830526)
Grades: 11, 12
Credit: one
Prerequisite: Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required.

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 clinical experiences. Students in this course are eligible to sit for the Virginia Pharmacy Technician Certification provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Pharmacy. For more information, visit the CTE web site.

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

PHARMACY TECHNICIAN 2 (830626)
Grades: 11, 12
Credit: one
Prerequisite: Pharmacy Technician 1

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 clinical experiences. Students in this course are eligible to sit for the Virginia Pharmacy Technician Certification provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Pharmacy. For more information, visit the CTE web site.

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

PHYSICAL THERAPY/OCCUPATIONAL THERAPY 1 (836527)
Grades: 11, 12
Credit: two
Prerequisite: Biology 1, Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required.

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. 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. 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

This course provides an 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 part two of a two-part, full-year course. The student will be able to participate in a clinical experience under the direct supervision of a licensed physical and/or occupational therapist. 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.

MEDICAL ASSISTANT 1 (834526)
Grades: 11, 12
Credit: two
Prerequisite: Exploring Health Sciences and Exploring the Language of Medicine are strongly recommended.

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. The curriculum consists of planned learning experiences in the classroom, laboratory, and faculty supervised clinical settings. Students will have the opportunity to observe and interact with a variety of patients experiencing varying degrees of injury or disease that are carefully selected to provide appropriate clinical learning experiences. As preparation, students will be provided with ample lab practice to fully prepare them for the clinical experience and minimize risks. During the course of study, students will have the opportunity to earn N-CERT 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.

PHYSICAL THERAPY/OCCUPATIONAL THERAPY 1 (836527)
Grades: 11, 12
Credit: two
Prerequisite: Medical Assistant 1

This is part one of a two-part, full-year course. Students must also register for part two, Medical Assistant 2 for the spring semester. The curriculum consists of planned learning experiences in the classroom, laboratory, and faculty supervised clinical settings. Students will have the opportunity to observe and interact with a variety of patients experiencing varying degrees of injury or disease that are carefully selected to provide appropriate clinical learning experiences. As preparation, students will be provided with ample lab practice to fully prepare them for the clinical experience and minimize risks. During the course of study, students will have the opportunity to earn N-CERT and other certifications. Offsite clinical lab opportunities with Fairfax County Fire and Rescue may be available to the students. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.
Students participating in Automotive Collision 3 will strive towards independence and quality workmanship as they become more proficient in their individual skill set to repair and/or refinish minor late-model damaged vehicles. The curriculum and laboratory practices defined by I-CAR include the following: refinishing, metal working, welding, frame-straightening systems, body-measuring principles, structural repair, steering, suspension, mechanical, and electrical repairs. As an option, many students will have an opportunity to participate in internship experiences. For more information, visit the CTE web site.

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

AUTOMOTIVE TECHNOLOGY 1 (850626)

Grades: 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, performing 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, performing 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. As an option, many students will have an opportunity to participate in local internship experiences. For more information, visit the CTE website.

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

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

Grades: 10, 11, 12
Credit: one

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.
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
Prerequisite: Cosmetology 1 (852727)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.

(Cayfield 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 2 (852827)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.

(Hayfield 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 certificate issued 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 3 (852927)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.

(Chantilly 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 1 (870226)

Grades: 10, 11, 12
Credit: one
Prerequisite: Criminal Justice 1 (870327)

(West 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 (870327)

(West 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 programs. 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
Prerequisite: Electrical Construction and Engineering 1 (853327)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.

(Edison Academy - transportation may be provided)

This course is designed for students who are considering a career in electrical engineering. The course prepares students for career opportunities within the electrical engineering system as well as entrance into institutions of higher learning. Specific areas of training will be provided in electrical engineering law and investigation, security training, communications, emergency response, electrical codes, and appliance repair. Students will learn advanced 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.

ELECTRICAL CONSTRUCTION AND ENGINEERING 2 (853427)

Grades: 11, 12
Credit: two
Prerequisite: Electrical Construction and Engineering 1 (853327)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.

(Edison Academy - transportation may be provided)

Further study of electrical wiring and power distribution techniques is offered, including direct- and alternating-current machines, such as motors and generators, and magnetic controls and transformers in both single- and two- or three-phase systems. National Electrical Codes, as well as state and power company policies pertaining to electrical power distribution, are studied. Major appliance repair is also taught. Student internship experiences are an option for this course. For more information, visit the 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 3 (853527)

Grades: 12
Credit: two
Prerequisite: Electrical Construction and Engineering 2 (853427)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.

(Edison Academy - transportation may be provided)

Students will further their electrical study to learn about layout, planning, and installation of wiring systems in commercial facilities. An introduction to Programmable Logic controls (PLC) and its associated applications will be provided with the most current Allen Bradley controls. Students will also get the chance to lead other students in installing wiring in a residential house. Upon completion of this course students should be able to install and wire all aspects of a residential house to include ordering and managing materials and equipment. Students should also have a knowledge of PLC's, solar power and other related 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
Prerequisite: Carpentry 1 (860126)

(Potomac Academy - transportation may be provided)

Students will have an opportunity to study and learn about a $700 billion industry providing a variety of employment opportunities. An emphasis will be focused on construction safety, OSHA regulations, mathematics applications, and craft knowledge. In addition to a variety of hands-on experiences, students will be introduced to electricity, framing, plumbing, millwork, and problem solving activities related to the construction industry. Curriculum is developed by the National Association of Home Builders (NAHB). For more information, visit the CTE 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 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 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 3 (860327)

Grades: 12
Credit: two
Prerequisite: Carpentry 2 (860227)

(Chantilly Academy - transportation may be provided)

Students will receive advanced instruction and experiences in the areas of layout and design, framing, estimating, purchasing, planning, and installing. 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 web site.

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

HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION 1 (850326)

Grades: 10, 11, 12
Credit: one
Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration 1 (850326)
Corequisite: Contact the instructor at the school site prior to registering any student for this course.

(Edison Academy - transportation may be provided)

In the first year of the heating, ventilation and air conditioning (HVAC) program students will learn to use a variety 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 water tubing, PVC and black iron pipe with AC tubing cutters, flaring, swaging and threading tools. Students will also master the use of various types of torches for soldering and brazing and build a basic mechanical refrigeration cycle. Students will also learn the concepts of electricity and complete a series of electrical projects and also be introduced to the sheet metal arts. For more information, visit the CTE web site.

Industry certification may be available as part of this course. This course requires a student materials fee as listed in FCPS Notice 5922.
HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION 2
(850427)
Grades: 11, 12  Credit: two
Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration 1 (850326)

(Edison Academy - transportation may be provided)

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

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

LANDSCAPE ARCHITECTURE AND TURF MANAGEMENT 1  (803626)
Grades: 11, 12  Credit: one

(Edison Academy - Transportation may be provided)

In this course, students develop the necessary knowledge, skills, and habits for employment and advancement in areas such as landscape design, landscape construction, landscape maintenance, turf grass installation, and turf grass management. Students work in the areas of sketching and drawing, analyzing a landscape site, designing for function and aesthetics, identifying and selecting landscape plants, purchasing and installing plants, and maintaining the landscape by watering, fertilizing, mulching, pruning, and controlling pests. This class is both classroom instruction as well as field work. For more information, visit the CTE website.

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

LANDSCAPE ARCHITECTURE AND TURF MANAGEMENT 2  (805127)
Principles of Landscaping 2
Grades: 11, 12  Credit: two

(Edison Academy - Transportation may be provided)

In this course, students continue to develop the necessary knowledge, skills, and habits for employment and advancement in areas such as landscape design, landscape construction, landscape maintenance, turf grass installation, and turf grass management. Students work in the areas of sketching and drawing, analyzing a landscape site, designing for function and aesthetics, identifying and selecting landscape plants, purchasing and installing plants, and maintaining the landscape by watering, fertilizing, mulching, pruning, and controlling pests. This class is both classroom instruction as well as field work. For more information, visit the CTE website.

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

PROFESSIONAL TELEVISION PRODUCTION 1  (868826)
Grades: 10, 11, 12  Credit: one

(West Potomac 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 productions 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 shoots. Students learn postproduction skills on cutting edge non-linear editing equipment, and finalize their projects to DVD. Toward the end of the first year, students may be presented with internship and professional work opportunities. For more information, visit the CTE web site.

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

PROFESSIONAL TELEVISION PRODUCTION 2  (868927)
Grades: 11, 12  Credit: two

(Edison Academy - Transportation may be provided)

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

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

PROFESSIONAL TELEVISION PRODUCTION 3  (869027)
Grades: 12  Credit: two

(Edison Academy - 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 web site.

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

SMALL ENGINE REPAIR  (872426)
Grades: 10, 11, 12  Credit: one

(Fairfax and West Potomac Academies - Transportation may be provided)

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

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

HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION 2
(850427)
Grades: 11, 12  Credit: two
Prerequisite: Heating, Ventilation, Air Conditioning, and Refrigeration 1 (850326)

(Edison Academy - transportation may be provided)

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

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