

# Planning Guide

## for Students and Parents



A Program of Studies • Grades 6 -12  
**2019-2020**



# HENRICO COUNTY PUBLIC SCHOOLS

Dr. Amy Cashwell  
Superintendent of Schools



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Dear Students and Parents:

This planning guide provides information about Henrico County Public Schools (HCPS) middle and high school programs and courses. HCPS endeavors to ensure that all of our students have opportunities to take part in a quality educational program that will prepare them to be globally competitive citizens who are life ready! It is our hope that this planning guide will be of assistance to our students and their families as they consider the many courses and programs available in our middle and high schools.

It is important that students and parents engage in open dialogue with counselors, teachers, and administrators in the development of an Academic and Career plan that will prepare each student to meet their own goals and interests as well as to meet the challenges of life beyond the K-12 educational setting.

Together, as a team, we will continue to provide excellent opportunities for all students that will allow them not only to acquire the academic knowledge they need but to develop and master the essential life skills outlined in the HCPS graduate profile; critical and creative thinking, communication and collaboration, quality character and global citizenship. The Henrico County Public Schools team is here to serve you as you make plans.

Sincerely,

A handwritten signature in black ink that reads "Amy E. Cashwell".

Amy E. Cashwell, Ed.D.  
Superintendent

## Henrico County Public Schools Academic & Career Plan

**Tentative Career Cluster/Plan:**

\_\_\_\_\_ Gr. 7  
 \_\_\_\_\_ Gr. 8  
 \_\_\_\_\_ Gr. 9  
 \_\_\_\_\_ Gr. 10  
 \_\_\_\_\_ Gr. 11

Name \_\_\_\_\_ DOB: \_\_\_\_\_

Middle School \_\_\_\_\_ High School \_\_\_\_\_

Specialty Center Program \_\_\_\_\_

Diploma Choice:  Advanced  Standard

[virginiacareerreview.org](http://virginiacareerreview.org)

[vawizard.org](http://vawizard.org)

[vamentoring.org](http://vamentoring.org)

This individualized plan is tentative and will be reviewed annually.  
 Your school counselor will help you develop your plan and will monitor your progress.

Post Secondary Plans \_\_\_\_\_

High School Credit Courses in Middle School Years 6-8 Course	Grade 9		Grade 10		Grade 11		Grade 12	
	Year -	Course	Year -	Course	Year -	Course	Year -	Course
	English 9	English 10	English 11	English 12				
	Health & P.E. 9	Health & P.E. 10						
	Total Credits	Total Credits	Total Credits	Total Credits				
Total Credits								Total Credits

Requirements for a student to earn a diploma from a Virginia High School are those in effect when a student enters ninth grade for the first time. Please see the charts in Section I of the Planning Guide for details.

Notes: \_\_\_\_\_  
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# Program of Studies Grades 6-12: A Planning Guide for Students and Parents

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# NOTES

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# **SECTION I**

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Requirements and Options

For students entering ninth grade for the first time in 2013-2014 through 2017-2018

- Requirements for a student to earn a diploma from a Virginia high school shall be those in effect when that student enters ninth grade for the first time.
- **Beginning with students entering the ninth grade for the first time in 2013-2014 through 2017-2018, a student must also:**
  - Earn a board-approved career and technical education credential to graduate with a Standard Diploma, and
  - Successfully complete one virtual course, which may be non-credit bearing.

### Standard Diploma Course Requirements for Students Entering Ninth Grade for the First Time in 2013-2014 through 2017-2018

Subject Area	Standard Credits	Verified Credits	Specifications
English	4	2	
Mathematics	3	1	Courses completed to satisfy this requirement shall be at or above the level of Algebra and shall include at least two course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra and Geometry.
Laboratory Science	3	1	Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: Earth Sciences, Biology, Chemistry, or Physics.  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 (1) the student selected verified credit and (2) either a science or history or 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 of Education as an additional test to verify student achievement.
History & Social Sciences	3	1	Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in either World History or Geography or both.  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 (1) the student selected verified credit and (2) either a science or history or 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 of Education as an additional test to verify student achievement.
Health & Physical Education	2		
World Language, Fine Arts, or Career & Technical Education	2		
Economics & Personal Finance	1		
Electives	4		Courses to satisfy this requirement shall include at least two sequential electives. Sequential Electives: <ul style="list-style-type: none"> <li>• Sequential electives may be in any discipline as long as the courses are not specifically required for graduation.</li> <li>• Courses used to satisfy the one unit of credit in a fine arts or career and technical education course may be used to partially satisfy this requirement.</li> <li>• An introductory course followed by another level of the same course of study may be used.</li> <li>• Sequential electives do not have to be taken in consecutive years.</li> </ul>
CTE Industry Certification Test			
Student Selected Test		1	A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education or other areas as prescribed by the Board in 8 VAC 20-131-110.
<b>Total</b>	<b>22</b>	<b>6</b>	

A **standard credit** is awarded for a course in which the student receives 140 clock hours of instruction and successfully completes the objectives of the course as evidenced by a passing grade.

A **verified credit** is awarded for a course in which the student earns a standard unit of credit and achieves a passing score on a corresponding end-of-course Standards of Learning test or a substitute assessment approved by the Board of Education.

Regular education students who pass their classes but do not earn the required number of verified credits will be awarded a Certificate of Program Completion. These students will be encouraged to continue to take the SOL tests needed so that they may receive a diploma. Students will not participate in graduation exercises until a diploma is earned.



For students entering ninth grade for the first time in 2013-2014 through 2017-2018

- Requirements for a student to earn a diploma from a Virginia high school shall be those in effect when that student enters ninth grade for the first time.
- Beginning with students entering the ninth grade for the first time in 2013-2014 and beyond, a student must successfully complete one virtual course, which may be non-credit bearing.

**Advanced Studies Diploma Course Requirements for Students Entering Ninth Grade for the First Time in 2013-2014 through 2017-2018**

Subject Area	Standard Credits	Verified Credits	Specifications
English	4	2	
Mathematics	4	2	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.
Laboratory Science	4	2	Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: Earth Sciences, Biology, Chemistry, or Physics or completion of the sequence of science courses required for the International Baccalaureate Diploma.
History & Social Sciences	4	2	Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and two courses in either World History or Geography or both.
World Languages	3		The Advanced Studies Diploma contains a requirement for either three years of one world language or two years of two languages.
Health & Physical Education	2		
Fine Arts or Career & Technical Education	1		
Economics & Personal Finance	1		
Electives	3		
Student Selected Test		1	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.
<b>Total</b>	<b>26</b>	<b>9</b>	

A **standard credit** is awarded for a course in which the student receives 140 clock hours of instruction and successfully completes the objectives of the course as evidenced by a passing grade.

A **verified credit** is awarded for a course in which the student earns a standard unit of credit and achieves a passing score on a corresponding end-of-course Standards of Learning test or a substitute assessment approved by the Board of Education.

Regular education students who pass their classes but do not earn the required number of verified credits will be awarded a Certificate of Program Completion. These students will be encouraged to continue to take the SOL tests needed so that they may receive a diploma. Students will not participate in graduation exercises until a diploma is earned.

Standard Diploma Course Requirements (8 VAC 20-131-51) for Students Entering Ninth Grade for the First Time in 2018-2019 and Beyond

Subject Area	Standard Credits	Verified Credits	Specifications
English	4	2	N/A
Mathematics	3	1	Courses completed to satisfy this requirement shall include at least two different course selections from among: algebra I, geometry, algebra functions, and data analysis, algebra II, or other mathematics courses approved by the board to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.
Laboratory Science	3	1	<p>Courses completed to satisfy this requirement shall include course selection from at least two different science disciplines: earth sciences, biology, chemistry, or physics, or completion of the sequence of science courses required for the International Baccalaureate Diploma and shall include interdisciplinary courses that incorporate Standards of Learning content from multiple academic areas. The board shall approve courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.</p> <p>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 either a laboratory 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.</p>
History and Social Sciences	3	1	<p>Courses completed to satisfy this requirement shall include Virginia and U.S. history, Virginia and U.S. government, and one course in either world history or geography or both. The board shall approve courses to satisfy this requirement.</p> <p>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 either a laboratory 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.</p>
Health and Physical Education	2	0	N/A
World Language, Fine Arts or Career and Technical Education	2	0	Per the Standards of Quality, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education. Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical course credit.
Economics & Personal Finance	1	0	N/A
Electives	4	0	Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
<b>Total</b>	<b>22</b>	<b>5</b>	N/A

## Additional Requirements for Graduation

- **Advanced Placement, Honors, or International Baccalaureate Course or Career and Technical Education Credential** - In accordance with the Standards of Quality, students shall either (i) complete an Advanced Placement, honors, or International Baccalaureate course, or (ii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the standard diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.
- **Virtual Course** - Students shall successfully complete one virtual course, which may be a non-credit-bearing course or a required or elective credit-bearing course that is offered online.
- **Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED)** - Students shall be trained in emergency first aid, CPR, and the use of AED, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an IEP or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided in [8VAC20-131-420 B](#).
- **Demonstration of the five Cs** - Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.

## For students entering the ninth grade for the first time in 2011- 2012 through 2017-2018

To graduate with a Standard Diploma for students who entered the ninth grade for the first time in 2011-2012 through 2017-2018, a student must earn at least 22 standard units of credit and six verified units of credit. Students earn standard credits by successfully completing required and elective courses. Students earn verified credits by successfully completing required courses and passing associated end-of-course SOL tests or other assessments approved by the state Board of Education.

Please note: Your school counselor can tell you which courses are offered by your school to fulfill the requirements for a Standard Diploma.

### Approved Courses

- [Approved Courses – Effective for Students Who Entered Ninth Grade for the First Time in 2010-2011 and Beyond-This is a Word document.](#) (Word)
- [Substitute Tests for Earning Verified Credits-This is a PDF document.](#) (PDF)

### Standard Diploma Course Requirements (8 VAC 20-131-51) for Students Entering Ninth Grade for the First Time in 2011-2012 through 2017-2018

Discipline Area	Standard Credits	Verified Credits	Specifications
<b>English</b>	4	2	N/A
<b>Mathematics</b>	3	1	Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I, Geometry, Algebra, Functions, and Data Analysis, Algebra II, or other mathematics courses above the level of Algebra II. The board shall approve courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.
<b>Laboratory Science</b>	3	1	<p>Courses completed to satisfy this requirement shall include course selections from at least two 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. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.</p> <p>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 acquire 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.</p>
<b>History &amp; Social Sciences</b>	3	1	<p>Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in either world history or geography or both. The board shall approve courses to satisfy this requirement.</p> <p>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 acquire 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.</p>

<b>Health &amp; Physical Education</b>	2	0	N/A
<b>World Language, Fine Arts or Career and Technical Education</b>	2	0	Pursuant to § <a href="#">22.1-253.13:4</a> of the Code of Virginia, credits earned for this requirement shall include one credit in fine or performing arts or career and technical education. Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical education course credit.
<b>Economics and Personal Finance</b>	1	0	N/A
<b>Electives</b>	4	0	Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
<b>Student Selected Test</b>	0	1	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 <a href="#">8VAC20-131- 110</a> .
<b>Career and Technical Education Credential</b>	0	0	Students shall earn a career and technical education credential approved by the Board of Education, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the standard diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.
<b>Total</b>	22	6	N/A

### Additional Requirements for Graduation

- **For students entering the ninth-grade class for the first time in 2013-2014 and beyond:** Students shall successfully complete one virtual course, which may be a noncredit-bearing course or a required or elective credit-bearing course that is offered online.
- **For students entering the ninth-grade class for the first time in 2016-2017 and beyond:** Students shall be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an Individualized Education Program (IEP) or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided in [8VAC20-131-420](#) B.

Advanced Studies Diploma Course Requirements (8 VAC 20-131-51) for Students Entering the Ninth Grade for the First Time in 2018-2019 and Beyond

Subject Area	Standard Credits	Verified Credits	Specifications
English	4	2	N/A
Mathematics	4	1	Courses completed to satisfy this requirement shall include at least three different course selections from among: algebra I, geometry, algebra II, or other mathematics courses above the level of algebra II. The board shall approve courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.
Laboratory Science	4	1	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 and shall include interdisciplinary courses that incorporate Standards of Learning content from multiple academic areas. The board shall approve additional courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.
History and Social Sciences	4	1	Courses completed to satisfy this requirement shall include Virginia and U.S. history, Virginia and U.S. government, and two courses in either world history or geography or both. The board shall approve additional courses to satisfy this requirement.
World Language	3	0	Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.
Health and Physical Education	2	0	N/A
Fine Arts or Career and Technical Ed	1	0	Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical credit.
Economics & Personal Finance	1	0	N/A
Electives	3	0	Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.
<b>Total Credits</b>	<b>26</b>	<b>5</b>	N/A



## Additional Requirements for Graduation

- **Advanced Placement, Honors, or International Baccalaureate Course or Career and Technical Education Credential** - In accordance with the Standards of Quality, students shall either (i) complete an Advanced Placement, honors, or International Baccalaureate course or (ii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the advanced studies diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.
- **Virtual Course** - Students shall successfully complete one virtual course, which may be a non-credit-bearing course or a required or elective credit-bearing course that is offered online.
- **Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED)** - Students shall be trained in emergency first aid, CPR, and the use of AED, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an IEP or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided in [8VAC20-131-420 B](#).
- **Demonstration of the five Cs** - Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.

## For students entering the ninth grade for the first time in 2011- 2012 through 2017-2018

To graduate with an Advanced Studies Diploma for students entering the ninth grade for the first time in 2011- 2012 through 2017-2018, a student must earn at least 26 standard units of credit and at least nine verified units of credit. Students earn standard credits by successfully completing required and elective courses. Students earn verified credits by successfully completing required courses and passing associated end-of-course SOL tests or other assessments approved by the state Board of Education.

Please note: Your school counselor can tell you which courses are offered by your school to fulfill the requirements for an Advanced Studies Diploma.

### Approved Courses

- [Approved Courses – Effective for Students Who Entered Ninth Grade for the First Time in 2010-2011 and Beyond-This is a Word document.](#) (Word)

#### Advanced Studies Diploma Course Requirements (8 VAC 20-131-51) for Students Entering the Ninth Grade for the First Time in 2011-2012 through 2017-2018

Discipline Area	Standard Credits	Verified Credits	Specifications
English	4	2	N/A
Mathematics	4	2	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 shall approve courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.
Laboratory Science	4	2	Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. The board shall approve additional courses to satisfy this requirement. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.
History & Social Sciences	4	2	Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and two courses in either world history or geography or both. The board shall approve additional courses to satisfy this requirement.
World Language	3	0	Courses completed to satisfy this requirement shall include three years of one language or two years of two languages.
Health & Physical Education	2	0	N/A
Fine Arts or Career & Technical Education	1	0	Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical education course credit.
Economics and Personal Finance	1	0	N/A
Electives	3	0	N/A
Student Selected Test	0	1	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 <a href="#">8VAC20-131- 110</a> .
<b>Total</b>	<b>26</b>	<b>9</b>	N/A

## Additional Requirements for Graduation

- **Virtual Learning** - Students shall successfully complete one virtual course, which may be a noncredit-bearing course, or may be a course required to earn this diploma that is offered online.
- **Training in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (AED)** - Beginning with first-time ninth-grade students in the 2016–2017 school year, students shall be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. Students with an IEP or 504 Plan that documents that they cannot successfully complete this training shall be granted a waiver from this graduation requirement, as provided in [8VAC20-131-420 B](#).

## Graduation Requirements – State of Virginia Applied Studies Diploma

To receive an Applied Studies Diploma, a student must receive exceptional education services and meet the requirements specified in his/her Individualized Education Program (IEP).

The Applied Studies Diploma is available to all students with an Individualized Education Program. The Code of Virginia (8VAC20-131-50D) states, “In accordance with the requirements of the Standards of Quality, students with disabilities who complete the requirements of their Individualized Education Program (IEP) and do not meet the requirements for other diplomas shall be awarded Applied Studies Diplomas.” This diploma is available to all students with an IEP. Students with an IEP who pursue a Standard Diploma but do not meet the criteria are still eligible to earn the Applied Studies Diploma.

# Overview of High School Program Options

## Henrico County Public Schools

### Middle School

*Exploring Careers and Planning for High School*

### High School Options

#### Comprehensive High Schools

*Academic and Technical programs of studies offered in all high schools (Advanced Placement/Honors, College Prep, Standard Academic Prep, and Dual Enrollment)*

##### Academic Core

English  
Mathematics  
Science  
Social Studies  
World Languages

##### Electives

Fine Arts  
Career and Technical Education  
General Academics

##### Career Clusters

Agriculture, Food & Natural Resources  
Architecture & Construction  
Arts, A/V Technology & Communications  
Business Management & Administration  
Education & Training  
Finance  
Government & Public Administration  
Health Science  
Hospitality & Tourism

Human Services  
Information Technology  
Law, Public Safety, Corrections & Security  
Manufacturing  
Marketing  
Science, Technology, Engineering & Mathematics  
Transportation, Distribution & Logistics

#### Specialty Centers

*Specialized college-preparatory programs and specialized technical concentrations require application for admission*

Advance College Academy – Business Administration (Highland Springs High School)  
Advance College Academy – Social Sciences (J. R. Tucker High School)  
Advanced Career Education (ACE) Centers at Hermitage and at Highland Springs High Schools (Career Clusters and Dual Enrollment)  
• High Tech Academy (ACE Center at Highland Springs)  
Center for the Arts (Henrico High School)  
Center for Communications and Media Relations (Varina High School)  
Center for Education and Human Development (Glen Allen High School)  
Center for Engineering (Highland Springs High School)  
Center for the Humanities (Hermitage High School)  
Center for Information Technology (Deep Run High School)  
Center for Leadership, Government, and Global Economics (Douglas S. Freeman High School)  
Center for Spanish Language and Global Citizenship (J. R. Tucker High School)  
International Baccalaureate (IB) Program (Henrico and J. R. Tucker High Schools)  
Todd Allen Phillips Center for Medical Sciences (Mills E. Godwin High School)

#### JROTC

*Military studies at six high schools*

Naval JROTC - Henrico High School, Varina High School  
Marine JROTC - Hermitage High School, Highland Springs High School, J. R. Tucker High School  
Air Force JROTC - Deep Run High School

#### Nontraditional Programs

*Personalized program of studies requiring application for admission*

Academy at Virginia Randolph  
Center for Diversified Studies  
Creative School Involvement  
Evening School of Excellence  
GRAD/Performance Learning Center  
GAD/ISAEP/GED  
Online Credit Recovery  
Program for Academic and Career Empowerment

#### Maggie L. Walker Governor's School for Government &

##### International Studies

*Regional high school offering a college-preparatory program requiring application for admission*

#### CodeRVA

*Regional public high school in which students focus on computer science and complete high school requirements through a combination of blended (online and face-to-face) learning, integrated coursework, and project based learning. Application required and available at [coderva.org](http://coderva.org)*

### Post-Secondary Options

Four-Year College  
Two-Year College

Other Professional Training  
Apprenticeship

Military Service  
Work Force

### Living and Working in the 21st Century

# Sequence Charts

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## ENGLISH SEQUENCE CHART

### GRADE 8-12

	<b>Regular Track</b>	<b>Advanced Track</b>
<b>8th Grade</b>	English 8 ↓	English 8 Advanced ↓
<b>9th Grade</b>	English 9 ↓	English 9 Honors ↓
<b>10th Grade</b>	English 10 ↓	English 10 Honors ↓
<b>11th Grade</b>	English 11 ↓	English 11 Honors or AP English 11 ↓
<b>12th Grade</b>	English 12	English 12 Honors or AP English 12

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## MATH SEQUENCE CHART

### GRADE 8-12

	<b>Regular Track</b>	<b>Advanced Track</b>
<b>8th Grade</b>	Math 8 ↓	Algebra I ↓
<b>9th Grade</b>	Algebra I (Foundations of Algebra, double blocked with Algebra; Fundamentals of Math) ↓	Geometry ↓
<b>10th Grade</b>	Geometry (Foundations of Geometry, double blocked with Geometry; Algebra I) ↓	Algebra II ↓
<b>11th Grade</b>	Algebra II (Algebra Functions and Data Analysis, Geometry) ↓	Math Analysis (Adv. Alg./Trig., Discrete Math/Stats) ↓
<b>12th Grade</b>	Math Analysis (Algebra II)	AP Calculus (AP Computer Science, AP Stats, Adv. Alg./Trig.)

# Sequence Charts

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## SCIENCE SEQUENCE CHART

### GRADE 8-12

	<b>Regular Track</b>	<b>Advanced Track</b>
<b>8th Grade</b>	Physical Science ↓	Earth Science ↓
<b>9th Grade</b>	Earth Science (Environmental Science, Biology I) ↓	Biology I (AP Environmental Science) ↓
<b>10th Grade</b>	Biology I (Biology II: Anatomy and Physiology, Biology II: Ecology, Earth Science II: Oceanography)) ↓	Chemistry (AP Environmental Science, AP Biology, AP Physics I, AP Physics C) ↓
<b>11th Grade</b>	Chemistry (Physics, Biology II: Anatomy and Physiology, Biology II: Ecology, Earth Science II: Oceanography, AP Environmental Science) ↓	AP Physics I (AP Environmental Science, AP Biology, AP Chemistry, AP Physics C) ↓
<b>12th Grade</b>	Physics (Chemistry, Biology II: Anatomy and Physiology, Biology II: Ecology, Earth Science II: Oceanography, AP Environmental Science)	AP Physics II (AP Environmental Science, AP Biology, AP Chemistry, AP Physics C)

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## SOCIAL STUDIES SEQUENCE CHART

### GRADE 8-12

	<b>Regular Track</b>	<b>Advanced Track</b>
<b>8th Grade</b>	Civics ↓	World History I (to 1500) ↓
<b>9th Grade</b>	World History I/Geography ↓	World History II (from 1500) ↓
<b>10th Grade</b>	Electives (World History II, AP classes) ↓	Electives (AP European History, AP World History, etc.) ↓
<b>11th Grade</b>	US History (or Honors, AP) ↓	US History (or Honors, AP) ↓
<b>12th Grade</b>	Government (or AP)	Government (or AP)



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# **SECTION II**

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General Information

# General Information

## Accreditation

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Henrico County Public Schools (HCPS) are accredited by the Virginia Department of Education.

## Adding or Dropping High School Courses

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ADD:

- 1) Year-long courses may not be added after the first nine-weeks' grading period.
- 2) Semester courses may not be added after the first interim report of either semester.

DROP:

- 1) Any year-long courses dropped on or before the end of the first nine-weeks' grading period will not appear on the high school transcript.  
Any semester courses dropped on or before the first Friday in October for first semester courses OR the first Friday in March for second semester courses will not appear on the high school transcript.
- 2) Any year-long courses dropped after the first nine-weeks' grading period OR after the first Friday in October for first semester courses or the first Friday in March for second semester courses will result in one of the following:

a) WP = (Withdrawn Passing)

NOT calculated in student GPA. WP appears on transcript in place of grade.
--

b) WF = (Withdrawn Failing)

WILL BE counted in the GPA calculation. WF will appear on transcript.
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- 3) Year-long courses may not be dropped after the first Friday in March. Semester courses may not be dropped after completion of the first nine weeks' grading period of either semester.

## Advance College Academy (ACA)

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The ACA programs located at J. R. Tucker and Highland Springs High School provide students the opportunity to earn an associate degree from Reynolds Community College (JSRCC) while also earning an advanced studies high school diploma. A student successfully completing the ACA at Tucker High School will earn an associate degree in social sciences and a student successfully completing the ACA at Highland Springs High School will earn an associate degree in business administration. All 8<sup>th</sup> grade students are eligible to apply to the ACA through the same application process that is used for specialty centers. Students who are selected will take honors and AP courses while earning more than 60 credits at J. R. Tucker and Highland Springs through dual enrollment, online, and on-campus coursework from JSRCC at minimal cost to students and their parents. The JSRCC credits are eligible for transfer to colleges and universities.

## Advanced Placement Examinations Program

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The Advanced Placement (AP) Examinations Program is a service provided by College Board. High school students enrolled in Advanced Placement courses will take Advanced Placement College Board exams each May, and depending upon their scores, may be awarded college credit and/or advanced placement at \*participating colleges and universities.

Henrico expects students taking an AP course to sit for the AP exam. Although most students who take the AP examinations are enrolled in exit-level courses with an "AP" designation, any highly motivated student may elect to take an AP exam in the subject area of his/her choice. According to information provided by College Board, the student's "learning experience may take the form of an honors class, a strong regular course, a tutorial, or an independent study."

Advanced Placement Examinations are administered in May of each year by the school's designated AP Coordinator. In June the examinations are graded on a five-point scale: 5 = extremely well-qualified; 4 = well-qualified; 3 = qualified; 2 = possibly qualified; and 1 = no recommendation. In July the scores are sent to the students, their designated colleges, and their home schools. \*Colleges which participate in the Advanced Placement Examinations Program will then consider full or partial credit for scores of three or better.

For additional information on the Advanced Placement Examinations Program, students should see their school counselors or the school's AP Coordinator. Information concerning financial assistance for exam fees (for those who qualify) is available from their school counselor.

\*Students should refer to the catalogue from each college or university for information concerning the institution's AP policies.

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## **Apprenticeship**

The student apprenticeship program blends school and work-site experiences that integrate high-level academics, structured technical training, and paid on-the-job experience in a wide variety of occupations. The student apprenticeship program connects the student 16 years of age or older and in the 11th or 12th grade with business and industry to begin career training before high school graduation. Additional information is available from the school counseling department.

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## **CodeRVA**

CodeRVA is a new regional public high school, which opened in September 2017. The school's design builds on next generation school models across the nation that rethink the use of time and space, leverage technology to advance learning, personalize learning experiences, and redesign curriculum to align with competency-based progressions. Focused on computer science, the school will offer the opportunity to complete high school requirements through a combination of blended (online and face-to-face) learning, integrated coursework, and project-based learning. CodeRVA students will be provided an opportunity to graduate with a Virginia high school diploma, an associate's degree from the community college system, industry certifications, and paid work experience in computer science-related fields.

CodeRVA is being designed to meet three specific goals:

- Redesign the high school experience to better meet the needs of today's students by reducing seat-time requirements and moving toward competency-based course completion;
- Address racial, economic, and gender inequities in STEM-related education; and
- Increase the pool of potential employees in coding and other computer science-related fields for central Virginia.

Each of the participating school divisions in central Virginia are allocated seats proportionally, based on overall membership numbers. Final selection of students will be made through an independent, computer-based lottery process. Applications for CodeRVA High School will be made available through the [coderva.org](http://coderva.org) website in early January. For more information, visit the [coderva.org](http://coderva.org) website.

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## **College Credit**

Students must complete the *Non HCPS Course Request Form* and submit it to their principal for approval in order to take college-level courses at local colleges and universities. Courses will only be added to the students' HCPS transcript if they are replacing a course that is required for graduation. To earn the verified credits, students must pass the course and the corresponding SOL end-of-course tests. They should see their school counselor for specific course and graduation requirements. Also, students must meet the admissions' requirements set forth by the university and pay the full cost for the college course taken. It is recommended that a student not enroll in a college course until approval has been granted.

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## **Community Service Learning**

Students in grades 9-12 may participate in voluntary assignments and activities to serve organizations as well as individuals in the community. Students who complete a minimum of 80 hours of community service during grades 9-12 will receive the Community Service Learning seal on their diploma and transcript notation. Interested students and parents may request a brochure from each school's community service contact person, a social studies teacher, or online at [henricoschools.us](http://henricoschools.us)

## Competency-Based Career and Technical Education (CBCTE)

Competency-Based Career and Technical Education is a systematic approach to improve the teaching/learning process. Essential elements of a CBCTE program include tasks/competencies to be achieved, student performance objectives for each of the tasks/competencies, criterion-referenced measures for evaluating performance, and formal procedures for documentation with possible industry certification and/or state/national licensing.

## Comprehensive High Schools

Henrico County high schools offer a rigorous academic core program as well as Career and Technical Education programs to prepare students for higher education and for the work force. Students have the option to pursue a Standard or Advanced Studies Diploma and to participate in the following academic core programs: Advanced Placement/International Baccalaureate/Honors, College Prep (See "Instructional Grouping" in this section). All students may select electives in the fine arts, career and technical education, and general academic areas.

## Comprehensive School Health Programs

The Comprehensive School Health Programs include health and physical education, student health services, school counseling, family life education, life skills instruction, and related services.

## Cumulative Grade Point Average (GPA)/Class Rank

- ◆ Students who successfully complete high school courses prior to promotion from middle school earn high school credit toward graduation; however, grades earned in these courses are not counted as part of the high school cumulative grade-point average (GPA).

**After promotion from the eighth grade, rising ninth graders who take high school courses in summer school earn credits toward graduation, and their grades are included in the GPA calculation.**

- ◆ **Cumulative Grade Point Average (GPA)** - A four-point system, based on quality of achievement, is used in computing GPA and class rank for each student.

NOTE: NCAA and/or academic scholarships have specific grade point average requirements. See your school counselor and/or coach for details.

The following formula is used to calculate the **cumulative** GPA.

### **Cumulative GPA Calculation for Classes of 2017 and Beyond**

$$\frac{\text{Total Grade Points}}{\text{Total Potential Credits}}$$

Total grade points include an additional .5 quality point for any Honors/IBMYP and a 1.0 quality point for any AP/dual enrollment/IBDP classes taken. Dual enrollment must be earned from a Regionally SACS accredited university.

Use the following **definitions** to figure the above calculations:

Points per Grade Unit =

A+	97-100	4
A	93-96	4
A-	90-92	3.7
B+	87-89	3.3
B	83-86	3
B-	80-82	2.7
C+	77-79	2.3

C	73-76	2
C-	70-72	1.7
D+	67-69	1.3
D	65-66	1
F	below 65	0
WF		0
WP	Not counted in calculation	

Definitions as reflected on the transcript:

**Total Grade Points** = the sum of (number of credits earned x Points per Grade Unit)

**Total Credits Attempted** = total credit of courses taken whether passed or failed

NOTE: Dropping a course may affect your GPA.

- 1) Any year-long courses dropped on or before the end of the first nine-weeks' grading period will not appear on the high school transcript.  
Any semester courses dropped on or before the first Friday in October for first semester courses or the first Friday in March for second semester courses will not appear on the high school transcript.
- 2) Any courses dropped after the first nine-weeks' grading period OR after the first Friday in October for first semester courses or the first Friday in March for second semester courses will result in one of the following:
  - a) WP = (Withdrawn Passing) NOT calculated in student GPA. WP appears on transcript in place of grade.
  - b) WF = (Withdrawn Failing) WILL BE counted in the GPA calculation. WF will appear on transcript.
- 3) Year-long courses may not be dropped after the first Friday in May.  
Semester courses may not be dropped after completion of the first nine-weeks' grading period of either semester.

Call your school counselor if you have questions regarding GPA calculations.

### ◆ **Class Rank**

Students are ranked numerically, in ascending order, according to GPA at the end of the junior year and at the end of first semester of the senior year. Class rank is computed into a percentile with 0% being the highest and 100% being the lowest.

NOTE: Only students earning verified credit are included in class rank.

### **Diploma Seals**

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Regulations Establishing Standards for Accrediting Public Schools in Virginia contain provisions for awards for exemplary performance for students who meet the requirements for graduation. Students who demonstrate academic excellence may be eligible for one or more of the following awards:

1. **The Governor's Seal** shall be awarded to students who complete the requirements for an Advanced Studies Diploma with an average grade of "B" or better and successfully complete college-level coursework that will earn the student at least nine transferable college credits in Advanced Placement (AP), International Baccalaureate (IB), Cambridge, or dual enrollment courses.
2. **The Board of Education Seal** shall be awarded to students who complete the requirements for a Standard Diploma or Advanced Studies Diploma with an average grade of "A".
3. **The Board of Education Career and Technical Education Seal** will be awarded to students who earn a Standard or Advanced Studies Diploma and complete a prescribed sequence of courses in a career and technical education concentration or specialization that they choose and maintain a "B" or better average in those courses; or (i) 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 (ii) acquire a professional license in that career and technical education field from the Commonwealth of Virginia. The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements. Please view the following Web link for additional information:  
[http://www.doe.virginia.gov/instruction/graduation/diploma\\_seals/](http://www.doe.virginia.gov/instruction/graduation/diploma_seals/)
4. **The Board of Education Seal of Advanced Mathematics and Technology** will be awarded to students who earn either a Standard or Advanced Studies Diploma and (i) satisfy all of the mathematics requirements for the Advanced Studies Diploma (four units of credit including Algebra II; two verified units of credit) with a "B" average or better; and (ii) either (a) pass an examination in a career and technical education field that confers certification from a recognized industry, or trade or professional association; (b) acquire a professional license in a career and technical education field from the Commonwealth of Virginia; or (c) pass an examination approved by the Board that confers college-level credit in a technology or computer science area. The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements. Please view the following Web link for additional information: [http://www.doe.virginia.gov/instruction/graduation/diploma\\_seals/](http://www.doe.virginia.gov/instruction/graduation/diploma_seals/)

5. **The Board of Education Seal for Excellence in Civics Education** will be awarded to students who earn either a Standard or Advanced Studies Diploma and: (i) complete Virginia and United States History and Virginia and United States Government courses with a grade of "B" or higher; and, (ii) have good attendance and no disciplinary infractions as determined by local school board policies and, (iii) complete 50 hours of voluntary participation in community service or extracurricular activities. Activities that would satisfy the requirements of clause (iii) of this subdivision include: (a) volunteering for a charitable or religious organization that provides services to the poor, sick or less fortunate; (b) participating in Boy Scouts, Girl Scouts, or similar youth organizations; (c) participating in JROTC; (d) participating in political campaigns or government internships, or Boys State, Girls State, or Model General Assembly; or (e) participating in school-sponsored extracurricular activities that have a civics focus. Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement.
6. **The Board of Education Seal of Biliteracy** will be awarded to students who earn a Board of Education-approved diploma and pass all required End-of-Course Assessments in English reading and writing at the proficient or higher level. Students will demonstrate proficiency at the intermediate-mid level or higher in one or more languages other than English as demonstrated through an assessment from a list approved by the Superintendent of Public Instruction. American Sign Language qualifies as a language other than English. For additional information on this seal, see <http://sealofbiliteracy.org>
7. **The Board of Education's Seal for Excellence in Science and the Environment** will be awarded to students who earn either a Standard Diploma or Advanced Studies Diploma and (i) complete at least three different first-level board-approved laboratory science courses and at least one rigorous advanced-level or postsecondary-level laboratory science course, each with a grade of "B" or higher; (ii) complete laboratory or field-science research and present that research in a formal, juried setting; and (iii) complete at least 50 hours of voluntary participation in community service or extracurricular activities that involve the application of science such as environmental monitoring, protection, management, or restoration. (Beginning with students entering 9th grade in 2018-2019)
8. Students may receive other seals or awards for exceptional academic, career and technical, citizenship, or other exemplary performance in accordance with criteria defined by the local school board.

## **Dual Enrollment**

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Dual enrollment is a plan that allows high school juniors and seniors (with some exceptions) to meet the requirements for high school graduation while simultaneously earning \*college credit. Most dual-enrollment students are served by the division-wide plan with Reynolds Community College, ECPI University, John Tyler Community College and Longwood University. Students participating in the High Tech Academy at the ACE Center at Highland Springs receive dual credits from Virginia Commonwealth University. In order to participate in dual enrollment courses, students are recommended by their high school principal or school counselor and have permission from their parents. Students must meet course prerequisites and may have to take and pass a college-readiness placement test. If a student elects to take a dual enrollment class, there will be a \$50 fee for each course starting fall of 2019. More information may be acquired from the school counseling office.

Course offerings have been designed to meet the needs of students in planning their program of study. Decisions depend on student enrollment, availability of faculty, facilities, and financial resources. In the event that a course cannot be offered, the student may, however, have the option to take a concurrent course at the college location. Dual enrollment course offerings are subject to agreement between Henrico County and the respective colleges.

\*Students should consult college catalogues about the transfer of college credit between colleges and universities as policies may vary.



## **Eligibility for Activities**

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### ◆ *Middle School Eligibility*

To be eligible for athletics, a student must maintain a 2.0 minimum grade point average and pass English, mathematics, science, social studies, and one additional course. Eligibility for fall sports requires that students pass five courses (referenced above) the preceding year; winter sport participants must have passed the five courses at the end of the previous year and at the end of the first semester of the current year if the season goes into second semester; spring sport participants must have passed the five courses at the end of the first semester of the current year. Before practicing, trying out, or becoming a member of any athletic team, the student must submit to the principal an accurate Middle School Athletic Participation/Parental Consent/Physical Examination Form that is completely filled in and properly signed.

### ◆ *High School Eligibility*

To be eligible to participate in interscholastic athletics, a student must maintain a 2.0 minimum grade point average. For athletics and any other performance-related activities sponsored by the Virginia High School League, the student must meet the following requirements:

- ◆ Must be a bona fide student in good standing of the school represented.
- ◆ Must have been promoted to the ninth grade (eighth-grade students may be eligible for junior varsity competition in sports not offered at the middle school level).
- ◆ Must have enrolled no later than the fifteenth day of the current semester.
- ◆ Must have passed at least five credit courses the preceding year and must be currently taking not fewer than five credit courses for participation during the first semester.
- ◆ Must have passed at least five credit courses the previous semester and must be currently taking no fewer than five credit courses for participation during the second semester.
- ◆ Must not have reached his or her nineteenth birthday on or before the first of August of the current school year.
- ◆ Must not, after entering the ninth grade for the first time, have been enrolled in or have been eligible for enrollment in high school more than eight consecutive semesters.
- ◆ Must submit to the principal before practicing, trying out, or becoming a member of any school athletic team, a High School Athletic Participation/Parental Consent/Physical Examination Form, completely filled in and properly signed. The form attests that the student has been examined after May 1 of the previous school year and found to be physically fit for athletic competition and that his or her parents consent to participation.

Eligibility to participate in interscholastic athletics is a privilege earned by meeting not only the above listed minimum standards, but also all other standards set by the Virginia High School League, district, and school. Students or parents who have questions regarding eligibility or who are in doubt about the effect an activity might have on eligibility should check with the principal or director of student activities.

## **Examinations**

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An examination, 100 minutes in length, is given at the end of each semester in all high school equivalent courses. For a semester course the examination score counts 20% of the final grade; for a year-long course each semester's examination score counts 10% of the final grade. (See "Grading Scale" in this section.)

## **Exceptional Education**

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Exceptional Education and related services are available for all students with identified disabilities that adversely affect their educational performance. This specially designed instruction is described in the student's individualized education program (IEP) and is provided to the student in the least restrictive environment. Exceptional education services are available to all students found eligible through an evaluation/eligibility process, and who have an IEP.

Students with disabilities may participate in all school activities. They may earn any type of diploma based on completion of curriculum and assessment requirements and/or individualized programs. (Refer to "Graduation Requirements" in Section I.)

The programs available at Virginia Randolph Education Center (VREC) provide educational services for students with disabilities. The center's ultimate goal is to have students improve academically and behaviorally to the extent that they can return to their home schools. Programs are provided according to individual student needs as designated in the student's IEP.

## **Gifted and Advanced Learners**

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The following middle and high school services are offered to gifted and other advanced learners:

### **Grades 6-8**

- ◆ Direct gifted services for identified students are provided by the Secondary Gifted Resource Teacher assigned to each middle school. Sixth grade gifted students are required to take a gifted enrichment seminar class.
- ◆ Advanced sections in English provide students the opportunity to examine topics in greater depth and breadth. The grade-level curriculum is modified to include complex learning tasks, variations in pacing, and in-depth independent investigations.
- ◆ Acceleration allows students to take high school credit courses in world history, world language, earth science, mathematics (Algebra I, geometry), Art I, family and consumer sciences, technology education, and business and information technology.
- ◆ The International Baccalaureate Middle Years Program at Fairfield, Moody, and Tuckahoe Middle Schools contains a curriculum model that emphasizes the importance of a holistic view of knowledge, intercultural awareness, and communication.
- ◆ The Gifted Young Scholars Academy at Wilder Middle School provides a comprehensive and rigorous interdisciplinary educational opportunity for students in grades 6-8. Students must have a gifted identification in the area of General Intellect to apply.
- ◆ Please refer to Course #9840 "21st Century Inquiry and Leadership" on page 97 in reference to high school credit.

*Note: For any high school credit-bearing course taken in middle school, parents may request that grades be omitted from the student's high school transcript. However, the passing SOL test will be posted on the student's test results record. The deadline for making such a request is June 30. The student will not earn course credit or verified credit for the course until the course is retaken and passed. Contact the student's middle school for procedures and more detailed information.*

### **Grades 9-12**

- ◆ Direct gifted services for identified students are provided by the Secondary Gifted Resource Teacher assigned to each high school.
- ◆ Honors courses that provide advanced challenges in all core content areas
- ◆ Advanced placement courses that provide the means for colleges to grant credit, placement, or both to students who have applied themselves successfully to introductory college level work
- ◆ International Baccalaureate courses that provide the means for colleges to grant credit, placement, or both
- ◆ Specialty Center programs that address a wide range of student interests (for further information, see "Specialty Centers" in this section)
- ◆ Maggie L. Walker Governor's School for Government & International Studies (For further information, see "Maggie L. Walker Governor's School" in this section.)

## Grading Scale and Honor Roll

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The grading scale for Henrico County Public Schools is as follows:

### 2019-20 Grading Scale

Letter Grade	Percent Grade	4.0 Scale	Letter Grade	Percent Grade	4.0 Scale
A+	97-100	4.0	C+	77-79	2.3
A	93-96	4.0	C	73-76	2.0
A-	90-92	3.7	C-	70-72	1.7
B+	87-89	3.3	D+	67-69	1.3
B	83-86	3.0	D	65-66	1.0
B-	80-82	2.7	F	Below 65	0.0

Henrico County teachers use an electronic grading system to calculate all grades. This system uses standard rounding procedures to determine marking period grades.

Final grades for semester courses are averaged as Marking Period 1 (40%), Marking Period 2 (40%), and Final Exam (20%). Final grades for year-long courses are averaged as Marking Period 1 (20%), Marking Period 2 (20%), First Semester Exam (10%), Marking Period 3 (20%), Marking Period 4 (20%), and Final Exam (10%).

NOTE: Exam exemptions will alter these percentages. The following formulas are used:

$$\text{Final Full Year course (non-exempt): } \frac{(\text{MP1} * 2) + (\text{MP2} * 2) + \text{EX1} + (\text{MP3} * 2) + (\text{MP4} * 2) + \text{EX2}}{10}$$

$$\text{Final Full Year course (exempt): } \frac{(\text{MP1} * 2) + (\text{MP2} * 2) + \text{EX1} + (\text{MP3} * 2) + (\text{MP4} * 2)}{9}$$

$$\text{Second Semester course (non-exempt): } \frac{(\text{MP3} * 4) + (\text{MP4} * 4) + (\text{EX2} * 2)}{10}$$

$$\text{Second Semester course (exempt): } \frac{(\text{MP3} * 4) + (\text{MP4} * 4)}{8}$$

### Guidelines for Honor Roll

Honor Roll is calculated each marking period and each semester as well as for final and cumulative (MP1-MP3) grades. Specific criteria for students' gaining honor roll status include (but are not limited to) the following:

- Students must be taking four academic subjects.
- Students may not have a D or an F in any marking period, semester, final, or cumulative grade. (Students may have any grade on exams.)
- Students with an "I" or an "N" in a course will be flagged for consideration at the school level.  
I = Incomplete, N = No grade
- Students' non home-school courses will be considered in all calculations.
- Students receiving U, WP, and WF will be excluded from Honor Roll.
- Letter grades of S (Satisfactory) or P (Pass) are not considered in Honor Roll calculations.

NOTE: Honor Roll and GPA are calculated differently. Please see your school counselor for honor roll calculation information.

### Homebound/Home-based Program

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The Homebound Program provides instructional assistance and support for core academic courses when a medical determination is made that a student is unable to attend classes for a temporary period of time. Homebound support is provided by VA state-licensed teachers. A *Medical Certification of Need* form and a treatment plan must be completed and signed by a licensed physician, psychiatrist or clinical psychologist and the parent. The certification of need form can be obtained from your school counseling office or downloaded from the HCPS website.

Home-based services authorized through an Individualized Education Program Team serve as a short-term transitional placement until an appropriate long-term placement can be arranged.

## **Instructional Grouping**

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Students are often grouped for instruction in core academic middle and high school courses, specialty center courses, and some elective courses. Grouping is based on a student's motivation, post-secondary and career goals, prior academic performance, standardized test scores, and recommendations from teachers, parents, and counselors.

Most high schools offer the following levels of grouping:

### **◆ College Preparatory**

- Rigorous implementation of the Standards of Learning to assure high performance on SOL end-of-course tests (Refer to Standards of Learning (SOL), End-of-Course Tests, Verified Credits, and Substitute Assessments in this section.)
- College preparatory curriculum designed for students who plan to pursue higher education in the liberal arts, in the fine and performing arts, in mathematics and science
- Career preparation emphasizing high performance standards required for successful pursuit of higher education and/or gainful employment (See Career Clusters in Section III.)
- Independent reading, writing, and short-range and long-range projects required outside of class
- Emphasis on critical thinking, stressing comprehension, application, analysis, synthesis, and evaluation
- Technical and business-world application of subject matter

### **◆ Advanced Placement/International Baccalaureate/Honors**

- Rigorous coursework designed to challenge the highly motivated and academically gifted/advanced student
- Independent reading, writing, and long-range projects required outside of class
- Emphasis on critical thinking skills, stressing higher order analysis, synthesis, and evaluation
- Preparation for four-year college/university and Advanced Placement and IB Examinations in exit-level courses (See "Advanced Placement Examinations Program" and "IB Diploma Program" in this section.)
- Development of career awareness through appropriate connections between subject matter and a variety of career options

*Note: Advanced Placement, IB Diploma and Honors course numbers will be accompanied by the letter A, Y, Z, or IB on the student request form, report card, and transcript, indicating that a weighted credit is awarded. The letter "X" indicates a Specialty Center course and "XA" indicates a Specialty Center Honors course.*

## **International Baccalaureate Diploma Program**

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High school students enrolled in an International Baccalaureate Diploma Program will complete mandatory internal assessment in their IB course work and sit for corresponding International Baccalaureate examinations in May of each year.

Students can receive a score of 1 (poor or elementary) to 7 (excellent) for each subject studied. Universities and colleges typically expect individual Higher Level (HL) subject scores to be a minimum of 4 (satisfactory) or sometimes 5 (good) for credit considerations. See the IB Diploma recognition policy at the university website to determine course credit. Also consult the university or college website to determine second year enrollment status and scholarship availability for those students earning the IB Diploma.

## **Language Instruction Educational Program (LIEP) (formerly English as a Second Language - ESL)**

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An LIEP is provided to all students who are designated as English learners (ELs) at proficiency levels of 1–5 in grades K-12 in all schools. Half-day zone center programs for Level 1 ELs are provided at Brookland Middle School and Quiocasin Middle School for Level I ELs from selected middle schools. Half-day zone center programs for level 1 and level 2 are provided at Hermitage High School and Highland Springs High School for Level 1 and 2 ELs from selected high schools.

## **Maggie L. Walker Governor's School for Government and International Studies (MLWGS)**

This regional high school offers an advanced college preparatory curriculum emphasizing government, international studies, world languages, science, mathematics, and fine arts as well as opportunities for international learning experiences. Eighth-grade students residing in Henrico County are selected on a competitive basis through an application process beginning mid-October through mid-March. Students are eligible to apply if they meet the following criteria:

- reside in Henrico County, Virginia
- be enrolled in or have completed a World Language and successfully pass/passed the course for high school credit
- be enrolled in Algebra I or a higher-level math course during the eighth grade year and successfully pass the course for high school credit
- have a B average according to Henrico County's grading scale for the four core subjects at the end of the 7th grade year. Students who do not have a B average, but would like to be considered as an applicant due to special circumstances, must provide a letter of explanation to the Educational Specialist for Gifted Education Programs, Henrico County Public Schools.

To ensure regional representation at each public middle school, HCPS' internal selection process has two phases. For phase one, HCPS will establish an applicant pool based on the composite score from the MLWGS regional application evaluation process. HCPS will offer admission to the top qualifying applicant from each public middle school that meets the regional established cut-off score in that pool. During phase two, the remaining slots will be offered to all applicants by numerical rank on the MLWGS composite score from highest to lowest. Applicants participating in a special program such as the IB Program or out of zone program will be considered with the public middle school they attend in eighth grade. All home-school or private school applicants will be considered in phase two of the selection process.

Admission handbooks and applications will be available beginning the middle of October with an application deadline in early December. Eighth-grade students enrolled in Henrico County Public Schools may obtain an application from their middle school counselor. Eighth-grade students residing in Henrico County and not enrolled in public schools should contact the Educational Specialist, Gifted Education Programs, Henrico County Public Schools, (804) 652-3765. For additional information, visit the Governor's School website at [www.gsgis.k12.va.us](http://www.gsgis.k12.va.us).

## **Military Science/JROTC**

Military Science/JROTC is offered at six of the county's high schools. Marine Corps JROTC is offered at Hermitage, Highland Springs, and J. R. Tucker. Naval JROTC is offered at Henrico and Varina, and Air Force JROTC is offered at Deep Run. (See Section VI, Course Descriptions.)

## **NCAA Eligibility Center for College-Bound Athletes**

Students who plan to participate as college freshmen in Division I or II athletic programs must register and be certified by the NCAA (National Collegiate Athletic Association) Eligibility Center. Please go to <http://www.ncaa.org> for the most up-to-date information regarding registering online and paying fees. Students should specifically review core course requirements, SAT/ACT requirements, recruiting rules and amateur status. There are specific GPA/SAT/ACT requirements for scholarships. See your school counselor for more information.

Checklist for College-Bound Student Athletes:

- Complete the registration process with the NCAA Eligibility Center at the beginning of your junior year at <http://naaeligibilitycenter.org>
- Ask your school counselor to send your transcript to the Eligibility Center at the end of your junior year
- Take the ACT or SAT and use code 9999 to have scores sent directly to Eligibility Center
- Request final amateurism certification during your senior year
- Ask your high school counselor to submit your final transcript with proof of graduation

## **Nontraditional Programs**

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Henrico County Public Schools offers a variety of nontraditional programs to meet the needs of all students. The following programs provide students with choices in their educational program to be prepared for life in the 21<sup>st</sup> century.

Note: *The HCPS Code of Student Conduct applies to all students participating in any nontraditional program.*

### **Academy at Virginia Randolph**

The Academy at Virginia Randolph (AVR) is open to all high school students who want or need an alternate approach to education. In a compassionate atmosphere fostered by a competent and concerned staff, students are encouraged to develop their talents and skills needed to meet the demands of the 21<sup>st</sup> century. Assisted by school counselors and instructors, students design their own programs of study to meet their needs and to serve as a foundation for their chosen career. The staff works closely with students and their families to pursue the students' educational and occupational career goals. School, family, and community involvement are all elements of the program. Students interested in enrolling at the Academy must complete an application signed by a parent and have school counselors supply the required student information. Once the application has been received, applicants will be notified of a required student and parent information session. Additionally, the prospective student and a parent must meet with the vocational instructor to develop a career plan. Acceptance to the Academy is based on space availability.

All students attending AVR will be working toward a standard or advanced high school diploma. Students may also choose to work toward a career and technical education certificate in addition to their high school diploma.

### **Center for Diversified Studies**

The Center for Diversified Studies, located at the Academy at Virginia Randolph, provides personalized programs for students who want to complete their high school education and who, for various reasons, are unable to complete the last few courses required for graduation at their home high school. Options for courses range from college level to career and technical certificate classes. This nontraditional, flexible educational structure may lead to one of the diploma options described in Section I. The Center's ultimate goal is to coordinate classes for students in order to help them obtain required credits for graduation. A personalized plan based on each student's educational and career goals will be implemented to identify where the student will be taking classes.

### **Communities in Schools Performance Learning Center Program (PLC)**

The PLC program is designed for students who have struggled in the traditional high school setting, but still have a desire to get their diploma. The PLC program, which is located at 2915 Williamsburg Road, will structure a student's learning to meet individual needs in a much smaller school setting through online courses and credit recovery. The individualization of the program allows for most students to complete the program within 18 months or less while earning a standard or advanced studies high school diploma.

### **Edgenuity - (Online Courses)**

- High school students who are behind in credits or those who need an alternative option within the comprehensive school will be given an opportunity to take courses online. Online courses are monitored by a licensed teacher and are taken along with regularly scheduled classes at the comprehensive school. Online courses can often be accelerated because the instruction and assignments are accessible to students 24/7.
- An Edgenuity contract is required. Students should have access to Internet and a laptop at home. Students must complete the course within a specific time frame. If a student does not complete within the prescribed time frame an "F" will be reflected on their transcript.

### **Evening School of Excellence**

The Evening School of Excellence serves high school students. Designed to help students get back on track, the program provides an opportunity for students to complete coursework and recover credits needed for graduation through evening classes offered at two sites, Highland Springs High School and the Academy at Virginia Randolph. The instructional program addresses the learning styles of students through smaller classes, more individualized attention, differentiated teaching strategies, and online course offerings. Students are referred through their home school administrator and/or school counselor. Please note there is an additional fee to take Evening School of Excellence courses.



## **Individual Student Alternative Education Plan (ISAEP) Program**

- Serves eligible students who are at least 16.5 - 18 years old
- Targets students with strong academic skills who have not been successful in a traditional school setting
- Provides instruction for the GED (General Educational Development) Certificate
- Provides career counseling and occupational skills training through participation in work-based learning and exploration of post-secondary opportunities
- Requires an application, mandatory orientation, adherence to attendance requirements and an entrance exam (Test of Adult Basic Education - TABE test).

## **Program for Academic and Career Empowerment at Virginia Randolph (PACE)**

PACE is a nontraditional program that serves overage middle school students. The program is designed to remediate students and allow them to experience success with their peer group in high school the following school year. This unique program provides students with small class sizes, an individualized learning plan, faculty mentorship, blended online curriculum, and project-based learning steeped in collaboration, problem solving, critical thinking, and innovation. Students also explore a wide variety of careers as they earn up to three high school elective credits.

Seventh and eighth grade students who are one or more years overage are eligible for the program. All overage students will be reviewed and recommended to the program by their comprehensive middle school. Overage students will be enrolled in PACE with the intent of them returning to the comprehensive high school or the Academy at Virginia Randolph with three to five high school credits the following year.

## **Number of Credits Per Year**

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- Students may not audit a class.
- Students may not enroll in more than 7 credits per school year without principal approval.

## **Number of Periods Per Day**

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All students shall maintain a full-day schedule of classes unless (1) the student is enrolled in a cooperative work/apprenticeship program or (2) the Superintendent of Schools or the Superintendent's designee grants the student a waiver.

## **Promotion Policies**

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### **Middle School**

To qualify for promotion between middle school grades, or from middle school to high school, students must earn a passing final grade in the four core subject areas of English, mathematics, science and social studies. Students who fail one or more core subjects are retained and recommended to attend summer school to retake the failed courses. If the student does not attend summer school, he/she will be retained.

### **High School**

Satisfactory completion of courses which meet graduation requirements determines promotion or retention on a course-by-course basis.

The requirements for classification of a student at specific grade levels are indicated below:

10th Grade - A student must have earned a minimum of 5 credits, 3 of which must be from the disciplines of English, social studies, mathematics, science, physical education, or economics and personal finance.

11th Grade - A student must have earned a minimum of 10 credits, 6 of which must be from the disciplines of English, social studies, mathematics, science, physical education, or economics and personal finance.

12th Grade - A student must have earned 15 credits, 10 of which must be from the disciplines of English, social studies, mathematics, science, physical education, or economics and personal finance.

## **School Counseling**

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School counseling is a planned, sequential program of services designed to aid children in mastering the academic, personal/social, and career tasks which are essential to the development of academic, technical, and life skills. The primary task of the school counselor is to assist students and their parents in identifying the appropriate pathways that will provide a positive academic, social, and career direction.

## **School/Parent Communication on Student Progress**

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The school year is divided into quarters of nine weeks each; every student receives a report card following each quarter. Parents are encouraged to participate in the PowerSchool Parent Portal where they can check student progress. In addition, parents have opportunities for parent/teacher dialogue through conferences and telephone and/or e-mail contacts. Appointments are recommended for conferences.

## **Sequential Electives - Standard Diploma**

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In order to obtain a 22-credit Standard Diploma, students must take two electives that are sequential (coursework that builds similar skills as defined by the Virginia Department of Education). A course may satisfy the requirement for fine arts or Career and Technical Education and still meet the requirement for sequential electives. Ex. Art I followed by Art II counts as both the sequential electives and the fine arts or Career and Technical Education requirement.

## **Specialty Centers**

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Specialty Centers, located in all Henrico County comprehensive high schools and four middle schools, offer unique choices for HCPS students who have specific educational and/or career goals. Specialty Centers, which also include the Advanced Career Education (ACE) Centers, provide opportunities for students to concentrate on specialized interests or skill-based programs.

Students who wish to complete a rigorous college-preparatory program in addition to concentration on a specialized interest will receive booklets containing information about the Centers in their 8th grade year. Information Sessions and Open Houses during the first semester provide in-depth information about Center curriculum and the application process. Students must apply to Centers in their 8th grade year\* and may use the application available at [henricoschools.us](http://henricoschools.us). Students who are accepted and choose to attend one of these Specialty Centers will become full-time students at the high school which houses the Center; however, students who withdraw from a Specialty Center prior to their junior year will return to their home school to complete their remaining high school years. See pages 46-84 for information about each Specialty Center.

Ninth and tenth grade students who wish to prepare for job-entry skills and/or post-secondary education should be in a rigorous core curriculum cluster at their home high school to prepare for **3-credit** technical courses during their junior and senior years. **All** Advanced Career Education Center programs lead to licensure or certification upon successful completion. Admission is through an application process. Henrico County has two ACE Centers, one at Hermitage High School and another at Highland Springs High School. See pages 58-60 for descriptions of the technical courses offered.

*\* For IBMYP at the middle school level, students must apply during their 5th grade year.*

## **Standards of Learning (SOL), End-of-Course Tests, Verified Credits, and Substitute Assessments**

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The State of Virginia has established a set of K-12 subject-area Standards of Learning (SOL) with corresponding grade level and end-of-course SOL tests. These SOLs are incorporated in the Secondary pacing guides found on the Henrico County Public Schools website. All middle and high school students enrolled in applicable high school credit-bearing courses are required to take corresponding end-of-course tests or substitute tests.

Note: For any high school credit-bearing course taken in middle school, parents may request that grades be omitted from the student's high school transcript. However, the passing SOL test will be posted on the student's test results record. The deadline for making such a request is June 30. The student will not earn course credit or verified credit for the course until the course is retaken and passed. Contact the student's middle school for procedures and more detailed information.

Remediation opportunities (before, after, during school and summer school) will be provided in certain subject areas for students failing one or more of the Standards of Learning tests (SOL tests). Students and parents should check with principals in selecting appropriate programs.

**Students who pass the course and achieve a passing score on an end-of-course test are awarded a verified unit of credit in that course. A verified unit of credit** is awarded for a course in which the student earns a standard unit of credit and achieves a passing score on a corresponding end-of-course SOL test or a substitute assessment approved by the Board of Education.

The State has established the number of standard credits and verified credits required for the Standard Diploma and for the Advanced Studies Diploma (See "Graduation Requirements" in Section I):

Students seeking a **Standard Diploma** must pass 6 end-of-course tests: 2 English plus 1 mathematics, 1 science, 1 social studies/history, and 1 of student's choice.

Students seeking an **Advanced Studies Diploma** must pass 9 end-of-course tests: 2 English, 2 mathematics, 2 science, 2 social studies/history, and 1 of the student's choice.

**Verified credits may be earned in each of the following core content areas:**

### **ENGLISH**

For the 22-Credit Standard Diploma and the 26-Credit Advanced Studies Diploma, Virginia graduation requirements specify four (4) course credits with two (2) verified credits earned by passing the following SOL English end-of-program tests.

- ✓ SOL English end-of-course test, **EOC Writing** (covers grades 9-10 content; 2 parts, 1 verified credit) will be administered to all English tenth-grade students enrolled in the following courses:

English 10 (#1140)

IBMYP English, Level Five (#IB1140)

- ✓ SOL English end-of-course test, **EOC Reading** (covers grades 9-11 content; 1 verified credit) will be administered to all English eleventh-grade students enrolled in the following courses:

English 11 (#1150)

AP English 11 Language & Composition (#1196)

IBDP English HL (#IB1150)

### **MATHEMATICS**

Virginia graduation requirements for the 22-Credit Standard Diploma specify three (3) course credits with one (1) verified credit; and for the 26-Credit Advanced Studies Diploma, four (4) course credits with two (2) verified credits are required.

- ✓ SOL Algebra I end-of-course test will be administered in the following classes:

Algebra I (#3130)

Algebra I - 2 year Sequence Pt. 2 (#3132)\*

IBMYP Algebra I (#IB3130)

- ✓ SOL Geometry end-of-course test will be administered in the following classes:

IBMYP Geometry (#IB3143)

Engineering Mathematics I (#3343)

PSC Geometry (#3143)

Mathematical Investigations I (#3243)

Geometry - 2 year Sequence Pt. 2 (#3145)\*

- ✓ SOL Algebra II end-of-course test will be administered in the following classes:

Algebra II (#3135)

Mathematical Investigations II (#3233)

IBMYP Algebra II (#IB3135)

Engineering Mathematics II (#3333)

\*Exceptional Education only

## SCIENCE

Virginia graduation requirements for the 22-Credit Standard Diploma specify three (3) laboratory science credits (from at least two (2) different science disciplines) with one (1) verified credit; and for the 26-Credit Advanced Studies Diploma, four (4) laboratory science credits (from at least three (3) different science disciplines) and two (2) verified credits are required.

✓ SOL Earth Science end-of-course test will be administered to students enrolled in the following courses:

- Earth Science (#4210)
- AP Environmental Science (#4270)\*
- Earth Science I - Part 2 (4201)\*\*

✓ SOL Biology end-of-course test will be administered to students enrolled in the following courses:

- Biology I (#4310)
- AP Biology (#4370)\*
- IBMYP Biology (#IB4310)
- AP Biology - Research Based (#4341)\*
- Biology II - Advanced Survey of Biology Topics (#4320)\*
- Biology I - 2 year Sequence Pt. 2 (#4301)\*\*

✓ SOL Chemistry end-of-course test will be administered to students enrolled in the following courses:

- Chemistry I (#4410)
- IBMYP Chemistry (#IB4410)
- AP Chemistry (#4470)\*

\*Students would only sit for the SOL test if they had not taken or passed it with the first-year course.

\*\*Exceptional Education only

## SOCIAL STUDIES

Virginia graduation requirements for the 22-Credit Standard Diploma specify three (3) course credits with one (1) verified credit; and for the 26-Credit Advanced Studies Diploma, four (4) course credits with two (2) verified credits are required.

✓ SOL World History I end-of-course test will be administered to students enrolled in the following courses:

- World History & Geography I (#2215)
- IBMYP World History & Geography I, Level Three (#IB2215)

✓ SOL World History II end-of-course test will be administered to students enrolled in the following courses:

- World History & Geography II (#2216)
- IBMYP World History & Geography II, Level Four (#IB2216)
- Immersion World History & Geography II (#2216)

✓ SOL Virginia and United States History end-of-course test will be administered to students enrolled in the following courses:

- Virginia and United States History (#2360)
- IBDP History of the Americas HL (#IB2360)
- AP Virginia and United States History (#2319)
- Virginia and United States History - 2 year Sequence Pt. 2 (#2362)\*

✓ SOL World Geography end-of-course test will be administered to students enrolled in the following courses:

- World Geography (#2210)
- AP Human Geography (#2380)

\*Exceptional Education only

## SUBSTITUTE ASSESSMENTS (FOR SOL TESTS)

Assessments which substitute for SOL tests and enable students to earn verified credit must meet the following minimum criteria:

1. The substitute test must be standardized and graded independently of the school or school division in which the test is given;
2. The substitute test must be knowledge-based;
3. The substitute test must be administered on a multistate or international basis;
4. To be counted in a specific academic area, the substitute test must measure content that incorporates or exceeds the SOL content in the course for which verified credit is given; and
5. The grade or cut score will be pre-determined for approved substitute tests.

**The State Board of Education has approved various tests which may substitute for certain SOL tests. See the DOE website ([www.doe.virginia.gov/testing/substitute\\_tests/index.shtml](http://www.doe.virginia.gov/testing/substitute_tests/index.shtml)) for current listings and minimum acceptable scores.**

### Student Activities

Students are encouraged to explore interests and to participate in student activities that tend to promote and build self-esteem, character, and leadership qualities. Numerous opportunities available for students to excel in activities beyond the classroom include the following:

- ◆ athletics
- ◆ performing groups
- ◆ intramural activities
- ◆ academic competitions
- ◆ co-curricular organizations
- ◆ honorary societies
- ◆ community service
- ◆ service clubs
- ◆ publications
- ◆ interest clubs

For additional information check the school's website.

### Summer Programs

Henrico County Public Schools offers a variety of programs every summer. Tuition is required for most courses. Academic and enrichment programs are offered at most of the middle schools. Career awareness programs for high school students are also offered at both ACE Centers. A comprehensive summer school program either on-site or online is offered to all high school students. Remediation opportunities are provided for students who failed one or more of the Standards of Learning tests (SOL tests) or the W!SE examination. All schools have the appropriate forms and information for registration and enrollment of students. Information concerning possible financial assistance is available through each school's principal.

### Testing Program

#### An overview of division-wide standardized tests and local assessments

Testing is an essential part of a student's education. With test results, students, parents, teachers, and administrators can determine not only the student's strengths but also the school's curricular strengths. State-mandated test scores are a part of the student's school record.

The following standardized tests may be administered to middle and high school students through the Department of Research and Planning:

<i>Grade</i>	<i>Test</i>	<i>Dates</i>
6 - 8	NWEA (Northwest Evaluation Association) - MAP (Measure of Academic Progress) assessment given to students in grades 6-8 in Reading and Math.	Fall, Winter (optional), Spring
6 - 12	Virginia Standards of Learning (SOL) Tests (Refer to "Standards of Learning and End-of Course Tests.")	Spring Summer, Fall (for certain students)
6 - 12	ACCESS for ELs (English learners only)	Spring
10 - 11	PSAT/NMSQT (see following paragraph)	Fall
9 - 12	Career & Technical Education (CTE) Industry Credentials	Fall, Winter, Spring

Unique to Henrico County Public Schools is the opportunity for all 10th grade students to take, free of charge, the Preliminary Scholastic Aptitude Test (PSAT)/National Merit Scholarship Qualifying Test (NMSQT) given in October. The official PSAT/NMSQT taken during the fall of the junior year is a requirement for eligibility for some scholarships. (A fee is required.)

Henrico County Public Schools also administers the following local assessments/simulation assessments correlated to the Standards of Learning in the core content areas:

<i>Grade</i>	<i>Content Areas</i>	<i>Dates</i>
8 & 10	English (writing)	Fall
6 - 7	Science 6, Life Science	Spring

### **Transfer Students**

For all students in social studies and science for the standard diploma only, LAVCs (Locally Awarded Verified Credits) are available in English and Mathematics for students with disabilities who are eligible for credit accommodations stipulated in each student's IEP/504 plan. In order to be eligible for an LAVC a student must

- Pass the high school course
- Score 375-399 scale score range on an SOL test after taking the test at least twice. Special circumstances may be considered for first time transfers regarding meeting graduation requirements earning verified credits. Please contact your school counselor.

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# SECTION III

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## Career and Technical Education (CTE)

- Career Clusters
- Descriptions and Course Offerings for Each Cluster and CTE Industry Credential Information



# Career & Technical Education (CTE)

## Career Cluster Descriptions

<b>Agriculture, Food &amp; Natural Resources</b>	The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources
<b>Architecture &amp; Construction</b>	Careers in designing, planning, managing, building and maintaining the built environment
<b>Arts, A/V Technology &amp; Communications</b>	Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services
<b>Business Management &amp; Administration</b>	Business Management and Administration careers encompass planning, organizing, directing and evaluating business functions essential to efficient and productive business operations. Business Management and Administration career opportunities are available in every sector of the economy
<b>Education &amp; Training</b>	Planning, managing and providing education and training services, and related learning support services
<b>Finance</b>	Planning, services for financial and investment planning, banking, insurance, and business financial management
<b>Government &amp; Public Administration</b>	Executing governmental functions to include Governance, National Security, Foreign Service, Planning, Revenue and Taxation, Regulation, and Management and Administration at the local, state and federal levels
<b>Health Science</b>	Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development
<b>Hospitality &amp; Tourism</b>	Encompasses the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services
<b>Human Services</b>	Preparing individuals for employment in career pathways that relate to families and human needs
<b>Information Technology</b>	Building Linkages in IT Occupations Framework: for Entry Level, Technical, and Professional Careers Related to the Design, Development, Support and Management of Hardware, Software, Multimedia, and Systems Integration Services
<b>Law, Public Safety, Corrections &amp; Security</b>	Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services
<b>Manufacturing</b>	Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering
<b>Marketing</b>	Planning, managing, and performing marketing activities to reach organizational objectives
<b>Science, Technology, Engineering &amp; Mathematics</b>	Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services
<b>Transportation, Distribution &amp; Logistics</b>	Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance

The Career Clusters are being used with permission of the States' Career Clusters Initiative, 2009, [www.careerclusters.org](http://www.careerclusters.org)

# Career & Technical Education

## Course Offerings

CTE Industry Credentials are available. A credential is defined as an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness skills assessment.

### Agriculture, Food & Natural Resources

#### AGRICULTURAL EDUCATION

Detailed course descriptions can be found on page 86 in Section VI of the Planning Guide.

Greenhouse Management  
Landscaping

### Business Management & Administration

#### Finance

#### Information Technology

#### Law, Public Safety, Corrections & Security

#### BUSINESS and INFORMATION TECHNOLOGY

Detailed course descriptions can be found on pages 88-89 in Section VI of the Planning Guide.

Accounting I (Honors)  
Accounting II (Honors)  
Advanced Microsoft IT Academy (Honors)  
AP Computer Science Principles  
Business Law  
Business Management  
Digital Applications  
Digital Input Technologies  
Discovering Business and IT  
Economics & Personal Finance  
Exploring Business Computers  
Exploring Computer Science  
Introduction to Coding  
Legal Systems Administration  
Make It Your Business  
Medical Systems Administration  
Microsoft IT Academy  
Office Administration  
Principles of Business and Marketing  
Programming (Honors)  
Web Development/Programming I & II

### Education & Training

#### Marketing

#### EDUCATION for EMPLOYMENT (EFE)

Detailed course descriptions can be found on pages 112-113 in Section VI of the Planning Guide.

Introduction to Education for Employment  
Education for Employment I and II  
Work Experience Cooperative Education Program

### Arts, A/V Technology & Communications

#### Education & Training

#### Finance

#### Hospitality & Tourism

#### Human Services

#### Marketing

#### FAMILY and CONSUMER SCIENCES

Detailed course descriptions can be found on pages 96-97 in Section VI of the Planning Guide.

Child Development and Parenting  
Creative Fashion (Intro to Fashion Careers)  
Culinary Arts I and II  
Early Childhood Education and Services I and II  
Independent Living  
Introduction to Culinary Arts  
Introduction to Interior Design  
Introduction to Virginia Teachers for Tomorrow,  
Grade 8 or 9  
Life Planning  
Nutrition and Wellness  
Relationships (Family Relations)  
Teen Living 6 & 7 (FACS Exploratory I and II)  
Virginia Teachers for Tomorrow I and II

### Agriculture, Food & Natural Resources

#### Health Science

#### HEALTH and MEDICAL SCIENCES

Detailed course descriptions can be found on pages 97-98 in Section VI of the Planning Guide.

Emergency Medical Technician  
Nurse Aide  
Pharmacy Technician  
Practical Nursing I & II  
Practical Nursing III  
Sports Medicine  
Veterinary Science I & II

# Career & Technical Education

## Course Offerings (cont.)

CTE Industry Credentials are available. A credential is defined as an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness skills assessment.

### **Business Management & Administration**

**Finance**

**Hospitality & Tourism**

**Marketing**

#### **MARKETING**

Detailed course descriptions can be found on page 99-100 in Section VI of the Planning Guide.

Digital Marketing

Entrepreneurship

Fashion Marketing I

Fashion Marketing II

Hospitality, Tourism and Catering

Marketing I

Marketing II

Principles of Business and Marketing

Sports and Entertainment Marketing I

Sports and Entertainment Marketing II

Sports and Entertainment Marketing II Honors

Tourism Marketing, Sales, and Catering

### **Education & Training**

**Government & Public Administration**

**Law, Public Safety, Corrections & Security**

**Transportation, Distribution & Logistics**

#### **MILITARY SCIENCE**

Detailed course descriptions can be found on page 102 in Section VI of the Planning Guide.

Air Force JROTC

Marine Corps JROTC

Naval Corps JROTC

### **Architecture & Construction**

**Arts, A/V Technology & Communications**

**Information Technology**

**Manufacturing**

**Science, Technology, Engineering  
& Mathematics**

**Transportation, Distribution & Logistics**

#### **TECHNOLOGY EDUCATION**

Detailed course descriptions can be found on pages 108-110 in Section VI of the Planning Guide.

Advanced Drafting and Design

Advanced Photography (Imaging Technology)

Architectural Drawing/Design/CAD

Career and Technical Occupational Exploration

Communications Systems

Construction Technology

Digital Visualization

Drafting and Design

Electronic Systems I and II

Energy and Power

Engineering Analysis and Applications II

Engineering Drawing/Design/CAD

Engineering Explorations I

Geospatial Technology

Introduction to Photography (Semester Imaging Technology)

Introduction to Technology

Inventions and Innovations

Manufacturing Systems I and II

Materials and Processes Technology with Metals

Materials and Processes Technology with Woods

Production Systems with Metals

Production Systems with Woods

Technical Drawing/Design/CAD

Technological Systems

Technological Systems/Manufacturing

Technology Foundations

Technology of Robotic Design

Technology Transfer

Video and Media Technology

# Career & Technical Education

## Course Offerings (cont.)

*CTE Industry Credentials are available. A credential is defined as an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness skills assessment.*

**Architecture & Construction**

**Arts, A/V Technology & Communications**

**Hospitality & Tourism**

**Human Services**

**Information Technology**

**Law, Public Safety, Corrections & Security**

**Manufacturing**

**Science, Technology, Engineering &  
Mathematics**

**Transportation, Distribution & Logistics**

### **TRADE and INDUSTRIAL EDUCATION**

Detailed course descriptions can be found on pages 110-112 in Section VI of the Planning Guide.

Air Conditioning, Refrigeration, and Plumbing I and II

Auto Body Repair I and II

Automotive Technology I and II

Barbering I, II, and III

CAD-Computer-Aided Drafting/3D Animation I and II

Carpentry I and II

Computer Systems Technology I and II

Cosmetology I, II, and III

Criminal Justice I and II

Diesel Technologies I and II

Electricity and Cabling I and II

Graphic Communications I and II

Industrial Maintenance Repair/Welding I and II

Masonry I and II

Precision Machining Technology I and II

Radio Broadcasting and Journalism I and II

# NOTES

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# **SECTION IV**

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Specialty Centers and Programs

Middle Schools

# Gifted Young Scholars Academy

## L. Douglas Wilder Middle School

The Gifted Young Scholars Academy (GYSA) at L. Douglas Wilder Middle School provides a comprehensive and rigorous interdisciplinary educational opportunity for students in grades 6-8. Students must be identified as gifted in the area of General Intellect to apply. In addition to mastery of foundational content and skills, students attending GYSA are expected to master advanced competencies across all content areas. The Academy will provide opportunities for leadership, inquiry based learning, literary and scientific analysis, service learning, arts integration, and problem based learning that focuses on topics of strength and interest. This comprehensive instructional program is designed around the cognitive characteristics and learning styles of gifted children, providing an integrated curriculum incorporating focused reflection, interaction, and discussion.

### Gifted Young Scholars Academy Course Offerings

Course	6th	7th	8th (2020/21)
Language Arts	GYSA English 6	GYSA English 7	GYSA English 8
Social Studies	GYSA U.S. History/Civics	GYSA U.S. History/Econ.	GYSA World History*
Science	GYSA Life Science	GYSA Physical Science	GYSA Earth Science*
Math	GYSA Math 6/7 GYSA Algebra I*	GYSA Algebra I* GYSA Geometry*	GYSA Geometry* GYSA Algebra II*
World Languages	Spanish I* Chinese I*	Spanish II* Chinese II*	Spanish III* Chinese III*
PE	Health & PE 6	Health & PE 7	Health & PE 8
Electives	GYSA Innovation <sup>1</sup>	GYSA Innovation <sup>1</sup>	GYSA Innovation <sup>1*</sup>
	Visual & Performing Arts	Visual & Performing Arts	Visual & Performing Arts

<sup>1</sup> 9 week rotations may include Cooking With Chemistry, Digital Media and Movie Making, CTE, Service Learning, Robotics, Drone Technology, Drama, Leadership, Advancements in Medicine, etc. based on student interest and staff expertise. Students will select 4 per year.

\* High School Credit

#### GYSA Accelerated US History I/Civics

Course #2354GYSA  
36 weeks; required 6th Grade  
Middle Schools

- Focus on the history of the United States from Pre-Columbian times until 1865
- Analyze primary and secondary sources
- Engage in historical analysis and interpretation

#### GYSA Accelerated US History 2/ Economics

Course #2355GYSA  
36 weeks; required; 7th Grade

- ✓ SOL Civics and Economics test
- Focus on American History from 1865 to the present
- Study documents and events that lay the foundation of American ideals and institutions
- Analyze principles, structure, and operation of the American economy

#### GYSA World History and Geography I (Available 2020-2021)

Course #2215GYSA  
36 weeks (1 cr.); required; Grade 8

- ✓ World History I SOL
- Examine physical, regional, and human geography
- Examine regions of the world along with conflicts and cooperation
- Engage in classroom discussions utilizing map skills, data analysis, and virtual tours

#### GYSA English 6 Advanced

Course #1109GYSA  
36 weeks; required

- ✓ Grade 6 SOL Reading test
- Examine the world through challenging textual analysis and writing, and apply comprehension and writing skills to a variety of interdisciplinary and problem-based experiences
- Develop research skills, including MLA style
- Build increased knowledge of the writing process, grammatical structure, and advanced vocabulary

#### GYSA English 7 Advanced

Course #1110GYSA  
36 weeks; required

- ✓ Grade 7 SOL Reading test
- Experience inquiry-based instruction and reading through the theme of “Persuasion”
- Apply literary skills to the analysis and development of a variety of media
- Write and read across the content areas to influence and positively affect our community

#### GYSA English 8 Advanced (Available 2020-2021)

Course #1120GYSA  
36 weeks; required

- ✓ Grade 8 SOL Reading test
- ✓ Grade 8 SOL Writing test
- Deepen analysis of a variety of literature through text annotation
- Craft essays that increase insight into literature and life
- Manipulate grammar and syntax for intended effect



# Gifted Young Scholars Academy

## L. Douglas Wilder Middle School

### **GYSA Accelerated Math 6/7**

Course #3115GYSA

36 weeks; required; Grade 6

✓ Grade 7 SOL test

- Rigorous independent environment
- Algebraic concepts
- Solve and graph linear equations and inequalities

### **GYSA Algebra I**

Course #3130GYSA

36 weeks (1 cr.); required; Grade 6

(Prerequisite: Early Bird) or Grade 7

✓ Algebra I SOL test

- Represent problem situations using expressions, equations, and inequalities
- Apply algebraic concepts and processes to the real world
- Graph and solve linear and quadratic functions

### **GYSA Geometry (Available 2020-2021)**

Course #3143GYSA

36 weeks (1 cr.); required; Prerequisite:

Algebra I

✓ Geometry SOL test

- Understand the principles of plane, solid, and coordinate geometry
- Investigate and solve problems involving circles and polygons
- Determine congruence and similarity of polygons

### **GYSA Algebra II (Available 2020-2021)**

Course #3135GYSA

36 weeks (1 cr.); required; Prerequisite:

Geometry

✓ Algebra II SOL test

- Represent problem situations using expressions, equations, and inequalities
- Graph and solve linear and quadratic functions
- Apply algebraic concepts and processes to the real world

### **GYSA Life Science**

Course ##4115GYSA

36 weeks; required; Grade 6

- Explore relationships between organisms, populations, and communities
- Focus on environmental stewardship with emphasis on real world issues and solutions
- Develop and design a long term, independent science project with infusion of technology and experimental design

### **GYSA Physical Science**

Course #4125GYSA

36 weeks; required; Grade 7

✓ SOL Cumulative Grade 8 science test

- Introduce concepts in chemistry and physics in dynamic manner
- Emphasize mathematical equations and their relationship to physical science phenomenon
- Complete a long term, independent science project

### **GYSA Earth Science Honors (Available 2020-2021)**

Course #4210GYSA

36 weeks (1 cr.); required; Grade 8

✓ SOL Earth Science end-of-course test

- Connect the study of Earth's composition, processes, atmosphere, freshwater, oceans, and its environment in space
- Emphasize historical contributions of scientific thought about the Earth and space
- Interpret maps, charts, tables, and profiles, as well as extract key information from scientific publications and analyze/interpret real-time data from various sources

### **Spanish I**

Course #5510

36 weeks (1 cr.); elective

Middle/High schools

- Acquire skills in comprehending, speaking, reading, and writing Spanish
- Learn vocabulary and structures for everyday situations
- Explore the geography, customs, and traditions of Spain and Hispanic America

### **Spanish II**

Course #5520

36 weeks (1 cr.); elective

High schools

- Continue to improve all communication skills; reading, writing, listening and speaking
- Learn to speak the language with more fluency and ease
- Increase vocabulary and improve grammar usage

### **Spanish III**

Course #5530

36 weeks (1 cr.); elective

High schools

- Increase comprehension, speaking, reading, and writing skills
- Read, discuss, and write short, creative themes on stories drawn from the Spanish cultural heritage
- Read excerpts from the literature of Spanish-speaking countries and expand the study of history, art, music, and geography

### **Chinese I**

Course #5810

36 weeks (1 cr.); elective

Middle/High schools

- Acquire skills in understanding and speaking the Chinese language
- Learn basic vocabulary, grammar and characters used in daily living and conversations
- Discuss geography, history, culture and traditional customs of China

### **Chinese II**

Course #5820

36 weeks (1 cr.); elective

High schools

- Increase vocabulary and grammatical structures and learn more Chinese characters
- Develop the ability to speak and communicate in Chinese
- Increase knowledge of the history, geography, culture and customs of China

### **Chinese III**

Course #5830

36 weeks (1 cr.); elective

High schools

- Continue to improve all communication skills; reading, writing, listening and speaking
- Refine pronunciation and fluency
- Increase knowledge of culture and number characters used in written communication

### **GYSA Physical and Health Education Level One**

Course #7110GYSA

36 weeks; required; Grade 6

- Learn how communicable diseases, physical and emotional changes and nutrition affect the body
- Demonstrate safety in physical activity settings
- Apply physical fitness concepts to achieve wellness-related fitness

### **GYSA Physical and Health Education Level Two**

Course #7120GYSA

36 weeks; required; Grade 7

- Learn about stimulants, depressants, narcotics, hallucinogens, and drug abuse
- Practice conflict resolution and violence prevention skills
- Apply principles of personal fitness for proficiency in the Virginia wellness fitness standards

### **GYSA Physical and Health Education Level Three**

Course #7200GYSA

36 weeks; required; Grade 8

- Identify behaviors that promote positive relationships
- Practice conflict resolution and violence prevention skills
- Participate in physical fitness screenings to achieve improvements in Virginia wellness-related fitness

# International Baccalaureate Programs

## Middle Years Program - Fairfield, Moody & Tuckahoe Middle Schools

The International Baccalaureate Middle Years Program (IBMYP), grades 6-10, at Fairfield, George H. Moody, and Tuckahoe Middle Schools, as well as Henrico and J. R. Tucker High Schools, offers an advanced curriculum for motivated students who are curious about the world around them and have demonstrated an ability to achieve academically. Students are challenged to think globally and become self-directed learners, taking IBMYP courses in all eight subject areas each year of the program. Interdisciplinary instruction connects the eight IB subject areas – the Arts, Design, Individuals and Societies, Language Acquisition, Language and Literature, Mathematics, Physical and Health Education, and Sciences. The Design requirements may be integrated through other MYP core subjects in Grades 6-8. The program is designed around Global Contexts, Key Concepts, and Approaches to Learning.

### International Baccalaureate Middle Years Program Course of Study

Grade 6, Level One	Grade 7, Level Two	Grade 8, Level Three
IBMYP Language & Literature (English) IBMYP Language Acquisition (French IA, Spanish IA) IBMYP Physical and Health Education *IBMYP Mathematics IBMYP Sciences IBMYP Individuals & Societies, US History, Part I IBMYP Arts: Visual and Performing **Electives	IBMYP Language & Literature (English) IBMYP Language Acquisition (French IB, Spanish IB) IBMYP Physical and Health Education *IBMYP Mathematics IBMYP Sciences IBMYP Individuals & Societies, US History, Part II IBMYP Arts: Visual and Performing **Electives	IBMYP Language & Literature (English) IBMYP Language Acquisition (French II, Spanish II) IBMYP Physical and Health Education *IBMYP Mathematics IBMYP Sciences IBMYP Individuals & Societies, World History and Geography I IBMYP Arts: Visual and Performing **Electives

- NOTES:** \* Entry level in mathematics is based on ability and preparation at the elementary level. In the IBMYP, students must complete Algebra I successfully before entering the ninth grade.
- \*\* Electives may include beginning band, intermediate band, advanced band, chorus, art, creative writing workshop, journalism, drama, independent living, word processing, keyboarding, Design, or gifted enrichment.

For more information on the continuation of the International Baccalaureate Programs in high school, see the IB descriptors in Section V of this planning guide.

### Course Descriptions

*Courses in the IBMYP incorporate the Virginia Standards of Learning, the Essentials of the Curriculum, and the standards set by the International Baccalaureate Organization.*

**IBMYP Language & Literature, Level One**  
 Course #IB1109  
 36 weeks; required; Grade 6  
 ✓ Grade 6 Reading SOL  
 • Introduce aims, objectives, and assessments of IBMYP Language and Literature  
 • Improve writing style while analyzing various types of literature  
 (See Course #1109 in Section VI for additional course content)

**IBMYP Language & Literature, Level Two**  
 Course #IB1110  
 36 weeks; required; Grade 7  
 ✓ Grade 7 Reading SOL  
 • Emphasize analysis and interpretation of various genres of literature  
 • Strengthen organization and style through completion of analytical, creative, persuasive, and research writing activities  
 (See Course #1110 in Section VI for additional course content)

**IBMYP Language & Literature, Level Three**  
 Course #IB1120  
 36 weeks; required; Grade 8  
 ✓ Grade 8 Writing SOL and Grade 8 Reading SOL  
 • Increase analysis and interpretation of various genres with an emphasis on independent critical thinking  
 • Continue analytical, creative, persuasive, and research writing with a focus on audience, craftsmanship, and purpose  
 (See Course #1120 in Section VI for additional course content)



# International Baccalaureate Programs

## Middle Years Program - Fairfield, Moody & Tuckahoe Middle Schools

### Course Descriptions (cont.)

#### IBMYP French IA

Course #IB5113

36 weeks; required; Grade 6

This is a possible world language (Language Acquisition) course required of all students entering the IBMYP. Delivered with an interdisciplinary approach, the focus on global awareness connects French to other disciplines.

(See Course #5113 in Section VI for additional course content)

#### IBMYP French IB

Course #IB5115

36 weeks (1 cr.); required; Grade 7

This is the second half of the world language (Language Acquisition) requirement for IBMYP. Placement is based on successful completion of IBMYP French IA.

(See Course #5115 in Section VI for specific course content)

#### IBMYP French II

Course #IB5120

36 weeks (1 cr.); required; Grade 8

This is the second level of required world language (Language Acquisition) for all IBMYP students. The accelerated content is a preparation for those students entering the IBMYP at the high school level.

(See Course #5120 in Section VI for specific course content)

#### IBMYP Spanish IA

Course #IB5513

36 weeks; required; Grade 6

This is a possible world language (Language Acquisition) course required of all students entering the IBMYP. Delivered with an interdisciplinary approach, the focus on global awareness connects Spanish to other disciplines.

(See Course #5513 in Section VI for additional course content)

#### IBMYP Spanish IB

Course #IB5515

36 weeks (1 cr.); required; Grade 7

This is the second half of the world language (Language Acquisition) requirement for IBMYP. Placement is based on successful completion of IBMYP Spanish IA.

(See Course #5515 in Section VI for specific course content.)

#### IBMYP Spanish II

Course #IB5520

36 weeks (1 cr.); required; Grade 8

This is the second level of required world language (Language Acquisition) for all IBMYP students. The accelerated content is a preparation for those students entering the IBMYP at the high school level.

(See Course #5520 in Section VI for specific course content)

#### IBMYP Physical and Health Education, Level One

Course #IB7110

36 weeks; required; Grade 6

- Learn how communicable diseases, physical and emotional changes and nutrition affect the body
- Demonstrate safety in physical activity settings
- Apply physical fitness concepts to achieve wellness-related fitness

#### IBMYP Physical and Health Education, Level Two

Course #IB7120

36 weeks; required; Grade 7

- Learn about stimulants, depressants, narcotics, hallucinogens, and drug abuse
- Practice conflict resolution and violence prevention skills
- Apply principles of personal fitness for proficiency in the Virginia wellness fitness standards

#### IBMYP Physical and Health Education, Level Three

Course #IB7200

36 weeks; required; Grade 8

- Identify behaviors that promote positive relationships
- Practice conflict resolution and violence prevention skills
- Participate in physical fitness screenings to achieve improvements in Virginia wellness-related fitness

#### IBMYP Mathematics, Course One, Level One

Course #IB3110

36 weeks; required; Grade 6

✓ Grade 6 SOL test

This course is one option for Level One students in the IBMYP. Students entering the IBMYP at grade 6 will be placed appropriately based on their prior mathematical background, preparation, and assessment.

(See Course #3110 in Section VI for specific course content)

#### IBMYP Mathematics, Course Two, Level One or Two

Course #IB3111

36 weeks; required; Grade 6 or 7

✓ Grade 7 SOL test

This course is one option for either Level One or Level Two students in the IBMYP. Students entering the IBMYP at grade 6 or 7 will be placed appropriately based on their prior mathematical background, preparation, and assessment. (See Course #3111 in Section VI for additional course content)



# International Baccalaureate Programs

## Middle Years Program - Fairfield, Moody & Tuckahoe Middle Schools

### Course Descriptions (cont.)

#### **IBMYP Accelerated Math 6/7**

Course #IB3115

36 weeks; required; Grade 6

✓ Grade 7 SOL test

This course is one option for Level One students in the IBMYP. Students entering the IBMYP at grade 6 will be placed appropriately based on their prior mathematical background, preparation and assessment. (See course #3115 in Section VI for additional course content)

#### **IBMYP Algebra I, Level One, Two or Three**

Course #IB3130

36 weeks (1 cr.); required; Grade 6, 7 or 8

✓ SOL Algebra I end-of-course test

Students entering the IBMYP at this level will be placed appropriately based on prior mathematical background, preparation, and assessment.

(See Course #3130 in Section VI for specific course content)

#### **IBMYP Geometry, Level Two or Three**

Course #IB3143

36 weeks (1 cr.); required; Grade 7 or 8

✓ SOL Geometry end-of-course test

This is the recommended sequential course for those students who have completed Algebra I. Students who enter IBMYP at this level will be placed appropriately based on their prior mathematical background, preparation, and assessment.

(See Course #3143 in Section VI for specific course content)

#### **IBMYP Life Science, Level One**

Course #IB4115

36 weeks; required; Grade 6

- Emphasize the life sciences
- Introduce the aims, objectives, and assessments of the IBMYP technology course, Level One
- Combine the study of the IBMYP design cycle and the scientific method

(See Course #4115V in Section VI for additional course content)

#### **IBMYP Physical Science, Level Two**

Course #IB4125

36 weeks; required; Grade 7

✓ SOL Cumulative Grade 8 SOL Science test

- Introduce the physical sciences
- Incorporate the IBMYP technology course, Level Two

(See Course #4125V in Section VI for additional course content.)

#### **IBMYP Earth Science, Level Three**

Course #IB4210

36 weeks; required; Grade 8

✓ SOL Earth Science end-of-course test

- Emphasize the earth sciences
- Incorporate the IBMYP technology course, Level Three

(See Course #4210 in Section VI for additional course content)

#### **IBMYP US History Part I, Level One**

Course #IB2354

36 weeks; required; Grade 6

This course is for students who enter the IBMYP in the sixth grade.

(See Course #2354V in Section VI for specific course content. Additionally, this course incorporates civics into the curriculum.)

#### **IBMYP US History Part II, Level Two**

Course #IB2355

36 weeks; required; Grade 7

✓ SOL Civics and Economics test

This course is for students in the second year of the IBMYP.

(See Course #2355V in Section VI for specific course content. Additionally, this course incorporates civics into the curriculum.)

#### **IBMYP World History and Geography I, Level Three**

Course #IB2215

36 weeks (1 cr.); required; Grade 8

✓ SOL World History I end-of-course test

Students will be challenged to think like historians and social scientists by analyzing primary and secondary sources and by using other tools of historical analysis including maps, pictures, stories, diagrams, charts, chronology, inquiry/research, and technology.

(See Course #2215 in Section VI for additional course content)



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# **SECTION V**

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Specialty Centers and Programs

High Schools

# Advance College Academy - Business Administration Highland Springs High School

- Students earn an advanced studies high school diploma by taking a wide range of honors and AP level classes.
- Students earn an Associate of Science degree in Business Administration from Reynolds Community College (JSRCC) during their four years in high school.
- All 61 JSRCC credits are eligible for transfer to a four-year college or university.
- College courses are taught by selected HCPS teachers, credentialed as adjunct professors with JSRCC.
- There is a minimal charge for students to enroll in the program and earn an associate degree through the program.

## Advance College Academy Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
English 9 Honors Biology Honors Geometry or Algebra II Honors World History II Honors World Language Health and P.E. HCPS Elective	English 10 Honors Chemistry Honors, AP Physics, or AP Environmental Science Algebra II or Math Analysis Honors AP European History or AP World History World Language Economics & Personal Finance Health and P.E. HCPS Elective **College Success Skills 100 & Personal and Community Health 115*	English 111 & 112* AP Physics or AP Chemistry <sup>1</sup> Math 161 & 261* (Pre-calculus and Applied Calculus) History 121 & 122* Leadership Development & Business 100* Intro to Computer Apps 115* & Spreadsheets (Excel) 140* (Microsoft IT Academy) HCPS Elective	English 244 & 242* Biology 101 & 102*, Biology Lab Accounting 211 & 212* (Accounting I & II) Economics 201 & 202* Political Science 211 & 212* HCPS Elective HCPS Elective

- NOTES: <sup>1</sup> In order to take AP Chemistry students must take Earth Science in 8th grade.
- \* All courses identified with asterisks are JSRCC courses that meet the requirements of an advanced studies high school diploma.
  - \*\* College Success Skills 100 & Personal and Community Health 115 must be taken during the summer prior to Grade 11.
  - Students must earn a B or higher in Algebra I and maintain a 3.0 GPA through 8th grade. It is recommended that students complete World History I prior to enrolling in the Academy.
  - Curriculum is subject to change.
  - All students must successfully complete the Economics and Personal Finance course.
  - Each dual enrollment class will have a \$50 fee.\*

ACA - H.S.	Number of dual enrollment classes	Fee	Total
11th Grade	11 classes	\$50/class	\$550/student
12th Grade	10 classes	\$50/class	\$500/student
TOTAL COST of two-year program			\$1050/student

\*Fee applies to students entering the program in fall of 2019.





# Advance College Academy - Business Administration

## Highland Springs High School

### Course Descriptions

#### **JSRCC College Composition 111 & 112**

Course # D1196

36 weeks; dual credit; (1 HS cr. & 6 College cr.); Grade 11

Required for academy students

- ✓ SOL English end-of-course Reading test
- Use nonfiction texts to develop rhetorical strategies, compose argumentative writing and utilize cross-curricular learning communities
- Prepare for the Advanced Placement Language and Composition exam

#### **JSRCC American & English Literature 244 & 242**

Course # D1195

36 weeks; dual credit; (1 HS cr. & 6 College cr.); Grade 12

Required for academy students

- Focus on the historical and philosophical influences on literature
- Write pieces that require analysis, synthesis, and evaluation involving cross-curricular learning communities
- Prepare for the Advanced Placement Literature and Composition exam

#### **JSRCC General Biology 101 & 102**

Course # D4370

36 weeks; dual credit; (1 HS cr. & 8 College cr.); Grade 12

Required for academy students

- Major topics include pathways and transformation of energy and matter; information flow, exchange and storage; evolution; ecology; botany; the origin of animals and the biology of animal systems
- Read and analyze peer reviewed scientific literature and relate to major course topics
- Prepare for the Advanced Placement Biology exam

#### **JSRCC General Biology Lab**

Course # D4371

36 weeks (.5 cr.); required for academy students; Grade 12

- Further develop laboratory and reporting skills
- Collect data, incorporate current scientific literature, create journal formatted reports
- Conduct research using cross-curricular learning communities

#### **JSRCC Pre-calculus with Trigonometry**

**JSRCC MTH 161**

Course # D3162

18 weeks; dual credit; (.5 HS cr. & 3 College cr.); required for academy students; Grade 11 or 12

- Placement through JSRCC math placement test required
- Explore polynomials, logarithms, exponential and rational functions, matrices
- Explore, graph, and apply trigonometric functions through learning communities

#### **JSRCC Applied Calculus**

**JSRCC MTH 261**

Course # D3177

18 weeks; dual credit (.5 HS cr. & 3 College cr.) Applied calculus or statistics required for academy students; Grade 11

- Placement through JSRCC math placement test required
- Understanding of limits as they apply to continuity, product, quotient, and chain rules to differentiate polynomial, rational, and transcendental functions, word problems
- Utilized cross-curricular learning communities to explore practical applications

#### **JSRCC United States History 121 & 122**

Course # D2319

36 weeks dual credit (1 HS cr. & 6 College cr.); required for academy students; Grade 11

- ✓ SOL Virginia and United States History end-of-course test.
- Read historical material critically, weigh evidence, and use learning communities to arrive at conclusions
- Prepare for the Advanced Placement US History exam

#### **JSRCC Political Science 211 & 212**

Course # D2445

36 weeks; dual credit (1 HS cr. & 6 College cr.); required for academy students; Grade 12

- Obtain a college-level perspective on politics and government in the United States
- Explore institutions, groups, beliefs, and ideas of American political reality through learning communities
- Prepare for the Advanced Placement US Government exam

#### **JSRCC Introduction to Computer Applications and Concepts**

**ITE 115**

Course # D6618

18 weeks (.5 HS cr. & 3 college cr.) Required by academy students for associate degree; Grade 12

- Computer literacy demonstrated through use of software suite which includes word processing, spreadsheet, database, and presentation software
- Computer concepts and internet skills

#### **JSRCC Spreadsheet Software (Excel)**

**ITE 140**

Course # D6619

18 weeks (.5 HS cr. & 3 college cr.); Required by academy students for associate degree; Grade 12

- Demonstrate proficiency in designing an electronic spreadsheet incorporating numeric data, labels, formulas, functions, and formatting
- Create and edit charts and graphics
- Work with Excel tables, Pivot Tables, and Pivot Charts

#### **JSRCC College Success Skills**

**SDV 100**

5 weeks (1 college cr.); Required by academy students for associate degree; Grade 10

- Effective study habits, career and academic planning, exploration of other college resources available to students
- Course is taken at JSRCC Parham Road campus during summer as a rising junior

#### **JSRCC Introduction to Personal and Community Health**

**HLT 115**

5 weeks (1 college cr.); Required by academy students for associate degree; Grade 10

- Definition and limitation of biomedical health as well as primary, secondary, and tertiary prevention
- Health care delivery systems and health status in the United States
- Course is taken at JSRCC Parham Road campus during summer as a rising junior





# Advance College Academy - Business Administration

## Highland Springs High School

### Course Descriptions (cont.)

#### **JSRCC Business 100**

Course #D6136

18 weeks; dual credit (.5 HS cr. & 3 College cr.); required for academy students; Grade 11

- Describe how business institutions operate in our modern political, social and economic environments
- Identify the various business functions and their essential nature to business and society
- Acquire some basis for choosing his/her area of concentration

#### **Leadership Development (Honors)**

Course #9096

18 weeks (.5 HS cr.); Required for academy students; Grade 11

- Identify the characteristics, roles, and responsibilities of a leader
- Develop leadership skills
- Practice Problem Solving

#### **JSRCC Principles of Accounting I ACC 211**

Course #D6320G

18 weeks; dual credit (.5 HS cr. & 3 College cr.); required for academy students; Grade 12

- Introduction to accounting concepts, and the recording process, including journals, ledgers, and trial balance preparation
- Adjusting the accounts to comply with accrual accounting concept, preparing closing entries to insure comparability between the books and the financial statements, and setting up books for next accounting cycle
- Accounting for a merchandising business, including sales and purchase transactions, inventory valuation methods, and cost of goods sold under both perpetual and periodic inventory systems

#### **JSRCC Principles of Accounting II ACC 212**

Course #D6320H

18 weeks; dual credit (.5 HS cr. & 3 College cr.); required for academy students; Grade 12

- Organization and Operation of Corporations Including Stock Issues, Classes of Stock, Legal and Market Valuations
- Discussion of Cash and Stock Dividends and Computation of Earnings per Share
- Discussion of Bonds Including Discounts, Premiums, Amortization Methods and Procedures, Sinking Funds and Bond Retirement

#### **JSRCC Principles of Economics I- Macroeconomics**

##### **ECO 201**

Course #D2807

18 weeks; dual credit (.5 HS cr. & 3 College cr.); required for academy students; Grade 12

- Introduces macroeconomics including the study of Keynesian, classical, monetarist principles and theories
- Includes the study of national economic growth, inflation, recession, unemployment, financial markets, money and banking, the role of government spending and taxation, along with international trade and investments

#### **JSRCC Principles of Economics II- Microeconomics**

##### **ECO 202**

Course #D2806

18 weeks; dual credit (.5 HS cr. & 3 College cr.); required for academy students; Grade 12

- Introduces the basic concepts of microeconomics
- Explores the free market concepts with coverage of economic models and graphs, scarcity and choices, supply and demand, elasticities, marginal benefits and costs, profits, and production and distribution



# Advance College Academy - Social Sciences

## J. R. Tucker High School

- Students earn an advanced studies high school diploma by taking a wide range of honors and AP level classes.
- Students earn an Associate of Science degree in Social Sciences from Reynolds Community College (JSRCC) during their four years in high school.
- All 62 JSRCC credits are eligible for transfer to a four-year college or university.
- College courses are taught by selected HCPS teachers, credentialed as adjunct professors with JSRCC.
- There is a minimal charge for students to enroll in the program and earn an associate degree through the program.

### Advance College Academy Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
English 9 Honors Biology Honors Geometry or Algebra II Honors World History II Honors World Language Health and P.E. HCPS Elective	English 10 Honors Chemistry Honors Algebra II or Math Analysis Honors AP European History World Language Economics & Personal Finance Health and P.E. HCPS Elective **College Success Skills 100 & Personal and Community Health 115* (Test out of ITE 115)	English 111 & 112* AP Physics, AP Chemistry <sup>1</sup> or AP Environmental Science Math 167 and 245* (Pre- calculus with Trigonometry and Statistics) History 121 & 122* Spanish or French I & II* (Beginner or Intermediate Spanish or Beginner French) JSRCC Semester Elective* HCPS Elective HCPS Elective	English 242 & 244* Biology 101 & 102* Biology Lab Political Science 211 & 230* Psychology 200 & 230* (Introduction to and Developmental Psychology) HCPS Elective HCPS Elective

- NOTES:
- <sup>1</sup> In order to take AP Chemistry students must take Earth Science in 8th grade.
  - \* All courses identified with asterisks are JSRCC courses that meet the requirements of an advanced studies high school diploma.
  - \*\* College Success Skills 100 & Personal and Community Health 115 must be taken during the summer prior to Grade 11.
  - Students must earn a B or higher in Algebra I and maintain a 3.0 GPA through 8th grade. It is recommended that students complete World History I prior to enrolling in the Academy.
  - Curriculum is subject to change.
  - All students must successfully complete the Economics and Personal Finance course.
  - Each dual enrollment class will have a \$50 fee.\*

ACA - J. R. Tucker	Number of dual enrollment classes	Fee	Total
11th Grade	11 classes	\$50/class	\$550/student
12th Grade	8 classes	\$50/class	\$400/student
TOTAL COST of two-year program			\$950/student

\*Fee applies to students entering the program in fall of 2019.



# Advance College Academy - Social Sciences

## J. R. Tucker High School

### Course Descriptions

#### **JSRCC College Composition 111 & 112**

Course #D1196

36 weeks; dual credit; (1 HS cr. & 6 College cr.); Grade 11

Required for academy students

- ✓ SOL English end-of-course Reading test
- Use nonfiction texts to develop rhetorical strategies, compose argumentative writing and utilize cross-curricular learning communities
- Prepare for the Advanced Placement Language and Composition exam

#### **JSRCC American & English Literature 242 & 244**

Course #D1195

32 weeks; dual credit; (1 HS cr. & 6 College cr.); required for academy students; Grade 12

- Focus on the historical and philosophical influences on literature
- Write pieces that require analysis, synthesis, and evaluation involving cross-curricular learning communities
- Prepare for the Advanced Placement Literature and Composition exam

#### **JSRCC General Biology 101 & 102**

Course #D4370

32 weeks; dual credit; (1 HS cr. & 8 College cr.); required for academy students; Grade 12

- Major topics include pathways and transformation of energy and matter; information flow, exchange and storage; evolution; ecology; botany; the origin of animals and the biology of animal systems
- Read and analyze peer reviewed scientific literature and relate to major course topics
- Prepare for the Advanced Placement Biology exam

#### **JSRCC General Biology Lab**

Course #D4371

32 weeks (.5 cr.); required for academy students; Grade 12

- Further develop laboratory and reporting skills
- Collect data, incorporate current scientific literature, create journal formatted reports
- Conduct research using cross-curricular learning communities

#### **JSRCC Pre-calculus with Trigonometry JSRCC MTH 166**

Course #D3164

18 weeks; dual credit; (.5 HS cr. & 5 College cr.); required for academy students; Grade 11

- JSRCC math placement test required
- Explore polynomials, logarithms, exponential, inverse and rational functions
- Explore, graph, and apply trigonometric functions and identities, determine the features, sketch the graphs, and write the equations for conic sections

#### **JSRCC Applied Calculus**

Course #D3177

18 weeks; dual credit; (.5 HS cr. & 3 College cr.); Applied calculus or statistics required for academy students; Grade 11

- Placement through JSRCC math placement test required
- Understanding of limits as they apply to continuity, product, quotient, and chain rules to differentiate polynomial, rational, and transcendental functions, word problems
- Utilized cross-curricular learning communities to explore practical applications

#### **JSRCC Statistics**

Course #D3191

18 weeks; dual credit; (.5 HS cr. & 3 College cr.); Applied calc. or statistics required for academy students; Grade 11

- Placement through JSRCC math placement test required
- Use numerical methods to analyze data and understand basic concepts of probability as related to statistics
- Utilize learning communities to explore practical applications of confidence intervals and hypothesis testing for means and proportions

#### **JSRCC United States History 121 & 122**

Course #D2319

36 weeks; dual credit; (1 HS cr. & 6 College cr.); required for academy students; Grade 11

- ✓ SOL Virginia and United States History end-of-course test
- Read historical material critically, weigh evidence, and use learning communities to arrive at conclusions
- Prepare for the Advanced Placement US History exam

#### **JSRCC Political Science 211 & 212**

Course #D2445

32 weeks; dual credit; (1 HS cr. & 6 College cr.); required for academy students; Grade 12

- Obtain a college-level perspective on politics and government in the United States
- Explore institutions, groups, beliefs, and ideas of American political reality through learning communities
- Prepare for the Advanced Placement US Government exam

#### **JSRCC Introduction to Psychology**

Course #D2900

18 weeks; dual credit; (.5 HS cr. & 3 College cr.); required for academy students; Grade 12

- Study individual and group behavior, the effect of internal and external stimuli, and the interaction of individuals
- Increase critical thinking and improve communication through demonstrations, experiments, movies, and videotapes
- Utilize cross-curricular learning communities



# Advance College Academy - Social Sciences

## J. R. Tucker High School

### Course Descriptions (cont.)

#### **JSRCC Developmental Psychology** **JSRCC PSY 230**

Course #D2901

18 weeks; dual credit; (.5 HS cr. & 3 College cr.); required for academy students; Grade 12

- Major topics include history and theories of life-span development; development in prenatal, infancy, toddlerhood, early and middle childhood, development in adolescence, early, middle, and late adulthood, death and dying
- Comprehend the key concepts of research and statistics, nature versus nurture as well as biological, cognitive, personality, and social development
- Utilize cross-curricular learning communities

#### **JSRCC Beginner Spanish or French** **JSRCC SPA or FRE 101-102**

Course #D5520 or D5120

36 weeks; dual credit; (1 HS cr. & 8 College cr.); Beginner or intermediate Spanish or French required by academy students; Grade 11

- Major topics include basic dialogues, essential vocabulary, current events culture, and grammar
- Demonstrate listening comprehension and speaking skills at the beginner's level; novice to mid-novice level of the ACTFL
- Utilize cross-curricular learning communities

#### **JSRCC Intermediate Spanish** **JSRCC SPA**

Course #D5550

36 weeks; dual credit; (1 HS cr. & 8 College cr.); Beginner or intermediate Spanish or French required by academy students; Grade 11

- Major topics include verb systems, vocabulary building through reading, and a historical understanding of economic, historical, geographical, and cultural background
- Read with fluency from the textbook and outside readings; participate in discussions using learning communities
- Function at low to mid-intermediate level of the ACTFL rating scale

#### **JSRCC Introduction to Computer Applications and Concepts** **ITE 115**

Course #D6618

16 weeks (3 college cr.); Required by academy students for associate degree; Grade 10

- Computer literacy demonstrated through use of software suite which includes word processing, spreadsheet, database, and presentation software
- Computer concepts and internet skills
- Credit by Able test-out recommended

#### **JSRCC College Success Skills** **SDV 100**

4 weeks (1 college cr.); Required by academy students for associate degree;

Grade 10

- JSRCC English placement test required
- Effective study habits, career and academic planning, exploration of other college resources available to students
- Course is taken at JSRCC Parham Road campus during summer as a rising junior

#### **JSRCC Introduction to Personal and Community Health** **HLT 115**

4 weeks (1 college cr.); Required by academy students for associate degree;

Grade 10

- JSRCC English placement test required
- Definition and limitation of biomedical health as well as primary, secondary, and tertiary prevention, health care delivery systems and health status in the United States
- Course is taken at JSRCC Parham Road campus during summer as a rising junior

#### **JSRCC Reynolds Elective** **Varies**

10-16 weeks (3 college cr.); Required by academy students for associate degree; Grade 10-11

- Must be an elective from Humanities/fine arts
- Must complete ENG 112 to take 200 level English electives
- Course is taken on-line during summer as a rising junior or rising senior





# Career & Technical Education

## Advanced Career Education (ACE) Center Programs - An Overview

Two Advanced Career Education (ACE) Centers offer one-year and two-year courses in skill-based programs to all Henrico County high school **juniors and seniors**. The mission of these programs is to prepare students for job-entry skills and/or post-secondary education. Students planning to take an ACE Center program should be in a rigorous core curriculum cluster at their home high school to prepare for **3-credit** technical courses during their junior/senior years. **All** ACE Center programs lead to licensure or certification upon successful completion.

Students from Deep Run, Freeman, Glen Allen, Godwin, Hermitage, and Tucker high schools attend the ACE Center at Hermitage unless the technical program is offered only at the ACE Center at Highland Springs. Students from Henrico, Highland Springs, and Varina High Schools attend the ACE Center at Highland Springs unless the technical program is offered only at the ACE Center at Hermitage. Admission is through an application process.

### AGRICULTURE, FOOD AND NATURAL RESOURCES

**Greenhouse Management** (1 year, 3 credits) Grow annuals, perennials, vegetables and herbs in a garden center setting. Study horticulture therapy, techniques of floral design and wedding planning, plant propagation and transplanting *Offered at the ACE Center @ Hermitage*

**Landscaping** (1 year, 3 credits) Gain experience in the use of hand and power tools related to landscaping, turf care and grounds maintenance while preparing for entry-level employment and advancement in landscape design, landscape construction, and landscape maintenance *Offered at the ACE Center @ Hermitage*

### ARCHITECTURE AND CONSTRUCTION

**Air Conditioning/Refrigeration/Plumbing** (2 years, 6 credits) Learn to install, troubleshoot, and service air conditioning, heating, plumbing, and refrigeration systems. Students may work toward EPA/CFC certification *Offered at the ACE Center @ Hermitage*

**Carpentry** (2 years, 6 credits) Explore careers in residential and commercial carpentry, including cost and materials estimating and remodeling, while learning comprehensive carpentry skills *Offered at the ACE Center @ Highland Springs*

**CAD - Computer-Aided Drafting and 3D Animation** (2 years, 6 credits) Explore careers in drafting, animation and design while learning technical skills using AutoCad software *Offered at the ACE Center @ Hermitage*

**Electricity and Cabling** (2 years, 6 credits) Learn basic principles of direct and alternating current with emphasis on residential wiring. Earn one year of nationally accredited electrical apprenticeship through standardized tests *Offered at the ACE Center @ Hermitage and Highland Springs*

**Masonry** (2 years, 6 credits) Explore careers in residential and commercial brick and masonry construction while learning how to read blueprints, mix mortar and construct walls, corners, piers and chimneys *Offered at the ACE Center @ Highland Springs*

### ARTS, A/V TECHNOLOGY AND COMMUNICATIONS

**Graphic Communications** (2 years, 6 credits) Instruction on digital layout and design with Adobe Creative Suite as well as designing and publishing the ACE Center newsletter; production procedures, digital 4-color printing, screen printing of T-shirts and hoodies, vinyl signs and decals *Offered at the ACE Center @ Hermitage*

### ARTS, A/V TECHNOLOGY AND COMMUNICATIONS (cont.)

**Radio Broadcasting and Journalism** (2 years, 6 credits) Explore careers in commercial production, digital editing, news broadcasting, script writing, and radio programming while participating in live broadcasting *Offered at the ACE Center @ Highland Springs*

**Web Development/Programming I & II** (2 years, 6 credits) Learn to design and construct Web pages using HTML, JavaScript, Java, Dreamweaver, Flash, and other programming languages. Learn project-management skills and become a Certified Internet Webmaster (CIW) *Offered at the ACE Center @ Hermitage*

### BUSINESS MANAGEMENT AND ADMINISTRATION

**Legal Systems Administration** (1 year, 3 credits) Learn business skills, legal terminology, and various legal documents that are utilized in the legal field. Also, participate in mock trial simulations with real life court officials (judges, attorneys, etc.) *Offered at the ACE Center @ Hermitage*

**Medical Systems Administration** (1 year, 3 credits) Learn business skills, medical terminology & abbreviations, record keeping, and various insurance documents that are utilized in the medical field. Also, participate in a dual-enrollment class to receive college credit *Offered at the ACE Center @ Hermitage*

### EDUCATION AND TRAINING

**Early Childhood Education and Services** (2 years, 6 credits) Early Childhood Education is a two-year program for students interested in careers which involve working with children. The program focuses on the study of growth and development of preschoolers and the preparation of preschool learning activities. Students receive additional employment skills through on-the-job experiences at Springer Preschool Academy. *Offered at the ACE Center @ Highland Springs*

### HEALTH SCIENCE

**Emergency Medical Technician** (1 year, 3 credits) Gain knowledge and learn the skills to become a certified emergency medical technician. This course is an excellent introduction to any health/medical occupation or public safety career. *Offered at the ACE Center @ Hermitage*





## Career & Technical Education Advanced Career Education (ACE) Center Programs (cont.)



### HEALTH SCIENCE (cont.)

**Nurse Aide** (1 year, 3 credits) This course provides clinical experience in long-term care settings and is an excellent introduction to basic nursing skills. Learn anatomy, physiology, nutrition, and geriatrics *Offered at the ACE Center @ Hermitage and Highland Springs*

**Pharmacy Technician** (1 year, 3 credits) Learn how to assist a pharmacist in ordering, stocking, packaging, and dispensing medications for related medical careers *Offered at the ACE Center @ Highland Springs*

**Practical Nursing** (Seniors only, 1 year, 3 credits) Explore nursing in med-surg and long-term care. After successful completion of Practical Nursing I, II, and III (9 months post-graduation) the student is eligible to take the NCLEX-PN to become a Licensed Practical Nurse. *Offered at the ACE Center @ Hermitage and Highland Springs*

**Sports Medicine** (1 year, 3 credits) Develop skills required by professional athletic trainers, physical therapists, nutritionists, and other health and medical personnel *Offered at the ACE Center @ Hermitage*

**Veterinary Science** (2 years, 6 credits) Explore a career in the veterinary field through hands-on experiences in order to learn proper health care and maintenance of animals. Students may become certified in Veterinary Science *Offered at the ACE Center @ Hermitage*

### HOSPITALITY AND TOURISM

**Culinary Arts** (2 years, 6 credits) Learn the art and science of culinary preparation from a certified executive chef and gain hands-on experience in the restaurant business. This program is accredited by the American Culinary Federation. *Offered at the ACE Center @ Hermitage*

**Hospitality, Tourism and Catering** (1 year, 3 credits) Explore careers in travel and tourism by gaining knowledge of the travel/tourism industry to include cruises, airlines, lodging, and car rental *Offered at the ACE Center @ Highland Springs*

**Tourism Marketing, Sales, and Catering** (1 year, 3 credits) Take an in-depth look into marketing and sales in the travel and tourism field through issues related to business and resource management and the sale process of the tourism industry *Offered at the ACE Center @ Highland Springs*

### HUMAN SERVICES

**Barbering** (2 years, 6 credits) Learn technical skills and job opportunities of a licensed barber. Successful completion of this two-year program will qualify students to take the state board exam and become a licensed barber. *Offered at the ACE Center @ Hermitage*

**Cosmetology** (2 years, 6 credits) Successful completion of this two-year course will qualify students to take the state board exam and potentially become a licensed cosmetologist, salon manager/owner or makeup specialist. *Offered at the ACE Center @ Hermitage and Highland Springs*

[henricoschools.us](http://henricoschools.us)


### INFORMATION TECHNOLOGY

**Computer Systems Technology** (2 years, 6 credits) Students learn how to install, set up, service, troubleshoot, network and maintain PCs while preparing for CompTIA's A+ and Net+ industry standard certifications. This is a dual enrollment class with Reynolds Community College and students may earn up to 12 college credits *Offered at the ACE Center @ Highland Springs*

### LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY

**Criminal Justice** (2 years, 6 credits) This is a dual enrollment class with Reynolds Community College and students may earn up to 12 college credits. Instruction is provided in all areas of Criminal Justice including law enforcement, corrections, legal and forensic science, as well as physical training *Offered at the ACE Center @ Hermitage and Highland Springs*

### MANUFACTURING

**High Tech Academy** (2 years, 6 credits) Prepare for a career in the high tech industries including science, technology, engineering and mathematics (STEM). Be introduced to different disciplines of engineering. Help answer the question "when are we going to use this?" by applying math and science. Get a head start in your college career; earn up to 28 college credits from VCU. *Offered at the ACE Center @ Highland Springs and offered for dual enrollment at Virginia Commonwealth University* 

**Precision Machining Technology** (2 years, 6 credits and 15 hours of college credit) Prepare for certification as a machinist apprentice or machine operator. Learn how to safely operate milling machines, lathes, drill presses and cut-off saws. Also offering Computer Numeric Control (CNC) and welding *Offered at the ACE Center @ Hermitage*

### TRANSPORTATION, DISTRIBUTION, AND LOGISTICS

**Auto Body Repair** (2 years, 6 credits) Gain hands-on experience with welding, plastic fillers, and refinishing equipment and processes *Offered at the ACE Center @ Highland Springs*

**Automotive Technology** (2 years, 6 credits) Learn maintenance and diagnostic procedures. Take the NATEF with N3SA Certification ASE Test. BG service approved training. AYES paid internships are available for second year students with sponsoring dealerships. Students receive Commonwealth of Virginia Safety Inspection License Training. This is a dual enrollment class with Reynolds Community College and students may earn up to 18 college credits. *Offered at the ACE Center @ Hermitage and Highland Springs*

**Diesel Technologies** (2 years, 6 credits) Learn the fundamentals of diesel equipment and identify, disassemble, clean, inspect and repair various components related to heavy equipment. Participate in work experiences during the second semester if recommended. This is a dual enrollment class with Reynolds Community College and students may earn up to 13 college credits. *Offered at the ACE Center @ Hermitage*

# HIGH TECH ACADEMY

## ADVANCED CAREER EDUCATION (ACE) CENTER AT HIGHLAND SPRINGS

The High Tech Academy (HTA) is a dual-credit enrollment program offered by Henrico County Public Schools (HCPS) and Virginia Commonwealth University (VCU). Located at the Advanced Career Education (ACE) Center at Highland Springs, this collaborative program prepares secondary students for future careers in high tech industries.

Students in this two-year program follow a rigorous academic curriculum which incorporates industrial applications in a high tech atmosphere. Working in teams through project based learning, the students engage in coursework in advanced mathematics and science within the framework of high tech industrial applications. HTA students can receive up to 28 dual enrollment credit hours through VCU. Applicants must be registered in a Henrico County high school. Two curriculum tracks are available based on the student's math background (see below). A completed application, transcript, and three teacher recommendations (one science, one mathematics, and one other) are required.

Students prepare for the NOCTI Pre-engineering certification exam, taken during their second year. HTA completers who pass this exam may qualify to receive the *Governor's Seal*, *VDOE Advanced Mathematics and Technology Seal*, as well as the *VDOE Career and Technical Education Seal* (see page 25 for all requirements).

An orientation at High Tech Academy and VCU prior to attending High Tech Academy is required.

### Sample Four-Year Curriculum

	Grade 9	Grade 10	Grade 11	Grade 12
	English 9	English 10	English 11	English 12
	Social Studies	Social Studies	Virginia and United States History	Virginia and United States Government
	Health and P.E.	Health and P.E.	*World Language	*World Language
	*World Language	*World Language	Elective	Elective
<b>Track 1</b>	Track 1 Offered Every Year			
	Geometry	Algebra II	VCU Precalculus (4 cr. VCU)	VCU Calculus (8 cr. VCU)
	Earth Science	Biology	VCU Chemistry** (8 cr. VCU)	VCU Physics** (8 cr. VCU)
	Elective	Elective	Engineering Explorations I Honors	Engineering Analysis & Application II Honors
<b>Track 2</b>	Track 2 Not Offered Every Year			
	Algebra	Geometry	Algebra II Honors	VCU Precalculus (4 cr. VCU)
	Earth Science	Biology	VCU Physics** (8 cr. VCU)	VCU Chemistry** (8 cr. VCU)
	Elective	Elective	Engineering Explorations I Honors	Engineering Analysis & Application II Honors

\*NOTE: Refer to Section I to determine which graduation requirements apply to you.

\*\*VCU Sciences may be taken in any order.

For information, call the ACE Center at Highland Springs at 328-4075.



# Center for the Arts

## Henrico High School

- Faculty augmented with resident and visiting artists
- Four levels of musical theatre - vocal production, dance, acting techniques, theatre history, microphone techniques, music theory and history, audition preparation, performance
- Four levels of dance - ballet and modern dance techniques, aesthetics, nutrition, anatomy, choreography, dance history, kinesiology, audition preparation, performance
- Four levels of theatre - acting techniques, creative expression, technical theatre, aesthetics, production, audition preparation, script and character analysis, character development, performance
- Four levels of visual arts - art and design principles, history, aesthetics, proficiency in a variety of artistic media and technique, exhibition of student art work

### Sample Four-Year Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
Center Module I Acting Studio/Production Design I (2 periods) or Ballet/Modern Dance I (2 periods) or Visual Art I (2 periods) or Musical Theatre I (2 periods)	Center Module II Acting Studio/Production Design II (2 periods) or Ballet/Modern Dance II (2 periods) or Visual Art II (2 periods) or Musical Theatre II (2 periods)	Center Module III Acting Studio/Production Design III (2 periods) or Ballet/Modern Dance III (2 periods) or Visual Art III (2 periods) or Musical Theatre III (2 periods)	Center Module IV Acting Studio/Production Design IV (2 periods) or Ballet/Modern Dance IV (2 periods) or Visual Art IV (2 periods) or Musical Theatre IV (2 periods)
Arts Infused English 9 Mathematics Arts Infused Science Arts Infused Social Studies *World Language +Health and P.E. 9 or Elective	Arts Infused English 10 Mathematics Arts Infused Science *Arts Infused Social Studies or Elective *World Language +Health and P.E. 10 Economics and Personal Finance	English 11 - Arts Infused/AP Language and Composition Mathematics Science Virginia and United States History *World Language Elective	English 12 - Arts Infused/AP Literature and Composition *Mathematics or Elective *Science or Elective Virginia and United States Government *World Language Elective

- NOTES:** \* Refer to Section I to determine which graduation requirements apply to you.
- + Students participating in the Center for the Arts Dance, Theatre and Musical Theatre programs will receive credit for the Physical Education component of the Health and Physical Education 9 and 10 Courses. The students will be required to complete the Health portion of the Health and Physical Education courses through online Health modules. This will be required to receive the Health and Physical Education credits for graduation. It is recommended that students in the Visual Arts program complete Health and Physical Education credits in summer school or evening school.
  - All students must successfully complete the Economics and Personal Finance course.



# Center for the Arts Henrico High School

## Course Descriptions

### Acting Studio/Production Design I Honors

Course #1390

36 weeks (2 crs.); required for Center students; Grades 9-12

- Study speech, vocal projection, movement, improvisation, dramatic literature, and creative writing
- Examine technical aspects of theatrical production and apply skills in performances
- Explore selected topics on the history of theatre, and examine relationships between theatre and other art forms

### Acting Studio/Production Design II Honors

Course #1395

36 weeks (2 crs.); required for Center students; Grades 9-12

- Develop acting techniques and theories with emphasis on script analysis and character development
- Undertake an in-depth exploration of Classical theatrical literature
- Application of skills is demonstrated through performances

### Acting Studio/Production Design III Honors

Course #1396

36 weeks (2 crs.); required for Center students; Grades 10-12

- Focus on audition preparation and professional practice, including the application of skills in performances
- Study of theatrical theories, techniques of direction, and selected history topics
- Expanded investigation in creative writing, including personal writing skills and critiques

### Acting Studio/Production Design IV Honors

Course #1397

36 weeks; (2 crs.); required for Center students; Grades 11-12; may be repeated for credit

- Emphasis on theatrical literature, character development and production practices
- Apply skills in performance, direction, and production, culminating in a class-produced performance of an established script

### Ballet/Modern Dance I Honors

Course #9303

36 weeks (2 crs.); required for Center students; Grades 9-12

- Develop a positive attitude toward dance and explore the relationships of dance to the other arts
- Develop basic movement and techniques in ballet, modern dance, and other dance forms to develop the body
- Learn dance vocabulary, study selected topics in history, and share skills attainment through performances

### Ballet/Modern Dance II Honors

Course #9311

36 weeks (2 crs.); required for Center students; Grades 9-12

- Develop an appreciation of dance contributions and histories from different ethnic groups and historical periods
- Continue to develop traditional and new dance techniques and their vocabularies, as well as improvisation
- Emphasis on more complex choreography with the application of skills demonstrated in performance

### Ballet/Modern Dance III Honors

Course #9312

36 weeks; (2 crs.); required for Center students; Grades 10-12

- Learn movement composition and interpretation and create dance sequences to prepare for auditions and performances
- Develop a movement vocabulary that will aid in self-discovery and individual choreography
- Develop an appreciation for the aesthetics of dance and the arts

### Ballet/Modern Dance IV Honors

Course #9313

36 weeks (2 crs.); required for Center students; Grades 11-12; may be repeated for credit

- Increase student proficiency in all areas of dance and movement
- Explore dance opportunities in college and universities, and pursue venues for professional development
- Explore creative expression through choreography that culminates in an original dance project

### Visual Art I Honors

Course #9155

36 weeks (2 crs.); required for Center students; Grades 9-12

- Understand the elements and principles of design and study selected topics in art history
- Learn essential skills and techniques for creative expression through drawing, painting, sculpture, and printmaking
- Explore the relationships between the visual artist, their products and the impact they have on society



# Center for the Arts Henrico High School

## Course Descriptions (cont.)

### Visual Art II Honors

Course #9156

36 weeks (2 crs.); required for Center students; Grades 9-12

Participating in Visual Art I is not a prerequisite for taking Visual Art II.

- Improve technical applications and techniques for creative expression in a variety of art forms
- Study selected topics in art history, color theory, architecture, and investigate elements and principles of design
- Explore artistic concepts through analysis, structure and production

### Visual Art III Honors

Course #9157

36 weeks (2 crs.); required for Center students; Grades 10-12

Participating in Visual Art II is not a prerequisite for taking Visual Art III.

- Continue to study topics in art history with thematic units that emphasize creative problem solving
- Demonstrate a thorough knowledge of the elements and principles of design and various artistic techniques
- Participate in discussions and demonstrations with experts to foster professional development

### Visual Art IV Honors

Course #9158

36 weeks (2 crs.); required for Center students; Grades 11-12; may be repeated for credit

Participating in Visual Art III is not a prerequisite for taking Visual Art IV.

- Investigate, create, and present a directed production of an independent, cumulative, and unified body of work
- Explore contemporary art issues and research a variety of topics

### Musical Theatre I Honors

Course #9296

36 weeks (2 crs.); required for Center students; Grades 9-12

- Begin development of essential skills in vocal production, music reading, theory and ear training, and dance techniques
- Introduction to the history of the American musical theatre and the study of basic stage movement and character building
- Participate in building group skills utilizing appropriate vocal literature with the application of skills demonstrated through performance

### Musical Theatre II Honors

Course #9297

36 weeks (2 crs.); required for Center students; Grades 9-12

- Focus on acting techniques, speech and dialects, character building and script analysis
- Refine individual skills in vocal production, musicianship and dance techniques, with an increased emphasis in ensemble work
- Explore improvisation and acting exercises, scene work from musicals, and performance opportunities

### Musical Theatre III Honors

Course #9301

36 weeks (2 crs.); required for Center students; Grades 10-12

- Focus on audition and monologue preparation, scene study, vocal production, dance skills, and acting methodologies
- Continued study of selected theatre developments, dramatic theory and criticism
- Explore educational opportunities in college and universities, and pursue venues for professional development

### Musical Theatre IV Honors

Course #9302

36 weeks (2 crs.); required for Center students; Grades 11-12; may be repeated for credit

- Continue development of essential skills in vocal production, music reading, theory and ear training; and dance techniques
- Apply skills in performance, direction, and production culminating in a class-produced performance
- Emphasize the effect of American musical theatre on American culture



# Center for Communications and Media Relations

## Varina High School

- Comprehensive study and refinement of writing and speaking skills necessary for effective communication
- Applications of communications principles in areas such as television, multimedia, public speaking, photography, graphic design, journalism, advertising, web design, and public relations
- Ethical and technical aspects of communications
- Field trips, guest speakers, field experiences, and shadowing opportunities in partnership with the business community
- Production of student news shows, commercials, newspapers, speeches, multimedia presentations, websites, advertising campaigns, public service announcements, a senior project, and a senior portfolio

### Sample Four-Year Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
Center Module I English 9 Communications & Technology Connections	Center Module II English 10 Communications Writing & Production I (2 periods)	Center Module III AP English 11 Communications Writing & Production II (2 periods)	Center Module IV AP English 12 Advanced Communica- tions: Writing, Production, and Directed Research (2 periods)
Mathematics Science Health & P.E. + World History & Geography II *World Language	Mathematics Science Health & P.E. *World Language Economics and Personal Finance	*Mathematics *Science Virginia and United States History *World Language	Virginia and United States Government *Mathematics or Elective *Science or Elective *World Language

**NOTES:** \* Refer to Section I to determine which graduation requirements apply to you.

+ It is highly recommended that students complete World History & Geography I before enrolling in this Center.

- All students must successfully complete the Economics and Personal Finance course.



# Center for Communications and Media Relations

## Varina High School

### Course Descriptions

#### Communications and Technology Connections Honors

Course #1610

36 weeks (1 cr.); required; Grade 9

- Write and deliver formal and informal speeches and presentations
- Develop skills in news writing, reporting, script writing, and editing
- Explore print and broadcast journalism, desktop publishing, graphic design, photography, multimedia, and video production

#### Communications Writing and Production I Honors

Course #1620

36 weeks (2 crs.); required; Grade 10

- Deliver persuasive speeches, oral interpretations, and presentations with visual aids
- Further develop skills in news and script writing for print and broadcast journalism, desktop publishing, graphic design, multimedia, photography, video production, and editing
- Study the newspaper and book industries; explore communication law and ethics

#### Communications Writing and Production II Honors

Course #1621

36 weeks (2 crs.); required; Grade 11

- Study the television, recording, and radio industries; produce and broadcast a range of audio and video content including radio shows, news programs, music videos, and narrative television
- Refine public speaking skills and implement them in oral interpretation, persuasive speeches, and on-air presentations
- Apply skills in news and script writing, video editing, desktop publishing, web design, graphic design, and on-camera performance

#### Advanced Communications

Course #1622

36 weeks (2 crs.); required; Grade 12

- Design, produce, and present a variety of communications including video news packages, public service announcements, short films, graphic design projects, editorial and column writing, advertising campaigns, a senior project, and a senior portfolio
- Study the magazine, film, advertising, and public relations industries
- Participate in shadowing experiences with professionals in the communications field

# Center for Education and Human Development Glen Allen High School

- Exploration of human development and psychology as it relates to education; models best practices for teaching and other leadership roles
- An advanced studies program in social studies and English
- Comprehensive curriculum that explores the complexities of the learning process and utilizes the latest technology to develop educators and other leaders in the 21st Century
- Emphasis on research-based instructional practices and 21st Century skills necessary for success in the global society

## Sample Four-Year Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
Center Module I English 9 +World History and Geography II Child Growth and Development	Center Module II English 10 Technology and Communication in the 21st Century AP Psychology	Center Module III AP English 11 AP US History Foundations of Teaching and Learning (1/2) Instructional Design (1/2)	Center Module IV AP English 12 AP Government Internship/Organizational Development and Leadership Education Dual Enrollment
+Mathematics Science Health and P.E. *World Language	Mathematics Science Health and P.E. *World Language Economics and Personal Finance (online)	*Mathematics or Elective *Science or Elective *World Language or Elective Elective	*Mathematics or Elective *Science or Elective *World Language or Elective

- NOTES:**
- \* Refer to Section I to determine which graduation requirements apply to you.
  - + It is highly recommended that the students complete World History & Geography I before enrolling in this Center. This course is required for the Advanced Studies Diploma and the Center Diploma Seal but is NOT included in the Center's curriculum.
  - All students must successfully complete the Economics and Personal Finance course.



# Center for Education and Human Development

## Glen Allen High School

All Center courses will be taught in the interdisciplinary model. Teachers will demonstrate and model methods of best practice, differentiation of instruction, and student centered lessons. The curriculum will encourage students to become active and engaged participants in the lessons presented.

### Course Descriptions

#### Child Growth and Development Honors

Course #2992

36 weeks (1 cr.); required for Center Students  
Level I: Grade 9

- Examine the different stages of development from childhood to young adulthood from a psychological standpoint
- Develop skills in perception and psychological research to enhance understanding of mental processes and behavior

#### Technology and Communication in the 21st Century Honors

Course #9826

36 weeks (1 cr.); required for Center Students  
Level II: Grade 10

- Explore the fundamentals of advancing technology and how it relates to classroom instruction
- Develop skills in the creation and implementation of lessons using appropriate technology (Investigate the evolution of technology over time as it relates to best practice in education)
- Gather, analyze, and interpret data (Develop and implement student created curriculum)

#### Foundations of Teaching and Learning Honors

Course #2993

18 weeks (.5 cr.); required for Center students  
Level III: Grade 11

- Examine the historical and philosophical foundation for educational practice
- Observe and analyze teaching methods and the use of modern educational theory
- Develop skills in lesson plan creation modeling best practices and differentiation of instruction

#### Instructional Design Honors

Course #2722

18 weeks (.5 cr.); required for Center students  
Level III: Grade 11

- Systematically analyze the learning needs and goals of organizations
- Develop solutions to organizational problems that improve employee performance and organizational effectiveness
- Use data and current standards to drive instruction and lesson creation in education

#### Organizational Development and Leadership Honors

Course #2997

18 weeks (.5 cr.); required for Center students  
Level IV: Grade 12

- Examine and evaluate effective instruction and uses of best practices in the 21st Century model
- Analyze and observe the traits of effective leadership

#### Internship

Course #2999

18 weeks (.5 cr.); required for Center students  
Level IV: Grade 12

- Complete 60 hour internship with a local agency or community organization
- Seek opportunities to practice instruction and model leadership qualities during internship experience

#### Education Dual Enrollment

Course #2501

36 weeks (1 cr.); required for Center students  
Level IV: Grade 12 Dual Enrollment

- Explore differentiated instructional strategies for learning and performance focusing on the strengths and needs of diverse learners
- Determine alternative methods of instruction for diverse learners
- Explain how specific teaching strategies can best serve individuals of varying levels of development, ability, and achievement





# Center for Engineering Highland Springs High School

- Rigorous pre-engineering program founded in advanced studies of mathematics and science applicable to both a college engineering curriculum and many technical careers
- Field studies, mentoring, and internships in partnership with business
- Use of computer-aided drafting (CAD) systems in engineering, architecture, and design
- Modern technologies, including telecommunications, networking, and computer software applications
- Exploratory and summer programs

## Sample Four-Year Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
Center Module I Foundations of Engineering and Design *Engineering Mathematics I Engineering Science I Honors Technical Drawing/ Design/CAD Engineering Drawing/ Design/CAD	Center Module II Engineering I Design I Engineering Mathematics II *Engineering Science II	Center Module III AP Chemistry Engineering II Analysis/Trig. AP Calculus AB Practicum in Engineering I (optional) Aerospace Technology I (optional)	Center Module IV Engineering Design and Methods (cluster of four dual enrollment courses) Practicum in Engineering I or II (optional) AP Calculus BC AP Physics Aerospace Technology (optional)
English 9 Honors World History and Geography I Honors Health and P.E. World Language	English 10 Honors World History and Geography II Honors Health and P.E. World Language Optional Semester Electives - (2 if P.E. taken in summer) Economics and Personal Finance	AP English 11 AP Virginia and United States History World Language Electives	AP English 12 AP Virginia and United States Government World Language

**NOTE: \* Students must meet Center criteria through successful completion of Algebra I prior to enrolling in this Center.**

- All students must successfully complete the Economics and Personal Finance course.



# Center for Engineering Highland Springs High School

## Course Descriptions

### Foundations of Engineering and Design Honors

Course #8492

36 weeks (1 cr.); required for Center students;  
Grade 9

- Explore history and fundamental concepts of the engineering profession
- Use a variety of technologies for research and problem solving
- Use AutoCAD in conjunction with engineering projects and problem solving

### Engineering I Honors

Course #8452

36 weeks (1 cr.); required for Center students;  
Grade 10

- Explore energy and power as applied to engineering and transportation
- Apply mathematical and scientific principles to substantiate engineering problem solving skills
- Develop and present research projects that explore energy and power applications

### Engineering II Honors

Course #8494

36 weeks (1 cr.); required for Center students; Grade 11 (18 weeks of Engineering Economics and 18 weeks of Statics)

- Learn and apply concepts of statics
- Learn and apply principles of engineering economics
- Explore material applicability to problems through cost analysis, performance, and feasibility

### Design I Honors

Course #8451

36 weeks (1 cr.); required for Center students;  
Grade 10

- Develop skills in material selection, prototyping, and documentation through hands-on projects
- Apply advanced research methods and design technologies to solve design problems
- Analyze existing products and apply this information to designing prototype projects

### Engineering Mathematics I Honors

Course #3343

36 weeks (1 cr.); required for Center students;  
Grade 9

- ✓ SOL Geometry end-of-course test
- Introduce geometric concepts stressed in engineering and/or design professions
- Apply 2D and 3D geometrical principles to engineering related problems
- Model and analyze structures using computers and other technological tools

### Engineering Mathematics II Honors

Course #3333

36 weeks (1 cr.); required for Center students;  
Grade 10

- ✓ SOL Algebra II end-of-course test
- Introduce and stress the Algebra II concepts used in engineering-related problems
- Apply algebraic modeling principles to engineering-related principles
- Investigate discrete topics related to engineering and/or design

### Engineering Science I

Course #4311

36 weeks (1 cr.); required for Center students  
Grade 9

- ✓ SOL Biology end-of-course test
- Explore the connections between biological science and engineering fields such as Bioengineering, Biomedical Engineering, and Environmental Engineering
- Compare and contrast the scientific method and the engineering design method
- Apply these methods through a long-term research-based project

### Engineering Science II

Course # 4411

36 weeks (1 cr.); required for Center students  
Grade 10

- ✓ SOL Chemistry end-of-course test
- Explore the relationship between Chemistry and Chemical Engineering and other engineering fields
- Compare and contrast the scientific method and the engineering design method
- Apply these methods through a long-term research-based project

### Math Analysis/Trigonometry Honors

Course #3162

36 weeks (1 cr.); required for Center students;  
Grade 11

(See Course #3162 in Section VI for specific course content)

### AP Calculus AB

Course #3177

36 weeks (1 cr.); required for Center students;  
Grade 11

(See Course #3177 in Section VI for specific course content)

### AP Calculus BC

Course #3179

36 weeks (1 cr.); required for Center students;  
Grade 12

(See Course #3179 in Section VI for specific course content)

### AP Chemistry

Course #4470

36 weeks (1 cr.); required for Center students;  
Grade 11

(See Course #4470 in Section VI for specific course content)

### AP Physics

Course #4570

36 weeks (1 cr.); required for Center students;  
Grade 12

(See Course #4570 in Section VI for specific course content)



# Center for Engineering Highland Springs High School

## Course Descriptions (cont.)

### ENGINEERING DESIGN AND METHODS HONORS (cluster of four dual enrollment courses listed below)

Courses #8488, 8489, 8490, and 8491  
36 weeks (2 crs.); required for Center students; Grade 12

The following dual enrollment courses are taught by professors from Reynolds Community College:

#### JSRCC EGR110 Engineering Graphics

Course #8488 (3 semester hours college credit; .5 high school credit, is awarded weighted credit)

- Presents theories and principles of orthographic projection
- Analysis and graphic presentation of fundamental geometric elements
- Includes instruction in computer-aided drafting

#### JSRCC EGR124 Introduction to Engineering and Engineering Methods

Course #8489 (3 semester hours college credit; .5 high school credit, is awarded weighted credit)

- Introduce the engineering profession, professionalism, and ethics
- Explore problem presentation and engineering calculations
- Apply MATLAB, ALICE and other computer applications to engineering problems

#### JSRCC EGR 140 Engineering Mechanics - Statics

Course #8490 (3 college credits; .5 high school credit; weighted credit)

- Introduces mechanics of vector forces and space, scalar mass and time, including S.I. and U.S. customary units
- Teaches equilibrium, free-body diagrams, moments, couples, distributed forces, centroids, moments of inertia analysis of two-force and multi-force members, and friction and internal forces

#### JSRCC EGR 206 Engineering Economy

Course #8491 (3 college credits, .5 high school credit, weighted credit)

- Presents economic analysis of engineering alternatives
- Studies economic concepts as applied in the field of engineering
- Examines economic optimization in design and operation, depreciation and comparison of alternatives

#### Practicum in Engineering I Honors

Course #8453

36 weeks (1 cr.); elective;  
Grade 11, 12

- Complete an independent study at the Engineering Center
- Strengthen engineering skills in research, design, prototyping, production and time-management
- Incorporate appropriate software and/or technologies into independent project

#### Practicum in Engineering II Honors

Course #8456

36 weeks (1 cr.); elective;  
Grade 12

- Complete an independent study at the Engineering Center
- Strengthen engineering skills in research, design, prototyping, production and time-management
- Explore STEM and emerging technologies in the research process

#### Aerospace Technology I Honors

Course #8487

36 weeks (1 cr.); optional for Center students;  
Grade 11 or Grade 12

- Introduction to flight, space travel, and supporting technologies
- Hands-on approach to study concepts including the history of aviation, aerodynamics, aircraft components, flight conditions, airport and flight operations, space, rocketry, and the aviation and space industries
- Develop and present research projects that explore aerospace technology

#### Technical Drawing/Design/CAD

Course #8434G

18 weeks (.5 cr.); required for Center students; Grade 9

- Learn the basic language of industry and technology
- Gain skills in mechanical drawing or drafting
- Prepare technical sketches using orthographic projections, pictorial technical sketches, layout sketches, and prints of original drawings

#### Engineering Drawing/Design/CAD

Course #8493H

18 weeks (.5 cr.); required for Center students; Grade 9

- Learn the graphic language used by engineers, manufacturers, and technicians
- Interpret industrial prints to use handbooks with resource materials, and to adhere to standards for drafting
- Apply drafting principles to typical engineering drawing and design problems



# Center for the Humanities

## Hermitage High School

- Comprehensive and challenging academic program specializing in literature, history, philosophy, and the arts
- Exploration of themes across courses which show the human ties within and among cultures from the past to the present
- Interdisciplinary instruction of related core academics with seminars for reflective dialogue relating the humanities to current events and issues
- Emphasis on the role of the humanities and on the value of a liberal arts background in a technological society
- All English, Social Studies and Humanities courses receive honors credit

### Sample Four-Year Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
Center Module I English 9 World History & Geography II Foundations of Civilization (a Humanities Honors Seminar)	Center Module II English 10 AP Human Geography Development of World Cultures (a Humanities Honors Seminar)	Center Module III AP English 11 AP Virginia and United States History Age of Discovery and the New World (a Humanities Honors Seminar)	Center Module IV AP English 12 AP Virginia and United States Government Modernity and Global Cultures (a Humanities Honors Seminar)
*Mathematics *Science Health and P.E. *World Language	*Mathematics *Science Health and P.E. *World Language Economics and Personal Finance	*Mathematics *Science *World Language	*Mathematics or Elective *Science or Elective *World Language or Elective

**NOTE: \*Refer to Section I to determine which graduation requirements apply to you.**

- All students must successfully complete the Economics and Personal Finance course.



# Center for the Humanities

## Hermitage High School

### Course Descriptions

All Center courses emphasize the reading and analysis of primary sources, writing across disciplines, and provide an interdisciplinary approach to the study of the Humanities. All English, Social Studies and Humanities courses are connected through the themes outlined below for each grade level; therefore, the English and Social Studies courses may contain additional or varied readings and assignments while still allowing students to meet all the State and County requirements.

#### Foundations of Civilization Honors

Course #2715

36 weeks (1 cr.); required for Center students, Level I; Grade 9

- Explore the human condition through literary, historical, cultural, and artistic expression with an emphasis on the foundations in the humanities
- Study: pre-history, African folk and oral traditions, Ancient Egypt, Classical Greece and Rome, Greek philosophy, world religions, theater, sculpture, and architecture
- Develop skills in expository, analytical and creative writing, research, creativity, logic and reasoning, use of contextual evidence, presentations with the appropriate use of technology, communication in a team environment, the Socratic method, and service learning
- Examine the themes: *Myth and Global Tradition*; *Pursuit of the Ideal*; *The Faces of Love*; and *Heroes and Heroines*

#### Development of World Cultures Honors

Course #2716

36 weeks (1 cr.); required for Center students, Level II; Grade 10

- Explore the human condition through literary, historical, cultural, and artistic expression with an emphasis on the advancements in the humanities
- Study: Renaissance art and thought, classical and traditional music, European architecture, East Asian art and philosophy, and the Western “Great Works”
- Develop additional skills in critical thinking, inter-disciplinary learning, oral expression, analytical reading, research and writing, the Socratic method, and service learning
- Examine the themes: *Influence and Innovation*; *Power and Authority*; *Mixed Message*; and *Challenge and Growth*

#### Age of Discovery and the New World Honors

Course #2719

36 weeks (1 cr.); required for Center students, Level III; Grade 11

- Explore the human condition through literary, historical, and artistic expression with an emphasis on the humanities of America
- Study: Native American cultures, development of American art and music, progression of American philosophy, reflections of the American Dream, Jazz and Blues, and American theater
- Develop additional skills in descriptive writing, persuasive argument, inter-disciplinary thinking, self-directed learning, the Socratic method, and service learning
- Examine the themes: *Identity: A Clash of Cultures and Ideas*; *Character: Defining America*; *Convergence: A New Way of Life*; and *Self-Discovery and Responsibility*

#### Modernity and Global Cultures Honors

Course #2720

36 weeks (1 cr.); required for Center students, Level IV; Grade 12

- Explore the human condition through literary, historical, cultural and artistic expression with an emphasis on the contemporary humanities
- Study: modernism and post-modernism, genocide, social justice, gender, environmental and conceptual art, contemporary architecture, world film, globalization of cultures
- Master skills in research, the Socratic method, presentation with the use of technology, use of contextual evidence, formulation of argument and reasoning
- Develop additional skills in written and oral communication, aesthetic analysis and appreciation, cross-cultural awareness, self-guided learning, and community service leadership
- Examine the themes: *Freedom: Human Rights and Human Experience*; *Truth: Perception and Culture*; *Earth: World and Environment*; and *Future: Past, Present and Possibility*



# Center for Information Technology

## Deep Run High School

- Emphasis on the fundamentals for Information Technology
- Flexible/adaptable curriculum in-tune with changes in the technology world
- Rigorous program preparing students for a higher education and/or career in Information Technology and related fields
- Concentration in chosen IT field
- Realistic learning experiences within the IT community
- Industry Certifications

### CIT Course Sequence

Grade 9	Grade 10	Grade 11	Grade 12
Center Module I AP Computer Science Principles +Algebra II Honors or Geometry Honors English 9 Honors	Center Module II IT Project Management Honors Algebra II Honors or Math Analysis Honors Intro to Programming Honors English 10 Honors	Center Module III Application Development AP Computer Science A AP Calculus or Math Analysis Honors **Senior Internship	Center Module IV Mathematical Structures with Discrete Topics Honors Sr. Capstone Project Enterprise Architecture Honors
World History & Geography I Science Health and P.E. *World Language or *Elective	World History & Geography II Science Health and P.E. *World Language or *Elective Economics and Personal Finance	English 11 or AP English 11 Honors Virginia and United States History Science (or Elective) *World Language or *Elective	English 12 or AP English 12 Honors Virginia and United States Government Science (or Elective) *World Language or *Elective

**NOTES:** \* Refer to Section I to determine which graduation requirements apply to you.

- \*\* Senior Internship is completed during the summer between 11th and 12th grade (Summer tuition applies)
- + Students must meet Center criteria through successful completion of Algebra I prior to enrolling in this Center.
- All students must successfully complete the Economics and Personal Finance course.

### Course Descriptions

#### AP Computer Science Principles

Course #3186

36 weeks (1 cr.); Required; Grade 9

- Explore seven Big Ideas of computer science: Creativity, Abstraction, Data, Algorithms, Programming, Internet and Impact
- Develop problem-solving methodologies, computational and critical thinking skills.
- Learn and apply the foundations of computer science to address real-world problems

#### PSC Geometry Honors

Course #3143

36 weeks (1 cr.); required; Grade 9

- ✓ SOL Geometry end-of-course test
- Apply concepts and processes to information technology topics taught within the Center
- Refer to content in course #3143 in Course Descriptions, Section VI

#### IT Project Management Honors

Course #6671

18 weeks (.5 cr.); required; Grade 10

- Explore the fundamentals of project management as it relates to system life cycles
- Utilize real world project management techniques and methodologies in completing projects
- Material covered includes the Project Management Body of Knowledge and Agile Project Management





# Center for Information Technology

## Deep Run High School

### Course Descriptions (cont.)

#### English 9 Honors

Course #1130

36 weeks (1 cr.); required; Grade 9

- Analyze the meaning and effect of a passage related to grammar and syntax in both fiction and non-fiction works, giving special emphasis on information technology and business writing
- Write increasingly complex essays as a result of studying professional writers. Develop writing skills necessary for various technological media sources
- Understand use of rhetorical and literary devices used to create meaning. Read, comprehend, critique, and analyze a variety of literature, professional and technical writing

#### English 10 Honors

Course #1140

36 weeks (1 cr.); required; Grade 10

- Follow an interdisciplinary approach to integrate grammar, usage, writing, literature, and oral communication in assessing, evaluating, organizing, and presenting information as a part of the research process
- Develop persuasive, expository, and analytical writing skills, as well as fostering the writing skills necessary for various technological media sources
- Read, comprehend, critique, and analyze a variety of literature from various cultures and eras, with a focus on professional and technical writing within information technology and computer science

#### Algebra II Honors

Course #3135

36 weeks (1 cr.); required; Grades 9 or 10

- ✓ SOL Algebra II end-of-course test
- Apply advanced algebraic concepts and processes to information technology topics taught within the Center
- Refer to content in course #3135 in Course Descriptions, Section VI

#### Math Analysis/Trigonometry Honors

Course #3162

36 weeks (1 cr.); required; Grade 11

- Explore polynomials, logarithms, and exponential functions, matrices, theory of equations, curves, and conics
- Investigate limits, derivatives, vectors, permutations, and probability
- Explore, graph, and apply trigonometric and circular functions

#### Application Development

Course #6672

36 weeks (1 cr.); required; Grade 11

- Create an effective and original mobile or web application to solve an identified problem for a local organization
- Design applications with integrated security features and utilize version control software to manage development
- Follow project management methodologies and frameworks to complete the implementation, testing, and documentation

#### Senior Internship Honors

Course #6674

36 weeks (1 cr.); required; Grade 12

- Engage in real-world IT undertakings
- Apply software design, program development, database management and system architecture skills
- Utilize project management and communication skills through professional interactions

#### AP Computer Science A

Course #3185

36 weeks (1 cr.); elective

- Understand object-oriented (OO) design (OOD) and OO programming (OOP)
- Learn to code Java in a well-structured fashion and in good style giving attention to clarity of both code and documentation
- Learn to use Java library packages, classes, and interfaces and the Java Collections framework within the scope of the APCS-A Java subset

#### CIT Senior Capstone Project Honors

Course #6673

36 weeks (1 cr.); elective; Grade 12

- Explore one of the following areas of IT concentration; game design, network security, database design and development, or IT management
- Develop and apply area specific skills to IT projects within the Center and the IT community
- Research, develop and complete an independent project that solves a specific problem within the area of concentration

#### Mathematical Structures with Discrete Topics Honors

Course #3158

36 weeks (1 cr.); elective

- College level survey of discrete (non-continuous) algorithms and problem solving
- Study of mathematics with connections to computer science
- Explore logic, combinatorics, number theory, recursion, computational complexity, and graph theory

#### Intro to Programming Honors

Course #6640

18 weeks (.5 cr.); required; Grades 10-11

- Write code to create menus, sub procedures, sub functions, various controls & modules
- Enter, run, and compile a program; use variables and constants; program math operations and computer graphics
- Learn object oriented programming; work with arrays, templates and vectors

#### Enterprise Architecture Honors

Course #6675

36 weeks (1 cr.); Grade 12

- Understand the bare metal needs of building systems
- Understand the construction and allocation of resources when building virtual systems
- Architect efficient and secure network structures





# Center for Leadership, Government, and Global Economics

## Douglas S. Freeman High School

- Comprehensive curriculum preparing students to be knowledgeable, responsible, and ethical leaders
- An advanced studies program in government, history, and the free enterprise system
- Observation and interaction with leaders through partnerships and special programs
- Application of leadership skills and principles through curricular and co-curricular activities, community service, and enrichment programs
- Identification and development of personal leadership qualities through presentations, research, and mentorship programs

### Sample Four-Year Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
Center Module I English 9 +World History & Geography II Foundations of Leadership I	Center Module II English 10 Foundations of Leadership II AP Human Geography	Center Module III Leadership Ethics Seminar AP Virginia and United States History	Center Module IV AP Macroeconomics (1/2) AP Microeconomics (1/2) AP Government Senior Internship and Leadership Mentoring
Mathematics Science *World Lang. Health and P.E.	Mathematics Science *World Lang. Health and P.E. Economics & Personal Finance	English 11 *Mathematics or Elective *Science or Elective *World Lang. or Elective Elective	English 12 *Mathematics or Elective *Science or Elective *World Lang. or Elective

**NOTES:** \* Refer to Section I to determine which graduation requirements apply to you.

- + It is highly recommended that the students complete World History & Geography I before enrolling in this Center. This course is required for the Advanced Studies Diploma and the Center Diploma Seal but is NOT included in the Center's curriculum.
- All students must successfully complete the Economics and Personal Finance course.

### Course Descriptions

#### Foundations of Leadership I Honors

Course #2994

36 weeks (1 cr.); required for Center students; Grade 9

- Examine leadership styles of effective leaders
- Focus on the theories and competencies of leadership and group dynamics
- Emphasize knowledge of economic principles as a foundation for leadership growth

#### Foundations of Leadership II Honors

Course #2995

36 weeks (1 cr.); required for Center students; Grade 10

- Explore fundamental principles of psychology and sociology, as well as individual and group roles as they relate to society
- Study the impact of institutions on individuals, culture and society
- Focus on leadership in the contexts of formal organizations, government systems, social movements, and community organizations

#### AP Human Geography

Course #2212

36 weeks (1 cr.)

- Study human impact on the Earth's resources and environment
- Understand societal roles and relationships and their interdependence with one another
- Examine population trends and cultural patterns

#### Senior Internship and Leadership Mentoring Honors

Course #2997

36 weeks (1 cr.); required for Center students; Grade 12

- Complete a 180 hour internship with a local business, agency, or community organization
- Examine and evaluate effective leadership styles through an internship experience
- Integrate prior knowledge and evaluate personal performance during an internship experience

#### Leadership Ethics Seminar Honors

Course #2996

36 weeks (1 cr.); required for Center students; Grade 11

- Examine major theories of philosophy and ethics from antiquity to the present
- Analyze competing ethical systems from different cultures
- Examine the relationship of law, justice and morality in contemporary American jurisprudence

#### AP Microeconomics/AP Macroeconomics Honors

Course #2806 (micro); #2807 (macro)

18 weeks (.5 cr.); required for Center students; Grade 12

- Develop a fundamental understanding of the global marketplace and the functioning of a market economy
- Develop familiarity with economic performance measures, economic growth, and international economics
- Evaluate the nature and functions of product markets, factor markets, and the role of government in promoting greater efficiency and equity in the economy



# Center for Spanish Language and Global Citizenship

## J. R. Tucker High School

- Development of a high level of language proficiency and cultural awareness
- Enrollment in accelerated language classes and other courses taught exclusively in the target language
- Opportunities to interact with guest speakers, business partners, elementary school students, and community members
- Ability to interact and establish relationships with the non-English speaking community locally and internationally

### Sample Four-Year Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
Center Module I Immersion Spanish 9 Other World Language Level I Immersion Spanish Health & P.E. 9	Center Module II Immersion Spanish 10 Immersion World History & Geography II	Center Module III Immersion Spanish 11 AP Field Experience Immersion Elective	Center Module IV Immersion Spanish 12 AP Immersion Elective
English 9 Science *Social Studies Mathematics	English 10 Health & P.E. 10 Science Economics and Personal Finance Mathematics	English 11 Virginia and United States History *Science *Mathematics Elective	English 12 Virginia and United States Government *Science/Elective *Mathematics/Elective Elective

- NOTE:** \* Please refer to Section I of the Planning Guide to determine which graduation requirements apply to you. In addition to the required Center language courses, students must complete an additional year of another world language.
- All students must successfully complete the Economics and Personal Finance course.

### Course Descriptions

#### Immersion Spanish 9 Honors

Course #5520 (Spanish)  
36 weeks (1 cr.); required for Center students;  
Grade 9

- Develop proficiency skills where Spanish is the exclusive means of communication
- Explore customs and cultures where the target language is spoken
- Explore relationships with non-English speaking members of the local and international community

#### Spanish Study Abroad

#5535 (Spanish)  
Summer (1 cr.); elective  
Center students may choose to travel after Grade 10 or 11.

- Pass/Fail
- Acquire knowledge of culture and history through a home-stay experience during the summer
- Complete preparatory work before travel and post-travel projects

**Note:** Students receive credit for the Center's Exchange Program but do not receive credit for other travel experiences. Credit is posted on the student's transcript during the school year following travel.

#### Immersion Spanish 10 Honors

Course #5530 (Spanish)  
36 weeks (1 cr.); required for Center students;  
Grade 10

- Improve communication skills where Spanish is the exclusive means of communication
- Apply language skills through analysis of customs and traditions
- Develop relationships with non-English speaking members of the local and international community



# Center for Spanish Language and Global Citizenship

## J. R. Tucker High School

### Course Descriptions (cont.)

#### **Immersion Spanish 11, AP Spanish Language Honors**

Course #5570 (Spanish)

36 weeks (1 cr.); required for Center students; Grade 11

- Refine fluency through the advanced study of language structures and vocabulary
- Analyze and evaluate various literary works and themes to prepare for the Advanced Placement Spanish Language exam

#### **Immersion Spanish 12, AP Spanish Literature Honors**

Course #5580

36 weeks (1 cr.); required for Center students; Grade 12

- Perfect Spanish language skills for use beyond the classroom
- Complete an in-depth study of authors and works to include all of the suggested readings and preparation for the Advanced Placement Spanish Literature exam

#### **Immersion Health and PE 9**

Course #7300

36 weeks (1 cr.); required for Center students; Grade 9

- Taught in the target language
- Allows students the opportunity to increase their fluency through teamwork and cooperation

(See course #7300 in Section VI for specific course content)

#### **Cultures and Connections Honors**

Course #1518

36 weeks (1 cr.); elective; offered every three years; counts as 1 fine arts credit; Grades 10, 11, or 12; Instructed in Spanish

- Develop an understanding of/and an appreciation for the historical and cultural elements that contribute to the Spanish and Latin American civilizations
- Study the music, art, literature and culture of Spanish-speaking countries from early times to present

#### **Field Experience Honors**

Course #5998

36 weeks (1 cr.); Grades 11 or 12 required for Center students; counts as a practical arts credit; instructed in Spanish

- Complete a minimum of 40 hours of approved community service
- Expand world language skills working with elementary school students or by working with an organization, business or agency that has international ties

#### **Immersion World History & Geography II Honors**

Course #2216

36 weeks (1 cr.); required for Center students; Grade 10

✓SOL World History II end-of-course test

- Taught in Spanish
- See Course #2216 in Section VI for specific course content

#### **Contemporary Perspectives Honors**

Course #5997

36 weeks (1 cr.); elective; offered every three years; instructed in Spanish; Grades 10, 11, or 12

- Improve language skills and comprehension through Spanish newspapers, magazines, television and online resources
- Understand and respond to current issues using authentic materials and resources

#### **Conversation and Composition Honors**

Course #5505

36 weeks (1 cr.); elective; offered every three years; Grades 10, 11, or 12

- Improve interpersonal and presentational communication, accent, intonation, and fluency
- Expand vocabulary
- Strengthen complex grammar and usage



# International Baccalaureate Programs

## IB Program - Henrico & Tucker High Schools

Students in grades 9 and 10 complete Levels Four and Five of the International Baccalaureate Middle Years Program (IBMYP). In order for students to qualify for the Henrico County IB Certificate, students in grades 9 and 10 are required to complete the following:

- assessments in six IB subject groups
- a score of at least a 3 out of 7 on the personal project which is moderated by the IBO
- community and service requirements
- participation in the MYP for both grades 9 and 10

Grade 9, Level Four	Grade 10, Level Five
IBMYP Language and Literature (English) IBMYP Language Acquisition (French II or III or Spanish II or III) IBMYP Physical and Health Education IBMYP Geometry, Algebra II or AP Statistics IBMYP Biology IBMYP World History & Geography II *IBMYP Arts Elective	IBMYP Language and Literature (English) IBMYP Language Acquisition (French III or IV or Spanish III or IV) IBMYP Physical and Health Education** IBMYP Algebra II or IBMYP Extended Math IBMYP Chemistry IBMYP VA/US/Comparative Governments *IBMYP Arts Elective Economics and Personal Finance

**NOTES:** \* The six subject groups include mathematics, sciences, Language and Literature, Language Acquisition, Individuals and Societies, and the Arts. The IBMYP Art choices are visual arts and performing arts. Grade 10 elective choice should match Grade 9 elective choice for concurrency of learning as required by the IBO. Course availability may vary by school.

\*\*A student may take a non-weighted on-line or site based summer P.E. course to create an opportunity for an additional elective.

- All students must successfully complete the Economics and Personal Finance course.
- Students must meet Program criteria through successful completion of the following courses: Algebra I, French I or Spanish I. It is highly recommended that students complete World History I and Earth Science before enrolling in this Program.

During the eleventh and twelfth grades, the student completes the IB diploma curriculum. The high standards implicit in the IB examinations assume advanced levels of achievement. The subjects that comprise the core of the IB curriculum are arranged in six groups. All students must complete their study in all six areas. Group 6, however, may include not only arts electives, but also subjects in other areas such as psychology or science. Requirements for the IB diploma candidate in Grades 11-12 are listed below:

- Internally graded and externally moderated assessments in each subject
- Examinations in six IB subjects: 3 at the higher level (HL) and 3 at the standard level (SL)  
 SL = Standard Level (at least one year of study); HL = Higher Level (2 years of study)
- Theory of Knowledge course
- Extended essay on a student-selected topic
- CAS Program (Creativity, Activity, Service)

IB Subject Areas - Course Offerings by Groups			
Grade 11		Grade 12	
<b>1. Language &amp; Literature</b> IBDP English <b>2. Language Acquisition</b> IBMYP/DP French (IV or V) or IBMYP/DP Spanish (IV or V) <b>3. Individuals &amp; Societies</b> IBDP History of the Americas <b>4. Experimental Sciences</b> IBDP Biology or IBDP Chemistry SL	<b>5. Mathematics</b> IBMYP Extended Mathematics or IBMYP Standard Mathematics or IBDP Mathematical Studies SL or IBDP Mathematics SL <b>6. The Arts/Elective</b> IBDP Theatre Arts or IBDP Psychology SL or IBDP Art/Design IBDP Theory of Knowledge I (requirement for IB Diploma candidates)	<b>1. Language &amp; Literature</b> IBDP English HL <b>2. Language Acquisition</b> IBDP French V SL or VI SL or HL or IBDP Spanish V SL or VI SL or HL <b>3. Individuals &amp; Societies</b> IBDP World History Topics SL or HL <b>4. Experimental Sciences</b> IBDP Biology SL or HL or IBDP Chemistry SL or HL	<b>5. Mathematics</b> IBDP Mathematical Studies SL or IBDP Mathematics SL <b>6. The Arts/Elective</b> IBDP Art/Design HL IBDP Theatre Arts SL or HL IBDP Psychology SL or HL IBDP Theory of Knowledge II (requirement for IB Diploma candidates) AP Electives are available.

Students earning the IB diploma will have completed the requirements for graduation provided they have passed the end-of-course SOL tests to earn verified credits as required by the State of Virginia. (See "Graduation Requirements" in Section I.) The student who does not satisfy the requirements of the Diploma Program is awarded a certificate for the examination(s) completed.

Adhering to the full IB curriculum 9-12 satisfies the Virginia DOE Advanced Studies Diploma requirements.

Leaving the IB program prior to completion will require a student to meet the original state requirements for graduation.

**For more information on the IB Middle Years Program offered in grades 6-8, see Section IV of this planning guide.**

# International Baccalaureate Programs

## IB Program - Henrico & Tucker High Schools

### Course Descriptions

*Courses in the IBMYP and IB Diploma Program (IBDP) incorporate the Virginia Standards of Learning, the Essentials of the Curriculum, and the Standards set by the International Baccalaureate Organization.*

#### **IBMYP English, Level Four Honors**

Course #IB1130

36 weeks (1 cr.); required (Language & Literature); Grade 9

- Follow an interdisciplinary approach to integrate grammar, usage, writing, literature, and research
- Develop the Personal Project required for the HCPS MYP certificate

#### **IBMYP English, Level Five Honors**

Course #IB1140

36 weeks (1 cr.); required (Language & Literature); Grade 10

- ✓ SOL English end-of-course EOC Writing test (2 parts, 1 verified credit)
- Continue the development of the academic skills necessary for IB courses
- Complete the personal project and assessments required for the HCPS MYP certificate

#### **IBDP English Honors**

Course #IB1150

36 weeks (1 cr.); required (Language & Literature); Grade 11

- ✓ SOL English end-of-course EOC Reading test (1 verified credit)

This course is required for all IB diploma candidates.

- Concentrate on in-depth analytical study of major works of literature selected from an IB list of authors, genres, and time periods
- Undertake extensive reading and writing assignments
- Complete papers and oral presentation for external examiners

#### **IBDP English HL Honors**

Course #IB1160

36 weeks (1 cr.); required (Language & Literature); Grade 12

This course, in partnership with Course #IB1150, is required for all IB diploma candidates.

- Continue in-depth analytical study of major works of literature selected from an IB list of authors, genres, and time periods
- Complete papers and oral commentary for external examiners
- Prepare for the IB Literature (HL) written examinations

#### **IBDP Theory of Knowledge I Honors**

Course #IB1197

36 weeks (1 cr.); required; Grade 11

- Compare and contrast knowledge systems to understand how they affect the nature of knowledge, language, perception, and logic
- Understand the range of human knowledge by examining the belief systems inherent in various academic subjects
- Complete oral presentation for internal assessment

#### **IBDP Theory of Knowledge II Honors**

Course #IB1198

36 weeks (1 cr.); required; Grade 12

- Compare and contrast knowledge systems to understand how they affect the nature of knowledge, language, perception, and logic
- Understand the range of human knowledge by examining the belief systems inherent in various academic subjects
- Complete essay for external grading

#### **IBMYP French II Honors**

Course #IB5122

36 weeks (1 cr.); Grade 9

This is the second level of required world language (Language Acquisition) for students entering Grade 9 IBMYP at the high school level.

#### **IBMYP French III Honors**

Course #IB5132

36 weeks (1 cr.); Grade 9 or 10

This course represents the third level of required world language (Language Acquisition) study for students prior to entering the IB Diploma Program. All tenth grade IBMYP students in this course will prepare for the HCPS MYP certificate assessments.

#### **IBMYP French IV Honors**

Course #IB5142

36 weeks (1 cr.); Grade 10 or 11

Levels IV and V of world language (Language Acquisition) study are required for IB Diploma candidates. All Grade 10 IBMYP students in this course will prepare for HCPS MYP certificate assessments.

#### **IBDP French V SL Honors**

Course #IB5152

36 weeks (1 cr.); Grade 11 or 12

This course prepares students to complete the IB French examination (SL or HL) at the end of Grade 12. Grade 11 students will continue their world language studies in Grade 12 and sit for the examination at the end of Grade 12.

#### **IBDP French VI SL or HL Honors**

Course #IB5162

36 weeks (1 cr.); Grade 12

This rigorous level of French is designed for Grade 12 IB diploma students. Students sit for the standard or higher level IB examinations.

#### **IBMYP Spanish II Honors**

Course #IB5522

36 weeks (1 cr.); Grade 9

This is the second level of required world language (Language Acquisition) for students entering Grade 9 IBMYP at the high school level.





# International Baccalaureate Programs

## IB Program - Henrico & Tucker High Schools

### Course Descriptions (cont.)

#### **IBMYP Spanish III Honors**

Course #IB5532

36 weeks (1 cr.); Grade 9 or 10

This course represents the third level of required world language (Language Acquisition) study for students prior to entering the IB Diploma Program. All Grade 10 IBMYP students in this course will prepare for the HCPS MYP certificate assessments.

#### **IBMYP Spanish IV Honors**

Course #IB5542

36 weeks (1 cr.); Grade 10 or 11

Levels IV and V of world language (Language Acquisition) study are required for IB Diploma candidates. All Grade 10 IBMYP students in this course will prepare for HCPS MYP certificate assessments.

#### **IBDP Spanish V SL Honors**

Course #IB5552

36 weeks (1 cr.); Grade 11 or 12

This course prepares students to complete the IB Spanish examination (SL) at the end of Grade 12. Grade 11 students will continue their world language studies in Grade 12 and sit for the IB Spanish examination at the higher level in their senior year.

#### **IBDP Spanish VI SL or HL Honors**

Course #IB5562

36 weeks (1 cr.); Grade 12

This rigorous level of Spanish is designed for Grade 12 IB diploma students. Students sit for the standard or higher level IB examinations.

#### **IBMYP Physical and Health Education, Level Four Honors**

Course #IB7300

36 weeks (1 cr.); required; Grade 9

In addition to following the county curriculum, there is an emphasis on nutrition and sports performance; developing, implementing, and evaluating a physical fitness plan; and designing aesthetic movement routines to prepare for the HCPS MYP certificate assessments.

#### **IBMYP Physical and Health Education, Level Five Honors**

Course #IB7400

36 weeks (1 cr.); required; Grade 10

In addition to following the county curriculum, there is an emphasis on nutrition and sports performance; developing, implementing, and evaluating a physical fitness plan; and designing aesthetic movement routines to prepare for the HCPS MYP certificate assessments.

#### **IBMYP Geometry, Level Four Honors**

Course #IB3143

36 weeks (1 cr.); required; Grade 9

✓SOL Geometry end-of-course test  
This is the recommended sequential course for those students entering the IBMYP having completed Algebra I.

#### **IBMYP Algebra II, Level Four or Five Honors**

Course #IB3135

36 weeks (1 cr.); required; Grade 9 or 10

✓SOL Algebra II end-of-course test  
This is the recommended sequence for those students in the IBMYP who have completed geometry. All Grade 10 students will complete the HCPS MYP certificate assessments.

#### **IBMYP Standard Mathematics**

Course #IB3189

36 weeks; required; Grade 10 or 11

This course is for IB sophomores or juniors who have completed Algebra II. It provides additional support in preparation toward their IB Diploma Math Studies or Mathematics courses. All Grade 10 students will complete the HCPS MYP certificate assessments.

#### **IBMYP Extended Mathematics Honors**

Course #IB3199

36 weeks (1 cr.); required; Grade 10 or 11

This course is for Grade 10 IBMYP students who have completed Algebra II or Grade 11 IB Diploma students who have completed Algebra II. All Grade 10 students will complete the HCPS MYP certificate assessments.

- Incorporate IBMYP Extended Mathematics concepts in advanced algebra, trigonometry, statistics, and statistics, and probability
- Enhance students' mathematical problem-solving skills
- Enhance students' ability to communicate and reason using mathematical language and conventions

#### **IBDP Mathematical Studies SL Honors**

Course #IB3198

36 weeks (1 cr.); Grade 11 or 12

(Prerequisite: IBMYP Extended Mathematics)

This course prepares students to complete the IB Mathematical Studies examination. Course content focuses on the application of mathematics in the world outside the classroom. A required component of the course is a project involving original research and data collection.

Core topics include:

- Number Systems and Algebraic Expressions
- Sets and Logic
- Geometry and Trigonometry
- Statistics and Probability
- Functions
- Financial Math
- Further Statistics and Probability
- Matrices and Graph Theory
- Differential Calculus



# International Baccalaureate Programs

## IB Program - Henrico & Tucker High Schools

### Course Descriptions (cont.)

#### **IBDP Mathematics SL Honors**

Course #IB3197

36 weeks (1 cr.); Grade 11 or 12

(Prerequisite: IBMYP Extended Mathematics)

This course prepares students to take the IB Mathematics examination. Course content focuses on the development of mathematical concepts and theories that enable students to make connections to mathematics in the world outside the classroom. A project demonstrating achievement in all core topics is a required component of the course.

Core topics include:

- Number Systems and Algebraic Expressions
- Functions and Equations
- Circular Functions and Trigonometry
- Vector Geometry (2-dimensional)
- Statistics and Probability
- Calculus
- Statistical Methods
- Further Calculus
- Further Geometry

#### **IBMYP Biology, Level Four Honors**

Course #IB4310

36 weeks (1 cr.); required; Grade 9

✓SOL Biology end-of-course test

This course is an introduction to the biological sciences and is a prerequisite for Biology SL for students in the IB Diploma Program.

- Synthesize and relate biological information from different areas of biology
- Students complete assessments for the HCPS MYP certificate

#### **IBDP Biology SL Honors**

Course #IB4380

36 weeks (1 cr.); Grade 11

(Prerequisite: IBMYP Biology or teacher recommendation)

This course is required for the IB students who select biology from Group 4.

- Synthesize and relate biological information from different areas of biology
- Prepare students for the IB Biology SL examination
- Students may take this course as their IB elective or in grade 12 as an elective which does not apply to the diploma

#### **IBDP Biology SL or HL Honors**

Course #IB4390

36 weeks (1 cr.); Grade 12

- Continue to synthesize and relate biological information from different areas of biology
- Complete the required study of two options
- Prepare for the IB Biology SL or HL examination

#### **IBMYP Chemistry, Level Five Honors**

Course #IB4410

36 weeks (1 cr.); required; Grade 10

✓SOL Chemistry end-of-course test

This course is a prerequisite for IB Chemistry SL in the IB Diploma Program.

- Develop an understanding of chemistry
- Examine mathematical applications of chemical properties
- Students complete assessments for the HCPS MYP certificate

#### **IBDP Chemistry SL Honors**

Course #IB4480

36 weeks (1 cr.); Grade 11

(Prerequisite: IBMYP Chemistry and IBMYP Algebra II or teacher recommendation)

This course is required for IB students who select chemistry from Group 4.

- Continue qualitative and quantitative analysis as applied to an independent project
- Prepare for the IB Chemistry SL examination
- Students may take this course as their IB elective or in grade 12 as an elective that does not apply to the diploma

#### **IBDP Chemistry SL or HL Honors**

Course #IB4490

36 weeks (1 cr.); Grade 12

- Continue qualitative and quantitative analysis of an independent project
- Complete the required study of two options listed above with the duration of each to be 22 hours
- Prepare for the IB Chemistry SL or HL examination

#### **IBMYP World History & Geography II, Level Four Honors**

Course #IB2216

36 weeks (1 cr.); required; Grade 9

✓SOL World History II end-of-course test

This course is designed for students who will enter IB History in the eleventh and twelfth grades and fulfills one World History/World Geography requirement for graduation. It analyzes political, economic, and social change.

#### **IBMYP VA/US/Comparative Governments, Level Five Honors**

Course #IB2445

36 weeks (1 cr.); required; Grade 10

This course is designed for students who will enter IBDP History in the eleventh and twelfth grades and partially fulfills the U.S. Government requirement for graduation. Course #IB2361 completes the requirement. Students complete assessments for HCPS MYP certificate.

#### **IBDP History of the Americas Honors**

Course #IB2360

36 weeks (1 cr.); required; Grade 11

✓SOL Virginia and United States History end-of-course test

This course, required of all IB Diploma candidates, is a substitute for the Virginia and United States History requirement for graduation, and partially prepares the student for the IB examination at the completion of course #IB2361 in grade 12.

#### **IBDP World History Topics SL or HL Honors**

Course #IB2361

36 weeks (1 cr.); required; Grade 12

(Prerequisite: IB History of the Americas HL)

This course, in partnership with Course #IB2445, fulfills the U.S. Government requirement for graduation. Also, this course and course #IB2360 prepare the student for the IB SL or HL examination.

- Focus on world history and politics across the ages
- Continue the study of the Americas focusing on Latin America
- Continue preparation for the IB SL or HL examination





# International Baccalaureate Programs

## IB Program - Henrico & Tucker High Schools

### Course Descriptions (cont.)

#### **IBDP Psychology SL Honors**

Course #IB2903

36 weeks (1 cr.); elective; Grade 11 (or 12)

- Explore research methods, ethics and quantitative research methods
- Complete an experimental study
- Prepare for the IB Psychology SL examination

#### **IBDP Psychology SL or HL Honors**

Course #IB2904

36 weeks (1 cr.); elective; Grade 12

This course is the second year of the two-year IB Psychology Course.

The higher level course requires that 100 hours be spent on perspectives, 60 hours on options, 50 hours on research methodology, and 30 hours on experimental study.

- Complete the study of biological, cognitive, learning, and humanistic perspectives that are compulsory
- Complete experimental study
- Prepare for the IB Psychology SL or HL exam

#### **IBMYP Visual Arts I, Level Four Honors**

Course #IB9194

36 weeks (1 cr.); elective; Grade 9

This course is designed to fulfill the arts requirement of the IBMYP at Level Four.

#### **IBMYP Visual Arts II, Level Five Honors**

Course #IB9195

36 weeks (1 cr.); elective; Grade 10

This course is designed to fulfill the arts requirement of the IBMYP at Level Five. It prepares students for HCPS MYP certificate assessment in Grade 10.

#### **IBDP Art/Design Honors**

Course #IB9125

36 weeks (1 cr.); elective; Grade 11

This course, in partnership with #IB9126, comprises a Group 6 elective offering for IB diploma candidates. Art/Design engages the student on a personal journey, emphasizing in-depth study and requiring individual research. Over the two-year period, the course will engage students in a cultural awareness of art history, art interpretations, global perspectives, and critical thinking. Students will prepare to sit for the IB Art Design higher level examination at the completion of course #IB9126 in grade 12.

#### **IBDP Art/Design HL Honors**

Course #IB9126

36 weeks (1 cr.); elective; Grade 12

This is the second year of the Group 6 offering described in Course #IB9125. Students will prepare to sit for the IB Art Design higher level examination.

#### **IBMYP Dramatic Arts I, Level Four Honors**

Course #IB1432

36 weeks (1 cr.); elective; Grade 9

This course is an elective offering that fulfills the fine arts requirement of the IBMYP at Level Four.

#### **IBMYP Dramatic Arts II, Level Five Honors**

Course #IB1433

36 weeks (1 cr.); elective; Grade 10

This course is designed to fulfill the arts requirement of the IBMYP at Level Five and prepares students for HCPS MYP certificate assessments in Grade 10.

#### **IBDP Theatre Arts Honors**

Course #IB1450

36 weeks (1 cr.); elective; Grade 11

This course prepares students to complete the Group 6 Arts elective component of the IB Diploma Program.

- Introduce ensemble work, performance techniques, characterization, and the principles of theatre production
- Compare and contrast play texts from different theatrical traditions and cultures
- Prepare for the IB Theatre Arts internal assessments

#### **IBDP Theatre Arts SL or HL Honors**

Course #IB1451

36 weeks (1 cr.); elective; Grade 12

- Continue the study of theatre production including an in-depth research analysis project
- Prepare for the IB Theatre Arts SL or HL examination



# Todd Allen Phillips Center for Medical Sciences

## Mills E. Godwin High School

- A challenging curriculum preparing students to be analytical thinkers and diagnostic scientific researchers
- An accelerated course of studies in science and mathematics supplemented with exposure to topics relevant to the Life and Health Sciences
- Topical application of developed scientific inquiry and data analysis skills to advancements and ethical considerations in the Medical Sciences
- Mentored scientific research experiences in individual and collaborative settings
- Interaction with medical and scientific specialists through guest lectures and competitions

### Sample Four-Year Curriculum

Grade 9	Grade 10	Grade 11	Grade 12
<b>Center Module I:</b> Medical Biology: (Honors) Research Analytics: Algebra 2 (Honors) Scientific Research (Honors)	<b>Center Module II:</b> Medical Chemistry: (Honors) Research Analytics: PreCalculus (Honors) ^AP Statistics (AP)	<b>Center Module III:</b> AP Physics I <i>or</i> C: (AP) AP Calculus AB: (AP) ^AP Science Elective: (AP) *Center Elective: (Honors)	<b>Center Module IV:</b> AP Physics I, II, <i>or</i> C: (AP) AP Calculus BC (AP) *Center Elective: (Honors)
English 9 World History I <i>or</i> II World Language Health and P.E. 9	English 10 World History II <i>or</i> Elective World Language Health and P.E. 10	English 11 Virginia and US History World Language Electives	English 12 Virginia and US Government World Language Electives

#### NOTES:

1. Students should refer to Section I of this Planning Guide to determine specific graduation requirements.
  2. Students must meet Specialty Center admission/enrollment criteria through successful completion of Algebra I as a full-year course. Geometry may be taken as an Honors course during 9th grade or online during the summer preceding 9th or 10th grade.
  3. All students must successfully complete the Economics and Personal Finance course.
- ^ Year of enrollment in AP Statistics and the required AP Science elective will be recommended by Specialty Center mathematics and science instructor(s) in accordance with the students' plan of study.
- \* All students must complete two Specialty Center Elective courses to be chosen from the following: *Anatomy & Physiology, Biostatistics & Data Analysis, Genetics & Biotechnology, Organic & Biochemistry, and Microbiology & Immunology*

### Course Descriptions

#### Medical Biology - Honors

Course #4610  
 36 weeks (1 cr.); required for Center students;  
 Grade 9

✓ SOL Biology end-of-course test

- Investigate core curriculum concepts of Biology through unifying themes
- Use mathematical and scientific techniques and laboratory experiences to diagnose, analyze, and solve problems
- Engage in independent research

#### Medical Chemistry - Honors

Course #4612  
 36 weeks (1 cr.); required for Center students;  
 Grade 10

✓ SOL Chemistry end-of-course test

- Investigate core curricular concepts of inorganic Chemistry as well as introductory concepts of organic Chemistry and Biochemistry through unifying themes
- Provide an inquiry-based learning environment emphasizing field work and laboratory experiences
- Engage in independent research

#### AP Physics I

Course #4573  
 36 weeks (1 cr.); elective  
 High schools; Grades 10-12

- Study Newtonian mechanics (including rotational dynamics and angular momentum); work, energy and power; mechanical waves and sound; and electric circuits
- Prepare for the Advanced Placement Physics I exam



# Todd Allen Phillips Center for Medical Sciences

## Mills E. Godwin High School

### Course Descriptions (cont.)

#### AP Physics II

Course #4574

36 weeks (1 cr.); elective

High schools; Grades 10-12

- Study fluid mechanics, thermodynamics, electricity and magnetism, optics, atomic and nuclear physics
- Prepare for the Advanced Placement Physics II exam

#### AP Physics C: Mechanics

Course #4571

36 weeks (1 cr.); elective

High schools; Grades 11-12

- Study kinematics; Newton's laws of motion, work, energy, and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation
- Prepare for the Advanced Placement Physics C: Mechanics exam

#### Organic & Biochemistry Honors

Course #4450

36 weeks (1 cr.); elective for Center students; Grades 11-12

- Investigate the chemistry of carbon with focus on functional groups, their properties, and their characteristic reactions
- Explore substitution and elimination reactions with an introduction to the chemistry of aromatic compounds
- Cover chemical properties of biological systems: chemical and physical properties of nucleotides, amino acids, proteins, and water

#### Research Analytics: Geometry Honors

Course #3243

36 weeks (1 cr.); required for Center students; Grade 9

- ✓ SOL Geometry end-of-course test
- Investigate core curricular concepts of Geometry through unifying themes
- Master concepts and skills in graphing, algorithms, functions and proofs as problem-solving techniques
- Explore discrete topics related to Geometry

#### Research Analytics: Algebra 2 Honors

Course #3233

36 weeks (1 cr.); required for Center students; Grades 9-10

- ✓ SOL Algebra 2 end-of-course test
- Investigate core curricular concepts of Algebra 2 through unifying themes
- Use computers and calculators to model and solve data structures
- Promote problem-solving through modeling, investigation, and analysis

#### Research Analytics: PreCalculus Honors

Course #3262

36 weeks (1 cr.); required for Center students; Grades 9-11

- Investigate the characteristics and applications of trigonometric functions
- Develop skills in functions and their inverses in preparations for Calculus
- Explore mathematical connections to the physical and biological sciences

#### Scientific Research Honors

Course #9820

36 weeks (1 cr.); required for Center students; Grade 9

- Introduce experimental design and statistical analysis tools enabling diagnostic problem-solving and inference
- Study the process of experimental scientific research including hypothesis formulation, literature review, and data analysis
- Perform an original student research project and present results in written, oral, and electronic form

#### AP Statistics

Course #3191

36 weeks (1 cr.); required for Center students; Grade 10, 11, or 12

- Develop statistical analysis tools, statistical and probabilistic reasoning
- Use curve fitting to predict from data
- Apply statistical knowledge to student's independent research

(See Course #3191 in Section VI for specific course content)

#### Microbiology & Immunology Honors

Course #4338

36 weeks (1 cr.); elective for Center students; Grades 11-12

- Develop Microbiology techniques and skills needed in the identification of pathogenic organisms that cause disease
- Investigate host infection/defense mechanisms, resistance, and treatments for pathogens that alter the body's homeostatic processes
- Study the physical and chemical characteristics of the components of the immune system

#### Genetics & Biotechnology Honors

Course #4348

36 weeks (1 cr.); elective for Center students; Grades 11-12

- Develop techniques of restriction enzyme digestion, DNA profiling, population genetics, and simple genetic engineering
- Master techniques of gel electrophoresis, polymerase chain reaction, and blotting
- Investigate the advanced topics in Genetics such as epistasis, chromosomal mapping, and gene linkage

#### Anatomy & Physiology Honors

Course #4330

36 weeks (1 cr.); elective for Center students; Grades 11-12

- Study the structure and function of body parts
- Investigate the function and organization of body systems – skeletal, muscular, cardiovascular, respiratory, and sensory
- Explore the relationship between the body as a living system and its parts

#### AP Calculus AB

Course #3177

36 weeks (1 cr.); required for Center students; Grade 11 or 12

(See Course #3177 in Section VI for specific course content)

#### AP Calculus BC

Course #3179

36 weeks (1 cr.); required for Center students; Grade 12

(See Course #3179 in Section VI for specific course content)



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# **SECTION VI**

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Course Descriptions  
and Fee Schedule

**AGRICULTURAL  
EDUCATION**

**Greenhouse Management**

Course #8035

36 weeks (3 cr.); elective

ACE Center at Hermitage, The Academy at Virginia Randolph

- Study the production of greenhouse crops by working in a greenhouse setting
- Study flower and plant arrangements, soils, nutrients, and the propagation and transplantation of plants
- Produce foliage and bedding plants

**Landscaping**

Course # 8036

36 weeks (3 cr.); elective

ACE Center at Hermitage, The Academy at Virginia Randolph

- This course focuses on preparing students for entry-level employment and advancement in landscape design, landscape construction, and landscape maintenance
- Students gain experience in the use of hand and power tools related to landscaping
- Students gain experience in turf care and grounds maintenance

**ART**

**Art Exploratory Grade 6**

Course #9103

9-18 weeks; elective

Middle Schools

- Appreciate art, its history, aesthetics and criticism
- Participate and create using a variety of art media and techniques including computer
- Explore art vocabulary, visual literacy and art from different cultures

**Art 6**

Course #9104

36 weeks; elective

Middle Schools

- Learn art, its history, aesthetics and criticism
- Study elements and principles of design using a variety of media including computer
- Maintain a portfolio; use art vocabulary, understand visual literacy and cultural art

**Art 7**

Course #9105

36 weeks; elective

Middle Schools

- Learn art, its history, aesthetics and criticism
- Study elements and principles of design using a variety of media including computer
- Maintain a portfolio; use art vocabulary, understand visual literacy and cultural art

**Art Exploratory Grade 7 or 8**

Course #9106

18 weeks; elective

Middle Schools

- Appreciate art, its history, aesthetics and criticism
- Participate and create using a variety of art media and techniques including computer
- Maintain a portfolio; explore art vocabulary, visual literacy and cultural art

**Art 8**

Course #9115

36 weeks; elective

Middle Schools

- Learn art, its history, aesthetics and criticism
- Study elements and principles of design using a variety of media including computer
- Maintain a portfolio; use art vocabulary, understand visual literacy and cultural art

**Introduction to Computer Art**

Course #9107

18 weeks; elective

Middle Schools

- Use computer and peripherals to create art and animation
- Study elements and principles of design, digital imaging
- Maintain a portfolio

**Introduction to Art History**

Course #9108

18 weeks; elective

Middle Schools

- Explore art relating it to world history, science and culture
- Study elements and principles of design, aesthetics and art criticism
- Enjoy studio experiences using various art techniques and media

**Introduction to Crafts**

Course #9109

18 weeks; elective

Middle Schools

- Explore role of crafts in different cultures
- Develop skills in a variety of craft technique
- Explore the role of crafts within fine arts

**Art I, Discovering Art**

Course #9120

36 weeks (1 cr.); elective

Middle School - Teacher recommendation required

High Schools

- Learn art, its history, aesthetics and criticism using written and oral formats
- Study elements and principles of design using a variety of media including computer
- Maintain a portfolio; use art vocabulary, understand visual literacy and cultural art

**Senior Art I**

Course #9121

36 weeks (1 cr.); elective; only for seniors who have never taken Art I

High Schools

- Learn art, its history, aesthetics and criticism using written and oral formats with same grade level students
- Study elements and principles of design using a variety of media including computer
- Maintain a portfolio; use art vocabulary, understand visual literacy and cultural art

**Art II, Exploring Art**

Course #9130

36 weeks (1 cr.); elective

High Schools

- Expand study of art, its history, aesthetics and criticism
- Study elements and principles of design using a variety of media including computer
- Collect portfolio works; increase art vocabulary and understanding of visual culture

**Art III, Applied Arts and Design**

Course #9140

36 weeks (1 cr.); elective

High Schools

- Build on previous study of art, its history, aesthetics, criticism and vocabulary
- Apply personal themes to 2D and 3D projects. Differentiate between fine and commercial art
- Finalize a portfolio for advanced placements

**Art IV, Advanced Art**

Course #9145

36 weeks (1 cr.); elective

High Schools

- Develop works based on personal themes and assess using personal aesthetics
- Apply art vocabulary, history, aesthetics and criticism through written and verbal formats
- Organize and critique works for a final portfolio

**Art IV, Advanced Art Honors**

Course #9145

36 weeks (1 cr.); elective

- See Course #9145 above for content
- Fulfill additional Honors requirements

**Art V, Advanced Art**

Course #9146

36 weeks (1 cr.); elective

High Schools

- Develop multi-media works based on personal themes and expression
- Apply art vocabulary, history, aesthetics and criticism through written and verbal formats
- Organize and critique works for a final portfolio. Research art careers and education opportunities



**Art V, Advanced Art Honors**

Course #9146

36 weeks (1 cr.); elective

- See Course #9146 above for content
- Fulfill additional Honors requirements

**Introduction to Art**

Course #9123

18 weeks (.5 cr.); elective

High Schools

- Explore art, its history, aesthetics and criticism
- Participate and create using a variety of art media and techniques including computer
- Maintain a portfolio

**School Service Art**

Course #9122

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

High Schools

- Learn how to use elements and principles of design in daily living
- Explore lettering, silkscreen, computers, layout and design
- Apply skills to advertising, poster, bulletin board and display design and school service projects

**Drawing**

Course #9142

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

High Schools

- Explore history of drawing
- Understand its relationship to artistic development and self-expression
- Use a wide variety of drawing techniques and maintain a portfolio

**Painting**

Course #9151

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

High Schools

- Explore history of painting; use a variety of painting techniques and media
- Understand its relationship to artistic development and self-expression
- Use the elements and principles of design in painting; maintain a portfolio

**Design**

Course #9141

18 weeks (.5 cr.)

36 weeks (1 cr.)

Elective for students who have completed Art II (may be repeated for credit)

High Schools

- Use elements and principles of design relating to art and the environment
- Combine art history, vocabulary, visual culture into 2 and 3D projects
- Maintain a portfolio. Teacher recommendation required

**Directed Independent Study**

Course #9147

18 weeks (.5 cr.)

36 weeks (1 cr.)

Elective for students who have completed Art IV or equivalent advanced coursework

High Schools

- Complete research based on previous art experiences. Maintain a portfolio
- Correlate art history with art projects related to major area of interest
- Develop self-directed project that is specialized, experimental and researched

**AP Studio Art 2D Design**

Course #9148

36 weeks (1 cr.); elective for students who are highly motivated and committed to the serious study of art

High Schools

- Engage in artistic study and production based on excellence and personal interest
- Develop 2D works that are specialized, experimental and research based
- Produce required portfolio for the Advanced Placement exam

**AP Studio Art 3D Design**

Course #9149

36 weeks (1 cr.); elective for students who are highly motivated and committed to the serious study of art

High Schools

- Engage in artistic study and production based on excellence and personal interest
- Develop 3D works that are specialized, experimental and research based
- Produce required portfolio for the Advanced Placement exam

**AP Studio Art Drawing**

Course #9150

36 weeks (1 cr.); elective for students who are highly motivated and committed to the serious study of art

High Schools

- Engage in artistic study and production based on excellence and personal interest
- Develop works that are specialized, experimental and research based
- Produce required portfolio for the Advanced Placement exam

**Foundations of Digital Media, Art and Design**

Course #9152

18 weeks (.5 cr.); elective

High Schools

- Explore the basic concepts of computer art and programs
- Use the elements and principles of design in digital images
- Understand the differences between fine and computer generated art

**Digital Media, Art and Design I**

Course #9153

36 weeks (1 cr.); elective

Middle Schools - Teacher recommendation required

High Schools

- Creatively use computer software and peripherals
- Study the history of computer art, graphics, fine art, art history, aesthetics and criticism
- Apply the elements and principles of design to digital images. Maintain a portfolio

**Digital Media, Art and Design II**

Course #9197

36 weeks (1 cr.); elective

High Schools

- Develop computer art skills in commercial and fine art, image manipulation and more
- Understand in depth art history, aesthetics and criticism and correlate to computer art
- Apply the elements and principles of design to digital images. Maintain a portfolio

**Digital Media, Art and Design III**

Course #9180

36 weeks (1 cr.); elective

High Schools

- Refine computer art skills; categorize work based on personal themes and techniques
- Increase knowledge of art history, aesthetics and criticism and correlate to computer art
- Finalize a portfolio for advanced placements

**Digital Media, Art and Design IV Honors**

Course #9181

36 weeks (1 cr.); elective

High Schools

- Use advanced computer art skills in video, presentation, marketing, 3D and publication
- Correlate art history, aesthetics and criticism to computer art. Explore copyright
- Critique using proper vocabulary and organize a final portfolio

**Crafts**

Course #9160

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

Middle Schools - may not be taken for credit

High Schools

- Explore the role of crafts in different cultures
- Develop skills in selected crafts
- Understand aesthetics and criticism in relation to crafts

**Foundations of Ceramics**

Course #9162

18 weeks (.5 cr.); elective

High Schools

- Work with clay and ceramics techniques Develop an appreciation for methods
- Use elements and principles in ceramics
- Learn the history of ceramics

**Ceramics I**

Course #9163

36 weeks (1 cr.); elective

High Schools

- Techniques emphasized: hand-building, wheel throwing, glazing and firing
- Explore the role of ceramics in art history and various cultures
- Understand the aesthetics and criticism relating to ceramics

**Ceramics II**

Course #9164

36 weeks (1 cr.); elective

High Schools

- Refine techniques: hand building, wheel throwing, experimental glazing and firing
- Continue explorations in the role of ceramics in art history and various cultures
- Understand the aesthetics and criticism relating to ceramics. Maintain a portfolio

**Ceramics III**

Course #9177

36 weeks (1 cr.); elective

High Schools

- Refine techniques: hand building, wheel throwing, experimental glazing and firing
- Develop works based on personal themes and is research based
- Understand the aesthetics and criticism relating to ceramics

**Art History Honors**

Course #9170

36 weeks (1 cr.); elective; for students in grades 11 and 12

High Schools

- Survey and correlate art and aesthetics with world history and humanities
- Study major periods of art through a variety of media, critiques and gallery visits
- Use art vocabulary to recognize, describe, analyze, and judge works of art

**AP Art History**

Course #9171

36 weeks (1 cr.); elective

High Schools

- See course #9170 above for basic course content
- Fulfill additional requirements in preparation for AP Art History examination

## BUSINESS AND INFORMATION TECHNOLOGY

Cooperative Education is a method of instruction that combines career and technical classroom instruction with paid employment directly related to the classroom instruction. Instruction is developed and conducted in consultation with employers having skills and considerable knowledge of the occupational field represented by the student's career objective. Individualized, written training plans are developed to correlate the classroom instructions with the on-the-job training. Formal and informal evaluations of student progress including feedback are completed to assist learners in improving their work performance. To participate in and earn cooperative education (co-op) credit, a student must combine classroom instruction and a minimum of 396 hours of continuous, supervised on-the-job training. \*Course numbers ending with a V indicate a Cooperative Education course.

**Accounting I Honors**

Course #6320

36 weeks (1 cr.); elective

Course #6320V

36 weeks (Co-op, 1 cr.); elective

High Schools

- Learn accounting principles
- Learn the need for financial management and records in business and home
- Evaluate accounting done manually and by computers

**Accounting II Honors**

Course #6321

36 weeks (1 cr.); elective

Course #6321V

36 weeks (Co-op, 1 cr.); elective

High Schools

- Use microcomputers to automate and interpret payroll, inventory, accounts payable, and accounts receivable
- Learn management of financial records through business activities, partnership and corporate accounting, general ledger, and cost accounting

**AP Computer Science Principles**

Course #3186

36 weeks; (1 cr.); elective

High Schools, grades 10-12

- Explore seven Big Ideas of computer science: Creativity, Abstraction, Data, Algorithms, Programming, Internet and Impact
- Develop problem-solving methodologies, computational and critical thinking skills
- Learn and apply the foundations of computer science to address real-world problems

**Business Law**

Course #6131

36 weeks (1 cr.); elective

Course #6131V

36 weeks (Co-op, 1 cr.); elective

Course #6132

18 weeks (.5 cr.); elective

High Schools

- Examine the American legal system
- Study the legal rights of minors and adults as American citizens
- Study contract, insurance, sales/credit, real estate, and employment laws

**Business Management**

Course #6135

36 weeks (1 cr.); elective

Course #6135V

36 weeks (Co-op, 1 cr.); elective

Course #6136

18 weeks (.5 cr.); elective

High Schools

- Acquire overview of national and international business
- Explore social and economic environments of business
- Learn all aspects of business ownership

**Digital Applications**

Course #6617

18 weeks (.5 cr.); elective

Middle/High Schools

- Develop touch skills for entering alphabetic information on a keyboard
- Examine digital citizenship, computer terminology, components, and functions
- Learn concepts of word processing, spreadsheets, database, and presentations

**Digital Input Technologies**

Course #6160

18 weeks; elective

Grades 7 and 8

- Explore the Digital Input Technologies Mix
- Use Digital Imaging and Audio Devices
- Learn Speech Recognition techniques

**Discovering Business & IT**

Course #6608

9 weeks; elective

Middle Schools

- Develop keyboarding, communications, and digital citizenship skills
- Explore elements of coding and computer science
- Create digital projects using the latest technology tools

**Economics and Personal Finance**

Course #6120

36 weeks (1 cr.); required;

High Schools (10-12)

(Course available online)

- Explore financial literacy and economic education through practical experiences
- Learn investment strategies for building a portfolio
- Consider factors to establish credit and acquire loans



**Exploring Business Computers**  
 Course #6150  
 9 weeks; elective  
 Middle Schools

- Develop touch skills for entering alphabetic information on a keyboard
- Learn computer terminology and concepts
- Use equipment and materials efficiently

**Exploring Computer Science**  
 Course #6670  
 36 weeks (1 cr.); elective  
 8th grade/High Schools

- Master computer science basics
- Learn programming, web design, and data analysis
- Develop/enhance teamwork, communication, and critical thinking skills

**Introduction to Coding**  
 Course #6607  
 18 weeks; elective; Grades 7-8

- Learn the basic tools of computer programming
- Explore social and ethical concerns relating to working in the software development field
- Use a variety of online resources to solve problems and create programs

**Legal Systems Administration**  
 Course #6735  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Study terminology and procedures to prepare legal documents
- Obtain preparation for continuing education in a law-related occupation
- Prepare legal documents using microcomputer software

**Make It Your Business**  
 Course #8112  
 9 weeks; elective  
 Course #8114  
 18 weeks; elective  
 Middle Schools

- Learn business terminology and business principles
- Use the computer as a problem-solving tool to design business documents
- Participate in team-building activities

**Medical Systems Administration**  
 Course #6730  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Acquire skills used in doctors' offices and hospital records departments
- Learn medical terminology and procedures
- Prepare medical correspondence and insurance forms/documents

**Microsoft IT Academy**  
 Course #6612  
 36 weeks (1 cr.); elective  
 Course #6612V  
 36 weeks (Co-op, 1 cr.); elective  
 High Schools

- Learn microcomputer terminology
- Learn fundamentals of MS Office Suite, Windows, and programming concepts
- Use software employed in colleges and businesses in the Richmond area

**Advanced Microsoft IT Academy Honors**  
 Course #6613  
 36 weeks (1 cr.); elective  
 alone or with  
 Course #6613V  
 36 weeks (Co-op, 1 cr.); elective  
 High Schools

- Create professional documents demonstrating principles of layout design
- Use computer peripherals to produce multimedia presentations
- Create, post, and maintain a website

**Office Administration**  
 Course #6621  
 36 weeks (1 cr.); elective  
 Course #6621V  
 36 weeks (Co-op 1 cr.); elective  
 High Schools

- Develop office procedure skills
- Learn operation of office equipment, document preparation, records management, recordkeeping, and information processing
- Increase oral and written communication skills

**Principles of Business and Marketing**  
 Course #6115  
 36 weeks (1 cr.); elective  
 High Schools

- Explore the roles of business and marketing in the free enterprise system
- Make decisions as consumers, wage earners, and citizens
- Plan for further study in business and marketing careers

**Programming Honors**  
 Course #6640  
 36 weeks (1 cr.); elective  
 Course #6640V  
 36 weeks (Co-op, 1 cr.); elective  
 High Schools

- Enter, run, and compile a program
- Use variables and constants
- Program math operations and computer graphics

**Web Design & Multimedia Technologies**  
 Course #IB6632  
 18 weeks; elective  
 Grade 6 MYP students

- Develop interactive multimedia presentations/projects
- Create Web Pages using a variety of programming languages and applications
- Develop/strengthen communication and teamwork skills

**Web Development/Programming I**  
 Course #6680  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Understand the business of web site development
- Construct web pages using HTML, CSS and JavaScript programming
- Master concepts required to pass the related CTE industry credential exam

**Web Development/Programming II**  
 Course #6681  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Develop real-world programming and application development skills
- Develop real-world dynamic database driven web applications
- Master concepts to pass CIW Design Specialist exam

**DRIVER EDUCATION**

**Driver Education and Highway Safety**  
 Course #7040  
 18 weeks (.5 cr.); elective

*Students must have a valid Virginia learner's permit on the first day of class.*

High Schools

- Identify and interpret traffic safety regulations
- Demonstrate decision-making skills to operate a motor vehicle, and explain the effects of alcohol and other drugs on driving tasks
- Demonstrate knowledge of car systems and maintenance, as well as maintain a driving log

**DUAL ENROLLMENT COURSES**

Refer to Section V entitled *Career and Technical Education* to identify dual enrollment courses

**ENGLISH/  
LANGUAGE ARTS**

**College and Career Readiness English**

Course #9812  
18 weeks (.5 cr.); elective  
High Schools

- Improve reading and writing skills with a focus on college entrance exams
- Explore college application and search processes
- Focus on career education and readiness

**English 6**

Course #1109  
36 weeks; required  
Middle Schools

- ✓ Grade 6 SOL Reading test
- Develop independence in vocabulary acquisition
- Read for comprehension a variety of literature, nonfiction, and informational text
- Develop narratives, descriptions, and explanations through the writing process

**English 6 Advanced**

Course #1109  
36 weeks; required  
Middle Schools

- ✓ Grade 6 SOL Reading test
- Experience inquiry-based instruction through the theme of "Change"
- Begin two-year research project
- Read a variety of literature in connection to the theme

**English 7**

Course #1110  
36 weeks; required  
Middle Schools

- ✓ Grade 7 SOL Reading test
- Begin study of figurative language, connotations, and analogies
- Read and analyze a variety of literature, nonfiction, and informational text
- Develop persuasive and expository pieces through the writing process

**English 7 Advanced**

Course #1110  
36 weeks; required  
Middle Schools

- ✓ Grade 7 SOL Reading test
- Experience inquiry-based instruction through the theme of "Persuasion"
- Complete two-year research project
- Read a variety of literature in connection to the theme

**English 8**

Course #1120  
36 weeks; required  
Middle Schools

- ✓ Grade 8 SOL Reading test
- ✓ Grade 8 SOL Writing test
- Describe themes and draw conclusions from literature
- Continue to develop an appreciation of literary elements
- Develop informational, persuasive, and expository pieces through the writing process

**English 8 Advanced**

Course #1120  
36 weeks; required  
Middle Schools

- ✓ Grade 8 SOL Reading test
- ✓ Grade 8 SOL Writing test
- Deepen analysis of a variety of literature through text annotation
- Craft essays that increase insight into literature and life
- Begin manipulating grammar and syntax for intended effect

**English 9**

Course #1130  
36 weeks (1 cr.); required  
High Schools

- Apply knowledge of literary terms and forms to analysis of literature and informational materials
- Write in a variety of forms with an emphasis on analysis
- Develop research skills in using a variety of print and electronic sources to access information

**English 9 Honors**

Course #1130  
36 weeks (1 cr.); required  
High Schools

- Analyze the meaning and effect of a passage related to grammar and syntax
- Write increasingly complex essays as a result of studying professional writers
- Understand use of rhetorical and literary devices to create meaning

**English 10**

Course #1140  
36 weeks (1 cr.); required  
High Schools

- ✓ SOL English end-of-course EOC Writing test (2 parts; 1 verified credit)
- Read, comprehend, critique, and analyze a variety of literature
- Develop expository writing skills by analyzing and critiquing peers and professionals
- Develop research skills in accessing, evaluating, and organizing information

**English 10 Honors**

Course #1140  
36 weeks (1 cr.); required  
High Schools

- ✓ SOL English end-of-course EOC Writing test (2 parts; 1 verified credit)
- Read more complex, layered texts with tone shifts and multiple tones
- Connect tools of persuasion to the meaning of a work as a whole
- Develop a distinct voice as a writer by choosing sentence structures, details, etc.

**English 11**

Course #1150  
36 weeks (1 cr.); required  
High Schools

- ✓ SOL English end-of-course EOC Reading test (1 verified credit)
- Analyze relations among American literature, history, and culture
- Refine writing skills with an emphasis on persuasion
- Create a documented research project

**English 11 Honors**

Course #1150  
36 weeks (1 cr.); required  
High Schools

- ✓ SOL English end-of-course EOC Reading test (1 verified credit)
- Identify prevalent themes, universal characters, and genres in American literature
- Use the tools of rhetoric to develop persuasive writing
- Create an independent, documented, research project

**AP English 11, Language & Composition**

Course #1196  
36 weeks (1 cr.); may be taken in lieu of English 11  
High Schools

- ✓ SOL English end-of-course EOC Reading test (1 verified credit)
- Use nonfiction texts to identify and explain use of rhetorical strategies
- Compose argumentative writing assignments based on readings
- Prepare for the Advanced Placement Language and Composition Exam

**English 12**

Course #1160  
36 weeks (1 cr.); required  
High Schools

- Analyze world literature
- Produce a well-documented research paper
- Fine tune learning, thinking, studying, and writing skills

**English 12 Honors**  
 Course #1160  
 36 weeks (1 cr.); required  
 High Schools; Course is available online

- Analyze the development of world literature
- Refine writing skills
- Demonstrate independent and cooperative learning skills

**AP English 12, Literature & Composition**  
 Course #1195  
 36 weeks (1 cr.); may be taken in lieu of English 12  
 High Schools

- Focus on the historical and philosophical influences on literature
- Write pieces that require analysis, synthesis, and evaluation
- Prepare for the Advanced Placement Literature & Composition Exam

**Shakespeare Studies Honors**  
 Course #1100  
 36 weeks (1 cr.); elective; recommendation required  
 High Schools (**online**)

- Experience interactive, online learning of Shakespeare
- Study a variety of Shakespeare's work
- Attend required after-hours and off-site meetings

**Advanced Shakespeare Studies Honors**  
 Course #1104  
 36 weeks (1 cr.); elective; recommendation required  
 High Schools

- Study lesser-known works of Shakespeare
- Examine Shakespeare's influence on other works of literature
- Attend required after-hours and off-site meetings

**Dramatic Literature**  
 Course #1188  
 36 weeks (1 cr.); elective  
 High Schools

- Study classical and contemporary plays
- Learn the theatrical conventions involved with acting styles, playhouses, and costuming

**World Literature**  
 Course #1191  
 18 weeks (.5 cr.); elective  
 High Schools

- Expand knowledge of the western world
- Investigate themes in art, music, and literature through a humanities approach
- Study major writers, artists, and musicians that vary in time, place, and theme

**World Literature Honors**  
 Course #1191  
 36 weeks (1 cr.); elective  
 High Schools

- Survey Greek, French, Spanish, Italian, German, Scandinavian, and Russian cultures
- Examine the social, aesthetic, and intellectual traits of world literature
- Study a major work from each culture

**Middle School Introduction To Creative Writing**  
 Course #1170  
 18 or 36 weeks; elective  
 Middle Schools

- Explore the techniques used in writing short stories, plays, and poetry
- Apply learned principles to creative writing
- Submit compositions for publication in the school newspaper/literary magazine

**Creative Writing**  
 Course #1171  
 18 weeks (.5 cr.); elective  
 36 weeks (1 cr.); elective  
 High Schools

- Write short stories, poetry, drama, and essays
- Focus on the process of writing rather than the product
- Develop skills in rewriting

**Advanced Composition/Creative Writing Honors**  
 Course #1172  
 36 weeks (1 cr.); elective  
 High Schools; Grades 11-12; may be repeated for credit

- Learn that effective writing can be achieved through the application of certain skills
- Explore writing as an art to refine natural talent

**Middle School Introduction To Journalism**  
 Course #1199  
 36 weeks; elective  
 Middle Schools

- Focus on collecting, writing, editing, and publishing news
- Survey skills necessary to regularly publish a newspaper
- Gain experience by publishing a school newspaper

**Journalism Skills**  
 Course #1201  
 18 weeks (.5 cr.); elective  
 36 weeks (1 cr.); elective  
 High Schools

- Examine media assaults on the public
- Become aware of the responsibilities of journalists as well as the laws which govern them
- Improve skills for work on school publications

**Journalism**  
 Course #1200  
 36 weeks (1 cr.); elective; may be repeated for credit  
 High Schools

- Develop skills in newspaper style, news, features, sports, editorials, captions, etc.
- Develop skills in graphics, production, and advertising
- Explore legal restraints of free speech that affect high school publications

**Photojournalism**  
 Course #1215  
 36 weeks (1 cr.); elective; may be repeated for credit  
 High Schools

- Conceptualize journalistic procedures that record school year activities
- Incorporate taking photographs with script and art work
- Develop basic skills in desktop publishing

**Creative Communications for Middle School**  
 Course #9803  
 18 or 36 weeks; elective  
 Middle Schools

- Appreciate the power of words and the power of the media
- Explore drama and speech
- Experiment with a variety of methods for self-expression

**Middle School Speech and Dramatics**  
 Course #1389  
 36 weeks; elective  
 Middle Schools

- Develop public speaking skills
- Explore dramatic skills such as improvisation, gestures, and voice projection
- Write scenes, dialogue, and speeches

**Oral Communication I**  
 Course #1300  
 36 weeks (1 cr.); elective  
 High Schools

- Apply techniques of speaking, organizing, and delivering information
- Develop a variety of skills for presentations
- Deliver in-class speeches for a variety of purposes and audiences

**Oral Communication II**  
 Course #1302  
 36 weeks (1 cr.); elective  
 High Schools

- Learn a variety of speech techniques
- Practice leading a discussion
- Study the styles of great speakers and practice speech techniques

**Speech Communication**

Course #1304  
18 weeks (.5 cr.); elective  
36 weeks (1 cr.); elective  
High Schools

- Examine the techniques of speaking as well as the composition of effective speeches
- Deliver in-class speeches for a variety of purposes and audiences
- Develop diction, enunciation, and other skills for presentations

**Speech for Competition and the Stage**

Course #1121  
36 weeks (1 cr.); elective  
High Schools

- Study the competitive aspects of speech activities
- Develop rehearsal techniques and individual styles
- Prepare for public performances

**Debate**

Course #1111  
36 weeks (1 cr.); elective; may be repeated for credit  
High Schools

- Study the elements of debate
- Develop research strategies, arguments, refutation and rebuttal, and delivery styles
- Appreciate the skills involved in selling an idea

**Middle School Theatre Arts**

Course #1409  
36 weeks; elective  
Middle Schools

- Express self through creative dramatics, improvisations, and role playing
- Explore program design, set building, lighting, and props
- Participate in a school play

**Theatre Arts I**

Course #1410  
18 weeks (.5 cr.); elective  
36 weeks (1 cr.); elective  
High Schools

- Develop skills of speech, acting, stagecraft, and improvisation
- Experience acting exercises and improvisation
- Explore theatre appreciation, participation, and history

**Theatre Arts II**

Course #1420  
36 weeks (1 cr.); elective  
High Schools

- Focus on technical theatre, speech, and play analysis for the actor
- Study play structure, action, and characterization
- Participate in live performances

**Theatre Arts III**

Course #1430  
36 weeks (1 cr.); elective  
High Schools

- Explore theatre history and dramatic literature
- Produce and direct a one-act play
- Study actors and their techniques

**Theatre Arts IV Directing Honors**

Course #1440  
36 weeks (1 cr.); elective  
High Schools

- Study the development of the director as an integral part of theatre
- Prepare a prompt book
- Apply the duties of a director to all performances

**Stagecraft/Technical Theatre**

Course #1435  
18 weeks (.5 cr.); elective; may be repeated for credit  
High Schools

- Develop skills in set construction
- Study the history of scene design
- Explore areas of theatre management

**Introduction to the Humanities Honors**

Course #1515  
36 weeks (1 cr.); elective  
High Schools

- Examine the artistic and literary movements of the Western tradition and the political, economic, and social milestones of Western history
- Study the philosophy, religion, art, music and literature of the major cultural movements in Western history

**African American Literature**

Course #1519  
36 weeks (1 cr.); elective  
High Schools

- Expand knowledge of African American culture through literature
- Investigate themes in art, music, and literature
- Study African American writers, artists, and musicians

**ENGLISH AS A  
SECOND LANGUAGE - ESL  
is now  
LANGUAGE INSTRUCTION  
EDUCATIONAL PROGRAM  
(LIEP) FOR ENGLISH  
LEARNERS  
Please see page 99.**

**EXCEPTIONAL  
EDUCATION**

Middle School Exceptional Education  
Course Offerings, Required by IEP Team  
Placement

MIDDLE SCHOOL ENGLISH

English 6

Course #1109E

- ✓ Grade 6 SOL Reading test
- Develop independence in vocabulary acquisition
- Read for comprehension a variety of literature, nonfiction, and informational text
- Develop narratives, descriptions, and explanations through the writing process

English 7

Course #1110E

- ✓ Grade 7 SOL Reading test
- Begin study of figurative language, connotations, and analogies
- Read and analyze a variety of literature, nonfiction, and informational text
- Develop persuasive and expository pieces through the writing process

English 8

Course #1120E

- ✓ Grade 8 SOL Reading test
- ✓ Grade 8 SOL Writing test
- Describe themes and draw conclusions from literature
- Continue to develop an appreciation of literary elements
- Develop informational, persuasive, and expository pieces through the writing process

MIDDLE SCHOOL READING

Courses #1177, 1178, 1179

- Improve overall level of achievement through individual and group instruction
  - Acquire word attack, vocabulary building, and comprehension skills
  - Focus on reading and test-taking skills
- These courses include "Language!Live"

MIDDLE SCHOOL MATH

Middle School Math Course 1

Course #3110E

- ✓ Grade 6 SOL test
- Develop understanding and skills with fractions, decimals, and ratios
- Investigate geometry and probability; collect and analyze data
- Develop concepts of integers, variables, equations, and inequalities



Middle School Math Course 2  
*Course #3111E*  
 ✓ Grade 7 SOL test  
 • Use proportional reasoning to solve practical and consumer problems  
 • Investigate geometry, probability, data analysis, linear equation, and inequalities  
 • Use patterns, estimation, and simple algebraic techniques to solve problems

Middle School Math Course 3  
*Course #3112E*  
 ✓ Grade 8 SOL test  
 • Apply Pythagorean Theorem and transformations to geometric figures  
 • Analyze and represent relations and functions using tables, graphs, and rules  
 • Solve and graph multi-step linear equations

**MIDDLE SCHOOL SCIENCE**

Introduction to Earth and Environmental Science (6)  
*Course #4105E*

- Emphasize experimental design and the scientific method
- Explore fundamental concepts in meteorology, ecology, astronomy, and natural resources management
- Emphasize energy sources and their relationships to the natural world

Life Science (7)  
*Course #4115E*

- Explore cellular organization and the classification of organisms
- Explore the relationships among organisms, populations, communities, and ecosystems
- Examine the change that results from the transmission of genetic information from generation to generation

Physical Science (8)  
*Course #4125E*

- ✓ SOL Cumulative Grade 8 science test
- Build on skills of systematic investigation emphasizing sources of error and data based conclusions
- Understand the relationship between graphs and what is occurring in an experiment
- Focus on introductory concepts in chemistry and physics

**MIDDLE SCHOOL SOCIAL STUDIES**

Social Studies 6  
*Course #2354E*

- ✓ SOL United States History I test
- Focus on the history of the United States from Pre-Columbian times until 1865
- Study documents and events that lay the foundation of American ideals and institutions
- Learn fundamental concepts in civics, economics and geography

Social Studies 7  
*Course #2355E*  
 ✓ SOL United States History II test  
 • Focus on American history from 1865 to the present  
 • Learn the concepts of economics, geography, and due process of law  
 • Use reference sources to interpret graphs, charts, and maps

Social Studies 8: Civics and Economics  
*Course #2220E*  
 ✓ SOL Civics and Economics test  
 • Study the U. S. and Virginia Constitutions and government at the national, state, and local levels  
 • Learn the basic principles, structure, and operation of the American economy  
 • Learn the electoral process

**MIDDLE SCHOOL FUNCTIONAL ACADEMIC COURSE OFFERINGS, 6-8**

Functional English for Middle School Students  
*Course #7801*  
*students with intellectual disabilities*  
 • Develop spelling, vocabulary, grammar, reading, and written and oral expression

Functional Math for Middle School Students  
*Course #7802*  
*students with intellectual disabilities*  
 • Apply basic mathematical concepts and vocabulary, including using whole numbers, fractions, decimals, and percentages

Functional Social Studies for Middle School Students  
*Course #7803*  
*students with intellectual disabilities*  
 • Develop fundamental understanding of society, cultures and systems as adapted from the middle school social studies curriculum

Functional Science for Middle School Students  
*Course #7804*  
*students with intellectual disabilities*  
 • Develop fundamental understanding of scientific processes and concepts as adapted from the middle school science curriculum

Functional Reading for Middle School Students  
*Course #7805*  
*students with intellectual disabilities*  
 • Develop reading skills in the areas of fluency, decoding and comprehension to be utilized across content areas and functional applications

Middle School Vocational Preparation  
*Course #7896*  
*students with intellectual disabilities*  
 • Acquire skills to become a contributing member of the community  
 • Develop skills for employment through vocational training in supervised school-based work settings

Middle School Daily Living Skills  
*Course #7895*  
*Middle Schools; students with intellectual disabilities*  
 • Function independently at home and in the community  
 • Learn to care for personal needs, clothing, the household, and to prepare nutritious meals  
 • Develop independent mobility within the community

Leisure/Recreation  
*Course #7806*  
*36 weeks (0 cr.)*  
*Middle Schools*  
 • Engage in age-appropriate recreation and leisure activities  
 • Participate in individualized and group competitive and noncompetitive games and leisure activities

**MIDDLE SCHOOL EXCEPTIONAL EDUCATION ELECTIVES**

Social Skills  
*Course #7816*  
 • Learn, apply, generalize, and maintain social skills across multiple contexts and environments  
 • Receive direct instruction, modeling, coaching and reinforcement in identified areas of need to improve interpersonal relationship skills, and peer interactions

Learning Strategies  
*Course #7926*  
 • Develop learning strategies  
 • Develop skills such as test taking, note-taking, proofreading, time management, and memory association

Middle School Personal Development  
*Course #7894*  
 • Develop skills in the areas of decision making/problem solving, conflict resolution, character development and stress management  
 • Develop interpersonal and intrapersonal relations  
 • Enrollment in this course is based on IEP team determination

**HIGH SCHOOL EXCEPTIONAL EDUCATION COURSES, AS DICTATED BY IEP TEAM SERVICE DESCRIPTIONS**

**ENGLISH**  
 English 9, Adapted Curriculum  
*Course #1161*  
*36 weeks (1 cr.); IEP required*  
 • Increase vocabulary, grammar and spelling skills  
 • Strengthen oral and written language  
 • Obtain help with reading disabilities

## EXCEPTIONAL EDUCATION

English 10, Adapted Curriculum  
Course #1162

36 weeks (1 cr.); IEP required

- Develop writing skills
- Refine grammar usage and reading skills
- Write simple sentences and paragraphs for use in everyday communication

English 11, Adapted Curriculum  
Course #1163

36 weeks (1 cr.); IEP required

- Build on the skills already acquired
- Refine grammar, oral and written language, and vocabulary and spelling skills
- Apply skills for future employment and leisure

English 12, Adapted Curriculum  
Course #1164

36 weeks (1 cr.); IEP required

- Refine language and communication skills needed in everyday life
- Apply vocabulary and spelling skills to complete applications and other forms
- Learn to read for information using dictionaries, reference materials, and newspapers

### MATH

Algebra I, 2-yr Sequence, Part I  
Course #3131

36 weeks (1 cr.); elective; IEP required

- One half of the curriculum (Course #3130) is presented in one year for a full credit
- Continue the development of proportional reasoning, the concepts of variables and functions, equality, and inequality with equations and operations with equations
- Apply algebraic concepts and processes to the real world

Algebra I, 2-yr Sequence, Part II  
Course #3132

36 weeks (1 cr.); elective; IEP required

- ✓ SOL Algebra I end-of-course test
- One half of the curriculum (Course #3130) is presented in one year for a full credit
- Operate on expressions, equations and inequalities
- Graph and solve linear and quadratic functions

Geometry, 2-yr Sequence, Part I  
Course #3144

36 weeks (1 cr.); elective; IEP required

- One half of the curriculum (Course #3143) is presented in one year for a full credit
- Represent problem situations with geometric models
- Use inductive and deductive reasoning from given assumptions

Geometry, 2-yr Sequence, Part II  
Course #3145

36 weeks (1 cr.); elective; IEP required

- ✓ SOL Geometry end-of-course test
- One half of the curriculum (Course #3143) is presented in one year for a full credit
- Classify figures in terms of congruence and similarity
- Use transformations to identify congruent figures

Personal Living and Finance  
Course #3120

36 weeks (1 cr.); IEP required; Can be used as a math elective for students in exceptional education earning a standard diploma; Can be used as a math required course for a student in exceptional education earning a modified standard diploma

- Learn banking concepts, including managing checking and savings accounts, and budgeting skills
- Consider factors in establishing credit and acquiring loans for automobiles and mortgages
- Understand state and federal tax computations

Math 9, Adapted Curriculum  
Course #3199

36 weeks (1 cr.); IEP required

- Develop computational skills needed in everyday living
- Apply concepts related to money, measurements, and budgeting

Math 10, Adapted Curriculum  
Course #3200

36 weeks (1 cr.); IEP required

- Relate mathematics to the environment through activities, investigation, and projects
- Reinforce money values, usage, and the concept of time
- Apply computational skills to banking, measurement, buying, and budgeting

Math 11, Adapted Curriculum  
Course #3201

36 weeks (1 cr.); IEP required

- Apply computational skills to everyday situations
- Use whole numbers, fractions, decimals, percents, tables, and measurement in recipes, spending and earning money, traveling, working, and buying insurance

Math 12, Adapted Curriculum  
Course #3202

36 weeks (1 cr.); IEP required

- Apply computational skills to making consumer decisions
- Learn concepts related to earning money, buying food, shopping, budgeting, banking and investing, and paying taxes

Consumer Economics, High School  
Course #7889

36 weeks (1 cr.); IEP required

- Explore consumer skills
- Learn concepts of banking and credit
- Study legal protections and responsibilities of consumers

### SCIENCE

Earth Science I, Part I  
Course #4200

18 weeks; (.5 cr.); elective; IEP required

36 weeks (1 cr.); elective; IEP required

- One half of the curriculum (Course #4210) is presented in one year for a full credit
- Connect the study of Earth's composition, structure, processes, and history; atmosphere, freshwater, and oceans; and its environment in space
- Interpret maps, charts, tables, and profiles

Earth Science I, Part II  
Course #4201

36 weeks (1 cr.); elective; IEP required

- ✓ SOL Earth Science end-of-course test
- One half of the curriculum (Course #4210) is presented in one year for a full credit
- Integrate technology in collecting, analyzing, and reporting data
- Explore plate tectonics, rock cycle, Earth's history, oceans, atmosphere, weather, climate, solar systems, and the universe

Biology I, 2-yr Sequence, Part I  
Course #4300

36 weeks (1 cr.); elective; IEP required

- One half of the curriculum (Course #4310) is presented in one year for a full credit
- Understand living systems
- Integrate scientific technology in collecting, analyzing, and reporting data

Biology I, 2-yr Sequence, Part II  
Course #4301

36 weeks (1 cr.); elective; IEP required

- ✓ SOL Biology end-of-course test
- One half of the curriculum (Course #4310) is presented in one year for a full credit
- Emphasize the importance of research that validates or challenges ideas
- Explore the history of biological thought and the evidence that supports it, biochemical life processes, cellular organization, mechanisms of inheritance, dynamic relationships among organisms, and changes in organisms

Environmental Science I  
Course #4313

36 weeks (1 cr.); IEP required

- Develop thinking and inquiry skills
- Study microbes as causes of diseases
- Study ecosystems and interdependence of organisms within the environment

Environmental Science II  
 Course #4314  
 36 weeks (1 cr.); IEP required

- Study microbes as causes of diseases and how these are treated with medical attention
- Study ecosystems and interdependence of organisms within the environment
- Understand how recycling has a direct impact on the environment, and how recycled materials help to make other items for use in the environment

Environmental Science I  
 Course #7906  
 36 weeks (1 cr.); IEP required

- Examine the interdependence of people and their environment, and apply these concepts in everyday life situations
- Focus on daily living skills: personal hygiene, clothing care, safety, meal planning and purchasing food items

Environmental Science II  
 Course #7907  
 36 weeks (1 cr.); IEP required

- Examine the interdependence of people and their environment, and apply these concepts in everyday life situations
- Study units on energy for a balanced diet in addition to the units introduced in Environmental Science I
- Focus on daily living skills: personal hygiene, clothing care, safety, and meal planning

**SOCIAL STUDIES**

Virginia and United States History, 2-yr Sequence, Part I  
 Course #2361  
 36 weeks (1 cr.); elective; IEP required

- One half of the curriculum (Course #2360) is presented in one year for a full credit
- Study the contributions of minority groups
- Learn the political, economic, social, and cultural development of the United States from colonization to the present

Virginia and United States History, 2-yr Sequence, Part II  
 Course #2362  
 36 weeks (1 cr.); elective; IEP required

- ✓ SOL U.S. and Virginia History end-of-course test
- One half of the curriculum (Course #2360) is presented in one year for a full credit
- Learn the political, economic, social, and cultural development of the United States from colonization to the present time
- Appreciate our heritage

Virginia and United States History, Adapted Curriculum  
 Course #7890  
 18 weeks; (.5 cr.); IEP required  
 36 weeks (1 cr.); IEP required

- Study early explorers, colonists, and the American Revolution
- Explore the growth of government, democracy, and the development of territories in the United States
- Study the Civil War, rise of industry, influx of immigrants, 20th century wars, modern cities, and America's place in the world

Virginia and United States Government  
 Course #7891  
 36 weeks (1 cr.); IEP required

- Focus on the foundation, operation, and interrelationships of federal, state, and local governments
- Determine the rights and responsibilities of citizens
- Study the U. S. Constitution and the branches of federal government

**FUNCTIONAL ACADEMIC COURSE OFFERINGS, HIGH SCHOOL LEVEL**

Practical Language Arts, 9-12  
 Course #7808-#7811  
 36 weeks (1 cr.); IEP required

- Apply reading recognition skills, oral and written spelling skills, and listening skills for communication in daily living

Practical Mathematics, 9-12  
 Course #7812-#7815  
 36 weeks (1 cr.); IEP required

- Learn arithmetical operations through individual instruction
- Focus on money measurement and finance skills to function independently and skillfully in the community
- Develop application of skills in real life situations

Basic Life Skills, 9-12  
 Course #7896  
 36 weeks (1 cr.); IEP required; may be repeated for credit

- Develop preparation for employment
- Develop interpersonal skills, apply functional academic skills, follow directions, work independently, practice self-advocacy, and explore other community living skills

Daily Living Skills, 9-12  
 Course #7899  
 36 weeks (1 cr.); IEP required

- Function independently at home and in the community
- Care for personal needs including clothing, the household, and nutritious meals
- Develop independent mobility and functional use of community facilities

Leisure/Recreation  
 Course #7807  
 36 weeks (1 cr.); IEP required; may be repeated for credit

- Engage in age-appropriate recreation and leisure activities
- Participate in individualized and group competitive and noncompetitive games and leisure activities

Vocational Emphasis I, High School, Non-Competitive Employment Preparation  
 Course #7897  
 36 weeks (1 cr.); IEP required

- Examine the differences between going to school and going to work, the reasons for working, and pride in individual abilities
- Learn procedures in seeking employment, applying for a job, and keeping the job
- Examine unemployment, paychecks, wages, deductions, and other job-related concepts

Vocational Emphasis II, High School, Non-Competitive Employment Preparation  
 Course #7898  
 36 weeks (1 cr.); IEP required

- Improve interpersonal relationships
- Explore physical, mental, and emotional growth processes; family and peer relationships and pressures
- Determine personal responsibilities in the role of worker, citizen, family member, and future parent

Preparation for Employment, Competitive Employment Preparation  
 Course #7999  
 36 weeks (1 cr.); IEP required

- Explore jobs that exist in the community
- Develop the personal qualities for securing and maintaining a job

**HIGH SCHOOL EXCEPTIONAL EDUCATION ELECTIVES**

Reading Strategies, High School  
 Course #1181; 9<sup>th</sup> and 10<sup>th</sup> grade, #1182; 11<sup>th</sup> and 12<sup>th</sup> grade  
 18 weeks (.5 cr.); elective  
 36 weeks (1 cr.); elective; may be repeated for credit

- Apply learned skills to subject area reading
- Read for pleasure
- Develop word attack, vocabulary building, comprehension, fluency and study skills

Personal Development I, 9-10  
 Course #7892  
 18 weeks (.5 cr.); elective  
 36 weeks (1 cr.); elective; may be repeated for credit

- Learn study skills, time management, and communication skills
- Focus on decision making/problem solving, values clarification, goal setting, stress management, and career awareness
- Facilitate implementation of the Individualized Education Plan



Personal Development II, 11-12

Course #7893

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective; may be repeated for credit

- Apply social and study skills
- Explore stress management, decision making/problem solving, career exploration, and family/ financial planning
- Develop interpersonal and intrapersonal relations

Cooperative Work Experience Program  
CO-WEP I

Course #9084

36 weeks (1 cr. for work experience, 1 cr. for classroom experience); elective

- Gain entry-level skills for employment
- Develop work competencies through career exploration, decision making, and preparation for employment in a combination of classroom instruction and work experiences
- Participate in work experiences within the school that are planned, supervised, and evaluated by the CO-WEP teacher/coordinator

Cooperative Work Experience Program  
CO-WEP II, ages 16 and older

Course #9085

36 weeks (1 cr. classroom, 1 cr. work experience); elective

- Examine employment regulations, employee-employer expectations, and on-the-job attitudes expected by the employer
- Complete classroom instruction and complete supervised on-the-job training
- Participate in work experiences within the community that are supervised and evaluated by the CO-WEP teacher/coordinator

## EXPLORATORY COURSES – MIDDLE SCHOOLS

**General Exploratory—Grade 6**

Course #9760, 9761, 9762, 9763

**General Exploratory—Grade 7**

Course #9750, 9751, 9752, 9753

**General Exploratory—Grade 8**

Course #9770, 9771, 9772, 9773

Courses vary in length, content, and location, depending upon the individual needs within a given school. The purpose of these courses is to help students.

- Gather information to select courses for Grades 9-12
- Use hands-on activities to explore career fields
- Explore interests and talents in various areas that comprise the arts and sciences

## FAMILY AND CONSUMER SCIENCES

**Teen Living 6 (FACS Exploratory I)**

Course #8206

9 weeks; elective

Middle Schools

- Identify roles and responsibilities of family members
- Practice positive behaviors for self, family, and friends
- Complete a simple sewing project and a variety of healthy snack activities

**Teen Living 7 (FACS Exploratory II)**

Course #8263

18 weeks; elective

Middle Schools

- Explore individual skills and interests in nutrition, clothing, and relationships
- Describe responsible behavior in caring for children
- Plan and implement a teen project or event using the planning process

**Independent Living**

Course #8219

36 weeks (1 cr.); elective

Middle/High Schools

- Create strategies for individual and family financial security
- Identify and evaluate issues of consumer choice
- Develop decision-making skills in the areas of housing, nutrition, and clothing

**Life Planning**

Course #8227

36 weeks (1 cr.); elective

High Schools

- Develop a life management plan in the areas of finances, career, and community
- Apply the problem solving process to personal, family, and consumer issues
- Plan and prepare food choices that meet the health needs of the family

**Relationships (Family Relations)**

Course #8225

36 weeks (1 cr.); elective

Course #8223

18 weeks (.5 cr.); elective

High Schools

- Maintain healthy relationships through effective communication
- Balance family & work roles through positive stress and conflict management
- Nurture human development in the family and evaluate parenting responsibilities

**Nutrition and Wellness**

Course #8229

36 weeks (1 cr.); elective

Course #8228

18 weeks (.5 cr.); elective

High Schools

- Determine influences on food choices
- Analyze foods that promote wellness
- Practice proper food preparation and storage techniques

**Creative Fashion (Intro to Fashion Careers)**

Course #8248

36 weeks (1 cr.); elective

Course #8247

18 weeks (.5 cr.); elective

High Schools

- Evaluate personal clothing decisions
- Explore the fashion design, manufacturing, and marketing process
- Complete a design project

**Introduction to Interior Design**

Course #8254

18 weeks (.5 cr.); elective

High Schools

- Investigate influences on environment and design of interior spaces
- Explore careers in interior design, construction, and real estate
- Develop a design project

**Child Development and Parenting**

Course #8231

18 weeks (.5 cr.); elective

Course #8232

36 weeks (1 cr.); elective

High Schools

- Analyze developmental needs of children
- Prepare for healthy parent/child relationships
- Develop effective methods of guidance and discipline

**Introduction to Virginia Teachers for Tomorrow, Grade 8 or 9**

Course #9061

36 weeks

Middle/High Schools

- Explore careers in teaching and education
- Build positive learning environments through simulated teaching
- Introduces students to the high school Virginia Teachers for Tomorrow program

**Early Childhood Education and Services I**

Course #8285  
 36 weeks (3 cr.); elective  
 For students with a great deal of interest in working with young children;  
 ACE Center at Highland Springs

- Prepare for entry-level jobs in child care professions
- Study the developmental stages of the young child
- Work daily with children ages 2-5 years at Springer Preschool Academy

**Early Childhood Education and Services II**

Course #8286  
 36 weeks (3 cr.); elective  
 ACE Center at Highland Springs

- Extend objectives in Early Childhood Education and Services I (above)
- Learn occupational skills for workers in child care professions
- Plan and implement lesson plans in preschool classroom at Springer Preschool Academy

**Introduction to Culinary Arts**

Course #8249 (.5 cr.) only at AVR  
 Course #8250  
 36 weeks (1 cr.); elective  
 High Schools

- Explore culinary arts and related careers
- Investigate dietetics, nutrition, food preparation techniques, and food safety
- Identify contemporary cuisines and service styles

**Culinary Arts I**

Course #8275  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage, The Academy at Virginia Randolph  
 Course #8275  
 36 weeks (2 cr.); elective  
 Henrico H.S.; Highland Springs H.S.

- Prepare for entry level jobs in the food service industry
- Learn basic industry accepted culinary and catering skills
- Acquire personal and business skills through business and community activities

**Culinary Arts II**

Course #8276  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage, The Academy at Virginia Randolph

- Build on knowledge gained in Culinary Arts I
- Expand occupational skills for a broad range of food service professions
- Participate in cooperative and simulated work experiences

**Virginia Teachers for Tomorrow I Honors**

Course #9062  
 36 weeks (1 cr.); elective  
 High Schools

- Explore hands-on learning, teaching, and the educational system
- Complete observations and a teaching internship in local schools
- Must submit application, three teacher recommendations  
 Suggested 3.0 GPA

**Virginia Teachers for Tomorrow II Honors**

Course #9072  
 36 weeks (1 cr.); elective; Successful completion of Level I and teacher approval required for enrollment  
 High Schools

- Build on knowledge and experience gained in Virginia Teachers for Tomorrow I
- Complete an extensive internship in a local school

**GIFTED EDUCATION**

**21st Century Inquiry and Leadership**

Course #9840  
 36 weeks (1 cr.); 8th grade  
 Course #9840A  
 18 weeks (no credit\*); 7th grade  
 \*credit to be awarded with completion of 9840B in 8th grade  
 Course #9840B  
 18 weeks (1 cr.); 8th grade  
 Elective; only for identified gifted students

- Enhance 21st Century skills through multi-disciplinary experiences with in-depth learning or accelerated study outside the traditional curriculum
- Explore and evaluate learning through communication, inquiry, leadership, critical thinking, problem solving, and independent study

**HEALTH AND MEDICAL SCIENCES**

**Pharmacy Technician**

Course #8305  
 18 weeks (1.5 cr.); elective  
 Course #8306  
 18 weeks (1.5 cr.); elective (must successfully complete #8305) Must pass both semesters to be considered a completer.  
 ACE Center at Highland Springs

- Obtain a broad knowledge of pharmacy practice
- Learn to assist and support licensed pharmacists
- Learn techniques to order, stock, package, prepare and dispense meds

**Veterinary Science I**

Course #8088  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Learn small animal health care
- Understand disease prevention and pet first aid
- Learn to assist a veterinarian with routine exams

**Veterinary Science II**

Course #8089  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage  
 Prerequisite - Successful completion of Veterinary Science I required.

- Learn to assist with large animals, exotics, and wildlife
- Develop skills to assist with surgical procedures

**Emergency Medical Technician**

Course #8333  
 18 weeks (1.5 cr.); elective  
 Course #8334  
 18 weeks (1.5 cr.); elective (must successfully complete #8333)  
 Must be at least 16 years old; must pass both semesters to be considered a completer. Completers may be eligible for the National Emergency Medical Technician (EMT) and/or Emergency Medical Responder (EMR) certification exam.  
 ACE Center at Hermitage

- Develop skills to provide basic emergency medical care
- Learn to assess an individual's condition to determine appropriate emergency care

**Nurse Aide**

Course #8360  
 18 weeks (1.5 cr.); elective  
 Course #8362  
 18 weeks (1.5 cr.); elective (must successfully complete #8360) Must pass both semesters to be considered a completer. Completers are eligible for state certification exam.  
 ACE Center at Hermitage; ACE Center at Highland Springs

- Study medical terminology, disease, infection control, and basic nursing skills
- Provide nursing care to clients in long term care facilities

**Practical Nursing I and II**

Course #8357

18 weeks (1.5 cr.); elective

Course #8358

18 weeks (1.5 cr.); elective (must successfully complete #8357)

Seniors only

ACE Center at Hermitage; ACE Center at Highland Springs

This program is approved by the Virginia Board of Nursing, certified to operate by the State Council of Higher Education for Virginia (SCHEV) and is accredited by the Accreditation Commission of Education in Nursing (ACEN).

- Apply anatomy and physiology, fundamentals, nutrition, geriatrics, pharmacology, and medical-surgical nursing
- Practice nursing care under the direct supervision of a registered nurse or physician licensed by the Virginia Department of Health Professions
- Progress to the full-time, nine-month Practical Nursing II phase

**Practical Nursing III**

Course #8359

34 weeks; (must successfully complete #8357 and #8358) graduates are eligible for national licensing exam

This program is approved by the Virginia Board of Nursing, certified to operate by the State Council of Higher Education for Virginia (SCHEV) and is accredited by the Accreditation Commission for Education in Nursing (ACEN).

- Experience in medical-surgical, mental health, pediatrics, mother/infant, and community
- Provide nursing care to patients in a variety of settings including acute care, long-term care, physicians' offices, health clinics, and community sites

**Sports Medicine**

Course #7660

18 weeks (1.5 cr.); elective

Course #7662

18 weeks (1.5 cr.); elective (must successfully complete #7660)

ACE Center at Hermitage

Must pass both semesters to be considered a completer.

- Develop skills in prevention, recognition, assessment, management, disposition, and rehabilitation of injuries
- Learn the principles of designing exercise programs and proper diet therapy for healthy individuals
- Assess injuries and illnesses, provide care, and design a basic rehab program

## HEALTH AND PHYSICAL EDUCATION

Entering Ninth-Grade Class of 2016-2017 and Beyond Training in Emergency First Aid, CPR, and Use of an AED - Beginning with first-time ninth grade students in the 2016-2017 school year, requirements for the standard and advanced diplomas shall include a requirement to be trained in emergency first aid, cardiopulmonary resuscitation, and the use of automated external defibrillators, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation.

**Health and Physical Education 6**

Course #7110

36 weeks; required

Middle Schools

- Learn how communicable diseases, physical and emotional changes and nutrition affect the body
- Demonstrate safety in physical activity settings
- Apply physical fitness concepts to achieve wellness-related fitness

**Health and Physical Education 7**

Course #7120

36 weeks; required

Middle Schools

- Learn about stimulants, depressants, narcotics, hallucinogens, and drug abuse
- Practice conflict resolution and violence prevention skills
- Apply principles of personal fitness for proficiency in the Virginia wellness fitness standards

**Health and Physical Education 8**

Course #7200

36 weeks; required

Middle Schools

- Identify behaviors that promote positive relationships
- Practice conflict resolution and violence prevention skills
- Participate in physical fitness screenings to achieve improvements in Virginia wellness-related fitness

**Adapted Health and Physical Education 6, 7, & 8**

Course #7205

36 weeks; elective; IEP needed to be eligible

Middle Schools

- Participate in health and physical activities adapted to meet individual needs
- Participate in exercises and low organization activities designed to promote wellness
- Focus on physical fitness

**Health and Physical Education 9**

Course #7300

36 weeks (1 cr.); required

High Schools

(Online course may be taken during the summer)

- Analyze food labels to improve sports performance through nutrition
- Identify resources that support those suffering from substance abuse
- Learn about cardiac arrest and CPR

**Health and Physical Education 10**

Course #7400

36 weeks (1 cr.); required

High Schools

(Online course may be taken during the summer)

- Identify how diseases affect the body
- Review major body systems and ways to keep them healthy
- Promote responsible behaviors in activity settings

**Advanced Physical Education**

Course #7500

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

High Schools

- Demonstrate mastery of movement skills and patterns in lifetime physical activities
- Explain the importance of energy balance and nutritional needs of the body to maintain optimal health
- Design, implement, and evaluate personal fitness programs

**Personal Fitness**

Course #7600

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

High Schools

- Demonstrate mastery of movement skills and patterns used to perform a variety of strength training, physical conditioning, and fitness-based activities
- Describe energy balance, major body systems, and explain the effects of physical activity on the systems
- Create a personal fitness and conditioning program for health-related components of fitness

**Adapted Health and Physical Education**

Course #7700

36 weeks (1 cr.); elective; IEP needed to be eligible; may be repeated for credit

High Schools

- Participate in exercises and low organization games to increase physical activity and motor development
- Participate in health and physical activities to meet individual needs
- Focus on physical fitness and wellness



**LANGUAGE INSTRUCTION EDUCATIONAL PROGRAM (LIEP) FOR ENGLISH LEARNERS**

**Language and Cultures I and II**  
 Course #5701 (I) and Course #5702 (II)  
 36 weeks (1 cr.); required  
 Level I Middle School and Levels I and II High School; Middle School (no credit); may be repeated for credit  
 High Schools

- Build proficiency in English through the study of cultural topics associated with everyday life in the context of American culture
- Discuss signs, symbols and gestures as a form of communication

**Reading Across the Curriculum I, II, III**  
 Course #5711 (Level I)  
 Course #5721 (Level II)  
 Course #5732 (Level III)  
 36 weeks (1 cr.)  
 Level I Middle School; required Levels I and II High School; Middle School (no credit); may be repeated for credit  
 High Schools

- Begin/improve reading skills
- Acquire word-attack, comprehension and study skills
- Apply reading skills to content reading

**LIEP I**  
 Course #5710  
 36 weeks (1 cr.); required; Middle School (no credit); may be repeated for credit  
 High Schools

- Develop social and academic vocabulary
- Begin/improve writing for communication and academic purposes
- Practice oral/aural skills

**Content LIEP I**  
 Course #5714  
 36 weeks (1 cr.); elective for Level I English learners or newcomers  
 Middle or High Schools

- Practice listening, speaking, reading, and writing skills in English
- Develop academic vocabulary to support core content
- Build foundational knowledge in math, science or social studies

**LIEP Job Readiness Skills I**  
 Course #5715  
 18 weeks (.5 cr.); elective for English learners  
 High Schools

- Develop an understanding of proper work habits, work relationships, and dress
- Develop an understanding of paychecks, benefits and deductions
- Focus on searching and applying for a job, and preparing for an interview

**LIEP Independent Living Skills I**  
 Course #5716  
 18 weeks (.5 cr.); elective for English learners  
 High Schools

- Learn skills necessary for independent living
- Study money management, problem solving, interpersonal relationships, and other practical skills

**LIEP II**  
 Course #5720  
 36 weeks (1 cr.); required; Middle School (no credit); may be repeated for credit  
 High Schools

- Expand social and academic vocabulary
- Improve ability to read and write for communication and academic purposes
- Practice oral/aural skills

**Content LIEP II**  
 Course #5724  
 36 weeks (1 cr.); elective for English learners  
 High Schools

- Practice listening, speaking, reading, and writing skills in English
- Build academic vocabulary to support core content
- Expand knowledge in math, science or social studies

**LIEP Job Readiness Skills II**  
 Course #5725  
 18 weeks (.5 cr.); elective for English learners  
 High Schools

- Expand understanding of proper work habits
- Expand and develop skills for securing and maintaining employment
- Participate in group counseling in career opportunities

**LIEP Independent Living Skills II**  
 Course #5726  
 18 weeks (.5 cr.); elective for English learners  
 High Schools

- Broaden skills necessary for independent living
- Expand knowledge in money management, home management, and consumer skills, decision-making skills, and problem solving

**LIEP III**  
 Course #5730  
 36 weeks (1 cr.); required; Middle School (no credit); may be repeated for credit  
 High Schools

- Expand academic vocabulary
- Improve ability to read and write for communication and academic purposes
- Develop language skills to support performance in grade-level content courses

**LIEP IV**  
 Course #5731  
 36 weeks (1 cr.); required; Middle School (no credit); may be repeated for credit  
 High Schools

- Expand academic vocabulary
- Approach grade-level ability to read and write for communication and academic purposes
- Expand language skills to support performance in grade-level content courses

**LIEP V**  
 Course #5733  
 36 weeks (1 cr.); required; Middle School (no credit); may be repeated for credit  
 High Schools

- Expand academic vocabulary
- Perform at grade level in reading and writing
- Expand literacy skills to support performance in core content

**Content Writing**  
 Course #1516  
 36 weeks (1 cr.); elective  
 High Schools

- Build communication skills through writing and reading
- Improve skills in composing, mechanics and usage
- Acquire skills in reading, interpreting literature, and research

**MARKETING**

Cooperative Education is a method of instruction that combines career and technical classroom instruction with paid employment directly related to the classroom instruction. Instruction is developed and conducted in consultation with employers having skills and considerable knowledge of the occupational field represented by the student's career objective. Individualized, written training plans are developed to correlate the classroom instructions with the on-the-job training. Formal and informal evaluations of student progress including feedback are completed to assist learners in improving their work performance. To participate in and earn cooperative education (co-op) credit, a student must combine classroom instruction and a minimum of 396 hours of continuous, supervised on-the-job training. \*Course numbers ending with a V indicate a Cooperative Education course.

**Digital Marketing**  
 Course #8125  
 36 weeks (1 cr.); elective  
 High Schools

- Learn about the paperless exchange of information using technology
- Understand the technology of web servers, clients, and E-Commerce
- Conduct research projects related to electronic marketing

**Entrepreneurship**

Course #9093  
36 weeks (1 cr.); elective  
High Schools

- Analyze strategies that are essential to start a successful business
- Develop business, operations, and financial plans
- Develop management skills in employee and customer relations

**Fashion Marketing I**

Course #8140  
36 weeks (1 cr.); elective  
Course #8140V  
36 weeks (Co-op, 1 cr.); elective  
High Schools

- Develop marketing competencies for employment in fashion merchandising
- Develop marketing competencies applied to the apparel and accessories industries
- Develop competencies unique to fashion merchandising

**Fashion Marketing II**

Course #8145  
36 weeks (1 cr.); elective  
Course #8145V  
36 weeks (Co-op, 1 cr.); elective  
High Schools

- Gain knowledge of the apparel and accessories industries
- Develop skills for supervisory employment in the apparel business
- Develop advanced skills applied to the apparel and accessories industry

**Hospitality, Tourism and Catering**

Course #8139  
36 weeks (3 cr.); elective  
ACE Center at Highland Springs

- Examine the hospitality and tourism industry, including attractions, lodging, transportation, and food and beverage
- Develop communication, customer service, human relations and industry technology skills
- Plan and facilitate catering events in the local area

**Marketing I**

Course #8120  
36 weeks (1 cr.); elective  
Course #8120V  
36 weeks (Co-op, 1 cr.); elective

- Acquire marketing function knowledge and professional responsibilities
- Develop product/service planning skills related to market positioning
- Develop economics/social competencies related to marketing careers

**Marketing II**

Course #8130  
36 weeks (1 cr.); elective  
Course #8130V  
36 weeks (Co-op, 1 cr.); elective  
High Schools

- Acquire knowledge of marketing functions/supervisory responsibilities
- Develop advanced marketing competencies
- Develop economic/social competencies related to supervision of employees

**Principles of Business and Marketing**

Course #6115  
36 weeks (1 cr.); elective  
High Schools

- Explore the roles of business and marketing in the free enterprise system
- Make decisions as consumers, wage earners, and business owners

**Sports and Entertainment Marketing I**

Course #8175  
36 weeks (1 cr.); elective  
Course #8175V  
36 weeks (Co-op, 1 cr.); elective  
High Schools

- Identify occupations and analyze trends with the SERM industry
- Develop public relations and publicity programs, and explain sponsorship and endorsement roles in each

**Sports and Entertainment Marketing II**

Course #8177  
36 weeks (1 cr.); elective  
Course #8177V  
36 weeks (Co-op, 1 cr.); elective  
High Schools

- Establish a sports or entertainment marketing product/business
- Explore ethical and legal issues, marketing research, and related financial concepts
- Understand event planning, management, and security

**Sports and Entertainment Marketing II Honors**

Course #8177  
36 weeks (1 cr.); elective  
Course #8177V  
36 weeks (Co-op, 1 cr.); elective  
High Schools

- Plan and execute an event
- Participate in a related internship or job shadow
- See course #8177 above for additional course content

**Tourism Marketing, Sales, and Catering**

Course #8169  
36 weeks (3 cr.); elective  
ACE Center at Highland Springs

- Gain knowledge of marketing and sales in the travel and tourism field
- Learn about the issues related to business and resource management, tourism's effect on the world economy, the political impact of tourism, and how the sale process affects the tourism industry
- Develop skills in the areas of communication, human relations, finance, sales, promotional plans, and marketing research

**MATHEMATICS**

**College and Career Readiness Math**

Course #9813  
18 weeks (.5 cr.); elective  
High Schools

- Improve math skills with a focus on college entrance exams
- Explore college application and search processes
- Focus on career education and readiness

**Middle School Math Course 1**

Course #3110  
36 weeks; required  
Middle Schools

- ✓ Grade 6 SOL test
- Develop understanding and skills with fractions, decimals, and ratios
- Investigate geometry and probability; collect and analyze data
- Develop concepts of integers, variables, equations, and inequalities

**Middle School Math Course 2**

Course #3111  
36 weeks; required  
Middle Schools

- ✓ Grade 7 SOL test
- Use proportional reasoning to solve practical and consumer problems
- Investigate geometry, probability, data analysis, linear equation, and inequalities
- Use patterns, estimation, and simple algebraic techniques to solve problems

**Middle School Math Course 3**

Course #3112  
36 weeks; elective  
Middle Schools

- ✓ Grade 8 SOL test
- Apply Pythagorean Theorem and transformations to geometric figures
- Analyze and represent relations and functions using tables, graphs, and rules
- Solve and graph multi-step linear equations

**Accelerated Math 6/7**  
 Course #3115  
 36 weeks (1 cr.)  
 Middle Schools; Grade 6  
 ✓ Grade 7 SOL Test  
 • Investigate geometry, probability, and data analysis  
 • Use patterns estimation, and simple algebraic techniques to solve problems  
 • Solve and graph linear equations and inequalities

**Math Fundamentals**  
 Course #3123  
 36 weeks (1 cr.); elective  
 All students must have the recommendation of the classroom teacher and parental approval due to graduation implications. It is intended for the Tier 2 and Tier 3 students.  
 • Provide development of topics covered in Math 8 and Algebra I  
 • Represent problem situations using expressions, equations, and inequalities  
 • Use mathematical computer software

**Algebra Functions and Data Analysis**  
 Course #3134  
 36 weeks (1 cr.)  
 High Schools  
 • Investigate and analyze function families and their characteristics  
 • Collect data and determine the curve of best fit to predict outcomes  
 • Determine optimal values in problem situations using linear programming

**Algebra I**  
 Course #3130  
 36 weeks (1 cr.)  
 Middle/High Schools  
 ✓ SOL Algebra I end-of-course test  
 • Represent problem situations using expressions, equations, and inequalities  
 • Graph and solve linear and quadratic functions  
 • Apply algebraic concepts and processes to the real world

**Algebra II**  
 Course #3135  
 36 weeks (1 cr.)  
 High Schools  
 ✓ SOL Algebra II end-of-course test  
 • Solve linear and quadratics equations, inequalities, and systems of non-linear equations  
 • Explore functions and their transformations  
 • Investigate polynomials and radical and rational expressions

**Foundations of Algebra**  
 Course #3133  
 36 weeks (1 cr.); elective; Grade 9  
 • Provide development of topics covered in Algebra I  
 • Apply algebraic concepts and processes to the real world  
 • Use graphing calculators and computer software

**Algebra II Honors**  
 Course #3135  
 36 weeks (1 cr.)  
 High Schools; High Tech Academy  
 ✓ SOL Algebra II end-of-course test  
 • See Course #3135 above for additional course content  
 • More rigorous and in-depth investigation of topics  
 • More practical applications

**PSC Geometry**  
 Course #3143  
 36 weeks (1 cr.)  
 Middle/High Schools  
 (Course is available online during summer school)  
 ✓ SOL Geometry end-of-course test  
 • Understand the principles of plane, solid, and coordinate geometry  
 • Investigate and solve problems involving circles and polygons  
 • Determine congruence and similarity of polygons

**PSC Geometry Honors**  
 Course #3143  
 36 weeks (1 cr.)  
 High School only  
 ✓ SOL Geometry end-of-course test  
 • See Course #3143 above for additional course content  
 • More rigorous and in-depth investigation of topics  
 • More practical applications

**Foundations of Geometry**  
 Course #3137  
 36 weeks (1 cr.); elective; Grades 10-12  
 • Provide development of topics covered in Geometry  
 • Apply geometric concepts and processes to the real world  
 • Use graphing calculators and computer software

**Advanced Algebra/Trigonometry**  
 Course #3160  
 36 weeks (1 cr.)  
 High Schools  
 • Explore exponential, logarithmic, and polynomial functions  
 • Solve trigonometric and parametric equations and verify trigonometric identities  
 • Explore, graph, and apply trigonometric and circular functions

**Math Analysis/Trigonometry Honors**  
 Course #3162  
 36 weeks (1 cr.); for students who plan to major in a math-related field in college  
 High Schools; High Tech Academy  
 • Explore polynomials, logarithms and exponential functions, and probability  
 • Solve trigonometric equations and verify trigonometric identities  
 • Explore, graph, and apply trigonometric and circular functions

**Introduction to Calculus**  
 Course #3170  
 36 weeks (1 cr.); elective  
 High Schools  
 • Study limits, continuity, differentiation, integration, and applications  
 • Learn the logic and intuitive reasoning of calculus

**AP Calculus AB**  
 Course #3177  
 36 weeks (1 cr.); elective  
 High Schools; electronic classroom; High Tech Academy  
 • Study limits, continuity, differentiation, integration, and applications  
 • Learn the logic and intuitive reasoning of calculus  
 • Prepare for the AP Calculus AB Exam

**AP Calculus BC**  
 Course #3179  
 36 weeks (1 cr.); elective  
 High Schools; High Tech Academy  
 • Continue the study of calculus, which includes multi-variable calculus  
 • Prepare for the AP Calculus BC Exam

**Multivariable Calculus Honors**  
 Course #3178  
 36 weeks (1 cr.); elective  
 High Schools  
 Multivariable Calculus continues the study of calculus, preparing students for study in science, engineering, and mathematics fields. Students will greatly strengthen and reinforce skills learned in Calculus BC.  
 • Generalization of derivatives, integrals, and other calculus techniques to 3 dimensions  
 • Vector field calculus, including Green's Theorem, Stokes' Theorem, and potentials  
 • Advanced calculus topics and applications to other fields, particularly Physics

**Statistics**  
 Course #3190  
 18 weeks (.5 cr.); elective  
 High Schools  
 • Use curve fitting to predict from data  
 • Apply measures of central tendency, variability, and correlation  
 • Design a statistical experiment and use sampling techniques

**AP Statistics**

Course #3191  
36 weeks (1 cr.); elective  
High Schools

- Develop statistical and probabilistic reasoning
- Design a statistical experiment and use sampling techniques
- Interpret measures of data and apply methods of inference and correlation

**Discrete Topics**

Course #3154  
18 weeks (.5 cr.); elective  
High Schools

- Explore existence, enumeration, algorithms and optimization problems
- Investigate graph theory and circuits, apportionment, voting and game theory, and growth of populations and finance
- Use finite graphs, matrices, sequences, and recurrence relationships to solve problems

**Computer Mathematics**

Course #3184  
36 weeks (1 cr.)  
High Schools  
Computer Mathematics may be used in conjunction with Algebra I and Geometry to satisfy mathematics graduation requirements if the student also completes a career and technical concentration.

- Identify fundamental principles and concepts in the field of computer science
- Use strategies to define the problem; develop, refine, and implement a plan; and test and revise the solution
- Apply programming techniques and skills to solve practical problems in mathematics arising from consumer, business, and other applications in mathematics

**AP Computer Science**

Course #3185  
36 weeks (1 cr.); elective

- Understand object-oriented (OO) design (OOD) and OO programming (OOP)
- Learn to code Java in a well-structured fashion and in good style giving attention to clarity of both code and documentation
- Learn to use Java library packages, classes, and interfaces and the Java Collections framework within the scope of the APCS-A Java subset

**MILITARY SCIENCE / JROTC**

**Participation in the Military Science Program does not obligate the student to military service.**

**Air Force Junior ROTC**

Military Science (AFJROTC) I/II/III/IV  
Course #7913/#7916/#7918/#7919  
36 weeks (1 cr.) each; elective  
Deep Run High School

- Participate in courses that focus on citizenship, leadership, and patriotism
- Explore Air Force History, Science of Flight, Exploration of Space, Leadership and Management, Drill and Ceremonies, and Physical Fitness
- Enter military service with advanced rank of E3 (Airman First Class) upon graduation, if desired

**Marine Corps Junior ROTC**

Military Science (MCJROTC) I/II/III/IV  
Course #7913/#7916/#7918/#7919  
36 weeks (1 cr.) each; elective  
Hermitage High School, Highland Springs High School, J. R. Tucker High School

- Participate in core subjects: leadership tenets; drill and ceremonies; physical fitness and health; weapons training; and military organization, orientation, and history
- Enter military service with advanced rank of E2 (private first class) upon graduation, if desired

**Naval Corps Junior ROTC**

Military Science (NJROTC) I/II/III/IV  
Course #7913/#7916/#7918/#7919  
36 weeks (1 cr.) each; elective  
Henrico High School, Varina High School

- Participate in courses that focus on leadership, citizenship, and patriotism, and naval courses (e.g., maritime geography, meteorology, electricity and electronics, and military drill)
- Enter military service with advanced rank of E3 (seaman) upon graduation, if desired

**MUSIC**

**Exploratory Music 6**

Course #9208  
36 weeks or less; elective  
Middle Schools

- Develop a music vocabulary
- Enjoy music by singing, using instruments, and attending performances

**Exploratory Music 7**

Course #9211  
36 weeks; elective  
Middle Schools

- Learn musical terms, signs, symbols, and singing harmony
- Expand musical vocabulary

**Music History and Literature**

Course #9221  
36 weeks (1 cr.); elective  
High Schools

- Explore periods of Western musical heritage and styles
- Learn about composers and musicians throughout history

**Advanced Music History and Theory**

Course #9222  
36 weeks (1 cr.); elective  
High Schools

- Study composers and their effect on culture
- Examine principles of theory from a historical viewpoint

**Music Appreciation**

Course #9223 (first semester)  
18 weeks (.5 cr.); elective  
High Schools

- Develop a positive musical attitude through involvement in performances
- Gain a critical awareness of advanced music

**Music Appreciation**

Course #9224 (second semester)  
18 weeks (.5 cr.); elective  
High Schools

- Develop a positive musical attitude through involvement in performances
- Gain a critical awareness of advanced music

**Music Theory**

Course #9225  
36 weeks (1 cr.); elective  
High Schools

- Study meter, basic note values and rests, compound and simple time, conducting patterns, time signature, and chord construction

**AP Music Theory**

Course #9226  
36 weeks (1 cr.); elective  
High Schools; Grades 11 or 12

- Use fundamentals to create an advanced composition
- Learn styles and periods of compositional practice

**Middle School Beginning Band**

Course #9228  
36 weeks; elective  
Middle Schools

- Learn tone control and quality, proper breathing, major scales, articulation, and tempo
- Participate in musical activities and performances



**Middle School Intermediate Band**  
 Course #9230  
 36 weeks; elective  
 Middle Schools

- Develop tone control and quality, articulation, tempo, and rhythm
- Participate in musical activities and performances

**Middle School Advanced Band**  
 Course #9247  
 36 weeks; elective  
 Middle Schools

- Learn advanced articulations, expressions, interpretations, and balance and blend
- Participate in musical activities and performances

**High School Advanced Band**  
 Course #9234  
 36 weeks (1 cr.); elective; may be repeated for credit  
 High Schools

- Perform a variety of complex meters, rhythmic patterns, free rhythm, and styles from music history
- Participate in musical activities and performances

**High School Advanced Band Honors**  
 Course #9235  
 36 weeks (1 cr.); elective; for students who have high musical ability; admission by audition only; may be repeated for credit  
 High Schools

- Fulfill required project participation that may include music transcription, critical analysis, research, composition, outside ensembles and solo performances
- Participate in musical activities and performances

**Marching Band Honors**  
 Course #9232  
 18 weeks (.5 cr.); elective; may be repeated for credit  
 High Schools

- Perform a variety of complex meters
- Demonstrate marching techniques to execute performances
- Participate in musical activities and performances

**High School Instrumental Music**  
 Course #9240  
 36 weeks (1 cr.); elective; may be repeated for credit  
 High Schools

- Acquire supplemental assistance with primary instrument
- Participate in musical activities and performances

**Stage Band**  
 Course #9241  
 36 weeks (1 cr.); elective; admission by audition only; may be repeated for credit  
 High Schools

- Demonstrate advanced technical proficiency and musical terminology
- Participate in musical activities and performances

**Small Instrumental Ensembles**  
 Course #9250  
 36 weeks (1 cr.); elective; may be repeated for credit  
 High Schools

- Learn orchestral and percussion instruments used in small ensembles
- Participate in musical activities and performances

**HS Guitar I**  
 Course #9245  
 36 weeks (1 cr.); elective  
 High Schools

- Demonstrate basic guitar techniques and tone production
- Read and perform music of varying styles and levels of difficulty
- Use standard method books in class settings

**Beginning Strings**  
 Course #9252  
 36 weeks; elective; may be repeated for credit  
 Middle Schools (0 cr.)/High Schools (1 cr.)

- Learn basic notes, tuning and intonation, rhythmic patterns, and articulations
- Participate in musical activities and performances

**Intermediate Strings**  
 Course #9253  
 36 weeks; elective; may be repeated for credit  
 Middle Schools (0 cr.)/High Schools (1 cr.)

- Produce a controlled tone quality and incorporate the expressive elements of phrasing and style
- Participate in musical activities and performances

**Advanced Strings**  
 Course #9254  
 36 weeks; elective; may be repeated for credit  
 Middle Schools (0 cr.)/High Schools (1 cr.)

- Demonstrate proper playing position and ability to follow the conductor
- Participate in musical activities and performances

**String Orchestra**  
 Course #9251  
 36 weeks (1 cr.); elective; may be repeated for credit  
 High Schools

- Play all major scales, the chromatic scale, and the melodic minor scale, and three-octave scales
- Participate in musical activities and performances

**High School Advanced Orchestra Honors**  
 Course #9257  
 36 weeks (1 cr.); elective; admission by audition only; may be repeated for credit  
 High Schools

- Fulfill project participation which may include music transcription, critical analysis, research, composition, ensembles and solo performances

**Beginning Keyboard I, Piano**  
 Course #9255  
 18 weeks (.5 cr.); elective; for students with no previous piano experience  
 High Schools

- Learn keyboard fundamentals, including notation, scales, chords, and theory
- Focus on playing

**Keyboarding II, Piano**  
 Course #9256 18 weeks (.5 cr.); elective; for students who have completed Beginning Keyboard I—Piano  
 High Schools

- Build on fundamentals to learn more advanced piano skills
- Study notation, scales, chords, and theory

**Middle School Treble Chorus**  
 Course #9260  
 36 weeks; elective  
 Middle Schools

- Achieve good vocal production and musicianship through three-part choral music
- Participate in musical activities and performances

**Middle School Beginning Chorus**  
 Course #9269  
 36 weeks; elective  
 Middle Schools

- Acquire proper posture and breathing techniques, expressive qualities, and proper diction
- Participate in musical activities and performances

**Middle School Intermediate Chorus**  
 Course #9270  
 36 weeks; elective  
 Middle Schools

- Develop tone quality, intonation, legato singing, and sight singing
- Participate in musical activities and performances

**Chorus 7**  
 Course #9271  
 18 weeks; elective  
 Middle Schools

- Develop ear training, notation, and vocal techniques
- Participate in musical activities and performances

**MUSIC****Middle School Advanced Chorus/Selected Choir**

Course #9275  
36 weeks; elective  
Middle Schools

- Demonstrate vocal production, emphasizing tone quality and diction
- Participate in musical activities and performances

**Middle School Small Vocal Ensemble**

Course #9276  
36 weeks; elective; for students who have taken a one-year middle school choral ensemble and are recommended by a previous choir director or music teacher  
Middle Schools

- Learn the fundamentals of independent singing
- Use voice and skill to balance the ensemble

**Treble Selected Chorus**

Course #9266  
36 weeks (1 cr.); elective; may be repeated for credit  
High Schools

- Expand vocal production and study of dynamics, mood, and tempo, breathing techniques, and phrasing
- Participate in musical activities and performances

**Treble Chorus**

Course #9267  
36 weeks; elective; may be repeated for credit  
High Schools

- Study terms, symbols, signs, mood, contrast, and tempo
- Participate in musical activities and performances

**Small Vocal Ensemble**

Course #9278  
36 weeks (1 cr.); elective; for advanced students; admission by audition only; may be repeated for credit  
High Schools

- Study music from the Renaissance period to present day
- Participate in musical activities and performances

**Small Vocal Ensemble**

Course #9280  
36 weeks (1 cr.); elective; for the talented musician who wishes additional vocal training in a "private lesson" (individual or group) arrangement; may be repeated for credit  
High Schools

- Develop vocal range, flexibility, ear training, and individual musicianship
- Study literature based on vocal problems of students in the class

**READING****Mixed Chorus 9**

Course #9281  
36 weeks (1 cr.); elective; may be repeated for credit  
High Schools

- Build on 8th-grade mixed chorus study with more literature and more emphasis on performance
- Participate in musical activities and performances

**Mixed Chorus**

Course #9282  
36 weeks (1 cr.); elective; may be repeated for credit  
High Schools

- Review fundamentals of music, improve vocal quality, and sight singing ability
- Participate in musical activities and performances

**Mixed Chorus, Selected Choir**

Course #9283  
18 weeks (.5 cr.) or 36 weeks (1 cr.); elective; admission by audition only; may be repeated for credit  
High Schools

- Participate in all-county, all-regional, and all-state choruses
- Participate in musical activities and performances

**High School Advanced Choir Honors**

Course #9284  
36 weeks (1 cr.); elective; admission by audition only; may be repeated for credit  
High Schools

- Fulfill project participation which may include music transcription, critical analysis, research, composition, outside ensembles and solo performances
- Participate in musical activities and performances

**Show Choir**

Course #9298  
36 weeks (1 cr.); elective; admission by audition only  
High Schools

- Exhibit knowledge of complex rhythmic patterns, variety of meters, rhythmic accuracy, and choreography
- Participate in musical activities and performances

**READING****Teens Read!**

Grade 6, Course #1106 (enrichment)  
Grade 7, Course #1107 (enrichment)  
Grade 8, Course #1108 (enrichment)

- Learn and apply 6 strategies of comprehension to a variety of texts
- Prepare to be teen readers in the 21st century through a variety of technologies
- Participate in projects, activities, and community events to build capacity as life-long readers

**SCIENCE****Strategies for Comprehension Success**

Course #1186  
Middle Schools  
18 weeks or 36 weeks; elective  
Course #1187  
High Schools  
18 weeks (.5 cr.); or 36 weeks (1 cr.); elective; may be repeated for credit

- Sharpen critical reading skills and improve the overall level of achievement through individual tasks
- Acquire tools for self-directed reading comprehension tasks
- Use resources to expand word attack, vocabulary building, and comprehension skills

**Reading Enrichment Advanced**

Course #1180  
18 weeks (.5 cr.); elective  
36 weeks (1 cr.); elective  
(For the student who is reading on or above grade level)

- Expand vocabulary, comprehension, and study skills
- Sharpen critical reading skills
- Develop rate of comprehension

**Secondary Reading and Writing Across the Curriculum**

Course #1167  
18 weeks (.5 cr.); elective  
High Schools

- Apply strategic reading and writing skills across the contents
- Expand knowledge of vocabulary
- Develop critical thinking, reading, and test-taking skills

**SCIENCE****Introduction to Earth and Environmental Science**

Course #4105  
36 weeks; required  
Middle Schools

- Emphasize experimental design and the scientific method
- Explore fundamental concepts in meteorology, ecology, astronomy, and natural resources management
- Emphasize energy sources and their relationships to the natural world

**Life Science**

Course #4115  
36 weeks; required  
Middle Schools

- Explore cellular organization and the classification of organisms
- Explore the relationships among organisms, populations, communities, and ecosystems
- Examine the change that results from the transmission of genetic information from generation to generation

**Advanced Life Science**

Course #4115

36 weeks; required

Middle Schools

- See Course #4115 above for additional course content
- Develop inquiry skills by designing and executing inquiry labs
- Complete a long-term, independent, science project

**Physical Science 8**

Course #4125

36 weeks; required

Middle Schools

- ✓ SOL Cumulative Grade 8 science test
- Build on skills of systematic investigation emphasizing sources of error and data based conclusions
- Understand the relationship between graphs and what is occurring in an experiment
- Focus on introductory concepts in chemistry and physics

**Advanced Physical Science**

Course #4125

36 weeks; required

Middle Schools

- ✓ SOL Cumulative Grade 8 science test
- See Course #4125 above for additional course content
- Significant emphasis on mathematical equations and their relationship to physical science phenomenon
- Complete a long-term, independent, science project

**Earth Science I**

Course #4210

36 weeks (1 cr.); elective

High Schools; (Middle Schools for accelerated learners)

- ✓ SOL Earth Science end-of-course test
- Connect the study of Earth's composition, processes, atmosphere, freshwater, oceans, and its environment in space
- Emphasize historical contributions of scientific thought about the Earth and space
- Interpret maps, charts, tables, and profiles

**Earth Science Honors**

Course #4210

36 weeks (1 cr.); elective

High Schools

- ✓ SOL Earth Science end-of-course test
- See course #4210 above for course content
- Extract key information from scientific publications and analyze/interpret real-time data from various sources
- Complete a long-term, independent, science project

**Earth Science II: Oceanography**

Course #4250

36 weeks (1 cr.); elective

High Schools

- Investigate contemporary issues of global warming, resources management, pollution and the interrelationship between the ocean environment and the human population
- Topics include history of oceanography, plate tectonics, ocean chemistry and physics, weather and climate, waves, tides, currents, marine ecosystems and life

**Biology I**

Course #4310

36 weeks (1 cr.); elective

High Schools

- ✓ SOL Biology end-of-course test
- Emphasize the importance of research that validates and or challenges ideas
- Integrate technology in collecting, analyzing, and reporting data
- Topics include history of biological thought, biochemical life processes, cellular organization, mechanisms of inheritance, dynamic relationships among organisms, and changes in organisms

**Biology I Honors**

Course #4310

36 weeks (1 cr.); elective

High Schools

- ✓ SOL Biology end-of-course test
- See Course #4310 above for additional course content
- Conduct a long-term independent research investigation
- Study advanced biology content in preparation for AP Biology

**Biology II: Anatomy and Physiology**

Course #4330

36 weeks (1 cr.); elective

High Schools

- ✓ SOL Biology end-of-course test (unless previously passed)
- Examine the organization and cellular processes of the human body
- Explore body system structures and function

**Biology II: Ecology**

Course #4340

36 weeks (1 cr.); elective

High Schools

- ✓ SOL Biology end-of-course test (unless previously passed)
- Explore the flow of matter and energy in the biotic and abiotic components of an ecosystem
- Investigate the interactions between organisms and their environment

**AP Biology**

Course #4370

36 weeks (1 cr.); elective

High Schools

- ✓ SOL Biology end-of-course test (unless previously passed)
- Must have successfully completed Biology I and have completed or be concurrently enrolled in Chemistry I or equivalent courses
- Complete course content typical to college freshman in general biology
- Prepare for the Advanced Placement Biology examination

**Chemistry I**

Course #4410

36 weeks (1 cr.); elective

High Schools; Grades 10-12

- ✓ SOL Chemistry end-of-course test
- Conduct experimental and analytical laboratory investigations
- Topics include reaction rate, thermodynamics, redox reactions, stoichiometry, kinetic molecular theory, gas laws, atomic structure, periodicity, bonding, colligative properties, and equilibrium

**Chemistry I Honors**

Course #4410

36 weeks (1 cr.); elective

High Schools; Grades 10-12

- ✓ SOL Chemistry end-of-course test
- See Course #4410 above for additional course content
- Conduct a long-term independent research investigation
- Study advanced chemistry content in preparation for AP Chemistry

**AP Chemistry**

Course #4470

36 weeks (1 cr.); elective

High Schools; High Tech Academy

- ✓ SOL Chemistry end-of-course test (unless previously passed)
- Must have successfully completed Chemistry I or its equivalent
- Complete course content that is typical to freshman in general chemistry
- Prepare for the Advanced Placement Chemistry exam

**Current Topics in Biology**

Course #4500

18 weeks (.5 cr.); elective

High Schools

- Engage in study of biology topics as they relate to current events studied
- Develop Internet research skills
- Interpret charts, diagrams, and graphs
- Conduct experiments

**Physics I**

Course #4510

36 weeks (1 cr.); elective

High Schools; Grades 10-12

- Use algebra, inferential statistics, and trigonometry to understand and solve physics problems
- Study force and motion, kinetic molecular theory, energy transformations, wave phenomena and electromagnetic spectrum, light, electricity, fields, and non-Newtonian physics

**Physics I Honors**

Course #4510

36 weeks (1 cr.); elective

High Schools

- Conduct a long-term independent research investigation
- Study advanced physics content in preparation for AP Physics
- See Course #4510 above for additional course content

**AP Physics I**

Course #4573

36 weeks (1 cr.); elective

High Schools; Grades 10-12

- Study Newtonian mechanics (including rotational dynamics and angular momentum); work, energy and power; mechanical waves and sound; and electric circuits
- Prepare for the Advanced Placement Physics I exam

**AP Physics II**

Course #4574

36 weeks (1 cr.); elective

High Schools; Grades 10-12

- Study fluid mechanics; thermodynamics; electricity and magnetism; optics; atomic and nuclear physics
- Prepare for the Advanced Placement Physics II exam

**AP Physics C: Mechanics**

Course #4571

36 weeks (1 cr.); elective

High Schools; Grades 10-12

- Study kinematics; Newton's laws of motion, work, energy, and power; systems of particles and linear momentum; circular motion and rotation; and oscillations and gravitation
- Prepare for the Advanced Placement Physics C: Mechanics exam

**Environmental Science**

Course #4280

36 weeks (1 cr.); elective

High Schools

- Understand human dependence on Earth for a variety of resources
- Examine how human actions have changed the environment and promote civic responsibility
- Investigate the flow of matter and energy between the biosphere, hydrosphere, and atmosphere

**AP Environmental Science**

Course #4270

36 weeks (1 cr.); elective

High Schools; Grades 9-12

- ✓ SOL Earth Science end-of-course test (unless previously passed)
- Complete course content identical to a typical one-semester college introductory environmental science course
- Prepare for the Advanced Placement Environmental Science exam

**Meteorology**

Course #4621 (offered first semester)

18 weeks (.5 cr.); elective

High Schools

- Increase knowledge of atmospheric science through the use of a real-time weather database and satellite technology
- Analyze, forecast, and track existing synoptic weather conditions, and examine the elements of weather forecasting
- Investigate contemporary issues of acid rain, ozone depletion, and greenhouse effect

**Exploration of the Universe**

Course #4622 (offered second semester)

18 weeks (.5 cr.); elective

High Schools

- Use information from interplanetary exploration to focus on the organization, composition, and distribution of matter in the universe
- Study technological advances and instrumentation involved in space exploration

**SOCIAL STUDIES****Social Studies 6**

Course #2354

36 weeks; required

Middle Schools

- Focus on the history of the United States from Pre-Columbian times until 1865
  - Study documents and events that lay the foundation of American ideals and institutions
  - Complete activities to think like a historian
- Authentic Assessments given*

**Social Studies 6/Civics Accelerated**

Course #2354

36 weeks; required; designed for 6th grade

students with high ability in social studies

who plan to take Course #2215 in 8th grade

Middle Schools

- See Courses #2354 above and #2220 below for additional course content
  - Continue focus on 8th Grade Civics
  - Analyze primary and secondary sources
- Authentic Assessments given*

**Social Studies 7**

Course #2355

36 weeks; required

Middle Schools

- Focus on American history from 1865 to the present
  - Study documents and events that lay the foundation of American ideals and institutions
  - Complete activities to think like a historian
- Authentic Assessments given*

**Social Studies 7/Economics Accelerated**

Course #2355

36 weeks; required; designed for 7th grade

students with high ability in social studies

who plan to take Course #2215 in 8th grade

Middle Schools

- ✓ SOL Civics and Economics test
  - See courses #2355 above and #2220 below for additional course content
  - Continue focus on 8th Grade Economics
  - Analyze primary and secondary sources
- Authentic Assessments given*

**Social Studies 8: Civics and Economics**

Course #2220

36 weeks; required unless enrolled in Course

#2215

Middle Schools

- ✓ SOL Civics and Economics test
- Study the U. S. and Virginia Constitutions and government at the national, state, and local levels
- Learn the basic principles, structure, and operation of the American economy
- Learn the electoral process

**World History & Geography I**

Course #2215

36 weeks (1 cr.); required; offered to 8th-

grade students of advanced academic ability

who have completed USI, USII, and Civics &amp;

Economics

Middle/High Schools

- ✓ SOL World History I end-of-course test
- Study the history of people, places, and religions from ancient times to 1500
- Focus on Mesopotamia, ancient Greece and Rome, and the Middle Ages
- Compares African, early American, and Asian contributions to civilization

**World History & Geography I Honors**

Course #2215

36 weeks (1 cr.)

High Schools

- ✓ SOL World History I end-of-course test
- See Course #2215 above for additional course content
- Analyze primary and secondary sources
- Conduct a research project



**World History & Geography II**

Course #2216  
36 weeks (1 cr.)  
High Schools

- ✓ SOL World History II end-of-course test
- Explore people, places and religions from about 1500 to the present
- Analyze the late Medieval period, Renaissance, and Reformation
- Compare empires in India, China, Japan, sub-Saharan Africa and Central America

**World History & Geography II Honors**

Course #2216  
36 weeks (1 cr.)  
High Schools

- ✓ SOL World History II end-of-course test
- See Course #2216 above for additional course content
- Analyze primary and secondary sources
- Conduct a research project

**World Geography**

Course #2210  
36 weeks (1 cr.)

High Schools; For High School students, this course serves as an alternative to World History and Geography I or World History and Geography II as a graduation requirement

- ✓ SOL World Geography end-of-course test
- Work with maps, charts, and current global issues
- Compare world religions and geographic factors impacting society and culture

**World Geography Honors**

Course #2210  
36 weeks (1 cr.)

High Schools; For High School students, this course serves as an alternative to World History and Geography I or World History and Geography II as a graduation requirement

- ✓ SOL World Geography end-of-course test
- See Course #2210 above for additional course content
- Includes research and collaborative projects

**Virginia and United States History**

Course #2360  
36 weeks (1 cr.); required  
High Schools  
(Course is available online during summer school)

- ✓ SOL Virginia and United States History end-of-course test
- Study United States political and economic development to present time
- Focus on cultural and societal changes to the present time
- Study people and events contributing to the history of the United States

**Virginia and United States History Honors**

Course #2360  
36 weeks (1 cr.); required  
High Schools; Course is available online

- ✓ SOL Virginia and United States History end-of-course test
- See Course #2360 above for additional course content
- Read historical materials critically, weigh evidence, and problem solve
- Use advanced writing skills to analyze readings

**Virginia and United States Government**

Course #2440  
36 weeks (1 cr.); required  
High Schools  
(Course is available online during summer school)

- Study the political nature and political issues of American society
- Focus on constitutionalism and democracy within the United States
- Discuss issues of governmental power and guarantees of civil liberties

**Virginia and United States Government Honors**

Course #2440  
36 weeks (1 cr.); required  
High Schools

- See Course #2440 above for additional course content
- Apply critical thinking skills to evaluate research, current events, and elections
- Use advanced writing skills to analyze assigned readings

**AP Virginia and United States Government**

Course #2445  
36 weeks (1 cr.); students may substitute this course for Virginia and United States Government  
High Schools

- Obtain a college-level perspective on politics and government in the United States
- Explore institutions, groups, beliefs, and ideas of American political reality
- Prepare for the Advanced Placement Examination

**AP Microeconomics/AP Macroeconomics**

Course #2806 (micro)  
18 weeks (.5 cr.); elective  
Course #2807 (macro)  
18 weeks (.5 cr.); elective  
Grade 12

- Analyze the principles of economics that apply to an economic system
- Recognize government, business, and individual interaction in the market economy
- Prepare for completion of the AP economics exam

**AP Virginia and United States History**

Course #2319  
36 weeks (1 cr.); elective; students may substitute this course for U. S. History, which is required for graduation  
High Schools

- ✓ SOL Virginia and United States History end-of-course test
- Read historical material critically, weigh evidence, and arrive at conclusions
- Prepare for the Advanced Placement Examination
- Use advanced writing skills to analyze readings

**AP Psychology**

Course #2902  
36 weeks (1 cr.); elective  
High Schools

- Perform psychological research
- Study the many facets of psychological behavior and social psychology
- Prepare for the Advanced Placement Psychology Examination

**AP Human Geography**

Course #2212  
36 weeks (1 cr.); elective

- Study human impact on the Earth's resources and environment
- Understand societal roles and relationships and their interdependence with one another
- Examine population trends and cultural patterns

**AP World History**

Course #2380  
36 weeks (1 cr.); elective  
High Schools

- Study world history from approximately 8,000 B.C. to the present
- Emphasize historical development of Africa, the Americas, Asia, and Europe
- Prepare for the Advanced Placement World History Examination

**AP European History**

Course #2399  
36 weeks (1 cr.); elective  
High Schools

- Study European politics and economics from the Renaissance to the present
- Work with primary sources from period documents to sculpture and paintings
- Emphasize social, intellectual, and cultural studies

**Sociology**

Course #2500  
36 weeks (1 cr.); elective  
High Schools

- Study and analyze individual, institutional, and group relationships in society
- Use institutions such as the family, church, school, and government to emphasize the interaction of concepts

**Principles of Leadership Honors**

Course #2990

36 weeks (1 cr.); elective

High Schools

- Examine the qualities and leadership styles of recognized leaders
- Develop citizens who possess the leadership abilities to meet present and future challenges in a global society

**Psychology I**

Course #2900

36 weeks (1 cr.); elective

High Schools

- Study individual and group behavior, the effect of internal and external stimuli, and the interaction of individuals
- Increase critical thinking and improve communication through demonstrations, experiments, movies, and videotapes

**20th Century World History**

Course #2387

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

High Schools

- Analyze current events by learning the 20th century background of these problems
- Discuss topics that include colonialism, war, urban problems, minority groups, and women's liberation

**20th Century World History Honors**

Course #2387

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

High Schools

- See Course #2387 above for additional course content
- Participate in simulations and debates
- Obtain an advanced perspective on events, politics and government in the 20th Century

**20th Century Virginia and United States History**

Course #2388

18 weeks (.5 cr.); elective

36 weeks (1 cr.); elective

High Schools

- Focus on major events, trends, movements, ideas and people of the 20th Century as they relate to United States History
- Analyze present-day problems

**20th Century Virginia and United States History Honors**

Course #2388

36 weeks (1 cr.); elective

High Schools

- See Course #2388 above for additional course content
- Obtain a perspective on events, politics and government in the United States
- Apply critical thinking skills in evaluating research, current events, and other data

**African-American History**

Course #2371

18 weeks (.5 cr.); elective

High Schools

- Understand early African society, customs, and contact with Europe and the Americas
- Focus on the history of discrimination and civil rights movements in the US.
- Explore contributions to society by African-American citizens

**TECHNOLOGY EDUCATION**

**Introduction to Technology**

Course #8481

9 weeks; elective

Middle Schools

- Explore technology and its uses at home, in school, and in recreation
- Study the elements of technology: tools, machines, materials, processes, energy, information, and humans
- Study one of the four areas of technology: construction, transportation, communication, and manufacturing

**Inventions and Innovations**

Course #8464

9-18 weeks; elective

Middle Schools

- Trace the development of technology and inventions
- Construct a model of an early invention
- Discuss products/inventions needed for world-class competition and prepare a report on one of them

**Technological Systems/Manufacturing**

Course #8462

36 weeks; elective

Middle Schools

- Expand learning through hands-on activities
- Learn about designing systems, constructing models, and combining systems
- Explore occupational areas for technology-oriented careers

**Technological Systems**

Course #8463

18 weeks; elective

Middle Schools

- Explore technological systems and their impact on humans
- Study production, construction, and transportation with technological systems
- Improve life with biotechnology systems

**Career and Technical Occupational Exploration**

Course #8469

18 weeks; elective

36 weeks; elective

Middle/High Schools

- Explore career options
- Design/build products per design briefs
- Explore occupational and educational programs for career and technical education

**Technology Foundations**

Course #8402

18 weeks (.5 cr.); elective

Course #8403

36 weeks (1 cr.); elective

Middle/High Schools

- Acquire knowledge in technological material, energy, and information
- Analyze technological products to learn how and why technology works
- Build and control systems with computers

**Technology Transfer**

Course #8404

18 weeks (.5 cr.); elective

Course #8405

36 weeks (1 cr.); elective

High Schools

- Apply foundations of technology
- Apply the technological method as a problem-solving process
- Use tools, machines, materials, and process to solve problems

**Engineering Explorations I Honors**

Course #8450

36 weeks (1 cr.); elective

High Schools, High Tech Academy, Center for Engineering

- Explore engineering careers, history, practices, and concepts
- Apply mathematical and scientific principles to technical problems
- Use a computer to analyze data and mechanical/electrical systems to solve problems

**Engineering Analysis and Applications II**

Course #8451

36 weeks (1 cr.); elective

High Schools, High Tech Academy

- Work as a member of an engineering team
- Select a team project, such as a model, system, or product, that will creatively solve the engineering problem
- Use communications, graphics, mathematics, and community personnel to solve the team's engineering problem

**Communications Systems**

Course #8415

36 weeks (1 cr.); elective

High Schools

- Incorporate taking photographs with script and art work
- Study layout and design
- Develop basic technical skills in the areas of drafting, photography, and telecommunications
- Study layout and design



**Geospatial Technology**

Course #8423

36 weeks (1 cr.); elective

High Schools

- Study of geographic information systems (GIS), global positioning systems (GPS), remote sensing (RS), digital image processing simulator (DIPS), Automated Cartography (Auto-Carto), Land surveying and Navigation
- Students will explore and analyze the natural and human-made world from local to global
- Students will use various tools, processes, and techniques to create, store, access, manipulate and revise data to solve human challenges

**Introduction to Photography (Semester Imaging Technology)**

Course #8474

18 weeks (.5 cr.); elective

High Schools

- Identify, operate, and maintain digital equipment and hardware
- Produce images using digital equipment
- Explore careers in image technology

**Photography (Imaging Technology)**

Course #8455

36 weeks (1 cr.); elective

High Schools

- Produce images using digital equipment
- Correct, enhance, and transform digital images
- Apply design processes in using a variety of presentation techniques for images

**Digital Visualization**

Course #8459

36 weeks (1 cr.); elective

High Schools

- Gain experience related to computer animation by involving 3D object manipulation, storyboarding, texture mapping, lighting concepts, and environmental geometry
- Produce animations that include projects related to science, engineering, and the entertainment industry
- Develop a portfolio that showcases examples of original student work

**Video and Media Technology**

Course #8497

36 weeks (1 cr.); elective

High Schools

- Explore the development of broadcasting from early film to present-day television
- Learn the elements of planning and composing video productions
- Operate audio and video mixers and switches

**Electronic Systems I**

Course #8416

36 weeks (1 cr.); elective

High Schools

- Identify electricity/electronics applications
- Describe static electricity, electromotive force (voltage), and current electricity
- Construct a project using AC and DC circuits

**Electronic Systems II**

Course #8412

36 weeks (1 cr.); elective

High Schools

- Construct a project to apply theories and laws with electronic components
- Study integrated circuits used in computers, television, and other equipment
- Explore digital electronics and computer interfacing robotics

**Energy and Power**

Course #8495

18 weeks (.5 cr.); elective

Course #8448

36 weeks (1 cr.); elective

High Schools

- Learn about the applications of power and energy systems and transportation vehicles
- Apply theory to the servicing of common machines and small engines

**Production Systems with Metals**

Course #8447M

36 weeks (1 cr.); elective

High Schools

- Perform independent study as a learning experience
- Pursue a specialty based on interest
- Produce a major project of advanced design

**Production Systems with Woods**

Course #8447W

36 weeks (1 cr.); elective

High Schools

- Perform independent study as a learning experience
- Pursue a specialty based on interest
- Produce a major project of advanced design

**Materials and Processes Technology with Woods**

Course #8433W

36 weeks (1 cr.); elective

High Schools

- Learn safety in the use of tools and equipment
- Use and maintain hand tools and portable power equipment
- Design and build wood products while studying the woodworking industry

**Materials and Processes Technology with Metals**

Course #8433M

36 weeks (1 cr.); elective

High Schools

- Use hacksaws, chisels, files, drills, and sheet metal machines
- Study sheet metal, welding, and foundry
- Design and build a metal product

**Construction Technology**

Course #8432

18 weeks (.5 cr.); elective

High Schools

- Explore the construction industry
- Study building drawings, construction materials, and the safe use of tools and procedures used in the building trades
- Participate in the design and construction of a framed wood structure

**Manufacturing Systems I**

Course #8425

36 weeks (1 cr.); elective

Course #8426

18 weeks (.5 cr.); elective

High Schools

- Gain knowledge of the manufacturing industry through laboratory experiences and related information
- Mass-produce products related to manufacturing technology

**Manufacturing Systems II**

Course #8427

36 weeks (1 cr.); elective

High Schools

- Continue to expand overall knowledge of Manufacturing Technology
- Study new concepts such as Green Manufacturing and Resource Management in the manufacturing field
- Develop an end-of-year interdisciplinary project

**Technical Drawing/Design/CAD**

Course #8435

36 weeks (1 cr.); elective

Course #8434G

18 weeks (.5 cr.); elective

High Schools

- Learn the basic language of industry and technology
- Gain skills in mechanical drawing or drafting
- Prepare technical sketches using orthographic projections, pictorial technical sketches, layout sketches, and prints of original drawings

**Engineering Drawing/Design/CAD**

Course #8436  
36 weeks (1 cr.); elective  
Course #8493H  
18 weeks (.5 cr.); elective  
High Schools

- Learn the graphic language used by engineers, manufacturers, and technicians
- Interpret industrial prints to use handbooks with resource materials, and to adhere to standards for drafting
- Apply drafting principles to typical engineering drawing and design problems

**Architectural Drawing/Design/CAD**

Course #8437  
36 weeks (1 cr.); elective  
High Schools

- Learn principles of architecture and related drafting practices and techniques
- Draw plot, foundation, and house plans
- Develop and draw electrical, heating and air conditioning, and plumbing plans

**Advanced Drafting and Design**

Course #8438  
36 weeks (1 cr.); elective  
High Schools

- Develop an independent program of study related to student interest
- Complete research and/or major project related to drafting and design
- Reinforce knowledge of CAD by working in a peer learning environment with other students

**Technology of Robotic Design**

Course #8421  
36 weeks (1 cr.); elective  
High Schools

- Students engage in the study of computers and microprocessors and their applications to manufacturing, transportation, and communication systems
- Topics include computer equipment and operating systems, robotics, programming, control systems, and social/cultural impact of these technologies
- Problem-solving activities challenge students to design, program, and interface devices with computer systems

**TRADE AND INDUSTRIAL EDUCATION**

**Air Conditioning, Refrigeration, and Plumbing I**

Course #8503  
36 weeks (3 cr.); elective  
ACE Center at Hermitage

- Apply the fundamentals of installing and servicing air conditioning, refrigeration, and plumbing systems for both residential and commercial applications
- Use tools and materials required for jobs
- Study refrigeration and basic electricity principles

**Air Conditioning, Refrigeration, and Plumbing II**

Course #8504  
36 weeks (3 cr.); elective  
ACE Center at Hermitage

- Study instruments and controls including trouble shooting of components and systems
- Participate in work experiences during the second semester (if recommended)
- Prepare for HVAC certification

**Automotive Technology I**

Course #8506  
36 weeks (3 cr.); elective  
ACE Center at Hermitage, ACE Center at Highland Springs, The Academy at Virginia Randolph

- Perform shop operations to include safety, tool usage and management of repair facility
- Develop diagnostic skills to be used as entry level technicians
- Learn utilization of all maintenance related tools (coolant trans, power steering, induction, and brake equipment)

**Automotive Technology II**

Course #8507  
36 weeks (3 cr.); elective  
ACE Center at Hermitage, ACE Center at Highland Springs, The Academy at Virginia Randolph

- Perform engine, electrical system repairs and front end alignments
- Prepare for certification in VA State Inspection and A.S.E. tests
- Participate in work experiences during the second semester (February to June)

**Masonry I**

Course #8512  
36 weeks (3 cr.); elective  
ACE Center at Highland Springs, The Academy at Virginia Randolph

- Learn the safe use, handling, and maintenance of tools, machines, equipment, and materials used in the masonry trade
- Learn to lay brick and block to a line and to construct walls and corners
- Participate in the construction of a house (if selected)

**Masonry II**

Course #8513  
36 weeks (3 cr.); elective  
ACE Center at Highland Springs, The Academy at Virginia Randolph

- Refine techniques of bricklaying and blocklaying
- Study commercial masonry construction techniques
- Participate in the construction of a house (if selected)

**Cosmetology I**

Course #8527  
36 weeks (3 cr.); elective  
ACE Center at Hermitage, ACE Center at Highland Springs  
36 weeks (2 cr.); elective  
The Academy at Virginia Randolph only

- Practice sanitation, disinfection, and safety
- Acquire work habits and attitudes leading to employment
- Learn procedures to care for hair, skin, and nails

**Cosmetology II**

Course #8528  
18 weeks (1.5 cr.); elective  
ACE Center at Hermitage, ACE Center at Highland Springs  
36 weeks (2 cr.); elective  
The Academy at Virginia Randolph only

- Apply acquired skills from Cosmetology I
- Acquire skills in salon management including developing positive operator-patron relationships
- Perfect procedures to care for hair, skin, and nails

**Cosmetology III**

Course #8529  
18 weeks (1.5 cr.); elective  
ACE Center at Hermitage, ACE Center at Highland Springs  
36 weeks (2 cr.); elective  
The Academy at Virginia Randolph only

- Transfer skills to current style trends
- Acquire skills in salon management including developing positive operator-patron relationships
- Prepare and sit for state licensing examination

**Barbering I**

Course #8740  
36 weeks (3 cr.); elective  
ACE Center at Hermitage

- Practice sanitation, disinfection, and safety
- Acquire work habits and attitudes leading to employment
- Learn procedures to care for hair, skin, and nails

**Barbering II**

Course #8741  
18 weeks (1.5 cr.); elective  
ACE Center at Hermitage

- Apply acquired skills from Barbering I
- Acquire skills in barber shop/salon management including developing positive operator-patron relationships
- Perfect procedures to care for hair, skin, and nails

**Barbering III**  
 Course #8742  
 18 weeks (1.5 cr.); elective  
 ACE Center at Hermitage

- Transfer skills to current style trends
- Apply skills in barber shop/salon management including developing positive operator-patron relationships
- Prepare and sit for state licensing examination

**CAD - Computer-Aided Drafting/3D Animation I**  
 Course #8530  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Apply the fundamentals of drafting by producing working drawings
- Use computer-aided drafting (AutoCAD computer systems) for one-half the course
- Learn the basic skills and commands needed to manipulate animated objects in a 3-Dimensional format

**CAD - Computer-Aided Drafting/3D Animation II**  
 Course #8531  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Focus on architectural and engineering drawings
- Gain skills in building construction, mechanical engineering, and residential and commercial architecture
- Participate in work experiences during the second semester (if recommended)

**Electricity and Cabling I**  
 Course #8533  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage, ACE Center at Highland Springs, The Academy at Virginia Randolph

- Prepare for entry into electricity-related occupations or post-secondary engineering program
- Learn principles of electricity
- Apply fundamental skills using materials, tools, and techniques required to install, maintain, and repair electrical equipment

**Electricity and Cabling II**  
 Course #8534  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage, ACE Center at Highland Springs, The Academy at Virginia Randolph

- Prepare for entry into electricity-related occupations or a post-secondary engineering program
- Study direct and alternating current, industrial electricity, and motors
- Participate in the construction of a house (if selected) or in work experiences during the second semester (optional)

**Precision Machining Technology I**  
 Course #8539  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Explore aspects of machine shop technology
- Apply knowledge of blueprint reading, machine theory, technical language, math, and measurement to problems involving machines or machine parts
- Gain experience in use of lathes, milling machines, grinders, saws, drills, CNC (computer numerical control) machines, and welding equipment

**Precision Machining Technology II**  
 Course #8540  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage

- Study aspects introduced in Precision Machining Technology I
- Focus on tighter tolerances and improved quality
- Participate in work experiences during the second semester (if recommended)

**Industrial Maintenance Repair/Welding I**  
 Course #8575  
 36 weeks (1-2 cr.); elective  
 The Academy at Virginia Randolph

- Learn basic plumbing and electrical principles
- Study basic theory and operation of gas and electric welding
- Demonstrate basic skill in metal layout and fabrication techniques and develop basic skills in the welding processes

**Industrial Maintenance Repair/Welding II**  
 Course #8576  
 36 weeks (2-4 cr.); elective  
 The Academy at Virginia Randolph

- Demonstrate safe use of power and hand tools and high-pressure gases
- Use advanced measuring and fabrication techniques to build various projects

**Carpentry I**  
 Course #8601  
 36 weeks (3 cr.); elective  
 ACE Center at Highland Springs, The Academy at Virginia Randolph

- Use hand tools and power equipment used in the trade
- Apply knowledge of blueprint reading and interpretation, zoning laws, building codes, and foundation layout
- Participate in the construction of a house

**Carpentry II**  
 Course #8602  
 36 weeks (3 cr.); elective  
 ACE Center at Highland Springs, The Academy at Virginia Randolph

- Perfect skills learned in Carpentry I
- Learn advanced skills including estimating materials, installing cabinets and finishing trim
- Participate in the construction of a house

**Diesel Technologies I**  
 Course # 8613  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage – taught at Central Automotive Maintenance

- Introduces students to the fundamentals of diesel equipment
- Gain experience in the use of hand and power tools related to diesel equipment
- Identify, disassemble, clean, inspect and repair various components in diesel equipment

**Diesel Technologies II**  
 Course # 8614  
 36 weeks (3 cr.); elective  
 ACE Center at Hermitage – taught at Central Automotive Maintenance

- Study the support systems and heavy truck chassis concepts
- Inspection and repair of brake systems, steering mechanisms, wheel bearings, and other important systems related to heavy equipment
- Participate in work experiences during the second semester (if recommended)

**Computer Systems Technology I**  
 Course #8622  
 36 weeks (3 cr.); elective  
 ACE Center at Highland Springs

- Develop a foundation of computer hardware and operating systems
- Develop the skills and knowledge to pass the nationally recognized A+ certification exam
- Construct, troubleshoot, service, and repair computer systems, related components, and software

**Computer Systems Technology II**  
 Course #8623  
 36 week (3 cr.); elective  
 ACE Center at Highland Springs

- Understand career opportunities in the information technology field
- Learn to install and maintain local area networks
- Develop the skills and knowledge to prepare for a career as a Certified Cisco Network Administrator
- Install and configure Cisco routers

**Radio Broadcasting & Journalism I**  
 Course #8640  
 36 weeks (3 cr.); elective  
 ACE Center at Highland Springs

- Explore materials and equipment used in broadcasting
- Build speech and announcing techniques
- Write materials in format for a live broadcast



**Radio Broadcasting & Journalism II**

Course #8641

36 weeks (3 cr.); elective

ACE Center at Highland Springs

- Learn operation of radio station equipment
- Develop skills required for disk jockey work, news casting, traffic reports, and sports coverage
- Participate in the operation of WHCE with live, on-air broadcasting

**Graphic Communications I**

Course #8660

36 weeks (3 cr.); elective

ACE Center at Hermitage, The Academy at Virginia Randolph

- Develop techniques to manage and control production printing using 21st century skills
- Develop skills in digital composition & printing, wide format printing and collating/binding operations and the material used with each
- Learn the difference between Silk Screening, Heat Transfer Vinyl & Vinyl Film and produce graphics with them

**Graphic Communications II**

Course #8661

36 weeks (3 cr.); elective

ACE Center at Hermitage, The Academy at Virginia Randolph

- Develop techniques to manage and control production printing using 21st century skills
- Increase knowledge in digital composition & printing, wide format printing and collating/binding operations, Heat Transfer Vinyl & Vinyl Film and the material used with each
- Participate in work experiences during the second semester (if recommended)

**Auto Body Repair I**

Course #8676

36 weeks (3 cr.); elective

ACE Center at Highland Springs, The Academy at Virginia Randolph

- Explore all phases of automobile body repair
- Develop techniques and methods used to repair minor damage to automobiles and trucks
- Use hand tools, power tools, and painting equipment

**Auto Body Repair II**

Course #8677

36 weeks (3 cr.); elective

ACE Center at Highland Springs, The Academy at Virginia Randolph

- Evaluate damages and complete estimates for repair jobs
- Expand involvement in custom paint jobs
- Participate in work experiences during the second semester (if recommended)

**Criminal Justice I**

Course #8702

36 weeks (3 cr.); elective

ACE Center at Hermitage, ACE Center at Highland Springs

- Explore the United States criminal justice system major components: law enforcement, judiciary and corrections
- Gain knowledge about the evolution of the American juvenile delinquency system
- Learn from professionals in local, state, federal, and private law enforcement agencies

**Criminal Justice II**

Course #8703

36 weeks (3 cr.); elective

ACE Center at Hermitage, ACE Center at Highland Springs

- Explore procedures in criminal investigations and crime scene investigation
- Study goals, methods, and techniques of police patrol
- Examine responsibilities of administrators and field supervisors of patrol in the local and state law enforcement agencies

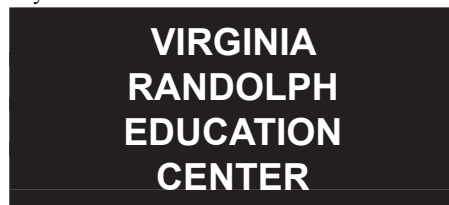
**Career Investigation, Phase I**

Course #9070

36 weeks (1 cr.); required for PACE students

The Academy at Virginia Randolph

- Develop workplace readiness skills
- Map your career
- Explore multiple technical areas during the year



**Each student's course of study is determined by that individual's IEP (Individualized Education Plan).**

The following descriptions include the vocational offerings at Virginia Randolph Education Center which represent only a portion of the curriculum available to students at this center:

**Agricultural Education**

Course #8053

Length of course varies with the individual student

Elective for students with disabilities who are aged 15 to 21, who have completed school through the middle level, and who show interest and talents in the area of horticulture

- Develop skills/abilities required for employment proficiency in horticulture-related occupations
- Train for competitive employment in greenhouse maintenance, greenhouse production, and grounds maintenance
- Apply concepts of basic plant propagation, with emphasis on greenhouse maintenance and nursery production

**Trade and Industrial Education**

Course #8627

Length varies with the individual student

Elective for students with mental disabilities who have completed school through the middle level and who show interest or talents in the area of Trade and Industrial Education

- Prepare for entry into janitorial jobs in supported or competitive employment
- Practice working in a simulated building/grounds maintenance environment
- Enter work through part-time jobs on campus and in the community

**Education for Employment Co-op I**

(EFE Co-op optional)

Course #9085

36 weeks; elective; for students with disabilities who are between the ages of 14 and 22

- Prepare for career paths, occupational opportunities, and continuing education
- Experience school-based and work-based instruction
- May exit WECEP to enter a regular/vocational cooperative education program



**Marketing**

Course #8120

36 weeks (1 cr.); elective

The Academy at Virginia Randolph

- Study the functions in the marketing of goods and services
- Develop the competencies for successful marketing employment
- Develop social and economic competencies in conjunction with marketing competencies
- Combine classroom instruction and a minimum of 396 hours of continuous, supervised on-the-job training when participating in cooperative education

**Introduction to Education for Employment**

Course #9076

36 weeks; elective; must be 14 years or older and considered disadvantaged to enroll

State enrollment limits apply

Middle Schools

- Develop goals and values for employment through occupational preparation
- Acquire skills necessary for positive interpersonal relationships
- Participate in an on-campus paid work experience (part time) when available

**Education for Employment I**  
 Course #9078  
 36 weeks; (Co-op Optional); elective; must be 14 years or older and considered disadvantaged to enroll  
 State enrollment limits apply  
 The Academy at Virginia Randolph

- Investigate various occupational fields
- Practice solving real-world problems
- Develop employability skills through in-class instruction and on-the-job paid work experience

**Education for Employment II (EFE II)**  
 Course #9080  
 36 weeks (co-op optional); elective; must be 14 years or older and considered disadvantaged to enroll  
 State enrollment limits apply  
 The Academy at Virginia Randolph

- Experience a motivational program to help achieve a higher level of success
- Develop skills to get a job and be successful on the job
- Participate in a paid-work experience
- Become familiar with educational and career options

**College and Career Readiness**  
 Course #9814  
 18 weeks (.5 cr.); elective  
 36 weeks (1 cr.); elective  
 The Academy at Virginia Randolph

- Explore college application and search processes
- Focus on career education readiness

**WORLD LANGUAGES**

**Exploratory Languages and Cultures 6**  
 Course #5102, #5202, #5302, #5502  
 9/18 weeks; elective  
 Middle Schools

- Explore the languages and cultures of Francophone and Spanish-speaking countries as well as Germany, Japan, Ancient Rome and China
- Learn basic vocabulary and communication skills of each language
- Explore the geography, customs and traditions of these countries

**Introduction to Languages and Cultures**  
 Course #5700  
 36 weeks; elective  
 Middle Schools

- Explore the languages and cultures of Francophone and Spanish-speaking countries as well as Germany, Japan, Ancient Rome and China
- Learn basic vocabulary and communication skills of each language
- Explore the geography, customs and traditions of these countries

**French Exploratory 7**  
 Course #5103  
 9-18 weeks; elective  
 Middle Schools

- Acquire skills in comprehending, speaking, reading, and writing French
- Acquire knowledge of the vocabulary and the structure of the French language while participating in activities related to the daily life of the Francophone people

**Foundations of French Part A**  
 Course #5113  
 36 weeks; elective  
 Middle Schools

- Acquire skills in comprehending, speaking, reading and writing French
- Learn vocabulary and grammatical structures to perform in contextual situations
- Explore the geography, customs, art, music, and traditions of Francophone countries

**Foundations of French Part B**  
 Course #5115  
 36 weeks (1 cr.); elective  
 Middle Schools

- Must have completed Foundations of French Part A
- Acquire skills in comprehending, speaking, reading, and writing French
- Expand vocabulary and grammatical structures
- Explore the geography, history, culture and customs of Francophone countries

**French I**  
 Course #5110  
 36 weeks (1 cr.); elective  
 Middle/High Schools

- Acquire skills in comprehending, speaking, reading, and writing French
- Learn vocabulary and grammatical structures to perform in contextual situations
- Explore the geography, customs, and traditions of Francophone countries

**French II**  
 Course #5120  
 36 weeks (1 cr.); elective  
 High Schools

- Continue to improve all communication skills: reading, writing, listening and speaking
- Learn to speak the language with more fluency and ease
- Increase vocabulary and improve grammar usage

**French III**  
 Course #5130  
 36 weeks (1 cr.); elective  
 High Schools

- Continue to improve all communication skills: reading, writing, listening and speaking using authentic resources
- Refine pronunciation and fluency
- Increase vocabulary and learn advanced grammar structures

**French IV Honors**  
 Course #5140  
 36 weeks (1 cr.); elective  
 High Schools

- Refine all communication skills: reading, writing, listening and speaking using advanced, authentic resources
- Broaden conversational vocabulary and idiomatic expressions
- Examine language usage through culture, history, art and literature

**AP French Language**  
 Course #5170  
 36 weeks (1 cr.); elective  
 High Schools

- Focus on themes to study literary works and their geographic and historical settings
- Refine structures, vocabulary usage, and speaking skills used in context
- Prepare for the Advanced Placement Language Exam and review for the College Board Achievements through increased emphasis on speaking and listening skills

**French VI Honors**  
 Course #5160  
 36 weeks (1 cr.); elective  
 High Schools

- Must have completed French AP
- Learn the most advanced grammar and vocabulary
- Analyze global current issues affecting Franco-phone communities
- Discuss literary, history and artistic work from Franco-phone countries

**German I**  
 Course #5210  
 36 weeks (1 cr.); elective  
 Middle/High Schools

- Learn basic vocabulary and grammatical structures
- Acquire skills in comprehending, speaking, reading, and writing German
- Explore the geography, customs, and traditions of Germany and other German-speaking areas

## WORLD LANGUAGES

### German II

Course #5220

36 weeks (1 cr.); elective

High Schools

- Continue to improve all communication skills: reading, writing, listening and speaking
- Learn to speak the language with more fluency and ease
- Increase vocabulary and improve grammar usage

### German III

Course #5230

36 weeks (1 cr.); elective

High Schools

- Continue to improve all communication skills: reading, writing, listening and speaking using authentic resources
- Refine pronunciation and fluency
- Increase vocabulary and learn advanced grammar structures

### German IV Honors

Course #5240

36 weeks (1 cr.); elective

High Schools

- Continue to improve all communication skills: reading, writing, listening and speaking using authentic resources
- Broaden conversational vocabulary and idiomatic expressions
- Acquire insight into German humanities from early Germanic tribes to present

### AP German

Course #5270

36 weeks (1 cr.); elective

High Schools

- Continue fluency in written and oral expression
- Read and discuss masterpieces in their entirety and historical settings
- Prepare for the Advanced Placement Language Exam and review for the College Board Achievements through increased emphasis on speaking and listening skills

### Latin and Greek for the 20th Century

Course #5305

18 weeks (.5 cr.); elective

High Schools

- Explore the elements of Latin and Greek that influence American culture and language
- Learn Latin words, phrases, and abbreviations used in English
- Use this course to prepare for taking standardized tests

### Foundations of Latin Part A

Course #5308

36 weeks; elective

Middle Schools

- Learn thematic and functional vocabulary with prefixes, suffixes, and root words
- Explore the impact of ancient Rome on the present
- Gain perspective on the present by finding root words in one's own language from Roman life

### Foundations of Latin Part B

Course #5309

36 weeks (1 cr.); elective

Middle Schools

- Must have completed Foundations of Latin Part A
- Increase English vocabulary and understanding of the structure of the language
- Explore the impact of ancient Rome on the present
- Gain perspective on the present by finding roots in one's own language from Roman life

### Latin I

Course #5310

36 weeks (1 cr.); elective

Middle/High Schools

- Learn thematic and functional vocabulary along with prefixes, suffixes, and root words
- Explore the impact of ancient Rome on the present
- Gain perspective on the present by finding roots in one's own language from Roman life

### Latin II

Course #5320

36 weeks (1 cr.); elective

High Schools

- Increase vocabulary by learning derivative
- Develop cultural understanding, attitudes, and linguistic performance skills
- Increase awareness of the contributions of Roman civilization to the Western civilization

### Latin III

Course #5330

36 weeks (1 cr.); elective

High Schools

- Develop vocabulary and derivatives
- Read a variety of Roman authors such as Livy, Caesar, and Cicero
- Gain insight into Roman thought and concerns, and political and social problems

### Latin IV Honors

Course #5340

36 weeks (1 cr.); elective

High Schools

- Become proficient in using Latin grammar
- Enrich English vocabulary through expanded study of prefixes, suffixes, and root words
- Read the classics of Roman literature, primarily lyric and epic poetry

### AP Latin: Vergil

Course #5341

36 weeks (1 cr.); elective

High Schools

- Translate and analyze the poet Vergil and his major work, the *Aeneid*
- Study the style, meter, vocabulary, and grammatical forms unique to Vergil
- Study the ancient epic as a literary genre and the parallels between the works of Vergil and Homer

### Foundations of Spanish Part A

Course #5513

36 weeks; elective

Middle Schools

- Acquire skills in comprehending, speaking, reading, and writing
- Learn basic vocabulary needed for everyday situations
- Explore the geography, customs, and traditions of Spain and Hispanic America

### Foundations of Spanish Part B

Course #5515

36 weeks (1 cr.); elective

Middle Schools

- Must have completed Foundations of Spanish Part A
- Acquire skills in comprehending, speaking, reading, and writing Spanish
- Learn expanded vocabulary for everyday situations
- Explore the geography, customs, and traditions of Spain and Hispanic America

### Spanish I

Course #5510

36 weeks (1 cr.); elective

Middle/High Schools

- Acquire skills in comprehending, speaking, reading, and writing Spanish
- Learn vocabulary and structures for everyday situations
- Explore the geography, customs, and traditions of Spain and Hispanic America



**Spanish II**

Course #5520

36 weeks (1 cr.); elective

High Schools

- Continue to improve all communication skills: reading, writing, listening and speaking
- Learn to speak the language with more fluency and ease
- Increase vocabulary and improve grammar usage

**Spanish III**

Course #5530

36 weeks (1 cr.); elective

High Schools

- Increase comprehension, speaking, reading, and writing skills
- Read, discuss, and write short, creative themes on stories drawn from the Spanish cultural heritage
- Read excerpts from the literature of Spanish-speaking countries and expand the study of history, art, music, and geography

**Spanish IV Honors**

Course #5540

36 weeks (1 cr.); elective

High Schools

- Review grammatical structures and incorporate structures in using the language
- Improve the skills of speaking, listening, reading, and writing
- Study the cultures of the Incan, Mayan, and Aztec Indians

**AP Spanish Language**

Course #5570

36 weeks (1 cr.); elective

High Schools

- Increase proficiency in listening, speaking, reading, and writing
- Write essays on literary topics
- Study Spanish and Latin American history, art, and literature after 1492
- Prepare for the Advanced Placement Language Exam and review for the College Board Achievements with added emphasis on speaking and listening skills

**Spanish VI Honors**

Course #5560

36 weeks (1 cr.); elective

High Schools

- Must have completed Spanish V or AP Spanish
- Refine listening, speaking, reading and writing skills in Spanish
- Analyze global current issues affecting Spanish-speaking communities
- Discuss literary, history and artistic work from Hispanic countries

**Chinese I**

Course #5810

36 weeks (1 cr.); elective

Middle/High Schools

- Acquire skills in understanding and speaking the Chinese language
- Learn basic vocabulary, grammar and characters used in daily living and conversations
- Discuss geography, history, culture and traditional customs of China

**Chinese II**

Course #5820

36 weeks (1 cr.); elective

High Schools

- Increase vocabulary and grammatical structures
- Learn more Chinese characters
- Develop the ability to speak and communicate in Chinese
- Increase knowledge of the history, geography, culture and customs of China

**Chinese III**

Course #5830

36 weeks (1 cr.); elective

High Schools

- Continue to improve all communication skills: reading, writing, listening and speaking
- Refine pronunciation and fluency
- Increase knowledge of culture and number characters used in written communication

**Chinese IV Honors**

Course #5840

36 weeks (1 cr.); elective

High Schools

- Refine all communication skills: reading, writing, listening and speaking
- Broaden conversational vocabulary and use of Chinese characters
- Examine language use through culture, history, art and literature

**Chinese V Honors**

Course #5850

36 weeks (1 cr.); elective

High Schools

- Refine and expand communication skills
- Read and speak for authentic purposes
- Explore and discuss Chinese in the global community, past and present

**HENRICO COUNTY PUBLIC SCHOOLS**  
**Secondary Education Fee Schedule**  
**Mandatory Fees**  
**2018-2019**

**FEES SUBJECT TO CHANGE FOR 2019-2020**

**Information Access & Retrieval Fee (all students)**

Covers the cost of printer toner and paper	\$ 5.00
Laptop support fee (middle and high schools)	50.00

**Art (36 week classes only)**

1. General Art Fee (Art I, II)	12.00
2. Advanced Art (Art III, IV and V, Computer Art, Crafts, Ceramics)	12.00
3. Exploratory (semester)	
18 week Exploratory (\$6.00 for each session = \$12.00 total)	6.00
9 week Exploratory (\$3.00 for each session = \$12.00 total)	3.00

**Business and Marketing**

1. Middle School Exploratory Business classes, 9 weeks	3.00
2. Middle and High School Business classes, 18 weeks	3.00
3. Middle and High School Business classes, 36 weeks	5.00
4. High School Marketing classes, 36 weeks	5.00
5. Web Development and Programming classes (ACE Hermitage)	15.00
6. Adv. Web Dev. and Adv. Programming classes (ACE Hermitage)	15.00
7. Accounting/Accounting II	10.00
8. Medical Systems Administration (ACE Hermitage)	15.00
9. Legal Systems Administration (ACE Hermitage)	15.00
10. Hospitality, Tourism and Catering (ACE Highland Springs)	65.00
11. Tourism Marketing, Sales, and Catering (ACE Highland Springs)	65.00
12. Cooperative Education students	35.00

**Class Dues**

1. Grades 9-11	4.00
2. Grade 12 (Includes Graduation Activities)	60.00

**Driver Education**

1. "Behind-the-Wheel" Instruction - 3 hrs.	100.00
2. Learner's Permit Testing	10.00

**Dual Enrollment**

1. Fee per course (effective Fall 2019)	50.00
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**English/Language Arts**

1. Drama Fee	High School	12.00
	Middle School	5.00

<b><u>Exploratory Classes</u></b> (Grades 6-8) (\$3.00 for each 9-week session = \$12.00 total)	3.00
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**Family and Consumer Sciences**

1. Culinary Arts Uniform-Lab Coat	65.00
2. Early Childhood Education Apron/Uniform	20.00
3. Specialty Supplies	7.00

### **Health and Medical Sciences**

1.	Nurse Aide Students*	\$ 115.00
	Includes: Name Pin, Liability Insurance, Nurse Supplies (stethoscope, etc.), Uniform and Books	
	*PLEASE NOTE: All Nurse Aide students will be required to purchase white shoes from vendor of their choice.	
2.	Practical Nursing Students - Practical Nursing I Expenses (Senior Year)*	315.00
	Includes: Name Pin, Liability Insurance, Nurse Supplies (stethoscope, etc.), Uniform and Books	
	*PLEASE NOTE: All Practical Nursing students will be required purchase white shoes from vendor of their choice.	
3.	Emergency Medical Technician (EMT) Includes: CPR Card and Name Pin	20.00
	Textbook	85.00
	Liability Insurance	34.00
4.	Pharmacy Technician	
	Textbooks (3)	120.00
	Name Pin	3.00
	Lab Coat	20.00
5.	Sports Medicine	35.00
6.	Veterinary Assistant I & II	35.00
7.	Introduction to Veterinary Assistant	10.00

### **JROTC**

1.	Class Fee (includes PT shirt, name badge)	30.00
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### **Music**

1.	Band Music	12.00
	Uniform Rental	40.00
2.	Vocal Music	12.00
3.	Strings	12.00

### **Physical Education**

Uniforms (bid pricing):

1.	P.E. Uniform, Shirt, Short Sleeve	Gildan G800, S-XL	Unit Price	3.00
1a.	P.E. Uniform, Shirt, Short Sleeve	Gildan G800, 2XL-4XL	Unit Price	5.00
2.	P.E. Uniform, Shorts, Champro	BBS5, S-XL	Unit Price	6.00
2a.	P.E. Uniform, Shorts, Champro	BBS5, 2XL-4XL	Unit Price	6.00
3.	Lock Rental			1.00
4.	Lock Replacement (Lost)			6.00
5.	P.E. Fee			4.00

### **Science**

1.	Lab Fees	5.00
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### **Specialty Centers and Programs**

1.	Center for the Arts (Visual Art)	20.00
2.	Center for the Arts - Dance, Theatre and Musical Theatre	20.00
3.	Center for the Arts - Dance, Theatre or Musical Theatre, Online Health	100.00

Module

(9<sup>th</sup> & 10<sup>th</sup> grade requirement in order to receive the Health portion of the Health and Physical Education Credits for graduation)

4.	Center for Communications and Media Relations Lab Fee	\$ 10.00
5.	Center for Education and Human Development	10.00
6.	Center for Engineering Lab Fee	20.00
	• Dual Enrollment Fee per course (effective Fall 2019)	50.00
7.	Center for the Humanities	10.00
8.	Center for Information Technology	15.00
	• Dual Enrollment Fee per course (effective Fall 2019)	50.00
	• Center for Information Technology Senior Capstone Project Fee	20.00
9.	IB Program Grades 6-8	5.00
10.	IB Program Grades 9-12	20.00
11.	Center for Leadership, Government and Global Economics	10.00
12.	Todd Allen Phillips Center for Medical Sciences Fee	12.00
	• Elective courses for Todd Allen Phillips Center for Medical Sciences students:	
	a. Anatomy & Physiology	35.00
	b. Genetics & Biotechnology	35.00
	c. Microbiology & Immunology	30.00
	d. Organic & Biochemistry	30.00
13.	Center for Spanish Language and Global Citizenship	20.00
14.	Advance College Academy - J. R. Tucker High School	20.00
	• Dual Enrollment Fee per course (effective Fall 2019)	50.00
	• Fee for ACA Dual Enrollment Biology	10.00
15.	Advance College Academy - Highland Springs High School	20.00
	• Dual Enrollment Fee per course (effective Fall 2019)	50.00
	• Fee for ACA Dual Enrollment Biology	10.00

### **Technology Education**

1.	Semester and year long classes - Initial deposit (This initial deposit is toward material costs where projects are constructed.)	10.00
2.	Exploratory classes - Initial deposit (not to exceed) (This fee will vary depending on modules assigned and projects constructed.)	6.00

### **Trade and Industrial Education**

1.	All Trade and Industrial Courses	
	Lab Fee: Includes safety equipment and needed supplies	20.00
2.	Additional fees for specific Trade and Industrial Education Courses	
	a. Protective Clothing (where required)	
	Coveralls	35.00
	Lab Coat (Cosmetology)	20.00
	Welding Helmet, Gloves, and Jacket (Maintenance and Repair)	60.00
	b. Supplemental Workbook for Trade and Industrial Classes	
	Automotive Technology	20.00
	Barbering	40.00
	Computer Systems Technology	60.00
	Cosmetology	24.00
	Criminal Justice	25.00
	Electricity	10.00
	High Tech Academy	15.00
	c. Barbering Tool Kit	175.00
	Smock	16.00
	d. Barbering II – Male Mannequin	45.00

e. Computer Systems Technology Software	\$ 25.00
f. Cosmetology (two-year program)	
Cosmetology Tool Kit	150.00
Starter Nail Kit	60.00

**Parking**

1. Each car	50.00
2. Replacement decals	2.00
Parking Fines:	
1st offense	warning
2nd offense	5.00
3rd offense	10.00
4th offense	20.00



**Henrico County Public Schools  
2018-2019 Dues and Assessments  
For Voluntary Student Activities  
FEES SUBJECT TO CHANGE FOR 2019-2020**

Fees charged for voluntary student activities must be spent for the purpose for which they were collected. The fees charged may not exceed the amounts listed below without special permission through the office of the appropriate instructional director.

Honor Societies	
Such as BETA, National Honor Society, etc.	\$ 15.00
Quill and Scroll Society (includes National initiation fee)	25.00
Special Interest	
Such as Drama, Latin Club, Pep Club, etc.	5.00
Community Service Groups	
Such as Key Club, SODA, etc.	15.00
Publications Fee: Yearbook, Literary Magazine, Newspaper	
Middle School	25.00
High School	50.00
T.S.A. (Technology Student Association) (Includes District, State, and National dues)	12.00
D.E.C.A. (co-curricular organization for marketing education students) (Includes District, State, and National dues. Also covers Leadership Conference and Banquet.)	18.00
F.B.L.A. (Future Business Leaders of America)	
Middle School Chapter (Includes Regional, State, and National dues)	7.50
High School Chapter (Includes Regional, State, and National dues)	15.00
F.E.A. (Future Educators of America) (Includes Local and National dues)	9.00
F.F.A. (Future Farmers of America) (Includes District, State, and National dues)	12.00
F.C.C.L.A. (Family, Career and Community Leaders of America)	
(Includes District, State, and National dues)	13.00
Choice Magazine	9.00
Pin - F.C.C.L.A. (gold)	5.00
(red/white enamel)	3.00
Teen Living 7 - American Red Cross Babysitters Training Set (optional)	15.00
Teen Living 7 - American Red Cross Babysitter's Certificate (optional)	9.00
Early Childhood Education II CPR Certificate (optional)	10.00
Early Childhood Education II First Aid Certificate (optional)	10.00
Key Chapter (Option for Exploratory Programs) (Includes District, State, and National dues)	4.00
H.O.S.A. (Health Occupations Student Association) (Includes State, and National dues)	15.00
SkillsUSA (Includes District, State, and National dues)	13.50
Construction-Related Programs - OSHA 10 Training Course	8.00
Cosmetology Kit Upgrade	150.00
Set of Scrubs for Laboratory Work/Internship Opportunities	22.00
SAT PREP Course	50.00
PSAT* Testing Fee (Freshmen Only)	11.00
PSAT* Testing Fee (Juniors Only)	15.00
AP Testing* (Fee is non-refundable once test is ordered)	93.00

\*Fee subject to change based on College Board actual cost

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# SECTION VII

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## Henrico County Public Schools Administration



# **Educational Specialists Serving Middle and High Schools**

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## **Art**

Michael C. Kalafatis, 652-3756

## **Business and Information Technology and Marketing**

Fahryka P. Elliott, 781-1812

## **Careers/Business Partnerships**

Bradford M. Beazley, 781-1811

## **ESL and World Languages**

Valerie P. Gooss, 652-3742

## **English, Language Arts, and Reading**

Erica L. Basnight-Johnson, 652-3740

## **Exceptional Education, East Region**

Susan R. Burke, 652-3803

## **Exceptional Education, West Region**

Kimber L. Coffey, 652-3546

## **Extended Learning Specialist**

Justine C. Jordan, 652-3027

## **Family and Consumer Sciences/EFE**

LaRhonda F. Mason, 781-1815

## **Gifted Education Programs**

Patricia A. Griffin, 652-3790

## **Health and Medical Sciences**

Jennifer M. McCrickard, 527-4660 ext. 82007

## **Health, Physical Education, and Driver Education**

M. Benita Turner, 652-3741

## **International Baccalaureate Programs**

April W. Craver, 261-6440

## **Library Services**

Anita B. Tarbox, 652-3700

## **Mathematics**

Erven S. Tyler, Jr., 652-3753

## **Music**

Richard A. Tinsley, 652-3759

## **Policy, Records Management/Transcripts**

Deborah W. Reed, 652-3854

## **Pre-Engineering/Industrial Careers/JROTC/ Agriculture**

Daniel Fancett-Stooks, 781-1821

## **Science**

Eric M. Rhoades, 652-3758

## **Social Studies**

Michael J. Hasley, 652-3752

## **STEAM**

Rachael L. Toy, 652-3919

## **Student Activities**

John P. Carroll, 652-3761

## **World Languages**

Val P. Gooss, 652-3742

## Specialty Centers and Programs

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### **MIDDLE SCHOOL:**

#### **Gifted Young Scholars Academy (GYSA)**

L. Douglas Wilder Middle School

Patricia A. Griffin, 652-3790

#### **International Baccalaureate Middle Years Program**

Fairfield, George H. Moody, and Tuckahoe Middle Schools

April W. Craver, 261-6440

### **HIGH SCHOOL:**

#### **Advance College Academy Business Administration**

Highland Springs High School

W. Allen Riddle, 328-4000

#### **Advance College Academy Social Sciences**

J. R. Tucker High School

Sheralyne R. Tierseron, 527-4600, ext. 3039

#### **ACE Center at Hermitage**

Terrie W. Allsbrooks, Principal

8301 Hungary Spring Road, Henrico 23228

Telephone: 756-3020

#### **ACE Center at Highland Springs**

William J. Crowder, Jr., Principal

100 Tech Drive, Highland Springs 23075

Telephone: 328-4075

#### **Center for the Arts**

Henrico High School

Stephanie L. Poxon, 228-2718

#### **Center for Communications and Media Relations**

Varina High School

Heidi H. Craft, 226-3139

#### **Center for Education and Human Development**

Glen Allen High School

Ryan M. Conway, 501-3329

#### **Center for Engineering**

Highland Springs High School

Billy W. Batkins, 328-4073

#### **Center for the Humanities**

Hermitage High School

Bruce D. Marr, 756-3017

#### **Center for Information Technology**

Deep Run High School

Lynne M. Norris, 364-8027

#### **Center for Leadership, Government, and Global Economics**

Douglas S. Freeman High School

Robert F. Peck, 673-3700

#### **Center for Spanish Language and Global Citizenship**

J. R. Tucker High School

Susan H. Hester, 527-4618

#### **International Baccalaureate Programs**

Henrico High School

Priscilla L. Biddle, 228-2745

J. R. Tucker High School

Elizabeth M. Harper, 967-2320

#### **Todd Allen Phillips Center for Medical Sciences**

Mills E. Godwin High School

Kelly A. Ostrom, 750-2600

## Program Centers

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### **The Academy at Virginia Randolph**

Jesse M. Casey, Principal  
2204 Mountain Road, Glen Allen 23060  
Telephone: 261-5085

### **GRAD/Performance Learning Center**

Victor L. Oliver, Principal  
2915 Williamsburg Road, Henrico 23231  
Telephone: 236-5730

### **Highland Springs Adult Education Center-East**

Angela S. Watson, Outreach Coordinator  
201 E. Nine Mile Road, Highland Springs 23075  
Telephone: 328-4095

### **Mount Vernon Adult Education Center-West**

Greg O. Lawson, Administrator  
7850 Carousel Lane, Henrico, 23294  
Telephone: 527-4660

### **James River Juvenile Detention Center**

Callis W. West, Principal  
P. O. Box 880, Goochland 23063  
Telephone: 556-4214

### **Virginia Randolph Education Center**

Jesse M. Casey, Principal  
2206 Mountain Road, Glen Allen 23060  
Telephone: 261-5090



## Henrico County Middle Schools

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### **Brookland Middle School**

Nicholas P. Barlett, Principal  
9200 Lydell Drive, Henrico 23228  
Telephone: 261-5000

### **Elko Middle School**

Dominique N. Friend, Principal  
5901 Elko Road, Sandston 23150  
Telephone: 328-4110

### **Fairfield Middle School**

Jamel A. Gibson, Principal  
5121 Nine Mile Road, Henrico 23223  
Telephone: 328-4020

### **Holman Middle School**

Brian P. Fellows, Principal  
600 Concourse Blvd., Glen Allen 23059  
Telephone: 346-1300

### **Hungary Creek Middle School**

Robert J. Moose, Principal  
4909 Francistown Road, Glen Allen 23060  
Telephone: 527-2640

### **George H. Moody Middle School**

Denise W. Doss, Principal  
7800 Woodman Road, Henrico 23228  
Telephone: 261-5015

### **Pocahontas Middle School**

Kimberly G. Sigler, Principal  
12000 Three Chopt Road, Henrico 23233  
Telephone: 364-0830

### **Quioccasin Middle School**

Cheri L. Guempel, Principal  
9400 Quioccasin Road, Henrico 23238  
Telephone: 750-2630

### **John Rolfe Middle School**

Michael A. Jackson, Principal  
6901 Messer Road, Henrico 23231  
Telephone: 226-8730

### **Short Pump Middle School**

Thomas H. McAuley, Principal  
4701 Pouncey Tract Road, Glen Allen 23059  
Telephone: 360-0800

### **Tuckahoe Middle School**

Ann M. Greene, Principal  
9000 Three Chopt Road, Henrico 23229  
Telephone: 673-3720

### **L. Douglas Wilder Middle School**

Deia N. Champ, Principal  
6900 Wilkinson Road, Henrico 23227  
Telephone: 515-1100

# Henrico County High Schools

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## **Deep Run High School**

Leonard G. Pritchard, Principal  
4801 Twin Hickory Road, Glen Allen 23059  
Telephone: 364-8000

## **Evening School of Excellence**

Highland Springs High School  
William "Randy" Mudd, Coordinator  
Tiffany H. Byrd, Coordinator  
15 S. Oak Avenue, Highland Springs, 23075  
Telephone: 512-4101  
Leslie V. Waller, Administrator  
3820 Nine Mile Road, Henrico 23223  
Telephone: 652-3809

## **Evening School of Excellence**

Academy at Virginia Randolph  
Lori Y. Huff, Coordinator  
Jamette J. Todd, Coordinator  
2204 Mountain Road, Glen Allen 23060  
Telephone: 553-4342

## **Douglas S. Freeman High School**

Andrew P. Mey, Principal  
8701 Three Chopt Road, Henrico 23229  
Telephone: 673-3700

## **Glen Allen High School**

Reginald V. Davenport, Principal  
10700 Staples Mill Road, Glen Allen 23060  
Telephone: 501-3300

## **Mills E. Godwin High School**

Leigh R. Dunavant, Principal  
2101 Pump Road, Henrico 23238  
Telephone: 750-2600

## **Henrico High School**

Karin G. Castillo-Rose, Principal  
302 Azalea Avenue, Henrico 23227  
Telephone: 228-2700

## **Hermitage High School**

Robert A. Turpin, III, Principal  
8301 Hungary Spring Road, Henrico 23228  
Telephone: 756-3000

## **Highland Springs High School**

Kenneth D. White, Principal  
15 South Oak Avenue, Highland Springs 23075  
Telephone: 328-4000

## **J. R. Tucker High School**

Arthur G. Raymond, III, Principal  
2910 Parham Road, Henrico 23294  
Telephone: 527-4600

## **Varina High School**

Ann Marie Seely, Principal  
7053 Messer Road, Henrico 23231  
Telephone: 226-8700

# Administrative Staff for Instruction

Amy E. Cashwell, Superintendent  
Telephone: 652-3720

Beth N. Teigen, Assistant Superintendent for Instruction  
Telephone: 652-3754

Nyah D. Hamlett, Assistant Superintendent for Instructional Support Services  
Telephone: 652-3825

Mary E. Cox, Director of Elementary Education  
Telephone: 652-3738

William R. Hall, Director of Elementary Education  
Telephone: 652-3794

Michelle McQueen-Williams, Director of Elementary Education  
Telephone: 652-3736

Ingrid G. Grant, Director of Middle School Education  
Telephone: 652-3676

Thomas E. Ferrell, Jr., Director of High School Education  
Telephone: 652-3848

Donice J. Davenport, Director of Exceptional Education  
Telephone: 652-3866

Mac R. Beaton, Director of Career and Technical Education  
Telephone: 781-1810

Monica R. Manns, Director of Equity and Diversity  
Telephone: 652-3845

Pamela B. Bell, Director of Family Engagement  
Telephone: 652-3374

Kourtney D. Bostain, Director of Innovative Learning  
Telephone: 652-3865

Regina B. Brown, Director of School Counseling  
Telephone: 652-3307

Yvonne B. Fawcett, Director of School Improvement  
Telephone: 652-3306

Scott E. Bray, Director of Teaching and Learning  
Telephone: 652-3832



## Vision & Mission

### Vision

Henrico County Public Schools believes in the right to achieve and the support to succeed for all.

### Mission

Henrico County Public Schools, an innovative leader in educational excellence, will actively engage our students in diverse educational, social, and civic learning experiences that inspire and empower them to become contributing citizens.

### Cover artwork provided by:

#### **Brookland MS** - *Michelle McGrath, Art Teacher*

- Linwood Johnson
- Azaria Thigpen

#### **Deep Run HS** - *Mike Guyer, Art Teacher*

- Travis Krickovic

#### **Glen Allen HS** - *Julie Johnson, Art Teacher*

- Emerson Aiken
- Roman Vasilev

#### **Hermitage HS** - *Mike O'Neal, Art Teacher*

- Mohammad Brightwell
- Kirsten Morrow

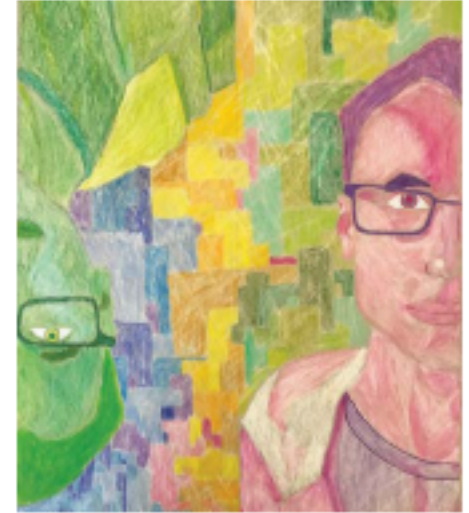
#### **Short Pump MS** - *Brendan Rossno, Art Teacher*

- Luci Owens
- Rosanne Wang

#### **Varina HS** - *Dawn Vass, Art Teacher*

- Gabrielle Tyler





Dr. Amy Cashwell  
Superintendent of Schools  
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