

# WEST SPRINGFIELD HIGH SCHOOL



## Course Selection Guide 2012-2013

Cover Design by Song Ya Han Class of 2012



# USING THIS BOOK TO EFFECTIVELY PLAN YOUR COURSES

Dear Students and Parents:

This course description booklet is offered to help you in the planning of your four-year high school program. West Springfield High School is committed to ensuring that all of our students are College and Career Ready upon graduation. This is defined by the Virginia Department of Education (VDOE) as possessing the English and Mathematics knowledge and skills necessary to qualify for and succeed in entry-level, credit-bearing college courses without the need for remedial coursework and/or postsecondary job training and/or education necessary for their chosen field.

Furthermore the VDOE has been collecting data on graduates who matriculate to college and identified indicators of college readiness that are independently associated with a high probability of enrollment and persistence in four-year postsecondary institutions from across the country. The Virginia specific indicators are:

- ✓ Participate in a college preparatory curriculum that includes Algebra II and Chemistry
- ✓ Earn advanced proficient scores on mathematics, reading, and writing SOL assessments
- ✓ Earn an advanced studies diploma
- ✓ Participate in Advanced Placement courses

When using this catalog, pay special attention to the different “Diploma Type” sections. The state has introduced new diplomas each of the past four years. Your counselor will work closely with you to ensure that you fulfill requirements for the diplomas available to you.

- ✓ Our Student Services staff can provide additional information about specific college requirements and career fields, financial aid, scholarships, testing, and online assistance.
- ✓ **Parents:** It is important to think about what is best for your child, not what other children are doing. Counselors will help develop an appropriate four-year plan for your student.
- ✓ **Students:** We challenge you to select classes that you are truly interested in versus those you believe will “look good” in the admissions process. Pursue your passions! We also challenge you to use discretion when selecting Honors and AP courses; you should choose to pursue advanced academic courses in those areas you are most interested, while still maintaining a balance so as to enable maximum success in ALL of your courses.

Course selection for next year is extremely important and requires extensive planning and discussion. Teaching staff and course sections are based upon the course selections that you make in February/March of 2012; therefore **choose carefully**. Some courses listed in this booklet may not be offered in the fall due to insufficient enrollment, so consider possible alternatives to your selections. Additionally, there are no drops from Honors and AP courses allowed until the end of the first quarter, and then **only** if the student has 1) completed all assignments and 2) utilized Spartan Time or after school time to get help from the teacher and 3) a conference has been held between the teacher, counselor, administrator, and parents to determine the decision that is in the best interest of the student.

Jennifer Ferrara  
Director of Student Services



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<p><b>NOTICE:</b> All graduation requirements documented in the 2012-2013 Standard Course Offerings Guide reflect Virginia Department of Education and Fairfax County Public Schools' expectations at the time of publication.</p>
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**Graduation  
Requirements for  
Students Entering the  
9<sup>th</sup> Grade for the First  
Time Prior to  
2011-2012**

# 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 9<sup>th</sup> grade students who entered high school prior to 2011-2012.

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

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

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

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

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

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

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

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

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

# ADVANCED STUDIES DIPLOMA

## 24 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

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

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

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

<b>Advanced Studies Diploma Course Requirements (8 VAC 20-131-50)</b>		
<b>Subject Area</b>	<b>Standard Credits</b>	<b>Verified Credits</b>
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
<b>Total Credits</b>	<b>24</b>	<b>9</b>

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

<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 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 ninth grade for the first time. The following applies to 9<sup>th</sup> grade students who entered high school in 2000-2001 and beyond.**

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 8<sup>th</sup> grade English reading and mathematics Standards of Learning (SOL) tests. Students may substitute a higher level high school SOL test for the 8<sup>th</sup> 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, Advanced Studies Diploma, or Standard Technical Diploma or Advanced Technical Diploma (based on year of entry into 9<sup>th</sup> grade) at any time throughout the high school career. The student may not be excluded from courses and tests required to earn a Standard, Advanced Studies, Standard Technical, or Advanced Technical Diploma.

<b>Modified Standard Diploma Course Requirements (8 VAC 20-131-50)</b>	
<b>Subject Area</b>	<b>Standard Credits</b>
English	4
Mathematics <sup>1</sup>	3
Science <sup>2</sup>	2
History and Social Sciences <sup>3</sup>	2
Health and Physical Education	2
Fine Arts or Career and Technical Ed.	1
Electives <sup>4</sup>	6
<b>Total Credits</b>	<b>20</b>

<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.

<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.

<sup>4</sup> 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, employee, or applicant for employment in the Fairfax County Public Schools shall, on the basis of race, color, sex, religion, national origin, marital status, disability, or age (under certain conditions), be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. Compliance is coordinated by the directors of the following: Office of Design and Construction Services (571-423-2280) regarding access to facilities; Office of Equity and Compliance (571-423-3050 or dial 711 for access to Telecommunications Relay Services (TRS)), regarding equal employment opportunity, discrimination, and sexual harassment issues; Due Process and Eligibility (703-317-3000), Department of Special Services, regarding programs and activities for students with disabilities. Correspondence may be addressed to the above offices and sent to 8115 Gatehouse Road, Falls Church, Virginia 22042.

**Graduation  
Requirements for  
Students Entering the  
9<sup>th</sup> Grade for the First  
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# STANDARD DIPLOMA

## 22 CREDIT DIPLOMA REQUIREMENTS FOR GRADUATION

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

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

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

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

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

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

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

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

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

<sup>5</sup> 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.

<sup>6</sup> Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association or acquires a professional license in a career and technical 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.

<sup>7</sup> 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 9<sup>th</sup> grade for the first time. The following applies to 9<sup>th</sup> grade students who enter high school in 2011-2012 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.**

<b>Advanced Studies Diploma Course Requirements (8 VAC 20-131-50)</b>		
<b>Subject Area</b>	<b>Standard Credits</b>	<b>Verified Credits</b>
English	4	2
Mathematics <sup>1</sup>	4	2
Laboratory Science <sup>2</sup>	4	2
History and Social Sciences <sup>3</sup>	4	2
*World Language <sup>4</sup>	3	
Health and Physical Education	2	
Fine Arts or Career and Technical Ed	1	
Economics & Personal Finance	1	
Electives	3	
Student Selected Test <sup>5</sup>		1
<b>Total Credits</b>	<b>26</b>	<b>9</b>

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

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

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

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

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

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

## **MODIFIED STANDARD DIPLOMA**

### **20 CREDIT DIPLOMA REQUIREMENT FOR GRADUATION**

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

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 8<sup>th</sup> grade English reading and mathematics Standards of Learning (SOL) tests. Students may substitute a higher level high school SOL test for the 8<sup>th</sup> 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, Advanced Studies Diploma, or Standard Technical Diploma or Advanced Technical Diploma (based on year of entry into 9<sup>th</sup> grade) at any time throughout the high school career. The student may not be excluded from courses and tests required to earn a Standard, Advanced Studies, Standard Technical, or Advanced Technical Diploma.

<b>Modified Standard Diploma Course Requirements (8 VAC 20-131-50)</b>	
<b>Subject Area</b>	<b>Standard Credits</b>
English	4
Mathematics <sup>1</sup>	3
Science <sup>2</sup>	2
History and Social Sciences <sup>3</sup>	2
Health and Physical Education	2
Fine Arts or Career and Technical Ed.	1
Electives <sup>4</sup>	6
<b>Total Credits</b>	<b>20</b>

<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.

<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, employee, or applicant for employment in the Fairfax County Public Schools shall, on the basis of race, color, sex, religion, national origin, marital status, disability, or age (under certain conditions), be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. Compliance is coordinated by the directors of the following: Office of Design and Construction Services (571-423-2280) regarding access to facilities; Office of Equity and Compliance (571-423-3050 or dial 711 for access to Telecommunications Relay Services (TRS)), regarding equal employment opportunity, discrimination, and sexual harassment issues; Due Process and Eligibility (703-317-3000), Department of Special Services, regarding programs and activities for students with disabilities. Correspondence may be addressed to the above offices and sent to 8115 Gatehouse Road, Falls Church, Virginia 22042.

**Additional Diploma  
Options for Students  
Entering the 9<sup>th</sup> Grade  
for the First Time in  
2012-2013 and Beyond**

# STANDARD TECHNICAL 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 diploma type applies to 9th grade students who enter high school in 2012-2013 and beyond.

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

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

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

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

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

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

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

<sup>4</sup> Courses completed to satisfy this requirement must include a career concentration as approved by the Board. If a career concentration includes a specific assessment approved by the Board and the student is eligible to take the assessment, then the student must take this assessment.

<sup>5</sup> Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry or trade or professional association or acquires a professional license in a career and technical 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.

<sup>6</sup> 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.

# ADVANCED TECHNICAL 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 diploma type applies to 9th grade students who enter high school in 2012-2013 and beyond.

To graduate from high school with an Advanced Technical Diploma, students shall meet the minimum requirements as outlined below which include 26 credits, 9 of which must be verified credits. Any student who meets the requirements for both the Advanced Studies and the Advanced Technical Diploma may choose between these two diplomas. 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.**

<b>Advanced Technical Diploma Course Requirements (8 VAC 20-131-110)</b>		
<b>Subject Area</b>	<b>Standard Credits</b>	<b>Verified Credits</b>
English	4	2
Mathematics <sup>1</sup>	4	2
Laboratory Science <sup>2</sup>	4	2
History and Social Sciences <sup>3</sup>	4	2
*World Language <sup>4</sup>	3	
Health and Physical Education	2	
Economics & Personal Finance	1	
Fine Arts or Career and Technical	1	
Career and Technical Education <sup>5</sup>	3	
Student Selected Test <sup>6</sup>		1
<b>Total</b>	<b>26</b>	<b>9</b>

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

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

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

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

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

<sup>5</sup> Courses completed to satisfy this requirement must include a career concentration as approved by the Board. If a career concentration includes a specific assessment approved by the Board and the student is eligible to take the assessment, then the student must take this assessment.

<sup>6</sup> A student may utilize additional tests for earning verified credit in computer science, technology, career or technical education, economics, or other areas as prescribed by the Board in 8 VAC 20-131-110.

## STATE DIPLOMA SEALS

1. The **Governor's Seal** shall be awarded to students who complete the requirements for an Advanced Studies or Advanced Technical 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, Standard Technical, Advanced Studies, or Advanced Technical 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, Standard Technical, Advanced Studies, or Advanced Technical 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, Standard Technical, Advanced Studies, or Advanced Technical Diploma and (i) satisfy all of the mathematics requirements for the Advanced Studies or Advanced Technical 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, Standard Technical, Advanced Studies, Advanced Technical Diploma, 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.

(NOTE: As in the past, the Board of Education Seal and the Governor's Seal are not to be interchanged among diplomas and may only be used when the conditions cited have been met. The seal should be placed in the lower left quarter of the diploma. Students who earn the Board of Education or the Governor's Seal may also earn the Career and Technical Education, the Advanced Mathematics and Technology, or the Civics Education Seals.)

## GRADING SYSTEM

### Effective September 2009

FCPS adopted a new grading scale effective September 2009. Changes in the FCPS grading policy include a modified ten-point grading scale that uses pluses and minuses. An asterisk (\*) is used on the transcript to distinguish B+, C+, and D+ grades earned prior to September 2009. For example, B\* = B+.

A	(93-100) = 4.0	B-	(80-82) = 2.7	D+	(67-69) = 1.3
A-	(90-92) = 3.7	C+	(77-79) = 2.3	D	(64-66) = 1.0
B+	(87-89) = 3.3	C	(73-76) = 2.0	F	(below 64) = 0.0
B	(83-86) = 3.0	C-	(70-72) = 1.7		

### Grading System Prior to September 2009

A	(94-100) = 4.0	C	(74-79) = 2.0
B+	(90-93) = 3.5	D+	(70-73) = 1.5
B	(84-89) = 3.0	D	(64-69) = 1.0
C+	(80-83) = 2.5	F	(below 64) = 0.0

## GRADE POINT AVERAGE

Grade point average (GPA) is calculated on the basis of **all courses for which high school credit has been earned or attempted, including repeated courses previously passed.** In order for a repeat course to raise a GPA, the student's grade must be higher than the one originally given. All classes appearing on the high school transcript including high school classes taken in summer school, middle school, elementary school, or online are included when calculating GPA.

Advanced Placement (AP) courses and specified International Baccalaureate (IB) courses 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 completing the corresponding AP or IB exam. For example, a final grade of A in an AP/IB course shall receive 5.0 quality points for purposes of calculating grade point average.

Honors courses in mathematics, science, English, social studies, and designated Thomas Jefferson High School courses, 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. In these disciplines, students have a choice of taking either a non-weighted standard level course or the weighted honors level course.

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

## EXPUNGING HIGH SCHOOL COURSES TAKEN IN MIDDLE SCHOOL

In accordance with Virginia state regulations, FCPS Regulation 2430 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.

## 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 2460 and Virginia state regulations. For additional information about pursuing coursework outside of FCPS for credit, please contact your school counselor.

## WITHDRAW POLICY

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

1st quarter	No penalty--nothing is recorded.
2nd quarter	WP (withdrawn passing) or WF (withdrawn failing) is recorded. Exception: For semester courses a WP or F for failure is recorded.
3rd quarter	WP or WF is recorded.
4th quarter	WP or F for failure is recorded.

## PASS-FAIL

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

- With parental or guardian approval, any high school student shall be given the option of taking one elective credit per school year to be marked on a pass-fail basis. This may be applied to required health and physical education credits, world language credits, and to credits other than those required for English, social studies, mathematics, and laboratory science and specialized courses such as Principles of Engineering Technology and Senior Technology Research taught at Thomas Jefferson High School for Science and Technology.
- A double or triple-period class taken for two or three credits in the technical fields may be taken on a pass-fail basis as the one pass-fail course per year.
- No student may take more than two-single semester electives or one full-year elective per school year on the pass-fail system except as indicated above.
- Any high school student wishing to take a course as pass-fail shall indicate this by completing a "Pass-Fail Status Request Form" requiring parent approval and returning it to designated school personnel on or before the 22nd school day or by the first half of the first grading period subsequent to entering the course. Students in schools using a semester block schedule must return the parent approval form to the designated school personnel on or before the 11th school day or by the first half of the first grading period subsequent to entering the course. This decision may not be reversed.
- If a student drops a class being taken on a pass-fail basis and transfers to a new class, the student shall have 10 school days to make a decision as to whether the new class will be taken on a pass-fail basis. Students in schools using a semester block schedule shall have 5 school days to make a decision as to whether the new class will be taken on a pass-fail basis, provided it is an elective course. This decision may not be reversed.
- Grades are determined as follows:
  - "P" for an A, A-, B+, B, B-, C+, C, C-, D+, D which will receive credit but will not count in grade-point average.
  - "F" for an F which will receive no credit but will be counted in grade-point average.

## 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 POS standards, benchmarks, and indicators. The decision may not be reversed with the exception of ESOL students placed in a content class who may be changed from audit to credit status at the request of the content teacher and ESOL department chair if the student demonstrates mastery of the course content.

## PROMOTION POLICY

### Middle School

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

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

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

### High School

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

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

## WORLD LANGUAGES PROFICIENCY CREDIT

The Credit Exam for World Languages is given each fall to students who wish to demonstrate written proficiency in one of several languages: Amharic, Arabic, Bengali, Chinese, Farsi, French, German, Hindi, Japanese, Korean, Nepali, Punjabi, Russian, Somali, Spanish, Tagalog/Pilipino, Telugu, Twi, Urdu, or Vietnamese. Students who are successful on the exam receive two world languages credits which may be used to fulfill the world languages requirements/electives of the Advanced Studies, Advanced Technical, Standard Technical or Standard Diplomas. In addition, middle school students in grades 6-8 enrolled in 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/creditem/index.shtml> or contact the World Languages Team at 571-423-4602.

## POSTSECONDARY PLANNING

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

## ADVANCED ACADEMIC PROGRAMS

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

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

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

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

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

### **Advanced Placement**

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

### **International Baccalaureate**

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

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

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

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

The Thomas Jefferson High School for Science and Technology is a unique Fairfax County public school offering a comprehensive college preparatory program emphasizing the sciences, mathematics, and technology. As the Governor's School for Science and Technology in Northern Virginia, the school serves students who are selected in a competitive process and intend to pursue college preparation in the sciences, engineering, or related fields. Students may obtain information about application procedures and deadlines from the School Counseling Office of their local schools or by calling Thomas Jefferson High School for Science and Technology Office of Admissions at 571-423-3770 or at: <http://www.tjhsst.edu/abouttj/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 Education, and Trade and Industrial in sections of the *Standard Course Offerings* guide. School counselors can provide further information on 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, and Spring Village Residential Construction Site. Please visit the CTE web site at <http://www.fcps.edu/is/cte/index.shtml>.

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

### STUDENT FEES

Courses that require a student fee for consumable materials have been designated in this catalog. The schedule of divisionwide student fees to be charged for any elective course can be found in Notice5922 at <http://www.fcps.edu/Directives/topicalindexQR.shtml#REVE>. 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.

Notes:

## 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/>.

The following courses are currently available online:

Algebra	Biology 1	Advanced Accounting
Algebra 1 Honors	Biology 1 Honors	Economics and Personal Finance
Geometry	Chemistry 1	
Geometry Honors	Chemistry 1 Honors	Spanish 1
Algebra 2	Physics 1	Spanish 2
Algebra 2 Honors	Geosystems	Spanish 3
Trigonometry	Oceanography	AP Spanish Language
Precalculus	AP Biology	AP Spanish Literature
AP Calculus AB	AP Chemistry	AP French Language
AP Statistics	AP Physics B	
Creative Writing 1	World History & Geography 1	Physical Education 9
Creative Writing 2	World History& Geography 1 Honors	Physical Education 10
English 9	World History & Geography 2	
English 9 Honors	World History & Geography 2 Honors	
English 10	VA & US History	<i>VA &amp; US History Honors*</i>
English 10 Honors	VA/U.S. Government	<i>VA/U.S. Government Honors*</i>
English 11	AP U.S. Government	<i>English 12 Honors*</i>
English 11 Honors	AP Microeconomics	<i>* These courses may be offered online pending</i>
English 12	AP Macroeconomics	<i>School Board decision. Confirmation not</i>
AP English Language	Psychology	<i>available on print date of 1/19/12.</i>
AP English Literature	AP Psychology	
	AP US History	

## HIGH SCHOOL ACADEMIES

Advanced technical and specialized elective courses are available at Academies located at Chantilly, Edison, Fairfax, Falls Church, Marshall, and West Potomac High Schools for students interested in pursuing careers in International Studies and Business; Engineering and Scientific Technology; Health and Human Services; or Communications and the Arts. Enrollment in the Academy elective course offerings will provide juniors and seniors with career and academic preparation for future learning in college and career fields. Students enrolling in the Academy elective courses will be provided with opportunities to participate in shadowing, mentoring, and/or internships with local businesses. Transportation may be provided to Academy locations. Please check with each respective location for transportation schedules relevant to each high school academy. Refer to course descriptions in the *Standard Course Offerings* for specific information on Academy courses.

### 2011-2012 HIGH SCHOOL ACADEMY COURSE OFFERINGS

#### **CHANTILLY ACADEMY: Engineering and Scientific Technology; Health and Human Services**

<http://www.fcps.edu/ChantillyAcademy/>

Air Force JROTC	Criminal Justice	Exploring Health Sciences
Animal Science	Culinary Arts	Exploring the Language of Medicine
Automotive Collision Service	Dental Careers	Geographic Information Systems
Automotive Technology	Early Childhood Careers	Girls Exploring Engineering (Engineering Sys.)
Carpentry	Engineering Mathematics	Independent Research – Engineering
Cisco	Engineering Physics	Medical Assistant
Computer Systems Technology - A+	Engineering Systems	Network Administration (Microsoft)
Cosmetology	Entrepreneurship	Oracle
		Pharmacy Technician

#### **EDISON ACADEMY: International Studies and Business; Engineering and Scientific Technology**

<http://www.fcps.edu/EdisonAcademy/>

Animal Science	Cosmetology	Hotel Marketing
Automotive Collision Service	Culinary Arts	Landscape Architecture & Turf Management
Automotive Technology	Electrical Construction & Engineering	Network Administration (Microsoft)
Computer Systems Technology - A+	Heating, Ventilation, AC, & Refrigeration	Oracle

#### **FAIRFAX ACADEMY: Communications and the Arts**

<http://www.fcps.edu/FairfaxAcademy/>

Chinese	Korean	Professional Photography Studio
Dance	Music and Computer Technology	Professional Television Production
Fashion Design	Professional Musical Theatre & Actor's Studio	

#### **FALLS CHURCH ACADEMY: Health and Human Services**

<http://www.fcps.edu/FallsChurchHS/academy/index.html>

Criminal Justice	Exploring the Language of Medicine	Pharmacy Technician
Dental Careers	Fire and Emergency Medical Sciences	Practical Nursing
Exploring Health Sciences	Medical Assistant	

#### **MARSHALL ACADEMY: International Studies and Business; Engineering and Scientific Technology**

<http://www.fcps.edu/MarshallAcademy/>

Aerospace Science	Computer Systems Technology - A+	Entrepreneurship
Automotive Collision Service	Cosmetology	Hotel Marketing
Automotive Technology	Criminal Justice	Network Administration (Microsoft)
Chinese	Culinary Arts	

#### **WEST POTOMAC ACADEMY: Communications and the Arts; Health and Human Services**

<http://www.fcps.edu/WestPotomacAcademy/>

Criminal Justice	Exploring Health Sciences	Music and Computer Technology
Dance	Exploring the Language of Medicine	Pharmacy Technician
Dental Careers	Fashion Design	Physical Therapy/Occupational Therapy
Early Childhood Careers	Medical Assistant	Professional Television Production

## BUSINESS & INFORMATION TECHNOLOGY

### ACCOUNTING (632000)

Grades: 9, 10, 11, 12

Credit: one

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

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

### ADVANCED ACCOUNTING (632100)

Grades: 10, 11, 12

Credit: one

Prerequisite: Accounting (632000)

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

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

### INFORMATION SYSTEMS (661200)

Grades: 9, 10, 11, 12

Credit: one

Prerequisite: Computer Solutions Digital Input Technologies or equivalent skill

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. 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. 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.**

### ADVANCED INFORMATION SYSTEMS (661300)

Grades: 10, 11, 12

Credit: one

Prerequisite: Information Systems (661200), Computer Solutions (615030, 31, 32), Digital Input Technologies (660932) or equivalent skill

Advanced Information Systems provides students with the opportunity to develop professional computer and technology skills in a project-oriented and student-centered environment. Working independently or in teams, students apply problem-solving, decision-making, creative-thinking, and communication skills to relevant, real-life situations through a series of software and peripheral applications. Instruction in current and emerging information technology includes operating systems, networking and hardware principles, document preparation, presentation tools, spreadsheet analysis and charts preparation, relational database management, technical writing, desktop publishing, copyright issues, and basic web page design. Upon completion of this course, students will be able to apply technology to analyze and solve problems and to complete technology tasks efficiently and effectively. 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. 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.**

### BUSINESS COOPERATIVE INTERNSHIP (679920)

(Formerly Cooperative Office Education-COE)

Grades: 10, 11, 12

Credit: one

Corequisite: Student must be concurrently enrolled in a business course.

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

### BUSINESS LAW (613232)

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.**

**BUSINESS MANAGEMENT - VIRTUAL ENTERPRISE (613500)****Grades: 10, 11, 12****Credit: one**

Students explore the roles of business in the free enterprise system and the global economy. Students study how the American economy operates and prepare to make decisions as consumers, wage earners, and citizens by working together as a class to design a business which will operate virtually over the Internet through participation in Virtual Enterprise VA--a method of instruction in simulated business operation. The students determine the nature of their business, its products and/or services, and its management and structure. Students in each Virtual Enterprise engage in a variety of specific activities ranging from marketing and research, advertising, buying and selling products or services, paying wages and taxes, managing personal finances, to negotiating loans with the Central Bank. 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. 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.**

**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 publications, and web page creation. Hands-on activities are used as students develop skills, master techniques, and prepare products for a client-based environment. Students learn to create professional slideshow presentations using animation, sound, and videos. Students also create brochures, flyers, business advertisements, and many other useful documents using Adobe products. The course also introduces students to document construction for publishing on the World Wide Web using authoring software. Units of instruction include design and layout, typeface selection, electronic scanners and scanned images, image editing, digital cameras and images, and video capturing. Internet research and copyright laws are emphasized. 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. 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.**

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

Instruction in economics and personal finance prepares students to function effectively as consumers, savers, investors, entrepreneurs, and active

citizens. Students learn how economies and markets operate and how the United States' economy is interconnected with the global economy. On a personal level, students learn that their own human capital (knowledge and skills) is their most valuable resource. Beginning with students entering ninth grade in fall 2011, one standard unit of credit in Economics and Personal Finance is required for graduation.

**Industry certification may be available as part of this course. Successful completion of this course in conjunction with a corresponding industry certification may qualify for a student selected verified credit.**

**OFFICE ADMINISTRATION (662100)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Computer Solutions or equivalent skill**

This course allows students to reinforce keyboarding skills and acquire knowledge of office routines such as preparing correspondence and business forms, managing electronic records and financial records, and voice recognition. In a team environment (The Company approach), relevant, real-life activities and simulations are used to improve communication skills, business etiquette, and develop job-seeking techniques. 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. 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.**

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

Students study the American business system as part of our total economic environment and become skillful in selecting and using goods and services to manage their personal and business affairs. Topics covered are banking, insurance, financial management, credit, savings and investments, consumer decisions, labor and management relations, and usage of computers in business and industry. This course is an excellent introduction course for IB Business and Management.

**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.**

**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. 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. 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.**

**CISCO 1 PART A (854232)****Grades: 10, 11, 12****Credit: one-half****Prerequisite: Computer related course or equivalent skill****Corequisite: Cisco 1 Part B****(Chantilly Academy - transportation may be provided)**

This is part A of a full year course. Part A is taken in the fall semester. Students also register and take Cisco 1 part B in the spring semester. This course teaches students the skills needed to obtain entry-level home network installer jobs. It also helps students develop some of the skills needed to become network technicians, computer technicians, cable installers, and help-desk technicians. It provides a hands-on introduction to networking and the Internet, using tools and hardware commonly found in home and small business environments. Labs include PC installation, Internet connectivity, wireless connectivity, file and print sharing, and the installation of game consoles, scanners, and cameras. The cooperative education (Business Cooperative Internship--679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the academy web site.

**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.**

**CISCO 1 PART B (854332)****Grades: 10, 11, 12****Credit: one-half****Prerequisite: Cisco 1 Part A****Corequisite: Cisco 1 Part A****(Chantilly Academy - transportation may be provided)**

This is part B of a full year course. Part B is taken in the spring semester. Students also register and take Cisco 1 part A in the fall semester. This course prepares students for jobs as network technicians and helps them develop additional skills required for computer technicians and help desk technicians. It provides a basic overview of routing and remote access, addressing, and security. It also familiarizes students with servers that provide e-mail services, Web space, and authenticated access. Students learn about the soft skills required for help desk and customer service positions, and the final chapter helps them prepare for the CCENT certification exam. Network monitoring and basic troubleshooting skills are taught in context. The cooperative education (Business Cooperative Internship--679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the academy web site.

**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.**

**CISCO 2 PART A (854432)****Grades: 11, 12****Credit: one-half****Prerequisite: Cisco 1 Part A and B****Corequisite: Cisco 2 Part B****(Chantilly Academy - transportation may be provided)**

This is part A of a full year course. Part A is taken in the fall semester. Students also register and take Cisco 2 part B in the spring semester. This course familiarizes students with the equipment applications and protocols installed in enterprise networks, with a focus on switched networks, IP Telephony requirements, and security. It also introduces advanced routing protocols such as Enhanced Interior Gateway Routing Protocol (EIGRP) and

Open Shortest Path First (OSPF) Protocol. Hands-on exercises, including configuration, installation, and troubleshooting, reinforce student learning. The cooperative education (Business Cooperative Internship--679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the academy web site.

**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.**

**CISCO 2 PART B (854532)****Grades: 11, 12****Credit: one-half****Prerequisite: Cisco 1 Part A and B****Corequisite: Cisco 2 Part A****(Chantilly Academy - transportation may be provided)**

This is part B of a full year course. Part B is taken in the spring semester. Students also register and take Cisco 2 part A in the fall semester. This course is designed for students interested in pursuing a career in the computer industry. Students will install, configure, upgrade, diagnose, troubleshoot and perform preventive maintenance on computer motherboards, processors, and memory chips. Other areas of study will include basic networking, software operation of Windows and DOS, memory management, and preventive maintenance. The cooperative education (Business Cooperative Internship--679920) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the academy web site.

**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.**

**COMPUTER SYSTEMS TECHNOLOGY - A+ LEVEL 1 (862232)****Grades: 10, 11, 12****Credit: one****Prerequisite: Computer related course or equivalent skill****Corequisite: Computer Systems Technology - A+ Level 2****(Chantilly, Edison and Marshall Academies - transportation may be provided)**

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

**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.**

**COMPUTER SYSTEMS TECHNOLOGY - A+ LEVEL 2 (862332)****Grades: 10, 11, 12****Credit: one****Prerequisite: Computer related course or equivalent skill****Corequisite: Computer Systems Technology - A+ Level 1****(Chantilly, Edison and Marshall Academies - transportation may be provided)**

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

**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.**

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

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

**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.**

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

Network Administration 2 is designed to continue teaching aspects of network administration-focusing on management and support of network users and systems. Time is spent discussing responsibilities of computer

professionals, training end users, evaluating new technology, developing system policies, troubleshooting workstations, managing network services and protocols, and effectively using e-business communications. Students learn communications protocols, troubleshooting techniques for systems and client server networks, web site management and other advanced networking topics. 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 academy web site.

**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.**

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

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

**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.**

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

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

**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.**

## ENGLISH

### ENGLISH 9 (113000)

Grades: 9

Prerequisite: English 8

Credit: one

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

### ENGLISH 9 HONORS (113036)

Grades: 9

Prerequisite: English 8

Credit: one/weighted +.5

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

Prerequisite: English 9

Credit: one

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

Prerequisite: English 9

Credit: one/weighted +.5

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

Prerequisite: English 10

Credit: one

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 continues through the application of rules for sentence formation, usage, spelling, and mechanics. 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

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 continues through the application of rules for sentence formation, usage, spelling, and mechanics. 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 Reading and Writing Test.

### AP ENGLISH LANGUAGE AND COMPOSITION (119605)

Grades: 11

Prerequisite: English 10

Credit: one/weighted +1.0

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

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

### ENGLISH 12 (116000)

Grades: 12

Prerequisite: English 11

Credit: one

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 papers, 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 HONORS (116036)

Grades: 12

Credit: one/weighted +.5

English 12 Honors deepens and advances the curriculum of English 12. Students read and analyze a variety of literary texts, recognizing major forms and their stylistic elements. Using nonfiction texts, students will analyze and synthesize information to solve problems. Language study expands students' general and specialized vocabulary through speaking, listening, reading, and viewing. Writing includes the production of informational, expository, and persuasive/argumentative papers, 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.

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

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

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

In Journalism 1 students learn the history and language of journalism; develop communication skills in writing, designing and editing for a variety of media; understand news and the process of publication; and become more critical readers and viewers of mass media.

**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)**  
*(Oracle)*  
**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)**  
*(Oracle)*  
**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 spokespeople for the publication. Students also take responsibility for business and circulation management. This course requires some after school time.

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

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

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

In Photojournalism 2, students develop their copywriting skills and advance their photography and design skills as they create pages for the school's

yearbook. They may become section editors. This course requires some after-school time.

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

In Photojournalism 3, students refine their copywriting skills and advance their computer and photography skills, develop individual style, and may assume leadership roles as members of the yearbook staff's editorial board. This course requires some after-school time.

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

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

**CREATIVE WRITING 2 (117200)**  
**Grades: 10, 11, 12** **Credit: one**  
**Prerequisite: Creative Writing 1**

This course provides students an opportunity for further exploration of creative writing. Students continue to experiment with many forms of writing, with an emphasis on poetry, short stories, plays, and all forms of descriptive writing. Students hone their writing skills by attempting more advanced work while also working collaboratively with other students on revision and critique. Students may also participate in the layout, design, and overall production of a high school literary m

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

This course provides students an opportunity to study creative writing at an advanced level through a collaborative workshop approach. Students continue to experiment with many forms of writing, with an emphasis on poetry, short stories, plays, and all forms of descriptive writing. Students work independently and through peer critique groups to refine their writing and develop a sense of voice. Students may also participate in the layout, design, and overall production of a high school literary magazine.

**ADVANCED COMPOSITION 1 (117700)**  
*Prerequisite: application and selection by the Advanced Composition Committee*  
**Grades: 10, 11, 12** **Credit: one**

This course provides students an in-depth study of writing in the academic disciplines. Students improve their writing through intense word study, critical reading, and analytical thinking. Students expand and refine their ability to write through analyzing and evaluating their own writing and that of others. Students may also participate in the school's writing center. *Students must submit an application (available in the Writing Center) and be selected by the Advanced Composition Committee. Students selected for Advanced Composition 1 will participate in the School Writing Center.*

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

This course provides students the opportunity for further exploration of academic writing. Students hone their writing skills by further analyzing published texts and attempting more advanced work while also collaborating with other students on revision and critique. Students may also participate in the school's writing center. *Students enrolled in Advanced Composition 2 will participate in the School Writing Center.*

**SPEECH COMMUNICATION (130033)****Grades: 9, 10, 11, 12****Credit: one-half**

Speech Communication is designed to introduce students to the basics of speech communication. Students participate in a variety of speech activities, which help them develop self-confidence and poise through preparation, performance, and evaluation. Students participate in interpersonal, group, and public speaking activities.

**DEBATE (139534)****Grades: 9, 10, 11, 12****Credit: one-half**

The debate course is designed to encourage and improve in creative and critical thinking, research, speaking and argumentation, mock trials, Lincoln-Douglas Debate, and Policy Debate. In addition, students improve their ability to take notes and to listen.

**FORENSICS (139000)****Grades: 9, 10, 11, 12****Credit: one**

Forensics provides students with an opportunity to practice and develop proficiency in oral communication techniques. Students sharpen their skills in a chosen area of concentration such as oral interpretation, extemporaneous speaking, or original oratory. Students are encouraged to use their skills in speech competition or performance.

**ADVANCED ORAL COMMUNICATION (130200)****Grades: 10, 11, 12****Credit: one****Prerequisite: Speech Communication, Forensics or Debate**

Advanced Oral Communication is a concentrated performance-based course providing students with an opportunity to broaden their expertise in competitive Forensics and Debate events. Students participate in local Forensics and/or Debate competitions. Through preparation, performance, and evaluation, students will sharpen skills in chosen areas of concentration such as interpretation, original speaking, and debate.

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

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

**DEVELOPING LITERACIES (118060)****Grades: 9****Credit: one**

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

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

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

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

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

**ENGLISH FOR SPEAKERS OF OTHER LANGUAGES****ESOL LEVEL 2 BEGINNING (571014)****Grades: 9, 10, 11****Credit: one**

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

*Since this class is taken for 3 periods, 3 elective credits will be awarded.***ESOL LEVEL 3 DEVELOPING (572091)****Grades: 9, 10, 11****Credit: one**

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

*Since this class is taken for 2 periods, 2 Foreign Language credits will be awarded.***ESOL LEVEL 4 EXPANDING (573000)****Grades: 9, 10, 11****Credit: one**

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

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

The purpose of this course is to provide the foundational skills necessary to enter Algebra 1 for ESOL students who are performing below the fifth grade level in mathematics. Students examine algebra- and geometry-preparatory concepts and skills; strategies for collecting, analyzing, and interpreting data; and number concepts and skills emphasizing proportional reasoning. Problem solving, communication, concept representation, and connections among mathematical ideas are presented in a hands-on learning environment. Students may need up to two years to complete the course, but should move to the next course as soon as their mathematics skills warrant. This course emphasizes language objectives in addition to mathematics objectives and does not meet the mathematics graduation requirements; students earn elective credit.

**FAMILY & CONSUMER SCIENCES****CHILD DEVELOPMENT AND PARENTING (823200)****Grades: 10, 11, 12****Credit: one**

This course is designed to focus on assessing the impact of the parenting role in society; taking responsibility for personal growth within the parenting role; preparing for a healthy, emotional, and physical beginning for parent and child; meeting developmental needs of children and adolescents; building positive parent-child relationships; using positive guidance to promote self-discipline, self-esteem, and socially responsible behavior; obtaining parenting information, support, and assistance; and, planning ways that families and society can share in nurturing children and adolescents.

The basic skills of mathematics, science, and communications will be highlighted when appropriate in the content.

**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.**

#### **EARLY CHILDHOOD CAREERS 1 (828524)**

**Non-academy**

**Grades: 10, 11, 12**

**Credit: two**

**(Sites have cooperative education experiences for students through the FCPS Head Start Program; transportation may be provided for high school students to Chantilly and West Potomac Academies.)**

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

**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.**

#### **EARLY CHILDHOOD CAREERS 2 (828624)**

**Non-academy**

**Grades: 11, 12**

**Credit: two**

**Prerequisite: Early Childhood Careers 1 (828524)**

**(Sites have cooperative education experiences for students through the FCPS Head Start Program; transportation may be provided for high school students to Chantilly and West Potomac Academies.)**

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

**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.**

#### **GOURMET AND INTERNATIONAL FOODS (825900)**

**Grades: 10, 11, 12**

**Credit: one**

This course allows students to explore food safety and sanitation, food preparation and presentation of foods, global cuisines, and a variety of careers related to the hospitality, tourism and recreation industry. Skills in mathematics, science, and communications will be reinforced throughout the curriculum. In addition, emerging technologies used in related industries will be incorporated. Students completing Gourmet and International Foods with a "B" or better may be eligible to articulate up to four credits at Stratford University.

**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.**

#### **FITNESS AND FOOD (822832)**

**Grades: 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.**

#### **INTRODUCTION TO INTERIOR AND FASHION DESIGN (825432)**

**Grades: 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.**

*Materials fee of \$10.00.*

#### **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 a living environment that supports the well-being of individuals; evaluating types of housing; maintaining a living environment that supports the well-being of self and family; living in a global environment; making decisions related to clothing; maintaining clothing for self and others; planning food choices that meet the health needs of individuals and families; and, preparing and serving nutritious foods. In addition, focus is placed on developing a life-management plan; caring for self and others to ensure wellness; building and maintaining constructive interpersonal relationships; building and maintaining strong, functional families; developing strategies for lifelong career planning, coordinating personal and career responsibilities; and, establishing a plan for using resources. The basic skills of mathematics, science, and communications will be highlighted when appropriate in the content.

**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.**

#### **CULINARY ARTS 1 (827527)**

**Grades: 11, 12**

**Credit: two**

**(Chantilly, Edison and Marshall Academies - transportation may be provided.)**

This course is dedicated to providing students with a working knowledge of classical culinary techniques. Through lecture, hands-on work and projects, the students will learn the skills needed for a career in the food service industry. Training in sanitation, hot food 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 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.**

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

This course builds on the skills learned in Culinary Arts 1. Further advanced instruction in table service, baking, pastries, and management techniques is emphasized. Students create a plan for establishing a restaurant that includes menu selection and preparation, facilities design, and management components. During the second semester, selected students may participate in internship activities as an option in cooperation with the local business community. Students completing Culinary Arts 1 (827527) and Culinary Arts 2 (827627) with a grade of "B" or better may be eligible to articulate credit at Stratford University, Johnson and Wales University, or The Art Institute of Washington. For more information, visit the academy web site. **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. This course requires a student materials fee as listed in FCPS Notice 5922.**

**FASHION DESIGN 1 (828027)****Grades: 11, 12****Credit: two****Prerequisite: Art 1 (912000), Fashion Marketing (814000), or Introduction To Interior And Fashion Design (825432). A performance review may be required.****(Fairfax and West Potomac Academies - transportation may be provided)**

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

**FASHION DESIGN 2 (828127)****Grades: 11, 12****Credit: two****Prerequisite: Fashion Design 1 (848027) or Portfolio Review (examples of student work) and/or a performance review may be required. (Fairfax and West Potomac Academies - transportation may be provided)**

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

## FINE ARTS DANCE

**DANCE 1 (931127)****Grades: 11, 12****Credit: two****Prerequisite: Successful Audition****(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.****DANCE 2/MODERN/JAZZ DANCE (931327)****Grades: 11, 12****Credit: two****Prerequisite: Dance 1 or Successful Audition****(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.****DANCE 3 (931527)****Grades: 11, 12****Credit: two****Prerequisite: Dance 2 or Successful Audition****(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.****DANCE 4 (931927)****Grades: 12****Credit: two****Prerequisite: Dance 3 or successful audition.****(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy)**

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

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

## FINE ARTS MUSIC

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

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

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

*Materials fee and a concert attire fee.*

**INTERMEDIATE BAND (923315)**

**Level 1**

*(Concert Band II Orange and Blue)*

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

**Credit: one**

**Prerequisite: Beginning Band or successful audition**

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

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

*Materials fee and a concert attire fee.*

**INTERMEDIATE BAND (923316)**

**Level 2**

*(Concert Band III)*

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

**Credit: one**

**Prerequisite: Beginning Band or successful audition**

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

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

*Materials fee and a concert attire fee. At WSHS this course is not a part of Marching Band.*

**ADVANCED BAND (923415)**

**Level 1**

*(Symphonic Band)*

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

**Credit: one**

**Prerequisite: Successful audition**

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

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

*Materials fee, marching band expenses, and a concert attire fee.*

**ADVANCED BAND (923416)**

**Level 2**

*(Wind Symphony)*

**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 after-school participation requirements to receive credit for the course.

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

*Materials fee, marching band expenses, and a concert attire fee.*

**ADVANCED BAND (923417)**

**Level 3**

*(Wind Symphony)*

**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 after-school participation requirements to receive credit for the course.

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

*Materials fee, marching band expenses, and a concert attire fee.*

**PERCUSSION ENSEMBLE (925015)**

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

**Credit: one**

**Prerequisite: Successful audition**

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

This course is designed to meet specific needs of percussionists. Content includes study of the appropriate ensemble literature, and rehearsal and performance techniques from the various areas of musical composition. Instrumentation of the group is at the discretion of the instructor. 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.**

*Materials fee, marching band fee (optional), and a concert attire fee.*

**JAZZ ENSEMBLE (924015)**

**Level 1**

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

**Credit: one**

**Prerequisite: Successful audition or permission of the instructor**

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

The instrumental jazz ensemble curriculum emphasizes improvisation and styles of the jazz idiom. Content includes the study of blues scale patterns and harmonic progressions innate in jazz music. Content also includes the study of the appropriate jazz literature and rehearsal and performance techniques from the jazz idiom. Instrumentation of the jazz ensemble is at the discretion of the instructor. 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.**

*This class meets after school and can be taken in addition to your other electives. Materials fee.*

**JAZZ COMBO (924019)**

*(Jazz Guitar Combo)(WSHS-Corequisite: participation in a guitar class)*

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

**Credit: one**

**Prerequisite: Successful audition or permission of the instructor**

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

The instrumental jazz combo curriculum emphasizes improvisation and styles of the jazz idiom. Content includes the study of blues, scale patterns, and harmonic progressions innate in jazz music. Content also includes the study of appropriate jazz literature, and rehearsal and performance techniques from the jazz idiom. Instrumentation of the jazz combo is at the discretion of the instructor. 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.**

*Materials fee of \$28.00.*

**BEGINNING ORCHESTRA (923715)**

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

**Credit: one**

Students develop skills as individual musicians and as members of a musical group. Course content includes beginning level technical and ensemble skills necessary for performance. Some performance opportunities are provided. Students must meet both the school day and after-school participation requirements to receive credit for the course.

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

**INTERMEDIATE ORCHESTRA (923815)****Level 1***(Concert Strings)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Attainment of beginning level skills and permission of instructor**

The course offers instruction in the development of intermediate and advanced performing skills, including individual playing and ensemble techniques, and disciplinary skills needed for performance. 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.***Materials fee of \$50.00. Concert attire fee may be required.***ADVANCED ORCHESTRA (923915)****Level 1***(Symphonic Strings)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition**

Students in this course form the representative string performing group for the school. Emphasis is placed on the development of 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 after-school participation requirements to receive credit for the course.

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$50.00. Concert attire fee may be required.***ADVANCED ORCHESTRA (923916)****Level 2***(Chamber Strings)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition**

Students in this course form the representative string performing group for the school. Emphasis is placed on the development of 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 after-school participation requirements to receive credit for the course.

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$50.00. Concert attire fee may be required.***MIXED CHORUS (926015)***(Spartan Choir)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: none**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Concert attire is required.***INTERMEDIATE WOMEN'S CHORUS (928516)***(Ladies Select Chorus) Prerequisite: Successful audition***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Beginning level chorus or successful audition.**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Concert attire is required.***ADVANCED MIXED CHORUS (928915)****Level 1***(Madrigals)***Grades: 10, 11, 12****Credit: one****Prerequisite: Successful audition**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Concert attire is required.***JAZZ CHOIR (929616)***(Pizzazz-Females only)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition****Corequisite: May require membership in another music class**

Students are offered choral experiences in the jazz genre. Emphasis is placed on the development of musicianship and proficiency in ensemble performance. Course content includes a study of appropriate literature, vocal techniques, sight-singing, and improvisation. 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.****SHOW/SWING CHOIR (929615)***(Personality Show Choir-Males & Females)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition****Corequisite: May require membership in another music class**

Students are offered choral experiences in the appropriate genre. Emphasis is placed on the development of musicianship and proficiency in ensemble performance. Course content includes a study of appropriate literature, vocal techniques, sight-singing, and choreography. 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.***Concert attire is required.***VOCAL ENSEMBLE (928015)***(Musical Theater)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition****Corequisite: Schools may require membership in intermediate or advanced choral class.**

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. Schools may also require membership in intermediate or advanced choral class. Voicing of the group is at the discretion of the instructor. Students must meet both the school day and after-school participation requirements to receive credit for the course.

**This course requires a student materials fee as listed in FCPS Notice 5922.***This course will focus on assisting students in acting and improvisation for the psychological depth of a character, as well as movement for increased body-awareness and voice training. Concert attire is required.***MIXED ENSEMBLE (925019)***Permission of the instructor is required***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition****Corequisite: Schools may also require membership in an intermediate or advanced band, orchestra, or choir class, and may require participation in marching band for wind and percussion students.**

This course 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. Instrumentation of the group is at the discretion of the instructor. 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.**

*Must be co-enrolled in a band class*

#### **MUSIC AND COMPUTER TECHNOLOGY 1 (922527)**

**Grades: 11, 12** **Credit: two**

**Prerequisite: Advanced Music Theory or a music theory background (Interview may be required with the instructor.)**

**(Selected sites or transportation may be provided to Fairfax or West Potomac Academies)**

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

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

#### **MUSIC AND COMPUTER TECHNOLOGY 2 (922627)**

**Grades: 12** **Credit: two**

**Prerequisite: Music and Computer Technology 1**

**(Selected site or transportation may be provided to Fairfax or West Potomac Academies)**

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

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

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

**Grades: 11, 12** **Credit: two**

**Prerequisite: One of the following: Theatre Arts, Chorus, or Dance. Audition is also required of all applicants. (See Fairfax Academy website for audition information.)**

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

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

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

#### **PROFESSIONAL MUSICAL THEATRE AND ACTOR'S STUDIO 2 (144027)**

**Grades: 12** **Credit: two**

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

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

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

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

#### **PROFESSIONAL MUSICAL THEATRE AND ACTOR'S STUDIO 3 (145027)**

**Grades: 12** **Credit: two**

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

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

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

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

#### **MUSIC SAMPLER (921433)**

**Level 1 Grades: 9, 10, 11, 12**

**Credit: one-half**

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 (921434)**

**Level 2**

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

**Credit: one-half**

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.**

#### **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.**

#### **ADVANCED PLACEMENT MUSIC THEORY (922604)**

**Grades: 10, 11, 12**

**Credit: one/weighted +1.0**

**Prerequisite: Music Theory or equivalency exam**

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

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

#### **GUITAR 1 (924515)**

*(Beginning)*

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

**Credit: one**

**Prerequisite: none**

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

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

*Materials fee of \$14.00.*

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

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$14.00.***GUITAR 3 (924517)***(Advanced)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition or successful completion of Guitar 2 or permission of the instructor**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$14.00.***GUITAR ENSEMBLE (924518)****Level 1***(Guitar Orchestra)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition or permission of the instructor**

Students in this course form one of the representative performing guitar ensembles for the school. Emphasis is placed on the sequential development of advanced technical skills and on the study of related literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and after-school participation requirements to receive credit for the course.

**This course requires a student materials fee as listed in FCPS Notice 5922. Materials fee of \$28.00.****GUITAR ENSEMBLE (924519)****Level 2***(Guitar Ensemble)***Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Successful audition or permission of the instructor**

Students in this course form the representative performing guitar ensemble for the school. Emphasis is placed on the sequential development of advanced technical skills and on the study of related literature. Based on successful completion of sequential concepts for each level, students will continue as specified in course level. Students must meet both the school day and after-school participation requirements to receive credit for the course.

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$28.00.***FINE ARTS  
THEATRE ARTS****THEATRE ARTS 1 (141000)****Grades: 9, 10, 11, 12****Credit: one**

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

course may be used to satisfy the graduation requirement for a credit in fine and practical arts.

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$10.00.***THEATRE ARTS 2 (142000)****Grades: 10, 11, 12****Credit: one****Prerequisite: Theatre Arts 1 and/or recommendation of the theatre arts instructor.**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$10.00.***THEATRE ARTS 3 (143000)****Grades: 11, 12****Credit: one****Prerequisite: Theatre Arts 2 and/or recommendation of the theatre arts instructor.**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$10.00.***THEATRE ARTS 4 (144000)****Grades: 12****Credit: one****Prerequisite: Theatre Arts 3 and/or recommendation of the theatre arts instructor.**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$10.00.***TECHNICAL THEATRE 1 (143511)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Theatre Arts 1 and/or recommendation of theatre arts instructor.**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$10.00.*

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

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$10.00***TECHNICAL THEATRE 3 (143513)****Grades: 11, 12****Credit: one****Prerequisite: Technical Theatre 2 or recommendation of the instructor**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$10.00.***TECHNICAL THEATRE 4 (143514)****Grades: 12****Credit: one****Prerequisite: Technical Theatre 3 or permission of the instructor**

Students will identify areas of special interest in technical theatre and initiate and complete major research or creative projects in play production. Emphasis is placed on in-depth study and completion of projects, assumptions of 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 may be used to satisfy the graduation requirement for a credit in fine arts.

**This course requires a student materials fee as listed in FCPS Notice 5922.***Materials fee of \$10.00.***ADVANCED TECHNICAL THEATRE 1 (143527)****Grades: 11, 12****Credit: two****Prerequisite: 11th or 12th grade standing, Technical Theatre 2, or permission of instructor (Fairfax Academy - transportation may be provided)**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.****ADVANCED TECHNICAL THEATRE 2 (143567)****Grades: 12****Credit: two****Prerequisite: Advanced Technical Theatre 1 (Fairfax Academy - transportation may be provided)**

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

creation of a professional portfolio. For more information, visit the academy web site.

**This course requires a student materials fee as listed in FCPS Notice 5922.****PROFESSIONAL MUSICAL THEATRE AND ACTOR'S STUDIO 1 (143027)****Grades: 11, 12****Credit: two****Prerequisite: One of the following: Theatre Arts, Chorus, or Dance.****Audition is also required of all applicants. (See Fairfax Academy website for audition information.)****(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy.)**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.****PROFESSIONAL MUSICAL THEATRE AND ACTOR'S STUDIO 2 (144026)****Grades: 12****Credit: one****Prerequisite: Professional Musical Theatre and Actor's Studio 1****(Selected sites or transportation may be provided to Fairfax Academy)**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.****PROFESSIONAL MUSICAL THEATRE AND ACTOR'S STUDIO 2 (144027)****Grades: 12****Credit: two****Prerequisite: Professional Musical Theatre and Actor's Studio 1****(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy.)**

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

**This course requires a student materials fee as listed in FCPS Notice 5922.****PROFESSIONAL MUSICAL THEATRE AND ACTOR'S STUDIO 3 (145027)****Grades: 12****Credit: two****Prerequisite: Professional Musical Theatre and Actor's Studio 2 or teacher recommendation****(Selected sites or transportation may be provided to Fairfax Academy or West Potomac Academy.)**

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

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

## FINE ARTS VISUAL ARTS

### STUDIO ART & DESIGN 1 (912000)

Formerly Art 1

Grades: 9, 10, 11, 12

Credit: one

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

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

*Materials fee of \$30.00.*

### STUDIO ART & DESIGN 2 (913000)

Formerly Art 2

Grades: 10, 11, 12

Credit: one

**Prerequisite:** STUDIO ART AND DESIGN 1

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

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

*Materials fee of \$45.00.*

### STUDIO ART & DESIGN 3 (914000)

Formerly Art 3

Grades: 11, 12

Credit: one

**Prerequisite:** STUDIO ART AND DESIGN 2

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

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

*Materials fee of \$45.00.*

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

permission of Instructor

Grades: 12

Credit: one

**Prerequisite:** STUDIO ART AND DESIGN 3

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

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

*Materials fee of \$45.00.*

### DRAWING (2D STUDIO ART) (916032)

Grades: 11, 12

Credit: one-half

**Prerequisite:** Studio Art and Design 1 or permission of the instructor

Practice and refine drawing techniques and skills. Think creatively, explore ideas, experiment with media and devise unique approaches to personal expression in drawings. Investigate the history of art as it relates to drawing to inform artmaking. Compile and maintain a required drawing portfolio.

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

### SCULPTURE 1 (3D STUDIO ART) (919732)

Grades: 11, 12

Credit: one-half

**Prerequisite:** Studio Art and Design 1 or permission of the instructor

Practice and apply three-dimensional design and sculpture techniques. Explore a variety of materials and approaches to create meaningful sculptures. Think creatively and critically to meet challenges and solve problems in innovative ways. Study the history of sculpture and leading contemporary sculptors to inform artmaking. Compile and maintain a required sculpture 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

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

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

*Materials fee of \$45.00.*

### COMPUTER GRAPHICS 2 (918111)

Grades: 10, 11, 12

Credit: one

**Prerequisite:** COMPUTER GRAPHICS 1

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

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

*Materials fee of \$45.00.*

### COMPUTER GRAPHICS 3 (918211)

Grades: 11, 12

Credit: one

**Prerequisite:** COMPUTER GRAPHICS 2

Expand knowledge and ability in the application of hardware and software to create personally expressive, original art. Create visual solutions using a variety of media, including motion graphics/animation, graphic design, game development, web design and print design. A final portfolio or demo reel is required for evaluation.

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

*Materials fee of \$45.00.*

### COMPUTER GRAPHICS 4: PORTFOLIO PREPARATION (919911)

Grades: 12

Credit: one

**Prerequisite:** COMPUTER GRAPHICS 3

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

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

*Materials fee of \$45.00.*

### 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.**  
*Materials fee of \$45.00.*

**VISUAL COMMUNICATIONS 1 (915311)**

**Grades: 12**

**Credit: one**

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

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

*Materials fee of \$45.00.*

**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 application of basic darkroom techniques. Be introduced to 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.**

*Materials fee of \$45.00. (MUST HAVE A 35mm manual CAMERA).*

**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.**

*Materials fee of \$45.00.*

**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.**

*Materials fee of \$45.00.*

**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. Prepare a final required portfolio evidencing technical proficiency, quality, concentration, and breadth of experience. Apply professional exhibition techniques to exhibit personal work and the work of others. Meet expectations by demonstrating initiative and commitment to communication of ideas through the use of the photographic medium.

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

*Materials fee of \$45.00.*

**ADVANCED PLACEMENT ART: ART HISTORY (915104)**

**Grades: 10, 11, 12**

**Credit: one/weighted +1.0**

Students develop an understanding of works of art within their historical context by examining issues such as politics, religion, patronage, gender, function, and ethnicity. The course also addresses visual analysis, aesthetics, and criticism. Students should demonstrate a high degree of commitment to academic work and possess academic skills needed to pursue a program designed to meet college standards. The course is designed to prepare students for the Advanced Placement Art History examination, for which college credit and/or placement may be awarded if a qualifying score is achieved. Objectives for Advanced Placement courses reflect the format and requirements in the Advanced Placement Course Description for Art published by the College Board. No prior experience in art studio or art history is assumed. All students are required to take the Advanced Placement Art History exam.

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

*Materials fee of \$20.00.*

**ADVANCED PLACEMENT ART: DRAWING PORTFOLIO (915004)**

**Grades: 11, 12**

**Credit: one/weighted +1.0**

**Prerequisite: Studio Art and Design 1 and 2 or permission of the instructor**

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

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

*Materials fee of \$45.00.*

**ADVANCED PLACEMENT ART: 2-D DESIGN PORTFOLIO (914804)**

**Grades: 11, 12**

**Credit: one/weighted +1.0**

**Prerequisite: Studio Art and Design 1 and 2 or permission of the instructor**

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

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

*Materials fee of \$45.00.*

**ADVANCED PLACEMENT STUDIO ART: 2D DESIGN -  
COMPUTER GRAPHICS** Credit: **one/weighted +1.0**  
Grades: **12**

**Prerequisite:** Computer Graphics 1, 2, 3 and 4/Portfolio Prep and permission of the instructor

This course is designed for highly motivated, advanced art students who have demonstrated a serious interest in the study of two-dimensional design issues, specifically related to Computer Graphics. Ideally suited for students who work well independently, the course will focus on the preparation of a 2D design portfolio of artworks that exhibit quality, concentration in an area of visual interest or problem solving, and breadth of experience in the formal, technical, and expressive means of an artist. This portfolio is intended to address two-dimensional (2-D) design issues. Design involves purposeful decision making about how to use the elements and principles of art in an integrative way. The *principles* of design (unity/variety, balance, emphasis, contrast, rhythm, repetition, proportion/scale, figure/ground relationships) can be articulated through the visual *elements* (line, shape, color, value, texture, space). They help guide artists in making decisions about how to organize an image on a picture plane in order to communicate content. Effective design is possible whether one uses representational or abstract approaches to art. Advanced Placement college credit and/or placement may be awarded if a qualifying exam score is achieved. All students are required to take Advanced Placement Studio Art: 2D Design exam.

This course requires a student materials fee as listed in FCPS Notice 5922. AP Studio fee is \$75.

## GENERAL

**ADVANCED ACADEMIC SEMINAR (013060)**

Grades: **11, 12**

Credit: **non-credit**

This course is designed to increase student achievement and provide support to General Education, Special Education and Limited English Proficiency students who enroll in an Advanced Placement course for the first time. Areas of instruction will include: learning strategies specific to Advanced Placement courses i.e. Study skills, critical/analytical thinking skills, note-taking, and test-taking. Prior approval of counselor is required to be enrolled in this course.

**COMPUTER TECHNOLOGY ASSISTANCE (980818)**

Grades: **11, 12**

Credit: **one**

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

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

**LEADERSHIP TRAINING 1 (980800)**

Grades: **10, 11, 12**

Credit: **one**

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

*All students must apply for the Leadership class.*

**LEADERSHIP TRAINING 2 (980812)**

Grades: **11, 12**

Credit: **one**

This course provides leadership training to interested students. It is especially appropriate for student body officers, organizational leaders, and

class officers. The course includes understanding leadership, assessment of leadership styles, planning and organization skills, relationship building and problem solving. Focus will be placed on organization, time management, election processes, financial planning, opinion surveys, communication techniques, and becoming a community liaison. Student government and class activities will be the basis around which most of the course work is designed.

*All students must apply for the Leadership class.*

**PEER MEDIATION 1 (980900)**

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

Credit: **one**

**Prerequisite:** Successful completion of the selection procedures including application, recommendations, and interview. Approval by the peer mediation program instructors and the Director of Student Services is required.

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

**PEER MEDIATION 2 (980912)**

Grades: **10, 11, 12**

Credit: **one**

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

**SUCCESS PREP (011160)**

Grade: **9, 10, 11, 12**

Credit: **one**

Success Prep is a course designed to help students cultivate the skills, attitudes, and values necessary to become confident and capable members of the academic community. This course revolves around learning specific skills and strategies which will help ensure success in an academic environment. Students will be taught Cornell note-taking and test-taking skills as well organizational, goal-setting, and study techniques applicable in all academic classes. Additionally, students will be given class time to complete work for their other classes while receiving help as necessary and appropriate.

**AIR FORCE JUNIOR RESERVE OFFICER TRAINING CORPS (AFJROTC) (791627)**

Aerospace Science 3/ Leadership Education 3

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

Credit: **two**

**Prerequisite:** Aerospace Science 2; Leadership Education 2 (Chantilly Academy - transportation may be provided)

Aerospace Science: The Exploration of Space course is divided into four units. Unit 1, "The Space Environment," discusses our solar system and the challenges facing space explorers. Unit 2, "Space Programs," introduces United States and covers Russian (Soviet), and international space exploration efforts. Unit 3, "Space Technology," examines the means for accessing space and the technology used to exploit its unique properties. Rocket boosters and basic orbital mechanics are introduced. Unit 4, "Manned Spaceflight," details United States manned spaceflight from Mercury to the present. Also included is a discussion of the developing field of space law. Leadership Education 3 is a study of performance counseling and the fundamentals of management, to include theories, financial, and stress management. The philosophy of citizenship and ethics are included. Students are given the opportunity to apply knowledge and techniques useful in dealing with fellow students and the experience of holding a position of leadership of the cadet organization. For the 2012-13 school year, this course is approved for Chantilly Academy only.

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

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

The fourth year curriculum is unique to the others. It offers one of the following three options: Option 1: Management of the Cadet Corps; Option 2: Honors Program - Ground School; Option 3: Civics Course. The Aerospace Science Instructor chooses the option which is best suited for their school. Leadership Education 4 course gives tips on choosing a career, finding a job, and maintaining employment. Students plan and carry out curricular activities. For the 2012-13 school year, this course is approved for Chantilly Academy only.

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

## HEALTH & MEDICAL SCIENCES

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

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

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

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

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

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

Dental Careers 1 is the first-level course of a two-year dental assisting program. The course content focuses on introducing all dental-related careers as well as competencies necessary to manage a dental office. The curriculum includes head and neck anatomy, infection control, tooth

charting, and instrumentation. The dental skills relevant to the curriculum are practiced in a classroom dental clinic. Lab coats or scrubs must be purchased for this class. For more information, visit the 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.**

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

During the second year of this course, students refine advanced skills and learn more about the management of the office as well as the dental specialties of oral surgery, orthodontics, and periodontics. Students are provided the opportunity to experience an internship while participating in patient care at local dental offices and to earn a Dental Radiography 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 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.**

**EXPLORING HEALTH SCIENCES (830226)**  
**Grades: 10, 11, 12** **Credit: one**  
**(Chantilly, Falls Church, and West Potomac Academies - transportation may be provided) Please use course code 830226 for the semester course**

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Exploring the Language of Medicine for the spring semester. It introduces the student to health care careers and develops basic skills common to all health and medical sciences. It is recommended as the first course for other health and medical sciences courses. This course focuses on exploring health careers, communication skills, safety, first aid, and Healthcare Provider CPR. It is offered at Chantilly, Falls Church, and West Potomac Academies. 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 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.**

**EXPLORING THE LANGUAGE OF MEDICINE (838326)**  
**Grades: 10, 11, 12** **Credit: one**  
**Prerequisite: Exploring Health Sciences**  
**(Chantilly, Falls Church, and West Potomac Academies - transportation may be provided) Please use course code 838326 for the semester course.**

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Exploring Health Sciences for the fall semester. This course builds on the foundations of the Exploring Health Sciences course. Exploring the Language of Medicine is designed to help students learn medical terminology. It is presented in logical order, beginning with each body system's anatomy and physiology and progressing through pathology, diagnostic procedures, therapeutic interventions, and pharmacology. Concepts, terms, and abbreviations are also presented to the students. It is offered at Chantilly, Falls Church and West Potomac Academies. 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 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.**

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

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Fire and Emergency Medical Sciences 2 for the spring semester. Fire and Emergency Medical Sciences prepares the student to enter the workforce or pursue further education in the field of Emergency Medical Services (EMS) and Fire Science. The principles and practices of emergency response and fire fighting will be explored under the direct supervision of a certified EMT-B instructor. The curriculum consists of planned learning experiences in the classroom, laboratory, and faculty supervised clinical settings. Students will have the opportunity to observe and interact with a variety of patients experiencing varying degrees of injury or disease that are carefully selected to provide appropriate clinical learning experiences. As preparation, students will be provided with ample lab practice to fully prepare them for the clinical experience and minimize risks. During the course of study, students will have the opportunity to earn the following six certifications: Healthcare Provider CPR, Emergency Medical Technician-Basic (EMT-B), and Hazardous Materials Response, Bloodborne Pathogens, Community Emergency Response Team (CERT) and Introduction to Incident Command systems (ICS 100B). Offsite clinical lab opportunities at Northern Virginia Community College, Medical Education Center (NVCC MEC), and Fairfax County Fire and Rescue Academy will be available to the students. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. Validated credit may be an option with NVCC. 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 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.**

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

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Fire and Emergency Medical Sciences 1 for the fall semester. Fire and Emergency Medical Sciences prepares the student to enter the workforce or pursue further education in the field of Emergency Medical Services (EMS) and Fire Science. The principles and practices of emergency response and fire fighting will be explored under the direct supervision of a certified EMT-B instructor. The curriculum consists of planned learning experiences in the classroom, laboratory, and faculty supervised clinical settings. Students will have the opportunity to observe and interact with a variety of patients experiencing varying degrees of injury or disease that are carefully selected to provide appropriate clinical learning experiences. As preparation, students will be provided with ample lab practice to fully prepare them for the clinical experience and minimize risks. During the course of study, students will have the opportunity to earn the following six certifications: Healthcare Provider CPR, Emergency Medical Technician-Basic (EMT-B), and Hazardous Materials Response, Bloodborne Pathogens, Community Emergency Response Team (CERT) and Introduction to Incident Command systems (ICS 100B). Offsite clinical lab opportunities at Northern Virginia Community College, Medical Education Center (NVCC MEC), and Fairfax County Fire and Rescue Academy will be available to the students. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. Validated credit may be an option with NVCC. For more information, visit the academy web site.

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

**MEDICAL ASSISTANT 1 (834526)**  
**Grades: 11, 12** **Credit: one**  
**Prerequisite: Exploring Health Sciences (830226) and Exploring the Language of Medicine (838326).**

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

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

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

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

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

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Pharmacy Technician 2 for the spring semester. The Pharmacy Technician course incorporates both classroom and clinical 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 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 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 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.**

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

This is part two (spring semester) of a two-part, full-year course. Students must also register for part one, Pharmacy Technician 1 for the fall semester. The Pharmacy Technician course incorporates both classroom and clinical 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 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 academy web site.

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

#### **PHYSICAL THERAPY/OCCUPATIONAL THERAPY 1 (836527)**

**Grades: 11, 12**

**Credit: two**

**Prerequisite: Biology 1, Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required. (West Potomac Academy - transportation may be provided)**

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

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

**Grades: 11, 12**

**Credit: two**

**Prerequisite: Physical Therapy/Occupational Therapy 1 (836527) (West Potomac Academy - transportation may be provided)**

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

#### **PRACTICAL NURSING 1 (835726)**

**Grades: 12**

**Credit: one**

**Prerequisite: Biology 1 and Algebra 1. Exploring Health Sciences and Exploring the Language of Medicine are recommended but not required.**

**(Falls Church Academy - transportation may be provided)**

This is part one (fall semester) of a two-part, full-year course. Students must also register for part two, Practical Nursing 2 for the spring semester. This course offers preclinical nursing instruction during the student's senior year of high school. Foundations of nursing including communication, anatomy and physiology, and medical math, are the main units of focus. Competency-based instruction provides students with the skills needed to provide basic bedside nursing care used for hospitalized, nursing home, and

homebound patients. Following successful completion of Practical Nursing 1 and 2, students electing to participate in the summer clinical are eligible to take the Certified Nursing Assistant (CNA) exam. Classes are held at Falls Church High School while community healthcare agencies serve as sites for the practical application of the learned competencies. Students must purchase uniforms and liability insurance and meet current health agency requirements to participate in clinical experiences. Eligibility for acceptance into nursing program includes strong algebra and biology grades, attendance, and student statement/essay. Successful completion of the Practical Nursing 1 and 2 courses allows students to take a nine-month, full-time postgraduate clinical internship program. The postgraduate clinical internship curriculum enables students to demonstrate advanced nursing competencies. Students in this course are eligible to sit for the Virginia Practical Nursing Licensing Exam (NCLEX) provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Nursing. For more information, visit the 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 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.**

#### **PRACTICAL NURSING 2 (835826)**

**Grades: 12**

**Credit: one**

**Prerequisite: PRACTICAL NURSING 1 (835726) (Falls Church Academy - transportation may be provided)**

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

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

## **HEALTH and PHYSICAL EDUCATION**

#### **HEALTH AND PHYSICAL EDUCATION 9 (730000)**

**Grades: 9**

**Credit: one**

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

*\$20 Uniform and lock fee required.*

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

Students demonstrate competency in a lifetime sport or activity and demonstrate personal fitness planning. One quarter of the course includes instruction in the health education topics; personal and community health, nutrition, human growth and development, and injury and violence prevention. One quarter of the course includes the classroom component of driver education. The 90-minute Parent/Teen Traffic Safety Presentation is offered to fulfill the requirements of juvenile licensing. Grades from all quarters are averaged to determine the final course grade.  
\$20 Uniform and lock fee required.

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

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

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

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

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

Students extend and enrich their knowledge and the application of human anatomy and physiology, kinesiology, nutrition, and personal fitness planning. Students will develop and participate in a personal fitness program to improve cardiorespiratory endurance, flexibility, muscular strength and endurance, and body composition. Students will utilize concepts to assess, plan, monitor, and modify their individual personal fitness plan. Students may not take this course in lieu of the grade 9 or grade 10 Health and Physical Education requirements.  
*Athletic clothes required.*

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

Students are introduced to the foundations and functions involved in the successful marketing of goods, services and ideas to consumers. Students will study marketing and business foundations, career development, economics, selling, shortage prevention, human relations, communications, distribution, promotion, product planning, credit pricing, and marketing mathematics. Students may supplement the classroom instruction through participation in an internship experience, or they may enroll in the course without the additional commitment required through on-the-job training. While enrolled in this course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

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

*10th graders who have successfully completed Introduction to Marketing may also take this course.*

**ADVANCED MARKETING (813000)***Prerequisite or Global Marketing (813500)* **Grades: 10, 11, 12** **Credit: one**  
**Prerequisite: Marketing 1 (812000), Fashion Marketing 1 (814000), Sports and Entertainment Marketing (817500), or approval of instructor**

Students have the opportunity to expand their knowledge of marketing from a management perspective. This course focuses on areas to include: ethics, consumer and environmental protection, economics, career development, entrepreneurship, professional sales, marketing-information-management, product planning, pricing, promotion, purchasing, distribution, finance, and the development of a business plan. Classroom instruction will be reinforced through the use of case studies, guest lecturers, and field trips. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

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

**FASHION MARKETING 1 (814000)****Grades: 9, 10, 11, 12** **Credit: one**

Fashion Marketing is a specialized course designed for students interested in the business aspect of the fashion industry. Curriculum units include an overview of basic apparel and accessories terminology, foundations and functions of business and marketing, sales and buying motives, economics, textiles, color, line and design, historical costume, career development, promotion, visual merchandising, and fashion show production. Cross curricular skills in research, merchandising mathematics, textile chemistry, computer applications, and creative and technical writing are reinforced in this course. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. Work-based learning strategies appropriate for this course may include job shadowing, paid/unpaid internships, field trips, and/or cooperative education. Marketing simulations, case studies, projects, teamwork, guest speakers, and DECA competitions provide many opportunities for application of instructional competencies. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

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

**FASHION MARKETING 2 (814500)***Prerequisite or Global Marketing (813500), Sports & Ent Mktg (817500)* **Grades: 10, 11, 12** **Credit: one**  
**Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000)**

This curriculum provides an in-depth study of merchandising techniques, fashion trends, fashion promotion, and management skills. Students may supplement the classroom instruction through an internship experience or

they may enroll in the course without the additional commitment required through on-the-job training. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. (Students interested in this course should also see Fashion Design I under Family and Consumer Sciences.) The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

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

#### **GLOBAL MARKETING (813500)**

*(formally International Trade & Marketing)*

**Grades: 11, 12**

**Credit: one**

**Prerequisite: It is recommended that students be enrolled in a foreign language either concurrently or prior to enrollment in Global Marketing.**

Through this course, students are introduced to the international marketing arena, where they receive a strong foundation in the following concepts: marketing, economics, international trade, and international finance. The course exposes students to economical, geographical, political, legal, and cultural influences in international markets. Emphasis on product development, pricing, promotion, and distribution are explored from an international perspective. Much of the course is tied to current events. While enrolled in the course, the student is an active member of DECA.

DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. Field trips, guest speakers, and DECA competitive events are used to enhance the course work. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

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

#### **SPORTS AND ENTERTAINMENT MARKETING (817500)**

**Grades: 10, 11, 12**

**Credit: one**

Sports and Entertainment Marketing is a unique and innovative course designed for students with an interest in the sports and entertainment industry. Instructional areas include: an orientation to the sports and entertainment industry, market analysis, decision making, event marketing, event execution, and the production of a culminating event and analysis of the event. Classroom instruction will be reinforced through the use of outside lectures, case studies, and field trip experiences. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

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

#### **ADVANCED SPORTS AND ENTERTAINMENT MARKETING (817700)**

**Grades: 11, 12**

**Credit: one**

**Prerequisite: Sports and Entertainment Marketing (817500)**

Enrollment in this advanced-level course will allow students to expand their knowledge in the sports and entertainment field. Instructional topics include: contracts, the role of agents and personal managers, market research, planning and segmentation, group sales, business ethics, management, and entrepreneurship. Classroom instruction will be reinforced through the use of case studies, guest lecturers, and field trips. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

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

*Prerequisite or Marketing 1(812000), Fashion Marketing 1(814000), Global Marketing (813500)*

#### **MARKETING COOPERATIVE INTERNSHIP (CO-OP) (819920)**

**Grades: 10, 11, 12**

**Credit: one**

**Corequisite: Student must be concurrently enrolled in a Marketing or EFE course.**

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

#### **MARKETING COOPERATIVE INTERNSHIP (CO-OP) (819921)**

**Grades: 10, 11, 12**

**Credit: two**

**Corequisite: Student must be concurrently enrolled in a Marketing or EFE course.**

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

#### **CLASSROOM-ON-THE-MALL: FASHION MARKETING 2 (814523)**

**Grades: 11, 12**

**Credit: one**

**Prerequisite: Marketing 1 (812000) or Fashion Marketing 1 (814000) (Fair Oaks Mall-transportation may be provided)**

This specialized program enables students to learn business organization as well as operation skills and techniques in a realistic business setting. Classes are held at the Fair Oaks Center shopping mall. Traditional classroom instruction in marketing, merchandising, and management is enhanced by the opportunity for students to meet and work with professionals in the mall businesses. This course provides an in-depth study of merchandising techniques, fashion trends, fashion promotion, and management skills. Students attend their base schools for regular classes and then travel to Fair Oaks Center shopping mall for both classroom instruction and related on-the-job training. The Holiday Gift Wrap Center at Fair Oaks Mall offers additional opportunities for real-life entrepreneurial experiences. Due to the unique structure of this program, excellent attendance is mandatory. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervision throughout the school year.

**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.**

**CLASSROOM-ON-THE-MALL: MARKETING MANAGEMENT (813223)**

**Grades: 11, 12** **Credit: one**  
**(Fair Oaks Mall and Tyson's Corner Center-transportation may be provided)**

This specialized program enables students to learn business organization as well as operation skills and techniques in a realistic business setting. Classes are held in the Fair Oaks and Tyson's Corner Center shopping malls. Traditional classroom instruction in marketing, merchandising, fashion and management is enhanced by the opportunity for students to meet and work with professionals in the mall businesses. Students will develop critical-thinking and decision-making skills through the application of marketing principles to small and large businesses, nonprofit organizations, service industries, and other institutions or associations that make products or provide services. Students attend their base schools for regular classes and then travel to Fair Oaks or Tyson's Corner Center shopping malls for both classroom instruction and related on-the-job training. The Holiday Gift Wrap Center at Fair Oaks Mall offers additional opportunities for real-life entrepreneurial experiences. Due to the unique structure of this program, excellent attendance is mandatory. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

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

**ENTREPRENEURSHIP 1 (909326)**

**Grades: 11, 12** **Credit: one**  
**(Marshall and Chantilly Academies - transportation may be provided)**

Entrepreneurship provides students opportunities for learning small business ownership skills. Students will experience the process of developing, financing, and marketing a new product or service through an interactive curriculum. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. Field trips, guest speakers, and DECA competitive events are used to enhance the course work. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. Students have a dual enrollment option with Northern Virginia Community College.

**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.**

**ENTREPRENEURSHIP 2 (909416)**

**Grades: 12** **Credit: one**  
**Prerequisite: Entrepreneurship 1 (909326)**  
**(Marshall and Chantilly Academies - transportation may be provided)**

Entrepreneurship 2 is an advanced course enabling students to further investigate and prepare for owning and operating a small business. Students must have successfully completed Entrepreneurship 1 (Course Code 909326) in order to participate in this class. Students enrolled in this class are encouraged to pursue the business developed in Entrepreneurship 1. The curriculum provides an in-depth study of business ownership. Students will develop a deeper understanding of the role of marketing and finance in their business success in order to implement their Business Plan. Classroom instruction will be supplemented with industry guest speakers, field experiences, and the cocurricular student organization DECA. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing

supervision throughout the school year. Students have a dual enrollment option with Northern Virginia Community College.

**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.**

**INTRODUCTION TO HOTEL MARKETING (816026)**

**Grades: 9, 10, 11, 12** **Credit: one**  
**(Edison and Marshall Academies-transportation may be provided)**

Hotel Marketing 1 actively investigates careers in the hospitality and tourism career cluster including hotel and restaurant management, event and wedding planning, tourism, resort and golf course management, and the cruise ship industry. Students become familiar with concepts in marketing, convention, banquet and meeting services, catering services and event planning, venue management, guest services and retention, food and beverage operation, travel and transportation, and social and internet marketing. The Hotel Marketing programs are administered through Edison and Marshall Academies. Students are active members of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. Program activities include: field trips, guest speakers, DECA competitive events, and projects. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. The one-credit Hotel Marketing course is offered at Edison and Marshall Academies and selected high schools. For more information, visit the academy web site.

**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.**

**HOTEL MARKETING 1 (816027)**

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

Hotel Marketing 1 actively investigates careers in the hospitality and tourism career cluster including hotel and restaurant management, event and wedding planning, tourism, resort and golf course management and the cruise ship industry. Students become familiar with concepts in marketing, convention, banquet and meeting services, catering services and event planning, venue management, guest services and retention, food and beverage operation, travel and transportation, and social and internet marketing. In the two credit option, students will have the opportunity to attend classes at participating hotels. Students are required to wear uniforms and follow the hotel dress code. Students are active members of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. Program activities include: field trips, guest speakers, DECA competitive events, and projects. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. For more information, visit the academy web site.

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

**HOTEL MARKETING 2 (816227)**

**Grades: 12** **Credit: two**  
**Prerequisite: Hospitality Marketing 1 (816026 or 816027)**  
**(Chantilly, Edison, and Marshall Academies - transportation may be provided)**

This advanced course enables students to continue to develop and grow their skills in the hospitality industry. Students will intern in a hotel, work with

hotel staff and guests to develop resume-building skills in a variety of departments. Three career clusters will be explored: Business Management & Administration, Marketing, and Hospitality & Tourism. Concentration of course work and internships will be in marketing techniques, supervisory skills, management reporting, overall operations and cost controls, specific department operations, and professional development. While attending classes at participating hotels, students are required to wear uniforms and follow the hotel dress code. While enrolled in the course, the student is an active member of DECA. DECA prepares emerging leaders and entrepreneurs in marketing, finance, hospitality and management in high schools and colleges around the globe. Field trips, guest speakers, and DECA competitive events are used to enhance the course work. The cooperative education (Marketing Cooperative Internship) method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year. The program is offered at Marshall, Chantilly and Edison Academies. For more information, visit the academy web site.

**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.**

## MATHEMATICS

### ALGEBRA 1 (313000)

Grades: 9, 10, 11

Prerequisite: Middle School Mathematics

Credit: one

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

### GEOMETRY (314300)

Grades: 9, 10, 11, 12

Prerequisite: Algebra 1

Credit: one

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

### GEOMETRY HONORS (314336)

Grades: 9, 10

Prerequisite: Algebra 1

Credit: one/weighted +.5

The depth and level of understanding expected in Geometry Honors is beyond the scope of Geometry. This course emphasizes two- and three-dimensional reasoning skills, coordinate and transformational geometry, and the use of geometric models to solve problems. A variety of applications and some general problem-solving techniques, including algebraic skills, will be used to explore geometric relationships. Conjectures about properties and relationships are developed inductively and then verified deductively. Students investigate non-Euclidean geometries, formal logic, and use deductive proofs to verify theorems. Calculators, computers,

graphing utilities, dynamic geometry software, and other appropriate technology tools will be used to assist in teaching and learning.

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

### ALGEBRA 2 (313500)

Grades: 10, 11, 12

Prerequisite: Algebra 1 and Geometry

Credit: one

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

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

### ALGEBRA 2 HONORS (313536)

Grades: 9, 10, 11

Prerequisite: Algebra 1 and Geometry

Credit: one/weighted +.5

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

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

### PRECALCULUS WITH TRIGONOMETRY (316000)

Grades: 10, 11, 12

Prerequisite: Geometry and Algebra 2

Credit: one

Precalculus with Trigonometry includes all the topics of Trigonometry (3150) and a thorough treatment of functions through the study of polynomials, rational functions, logarithmic, exponential, and inverse functions. Topics include continuity, maximum and minimum points, an intuitive approach to limits, and rates of change. A transformational approach to graphing is used with families of related graphs. Numerical, graphical, and algebraic solutions are considered for all problems as applicable. Emphasis will be placed on problem solving techniques. Graphing utilities, especially graphing calculators, are integral to the course. *Students must purchase the TI84 calculator.*

### PRECALCULUS WITH TRIGONOMETRY HONORS (316036)

Grades: 10, 11, 12

Prerequisite: Geometry and Algebra 2

Credit: one/weighted +.5

The depth and level of understanding expected in Precalculus with Trigonometry Honors is beyond the scope of Precalculus with Trigonometry. Precalculus with Trigonometry Honors includes all of the topics of Trigonometry (3150) and an in-depth treatment of functions through the study of polynomials, transformations, rational functions, exponential and logarithmic functions, inverses, polar equations, parametric equations, two-dimensional vectors, and selected topics in discrete mathematics. The course also includes the study of limits, continuity, maximum and minimum points and values, definition and properties of the derivative, rules of differentiation, equations of tangent lines to polynomial functions, infinite limits, and partial fractions. Numerical, graphical, and algebraic solutions are considered for all problems as applicable. Graphing utilities, especially graphing calculators, are integral to the course. *Students must purchase the TI84 calculator.*

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

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

*Students must purchase the TI84 calculator.*

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

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

*Students must purchase the TI84 calculator.*

**ADVANCED PLACEMENT CALCULUS BC (317704)**  
**Grades: 10, 11, 12** **Credit: one/weighted +1.0**  
**Prerequisite: Precalculus with Trigonometry Honors**

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

*Students must purchase the TI84 calculator.*

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

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

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

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

**DISCRETE MATHEMATICS SEMESTER COURSE (315432)**  
**Grades: 11, 12** **Credit: one-half**  
**Prerequisite: Geometry and Algebra 2**

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

**PROBABILITY AND STATISTICS SEMESTER COURSE (319032)**  
**Grades: 11, 12** **Credit: one-half**  
**Prerequisite: Geometry and Algebra 2**

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

**PROBABILITY AND STATISTICS (319062)**  
**Grades: 11, 12** **Credit: one**  
**Prerequisite: Geometry and Algebra 2**

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

*Students must purchase the TI84 calculator.*

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

A third semester college-level course, Multivariable calculus is the calculus of three dimensions and includes the study of partial differentiation, multiple 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-half/weighted +.5**  
**Prerequisite: AP Calculus AB or AP Calculus BC or IB Mathematics HL II**

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

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

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

## SCIENCE

### **BIOLOGY 1 (431000)**

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

**Credit: one**

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

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

### **BIOLOGY 1 HONORS (431036)**

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

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

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

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

### **ADVANCED PLACEMENT BIOLOGY (437004)**

**Grades: 11, 12**

**Credit: one/weighted +1.0**

**Prerequisite: Biology 1 and Chemistry 1**

After completing the core science curriculum, students pursue a more advanced and specialized study of biology topics with the intent of passing the AP Biology exam in May, for which college credit and/or placement may be granted by an approving institution if a qualifying score is achieved. Students conduct standard first year college-level laboratory research as well as analyze and interpret biological data. Students examine biology content with a molecular focus that includes the core theme of structure and function. Highlights include biotechnology such as electrophoresis and bacterial transformation, animal behavior studies, and genetic studies. If dissections are part of the laboratory experience, alternatives are available.

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

**Grades: 11, 12**

**Credit: one**

**Prerequisite: Biology and Chemistry**

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.**

### **CHEMISTRY 1 HONORS (441036)**

**Grades: 10, 11, 12**

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

**Prerequisite: One laboratory science course, Algebra 1**

**Corequisite: Algebra 2**

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

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

### **ADVANCED PLACEMENT CHEMISTRY (447004)**

**Grades: 11, 12**

**Credit: one/weighted +1.0**

**Prerequisite: Chemistry 1**

**Corequisite: Recommended: Physics or Precalculus with Trigonometry**

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

### **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. This course has a strong emphasis on experimentation. The units of study focus on predictions and real-world applications such as sports, medicine, transportation, home, and communication. The physics content is presented in a problem solving manner to strengthen both science and mathematics content knowledge and skills.

### **PHYSICS 1 (451000)**

**Grades: 11, 12**

**Credit: one**

**Prerequisite: Two laboratory science courses**

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

### **PHYSICS 1 HONORS (451036)**

**Grades: 11, 12**

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

**Prerequisite: Two laboratory science courses**

**Corequisite: Precalculus with Trigonometry**

Physics 1 Honors introduces the most central concepts of physics, including the dual wave-particle nature of light, kinematics, dynamics, the conservation laws (mass, energy, and momentum), electricity, magnetism, and waves. This course is laboratory-centered and employs the methods of scientific inquiry. Students will be involved in an externally-moderated experimental/research project, either independently or in teams.

**ADVANCED PLACEMENT PHYSICS B (457005)**

**Grades:** 12 **Credit:** one/weighted +1.0  
**Prerequisite:** Physics 1  
**Corequisite:** Precalculus and trigonometry

The purpose of this course is to prepare students to take the Advanced Placement Physics B examination, for which college credit and/or placement may be given if a qualifying score is achieved. Advanced Placement Physics B is a second-level course which surveys a broad selection of physics topics at a level above Physics 1. It is designed for students who have completed a core science curriculum and are now ready to pursue more advanced and specialized studies. It provides a systematic introduction to the main principles of physics, and there is an emphasis on problem-solving.

**ADVANCED PLACEMENT PHYSICS C (457004)**

**Grades:** 11, 12 **Credit:** one/weighted +1.0  
**Prerequisite:** Physics 1  
**Corequisite:** Calculus AB or Calculus BC

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

**GEOSYSTEMS (422000)**

**Grades:** 11, 12 **Credit:** one  
**Prerequisite:** Biology 1 and Chemistry 1

Geosystems utilizes content from geology, astronomy, oceanography, and meteorology to investigate, both qualitatively and quantitatively, the major earth systems (atmosphere, hydrosphere, lithosphere, biosphere) and their dynamic inter-relationships. Students explore concepts with the same tools professional scientists use including computers, Geographic Information Systems (GIS), Global Positioning System (GPS), image processing software, and probeware.

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

**GEOSYSTEMS HONORS (422036)**

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

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

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

**GEOSPATIAL ANALYSIS (422067)**

**Grades:** 12 **Credit:** two  
**Prerequisite:** Three laboratory science courses

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

**ADVANCED PLACEMENT ENVIRONMENTAL SCIENCE (427004)**

**Grades:** 11, 12 **Credit:** one/weighted +1.0  
**Prerequisite:** Biology 1 and Chemistry 1

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

**OCEANOGRAPHY (425000)**

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

Oceanography explores geophysical and biological factors and covers topics such as the geology and geography of ocean basins, physical properties of sea water, marine chemistry, marine biology, salinity and density circulation in the oceans, waves, and tides. The course is designed to be a survey of oceanography 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.

**ASTRONOMY (426000)**

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

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

**ENGINEERING PHYSICS 1 (451026)**

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

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

**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.**

## ENGINEERING PHYSICS 2 (452026)

Grades: 11, 12

Credit: one

**Prerequisite:** Engineering Physics 1(451026) or Physics 1 (451000).

**Corequisite:** Algebra Option: Co-enrollment in or completion of Algebra 2 (313500); Calculus Option: Co-enrollment in a calculus-based mathematics course (316308, 316508, or equivalent) (Chantilly Academy - transportation may be provided)

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

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

## SOCIAL STUDIES

### WORLD HISTORY AND GEOGRAPHY 1 (221900)

Grades: 9

Credit: one

This is the first of a two-year, chronologically organized study of world history and geography. In this first year, students study the world from ancient times to 1500. The course highlights the relationship between the geography and history of Europe, Africa, Asia, and Latin America. Students refine and expand critical thinking skills, practice decision making and problem solving, and formulate questions to guide research. World History and Geography 1 is required for graduation.

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

### WORLD HISTORY AND GEOGRAPHY 1 HONORS (221936)

Grades: 9

Credit: one/weighted +.5

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

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

### WORLD HISTORY AND GEOGRAPHY 2 (222100)

Grades: 10

Credit: one

This is the second of a two-year, chronologically organized study of world history and geography. In this second year, students study the world from

1500 through the contemporary era. The course weaves together the skills and content of both history and geography so that students may learn how history and geography affect each other and therefore gain a more complete understanding of the world around them, including North and South America, Europe, Asia, and Africa. Students continue to refine and expand critical thinking skills, practice decision making and problem solving, and formulate questions to guide research. World History and Geography 2 is required for graduation.

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

### WORLD HISTORY AND GEOGRAPHY 2 HONORS (222136)

Grades: 10

Credit: one/weighted +.5

This is the second of a two-year, chronologically organized study of world history and geography. In this second year, students study the world from 1500 through the contemporary era. The course weaves together the skills and content of both history and geography so that students may learn how history and geography affect each other and therefore gain a more complete understanding of the world around them, including North and South America, Europe, Asia, and Africa. Students continue to examine the relationship among social, economic, and geopolitical developments across time and place. Students are encouraged to think independently while developing group process skills. World History and Geography 2 is required for graduation.

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

### ADVANCED PLACEMENT WORLD HISTORY (234004)

Grades: 10, 11, 12

Credit: one/weighted +1.0

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

### VIRGINIA AND UNITED STATES HISTORY (236000)

Grades: 11

Credit: one

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

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

### VIRGINIA AND UNITED STATES HISTORY HONORS (236036)

Grades: 11

Credit: one/weighted +.5

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

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

**ADVANCED PLACEMENT UNITED STATES HISTORY (231904)**  
**Grades: 11** **Credit: one/weighted +1.0**

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

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

**VIRGINIA AND UNITED STATES GOVERNMENT (244000)**  
**Grades: 12** **Credit: one**

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

**VIRGINIA AND UNITED STATES GOVERNMENT HONORS (244036)**  
**Grades: 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 GOVERNMENT (244504)**  
**Grades: 12** **Credit: one/weighted +1.0**

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

**ADVANCED PLACEMENT COMBINED UNITED STATES AND COMPARATIVE GOVERNMENT (244567)**  
**Grades: 12** **Credit: one/weighted +1.0**

This course includes a study of comparative government as well as American government and politics. In the study of American government, students interpret national, state, and local government and politics through a study of both general concepts and specific case studies. In the study of comparative government, emphasis is placed on understanding the world's diverse political structures and practices, as well as on interpreting and analyzing the key political relationships found in national governments. This course prepares students to take both the Advanced Placement examination for United States Government and Politics and the Advanced Placement examination for Comparative Government for which college credit and/or placement may be given if qualifying scores are made. Completion of this course fulfills the graduation requirement for one credit in Virginia and United States Government. Students in this course must take at least one of the two AP Government exams and may take both.

**LAW IN ACTION (242032)**  
**Grades: 11, 12** **Credit: one-half**

This course provides practical information and problem-solving opportunities regarding the law. Students develop both knowledge of the law and skills necessary for survival in our law-based society. Students engage in active learning experiences such as mock trials, moot courts, role plays, case studies, simulations and small group exercises. Students explore the definition of law, citizen rights and responsibilities under the law, learn methods of dispute resolution, as well as identify and analyze public issues involving the law.

**WORLD RELIGIONS (295062)**  
**Grades: 11, 12** **Credit: one-half**

In this course, students develop the background necessary for an appreciation of the basic beliefs and practices of the world's religions. Importance is placed on historical origins as well as current beliefs. Students will study Buddhism, Christianity, Confucianism, Hinduism, Islam, Judaism, Shintoism, Taoism, and other belief systems.

**ADVANCED PLACEMENT EUROPEAN HISTORY (239904)**  
**Grades: 10, 11, 12** **Credit: one/weighted +1.0**

**The Advanced Placement Program in European History covers the basic chronology of events from 1450 to the present, from the High Renaissance to the recent past. Students are expected to demonstrate a knowledge of this basic chronology and of major events and trends in the intellectual-cultural, political-diplomatic and social-economic history of modern Europe. In addition, students are expected to demonstrate an ability to analyze historical evidence and to express that understanding and analysis in writing. This course prepares students to take the Advanced Placement examination in European History, for which college credit and/or placement is given if a qualifying score is achieved.**

**ADVANCED PLACEMENT HUMAN GEOGRAPHY (221204)**  
**Grades: 10, 11, 12** **Credit: one/weighted +1.0**

The purpose of Advanced Placement Human Geography is to introduce students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the earth's surface. Students will use spatial concepts and landscape analysis to analyze human social organization and its environmental consequences. They also will learn about the methods and tools geographers use in their science and practice. This course prepares students to take the Advanced Placement examination in Human Geography, for which college credit and/or placement is given if a qualifying score is achieved. All students are required to take the Advanced Placement Human Geography exam.

**APPLIED HISTORY (238700)**  
**Grade: 12** **Credit: one**  
**Prerequisite: Successful completion of the selection process which includes an application and recommendations**

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

**ADVANCED PLACEMENT MACROECONOMICS (280204)**  
*Must be taken in conjunction with AP Microeconomics*  
**Grades: 11, 12** **Credit: one-half/weighted +.5**

This course is designed to provide students with an understanding of the economic principles which apply to an economic system as a whole. Primary emphasis is placed on industries, national economics, performance indicators, and international economics. This course prepares students to take the Advanced Placement examination, for which college credit and/or placement may be given if a qualifying score is achieved. *AP tests for both AP Macro & AP Micro are required. Students pay for only one exam.*

**ADVANCED PLACEMENT MICROECONOMICS (280304)**  
*Must be taken in conjunction with AP Macroeconomics*  
**Grades: 11, 12** **Credit: one-half/weighted +.5**

This course is designed to provide students with an understanding of the principles of economics which apply to the functions of decision-makers, both consumers and producers, within the larger economic system. Primary emphasis is placed on the nature and functions of product markets, and includes the study of factor markets and the role of government in promoting greater efficiency and equity in the economy. This course prepares students to take the Advanced Placement examination, for which college credit and/or placement may be given if a qualifying score is achieved.

AP tests for both AP Macro & AP Micro are required. Students pay for only one exam.

### **PSYCHOLOGY (290000)**

**Grades: 11, 12**

**Credit: one**

In this course, students examine patterns and variations of human behavior and the process of individual human development. They identify and examine the emotional, 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.

### **ADVANCED PLACEMENT PSYCHOLOGY (290204)**

**Grades: 11, 12**

**Credit: one/weighted +1.0**

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

## **TECHNOLOGY AND ENGINEERING EDUCATION**

### **DESIGN AND TECHNOLOGY (840300)**

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

**Credit: one**

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

**Students successfully completing this course may be eligible to earn a Career and Technical Education diploma seal. Students successfully completing this course in conjunction with another one credit course within the same program area will satisfy the sequential elective requirement for the standard or modified standard diploma. This course requires a student materials fee as listed in FCPS Notice 5922.**

*Lab deposit of \$20.00.*

### **TECHNOLOGY TRANSFER (840500)**

**Grades: 10, 11, 12**

**Credit: one**

**Prerequisite: Design and Technology (840300)**

Technology Transfer is the study of various technologies working together as a system. The central theme of Technology Transfer is the integration of the technological systems of production, energy, communication, transportation, and other related current or emerging technologies. Students work on individual and group activities that are integrated with core subjects and reinforce mathematics, science, and technical writing. Integrated or thematic activities in this course challenge students to use the technological method to solve practical and critical thinking skills problems in a variety of systems or subsystems.

**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.**

*Lab deposit of \$20.00.*

### **TECHNOLOGY ASSESSMENT (840700)**

**Grades: 11, 12**

**Credit: one**

**Prerequisite: Technology Transfer (840500)**

Technology Assessment is designed as the capstone course for the Design and Technology Program. Students learn a variety of assessment techniques which they will use to identify and evaluate the effectiveness and

appropriateness of technologies. Students develop analytical skills and apply these to the assessment and improvement of proposed, current, and emerging technologies. Student activities foster integration of mathematics, science, and language arts and promote critical thinking and practical problem solving. Students are focused on the methods to assess technology systems to optimize their results.

**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.**

*Lab deposit of \$20.00.*

### **BASIC TECHNICAL DRAWING (843500)**

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

**Credit: one**

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

**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.**

*Lab deposit of \$20.00.*

### **ADVANCED DRAWING (843800)**

**Grades: 11, 12**

**Credit: one**

**Prerequisite: Engineering Drawing (843600) or Architectural Drawing (843700)**

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

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

*Lab deposit of \$20.00.*

### **ARCHITECTURAL DRAWING (843700)**

**Grades: 10, 11, 12**

**Credit: one**

**Prerequisite: Basic Technical Drawing (843500)**

Students study the history of architecture, examine various construction techniques, use Computer-Assisted Drafting (CAD) equipment, and design elements of a house. 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. 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. This course requires a student materials fee as listed in FCPS Notice 5922.**

*Lab deposit of \$20.00.*

**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 a handbook of standards and specifications along with other resource materials. Students interested in engineering or related careers will benefit from this course.

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

*Lab deposit of \$20.00.***ELECTRONICS 1 (841600)****Grades: 9, 10, 11, 12****Credit: one**

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

**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.**

*Lab deposit of \$20.00.***ELECTRONICS 2 (841200)****Grades: 10, 11, 12****Credit: one****Prerequisite: Electronics 1 (841600)**

Students learn theory and circuitry of more complex systems. Semiconductor, linear, and analog electronic circuits are explored. Students develop an advanced understanding of electrical theory, develop a measure of skill in the application of electrical theory as it applies to electronics circuit development, and learn safe practices for working with electricity and electronics.

**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.**

*Lab deposit of \$20.00. Industry certification NOCTI exam follows this course***ELECTRONICS 3 (841300)****Grades: 11, 12****Credit: one****Prerequisite: Electronics 2 (841200)**

Students learn how computer circuits work by taking an in-depth and hands-on look into digital electronics and microprocessor theory and operation. Topics include: microprocessor architecture, computer logic, digital logic circuits, machine language programming, and microprocessor interfacing. Special topics include robotics and speech synthesis and advanced electronics systems.

**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.**

*Lab deposit of \$20.00.***RESEARCH AND DEVELOPMENT ENGINEERING (849100)****Grades: 11, 12****Credit: one****Prerequisite: Engineering (849000)**

This course emphasizes student knowledge and application of engineering problem-solving through research and development concepts. Students learn to work in collaborative engineering teams and solve group design projects. Students are challenged to solve problems using design, mathematics,

computer simulations, scientific analysis, and oral and written skills. Engineering is studied with a focus on modeling, systems, optimization, technology-society interaction, design, and engineering ethics. Projects may be models, systems, or products that creatively solve an engineering problem.

**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.**

*Lab deposit of \$20.00. Industry certification NOCTI exam follows this course***STEM ENGINEERING (849000)****(Formerly known as Engineering)****Grades: 10, 11, 12****Credit: one****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. **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.**

*Lab deposit of \$20.00.***AEROSPACE SCIENCE 1 (848700)****Grades: 10, 11, 12****Credit: one****Prerequisite: Recommended Prerequisite Engineering (849000)**

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

**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.**

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

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

#### **ENGINEERING PHYSICS 1 (451026)**

**Grades: 10, 11, 12**

**Credit: one**

**Prerequisite: One year of laboratory science and Algebra 1 (313000) (Chantilly Academy - transportation may be provided)**

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

**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.**

#### **ENGINEERING PHYSICS 2 (452026)**

**Grades: 11, 12**

**Credit: one**

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

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

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

#### **ENGINEERING SYSTEMS 1 (845126)**

**Grades: 10, 11, 12**

**Credit: one**

**Prerequisite: Basic Technical Drawing (843500) or Engineering Drawing (843600) or STEM Engineering (849000) or two years of a laboratory science. (Chantilly Academy - transportation may be provided)**

Engineering Systems 1 is the first year of the two-year Engineering Systems sequence designed for students exploring careers in engineering and technology who seek to enter colleges with strong science and engineering programs. Students work in teams to apply basic engineering skills and learn the principles of introductory systems engineering as they plan, develop, and execute engineering projects. Mathematics, technical research and writing, electronics, and computer-aided design programs are used in the design and construction of mechanical, air, space and robotics system models, and system prototypes. Students engage in an intensive six-week engineering competitive system project selected for the course. The course may include curriculum-related field trips, and college-oriented information seminars. Individual academies apply the curriculum in the manner that best fits local facilities and opportunities. Participating students may compete for a limited number of industry internships. 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 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. Students successfully completing this course may be eligible for articulated credit with approved colleges or universities.**

#### **ENGINEERING SYSTEMS 2 (845226)**

**Grades: 11, 12**

**Credit: one**

**Prerequisite: Engineering Systems 1 (845126) (Chantilly Academy - transportation may be provided)**

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

#### **GEOGRAPHIC INFORMATION SYSTEMS 1 (842326)**

**Grades: 11, 12**

**Credit: one**

**(Chantilly Academy - transportation may be provided)**

This course will introduce students to the theory, vocabulary and concepts behind these and other applications of GIS, while providing students the opportunity to develop basic skills to apply GIS in a variety of contexts. Students will receive instruction in geographic information systems, global positioning systems, remote sensing, digital imaging processing simulator, Geodesy, automated cartography, land surveying, and navigation. Fundamentally, these technologies will enable students to explore and analyze the natural and human-made world, from local to global and beyond. Students will use various tools, processes, and techniques to create, store, access, manipulate, and revise data to solve human challenges. These experiences will employ real-world spatial analysis models and guidelines for integrating, interpreting, analyzing, and synthesizing data. For more information, visit the 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 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.**

**INDEPENDENT RESEARCH-ENGINEERING (845326)**  
**Grades: 12** **Credit: one**  
**Prerequisite: Engineering Systems 1 (844726) and Engineering Systems 2 (843326)**  
**(Chantilly - transportation may be provided)**

Independent Research-Engineering is a one-year program designed to provide a work-based learning and mentorship experience in engineering at a selected industry, center of higher education, or government organization. The project is a structured, school-coordinated arrangement requiring student preparation, which includes career awareness and exploration prior to the actual experience. Chantilly Academy only. 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 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.**

## TRADE AND INDUSTRIAL

**AUTOMOTIVE COLLISION SERVICE 1 (867627)**  
**Grades: 11, 12** **Credit: two**  
**(Chantilly, Edison, and Marshall Academies - transportation may be provided)**

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

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

**AUTOMOTIVE COLLISION SERVICE 2 (867727)**  
**Grades: 11, 12** **Credit: two**  
**Prerequisite: Auto Collision Service 1 (867627)**  
**(Chantilly, Edison, and Marshall Academies - transportation may be provided)**

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

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

**AUTOMOTIVE SERVICING (871026)**  
**Grades: 9, 10, 11, 12** **Credit: one**

Students enrolled in this course learn fundamental skills associated with engine tune-up, electrical diagnosis and repair, lubrication and cooling system diagnosis and repair, brake system diagnosis and repair, fuel system diagnosis and repair, suspension system diagnosis and repair, and routine maintenance of automobiles.

**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.**

**AUTOMOTIVE TECHNOLOGY 1 (850627)**  
**Grades: 11, 12** **Credit: two**  
**Prerequisite: Automotive Servicing (871026) (where offered at base high schools); Algebra 1**  
**(Chantilly, Edison, and Marshall Academies - transportation may be provided.)**

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

**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. 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)**  
**(Chantilly, Edison, and Marshall Academies - transportation may be provided)**

Students will perform technical operations using digital diagnostic equipment, hand scanners, multi-meters, and a computerized data information system during laboratory procedures that are defined by the National Automotive Technicians Education Foundation (NATEF). Major topics include engine performance, brakes, electrical and electronic systems, and suspension and steering systems. In addition, students will be tested on NATEF criteria. 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 academy web site.

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

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

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

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

**CARPENTRY 1 (860127)**  
**Grades: 11, 12** **Credit: two**  
**(Chantilly Academy - transportation may be provided)**

Students will have an opportunity to study and learn about a \$700 billion industry providing a variety of employment opportunities. An emphasis will be focused on construction safety, OSHA regulations, mathematics applications, and craft knowledge. In addition to a variety of hands-on

experiences, students will be introduced to electricity, framing, plumbing, millwork, and problem solving activities related to the construction industry. Curriculum is developed by the National Association of Home Builders (NAHB). For more information, visit the 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.**

#### **CARPENTRY 2 (860227)**

**Grades: 11, 12**

**Credit: two**

**Prerequisite: Carpentry 1 (860127)**

**(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 academy web site.

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

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

**Grades: 11, 12**

**Credit: two**

**Spring Village Residential Construction Site (transportation may be provided)**

Through a partnership with the Foundation of Applied Technical Education, Inc. (FATE), students have an opportunity to build a single-family home in Springfield, Virginia. This specialized course curriculum is developed by the National Association of Home Builders (NAHB). All aspects of new home construction will be addressed during the course of the year. Students will work directly on concrete installation, framing, ceramic tile, kitchen installation, bathroom installations, hardwood floors, electrical, plumbing, HVAC, landscape, and other areas of new home construction. Theoretical and physical aspects of the construction industry are explored in order for students to establish career goals in the industry.

**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.**

#### **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.

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

#### **COSMETOLOGY 1 (852727)**

**Grades: 11, 12**

**Credit: two**

**(Transportation may be provided to Hayfield Secondary School, Chantilly, Edison and Marshall Academies)**

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.

**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.**

#### **COSMETOLOGY 2 (852827)**

**Grades: 11, 12**

**Credit: two**

**Prerequisite: Cosmetology 1 (852727)**

**(Transportation may be provided to Hayfield Secondary School, Chantilly, Edison and Marshall Academies)**

Students use a laboratory setting for the study of skin, hair, nails and cosmetic chemistry. Through laboratory experiences, students will develop advanced skills and knowledge in all phases of salon industry. Students complete the required cosmetology competencies determined by the Virginia Board of Cosmetology in order to successfully pass the Virginia Cosmetology exam to qualify as a licensed cosmetologist. Students in this course will sit for the Virginia Cosmetology Licensing Exam provided they have a Social Security Number or a control number issued by the Virginia Department of Motor Vehicles as required by the Virginia Board of Cosmetology.

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

#### **COSMETOLOGY 3 (852927)**

**Grades: 12**

**Credit: two**

**Prerequisite: Cosmetology 2 (852827)**

**Corequisite: Contact the instructor at the school site prior to registering any student for this course.**

**(Transportation may be provided to Hayfield Secondary School, Chantilly, Edison and Marshall Academies)**

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

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

**CRIMINAL JUSTICE 1 (870226)****Grades: 10, 11, 12****Credit: one****(Chantilly, Falls Church, Marshall, and West Potomac Academies - transportation may be provided.)**

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

**CRIMINAL JUSTICE 2 (870327)****Grades: 11, 12****Credit: two****Prerequisite: Criminal Justice 1****(Chantilly, Falls Church, Marshall, and West Potomac Academies - transportation may be provided.)**

This course is an in-depth study of crime in America, United States' courts in action, and law enforcement efforts to deal with crime. The course will look into victimization, due process, and Constitutional laws affecting law enforcement as well as a review of sentencing offenders, parole, prison rehabilitation, and corrections of the 1990s. Included will be a view of other employment careers in private and mechanical security systems as well as local, state, and federal law enforcement. A major component of level 2 will include the work-experience component, i.e., shadowing, mentorship, etc. For more information, visit the academy web site.

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

**ELECTRICAL CONSTRUCTION AND ENGINEERING 1 (853327)****Grades: 11, 12****Credit: two****(Edison Academy - transportation may be provided)**

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

**ELECTRICAL CONSTRUCTION AND ENGINEERING 2 (853427)****Grades: 11, 12****Credit: two****Prerequisite: Electrical Construction and Engineering 1 (853327)****(Edison Academy - transportation may be provided)**

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

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

**HEATING, VENTILATION, AIR CONDITIONING, AND REFRIGERATION 1 (850327)****Grades: 11, 12****Credit: two****(Edison Academy - transportation may be provided)**

Students learn how to install and maintain special environmental systems for people, products, and perishables essential to today's lifestyles. Through laboratory experiences, students will utilize digital meters, gauges, testing instruments, and specialized tools. These instruments will be used to control the environment in any enclosed area. For more information, visit the academy web site.

**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. 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 (850327)****(Edison Academy - transportation may be provided)**

Students in level 2 will utilize the foundations learned in the first level to design, troubleshoot and correct problems in HVAC systems. Through engineering programs, simulations, and practices, students will calculate loads for buildings and specialized environments. Students will learn to write programs by using programmable logic controls (PLCs) and smart house programs for automating building energy management systems. This course may be offered for college credit. Student internship experiences are an option for this course. For more information, visit the academy web site. **Industry certification may be available as part of this course. 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. This course requires a student materials fee as listed in FCPS Notice 5922.**

**LANDSCAPE ARCHITECTURE AND TURF MANAGEMENT 1 (803627)****Principles of Landscaping 1****Grades: 11, 12****Credit: two****(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.

**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.**

**LANDSCAPE ARCHITECTURE AND TURF MANAGEMENT 2 (805127)****Principles of Landscaping 2****Grades: 11, 12****Credit: two****Prerequisite: Landscape Architecture and Turf Management 1 (803627)****(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.

**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.**

#### **PROFESSIONAL PHOTOGRAPHY STUDIO 1 (860727)**

**Grades: 11, 12**

**Credit: two**

**(Fairfax Academy - transportation may be provided)**

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

#### **PROFESSIONAL PHOTOGRAPHY STUDIO 2 (860827)**

**Grades: 11, 12**

**Credit: two**

**Prerequisite: Professional Photography Studio 1 (860727). Portfolio review may be required.**

**(Fairfax Academy - transportation may be provided)**

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

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

#### **PROFESSIONAL TELEVISION PRODUCTION 1 (868827)**

**Grades: 11, 12**

**Credit: two**

**(Fairfax and West Potomac Academies - transportation may be provided)**

This curriculum is designed to train students for a career in, or entry into a collegiate program involving the television and film production industries. Film, Video, and Multi-Media terminology, technique, and theory will be discussed. Only state-of-the-art, video equipment is used by the students in this class. Students will learn to operate professional video cameras and field equipment for productions outside of the classroom, and professional studio cameras, audio equipment, special effect generators, and character generators for use in the fully 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 academy web site.

**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.**

#### **PROFESSIONAL TELEVISION PRODUCTION 2 (868927)**

**Grades: 11, 12**

**Credit: two**

**Prerequisite: Professional Television Production 1 (868827)  
(Fairfax and West Potomac Academies - transportation may be provided)**

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

## **WORLD LANGUAGES**

#### **AMERICAN SIGN LANGUAGE (ASL) 1 (599000)**

**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 signing, receiving signs and non-manual gestures, and reading. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. This course may be counted as a world languages course in fulfilling requirements for the Advanced Studies Diploma.

#### **AMERICAN SIGN LANGUAGE (ASL) 2 (599500)**

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

**Credit: one**

**Prerequisite: Level 1 or equivalency test**

Students continue to develop proficiency in American Sign Language. They learn to function in real-life situations using more complex language structures and a wider range of vocabulary. Students continue to explore as they study the themes of Home Life, Student Life, Leisure Time, and Vacation and Travel. This course may be counted as a world languages course in fulfilling requirements for the Advanced Studies Diploma.

**AMERICAN SIGN LANGUAGE (ASL) 3 (599700)****Grades: 10, 11, 12****Credit: one****Prerequisite: Level 2 or equivalency test**

Students continue to develop and refine their proficiency in American Sign Language. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students add vocabulary and idiomatic expressions in the context of everyday interactions and social relationships. Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities. This course may be counted as a world languages course in fulfilling requirements for the Advanced Studies Diploma.

**AMERICAN SIGN LANGUAGE (ASL) 4 (599800)****Grades: 10, 11, 12****Credit: one****Prerequisite: Level 3 or equivalency test. Pilot at Woodson HS, Westfield HS and West Springfield HS**

Students continue to develop and refine their proficiency in American Sign Language. They communicate using complex language structures on a variety of topics, moving from concrete to abstract concepts. At this level, students add vocabulary and idiomatic expressions in the context of everyday interactions and social relationships. Students begin to explore the world of interpretation. Students gain a deeper understanding of the world around them while studying Deaf Culture, Globalization and Communication, Science, and Social Issues.

**FRENCH 1 (511000)****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 requirement of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

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

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

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

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

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

Students develop more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. The authentic reading selections are emphasized at this level. Students communicate using more complex

language structures and express abstract ideas with reasonable fluency. Students are able to create and listen with understanding to reports and presentations. They are also able to describe, summarize and discuss selected upper level POS themes and topics.

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

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

**ADVANCED PLACEMENT FRENCH LANGUAGE (517004)****Grades: 11, 12****Credit: one/weighted +1.0****Prerequisite: Level 4 or equivalency test**

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

**GERMAN 1 (521000)****Grades: 8, 9, 10, 11, 12****Credit: one****Prerequisite: none**

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

**GERMAN 2 (522000)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Level 1 or equivalency test**

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

**GERMAN 3 (523000)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Level 2 or equivalency test**

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

**GERMAN 4 (524000)****Grades: 10, 11, 12****Credit: one****Prerequisite: Level 3 or equivalency test**

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

**GERMAN 5 (525000)****Grades: 11, 12****Credit: one****Prerequisite: Level 4, or Advanced Placement Language, or equivalency test**

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

**ADVANCED PLACEMENT GERMAN LANGUAGE (527004)****Grades: 11, 12****Credit: one/weighted +1.0****Prerequisite: Level 4 or equivalency test**

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

**JAPANESE 1 (591000)****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. The Kana system of writing, along with some basic characters, is taught in this course. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. For middle school students, this credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages requirements of the high school Advanced Studies diploma. It also counts toward the total number of credits required for graduation.

**JAPANESE 2 (592000)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Japanese 1 or equivalency test**

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

**JAPANESE 3 (593000)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Japanese 2 or equivalency test**

Students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the

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

**JAPANESE 4 (594000)****Grades: 10, 11, 12****Credit: one****Prerequisite: Japanese 3 or equivalency test**

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

**JAPANESE 5 (595000)****Grades: 11, 12****Credit: one****Prerequisite: Level 4 or equivalency test**

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

**LATIN 1 (531000)****Grades: 8, 9, 10, 11, 12****Credit: one****Prerequisite: none**

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

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

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

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

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

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

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

**LATIN 5 (535000)****Grades: 11, 12****Credit: one****Prerequisite: Latin 4 or equivalency test**

Students continue their study of Latin prose and/or poetry, improving their reading proficiency as they deepen their understanding of more complex syntax. Analysis of the Latin texts as literature is emphasized. Students also develop a greater appreciation of the social and political context in which the various works were written as well as their influence upon later literature.

**ADVANCED PLACEMENT LATIN (537004)****Grades: 11, 12****Credit: one/weighted +1.0****Prerequisite: Latin 3, Latin 4, or equivalency test**

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

**SPANISH 1 (551000)****Grades: 8, 9, 10, 11, 12****Credit: one****Prerequisite: none**

Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the POS themes of Personal and Family Life, School Life, Social Life, and Community Life. For middle school students, this credit becomes a part of the high school transcript, is included in the determination of the high school grade point average (GPA), and counts toward fulfilling the world languages 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 communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the POS themes of Home Life, Student Life, Leisure Time, and Vacation and Travel.

**SPANISH 3 (553000)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: 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.

**SPANISH 4 (554000)****Grades: 11, 12****Credit: one****Prerequisite: Level 3 or equivalency test**

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

**SPANISH 5 (555000)****Grades: 11, 12****Credit: one****Prerequisite: Level 4, or Advanced Placement Language, or equivalency test**

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

**ADVANCED PLACEMENT SPANISH LANGUAGE (557004)****Grades: 11, 12****Credit: one/weighted +1.0****Prerequisite: Level 4 or equivalency test**

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

**SPANISH FOR FLUENT SPEAKERS 2 (552100)****Grades: 8, 9, 10, 11, 12****Credit: one****Prerequisite: Spanish for Fluent Speakers 1 or permission from instructor**

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

**SPANISH FOR FLUENT SPEAKERS 3 (553100)****Grades: 8, 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.

**E-CLASSROOM ARABIC 1 (501062)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: None****Enrollment in this course must be approved by the Director of Student Services.**

In this electronic classroom course, students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. Schools must have a facilitator on hand to proctor tests, ensure students are on task, and forward information to the instructor. Schools must provide adequate study area for distance learning students, access to TV, and telephone.

**E-CLASSROOM ARABIC 2 (502062)**

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

**Credit: one**

**Prerequisite: Level 1 or equivalency test.**

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

In this electronic classroom course, students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the themes of Home Life, Student Life, Leisure Time, and Vacation and Travel. Schools must have a facilitator on hand to proctor tests, ensure students are on task, and forward information to the instructor. Schools must provide adequate study area for distance learning students, access to TV, and telephone.

**E-CLASSROOM ARABIC 3 (503062)**

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

**Credit: one**

**Prerequisite: Level 2 or equivalency test**

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

In this electronic classroom course, students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities. Schools must have a facilitator on hand to proctor tests, ensure students are on task, and forward information to the instructor. Schools must provide adequate study area for distance learning students, access to TV, and telephone.

**CHINESE 1 (581026)**

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

**Credit: one**

**Prerequisite: none**

**(Marshall and Fairfax Academies - transportation may be provided)**

Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. This course is only offered at Fairfax Academy and Marshall Academy.

**CHINESE 2 (582026)**

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

**Credit: one**

**Prerequisite: Chinese 1 or equivalency test**

**(Marshall and Fairfax Academies - transportation may be provided)**

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

**CHINESE 3 (583026)**

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

**Credit: one**

**Prerequisite: Chinese 2 or equivalency test**

**(Marshall Academy - transportation may be provided)**

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

**CHINESE 3 (583033)**

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

**Credit: one**

**Prerequisite: Chinese 2 or equivalency test**

**(Fairfax Academy - transportation may be provided)**

During this fall semester course students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities. This course is only offered at the Fairfax Academy. Students who sign up for Chinese 3 in the fall semester must take Chinese 4 in the spring.

**CHINESE 4 (584026)**

**Grades: 10, 11, 12**

**Credit: one**

**Prerequisite: Chinese 3 or equivalency test**

**(Marshall Academy - transportation may be provided)**

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

**CHINESE 4 (584034)**

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

**Credit: one**

**Prerequisite: Chinese 3 or equivalency test**

**(Fairfax Academy - transportation may be provided)**

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

**KOREAN 1 (587026)**

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

**Credit: one**

**Prerequisite: none**

**(Fairfax Academy - transportation may be provided)**

Students develop the ability to communicate about themselves and their immediate environment using simple sentences containing basic language structures. This communication is evidenced in all four language skills - listening, speaking, reading and writing - with emphasis on the ability to communicate orally and in writing. Students begin to explore and study the themes of Personal and Family Life, School Life, Social Life, and Community Life. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy.

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

Students continue to develop proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to communicate orally and in writing. They learn to function in real-life situations using more complex sentences and language structures. They read material on familiar topics and produce short writing samples. Students continue to explore as they study the themes of Home Life, Student Life, Leisure Time, and Vacation and Travel. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy.

**KOREAN 3 (588026)****Grades: 9, 10, 11, 12****Credit: one****Prerequisite: Korean 2 or equivalency test (Fairfax Academy - transportation may be provided)**

During this fall semester course students continue to develop and refine their proficiency in all four language skills - listening, speaking, reading, and writing - with emphasis on the ability to interact orally and in writing. They communicate using more complex language structures on a variety of topics, moving from concrete to more abstract concepts. At this level, students comprehend the main ideas of the authentic materials that they read and hear, and they are able to identify significant details when the topics are familiar. Students gain a deeper understanding of the world around them while studying Rights and Responsibilities, Future Plans and Choices, Teen Culture, Environment, and Humanities. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy. Students who sign up for Korean 3 in the fall semester must take Korean 4 in the spring semester.

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

During this spring semester course students develop more sophisticated communication skills in all four areas - listening, speaking, reading and writing - with emphasis on the ability to interact orally and in writing. The authentic reading selections are emphasized at this level. Students communicate using more complex language structures and express abstract ideas with reasonable fluency. Students are able to create and listen with understanding to reports and presentations. They are also able to describe, summarize and discuss selected upper level POS themes and topics. The implementation of this course is contingent upon an enrollment of 25 students. This course is only offered at the Fairfax Academy. Students who sign up for Korean 4 in the spring semester must have taken Korean 3 in the fall semester.

**SPECIAL EDUCATION****ADAPTED PHYSICAL EDUCATION (770000)****Grades: 9, 10, 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.

**BASIC SKILLS I-IV (788980)****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 coping 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.)

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

This course is designed to provide direct, explicit and intensive reading instruction to students with disabilities who are reading significantly below grade level. Basic objectives of the reading courses are focused on closing the gap between the student's present level of performance and the level of performance needed to successfully access the general curriculum. Instruction focuses on increasing student's decoding, fluency and comprehension skills of fiction and nonfiction materials, which is based on the diagnosis of each student's needs as outlined through the student's Individual Education Program (IEP).

**EDUCATION FOR EMPLOYMENT 1 (908362)****Grades: 9, 10, 11, 12****Credit: two**

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.

**INDEPENDENT LIVING SKILLS (789662)****Grades: 9, 10, 11, 12****Credit: two**

This course, offered at Davis and Pulley Centers, is designed to teach students with disabilities skills for independent living.

**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.

**OFFICE TECHNOLOGY AND PROCEDURES (847162)****Grades: 9, 10, 11, 12****Credit: two**

This program offers instruction in office procedures and technology. Students learn skills in MS Office applications and perform assignments essential to the operation of the day-to-day instructional program at schools, offices, and in the business community. This course can be taken for more than one year. Students successfully completing two years of this course will satisfy the sequential elective requirement for the Standard or Modified Standard diploma.

**PERSONAL AND FINANCIAL MATHEMATICS (312080)****Grades: 11, 12****Credit: one****Prerequisite: One high school mathematics course**

Students learn how to become wiser consumers in today's society. Course topics include personal money management, business procedures, transportation, budgeting, taxation, banking, and insurance. Calculators are used as a tool throughout the course. This course does not meet the mathematics graduation requirements for the Standard or Advanced Studies Diploma.

**PERSONAL DEVELOPMENT (781583)****Grades: 9, 10, 11, 12****Credit: one**

Designed for students whose social/emotional needs affect their school performance. Instructional topics include: understanding yourself, goal setting, communication, building relationships, dealing with emotions, stress management, wellness, problem-solving, decision-making, self-advocacy, and career and transition. This course is appropriate for students who have

documented social/emotional needs on their Individualized Educational Program (IEP).

**WORK AWARENESS AND TRANSITION (907162)**

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

**Credit: two**

This option is available to high school students receiving special education services. Students explore potential career options while developing/improving skills needed for success in employment such as interpersonal/co-worker relationships. Most students participate in community work experiences as well. Students successfully completing two years of this course will satisfy the sequential elective requirement for the