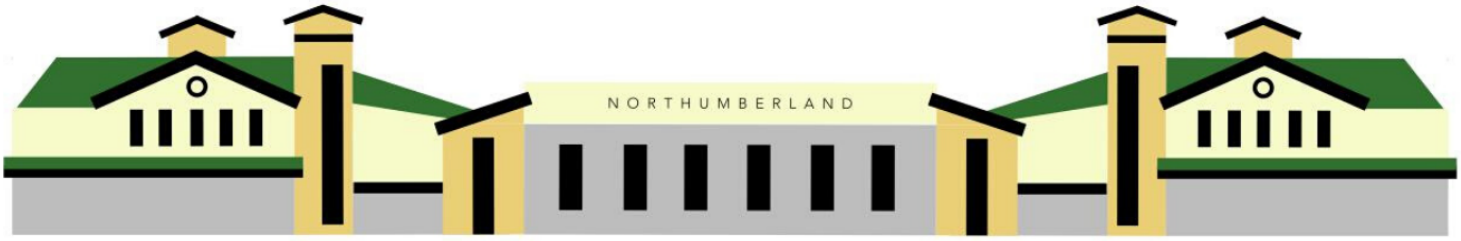
# 2023-2024




# PROGRAM OF STUDIES

## NORTHUMBERLAND MIDDLE & HIGH SCHOOL

Grades 6-12

**Northumberland Middle School**
175 Academic Lane
Heathsville, VA 22473
Phone: 804-580-5753
Fax: 804-580-5282

NORTHUMBERLAND
COUNTY PUBLIC SCHOOLS

**Northumberland High School**
201 Academic Lane
Heathsville, VA 22473
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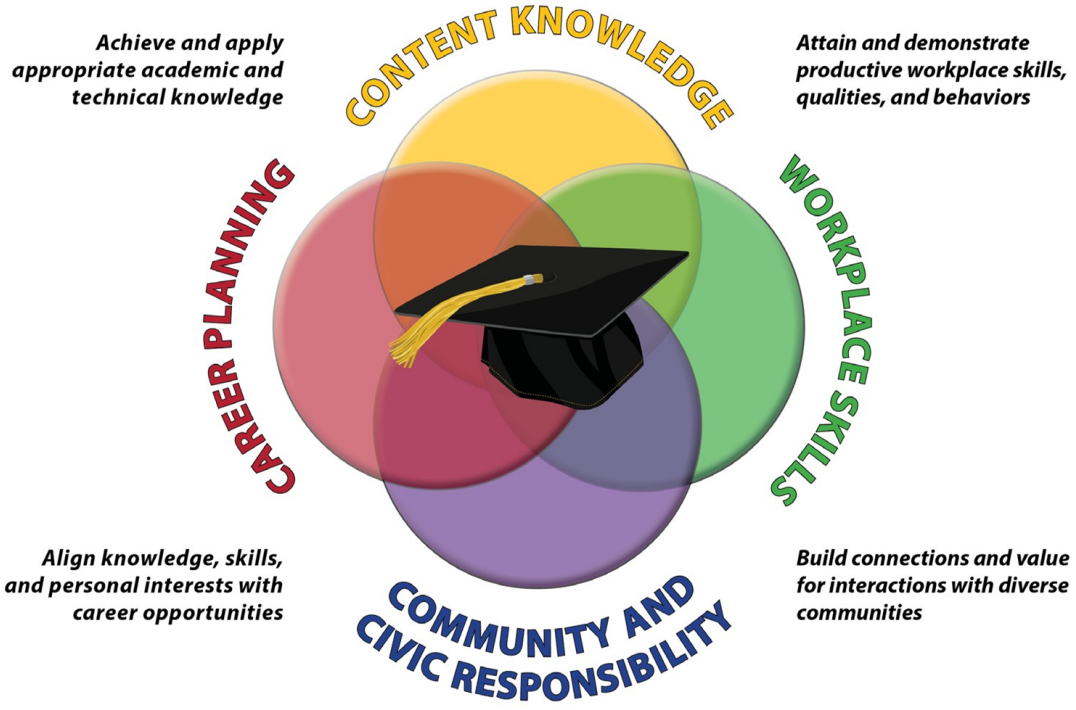
## TABLE OF CONTENTS

**Planning For A Career And Education After High School Graduation**

# Profile of a Virginia Graduate

A student meeting the Profile of a Virginia Graduate has achieved the Commonwealth's high academic standards and graduates with workplace skills, a sense of community and civic responsibility, and a career plan aligned with his/her interests and experiences.




The Profile of a Virginia Graduate describes the knowledge, skills, experiences, and attributes that students must attain to be successful in college and/or the workforce and be "life ready" in an economy and a world characterized by rapid change. The board has determined that a life-ready Virginia graduate must:

- Achieve and apply appropriate academic and technical knowledge
- Demonstrate productive workplace skills, qualities, and behaviors (workplace skills)
- Build connections and value interactions with others as a responsible and responsive citizen (community engagement and civic responsibility)
- Align knowledge, skills, and personal interests with career opportunities (career exploration)

The Profile of a Virginia Graduate's development creates a framework for the Board of Education as it reviews the Commonwealth's diploma standards to ensure that high school graduates are prepared for a successful life after high school. Legislation requires that diploma standards be aligned with the Profile of a Virginia Graduate.

# The Five C's

In preparing students to meet the Profile of a Virginia Graduate, schools are required to ensure that students develop the following competencies known as the "Five C's":

- Critical thinking
- Creative thinking
- Communication
- Collaboration
- Citizenship


## Academic And Career Plans

The Regulations Establishing Standards for Accrediting Public Schools in Virginia (SOA) includes provisions for each middle and high school student to have a personal learning plan and course of study that aligns with the student's academic and career goals. Refer to SOA: 8 VAC 20-131-140, page 33. College and career preparation programs and opportunities for postsecondary credit.

**The Academic and Career Plan must include but is not limited to:**

- A program of study for high school graduation and a postsecondary career pathway based on the student's academic and career interests.
- A review and update, if necessary, before the student enters the ninth and eleventh grades.
- The signatures of the student, student's parent or guardian and school official(s) designated by the principal.

*Note: The school shall have met its obligation for parental involvement if it makes a good faith effort to notify the parent or guardian of the responsibility for the development and approval of the Plan. The academic and career plan must be included in the student record.*

## The 16 Career Clusters

According to the VDOE, “Career Clusters help students investigate careers and design their courses of study to advance their career goals.” Virginia uses the national structure of career clusters, career pathways and sample career specialties or occupations.

A Career Cluster is a group of occupations and industries based on similarities. “Within each career cluster, there are multiple career pathways that represent a common set of skills and knowledge, both academic and technical, necessary to pursue a full range of career opportunities within that pathway – ranging from entry level to management, including technical and professional career specialties” (VDOE, 2014). Based on the skill sets taught, CTE courses are aligned with one or more career clusters and pathways (VDOE, 2014).

| | |
|---|---|
| **Agriculture, Food & Natural Resources**<br>● Agribusiness Systems<br>● Animal Systems<br>● Environmental Service Systems<br>● Food Products & Processing Systems<br>● Natural Resources / Plant Systems<br>● Power, Structural & Technical Systems Architecture & Construction | **Hospitality & Tourism**<br>● Lodging<br>● Recreation, Amusements & Attractions<br>● Restaurants & Food/Beverage Services<br>● Travel & Tourism |
| **Architecture & Construction**<br>● Construction<br>● Design/Pre-Construction | **Human Services**<br>● Consumer / Personal Care Services<br>● Counseling & Mental Health Services<br>● Early Childhood Development & Services<br>● Family & Community Services |
| **Arts, A/V Technology & Communications**<br>● A/V Technology & Film<br>● Journalism & Broadcasting<br>● Printing Technology<br>● Telecommunications<br>● Visual & Performing Arts | **Information Technology**<br>● Information Support & Services<br>● Programming & Software Development<br>● Web & Digital Communications |
| **Business Management & Administration**<br>● Administrative Support<br>● Business Information Management<br>● General Management<br>● Human Resources Management<br>● Operations Management | **Law, Public Safety, Corrections & Security**<br>● Correction / Legal Services<br>● Emergency & Fire Management Services<br>● Law Enforcement Services<br>● Security & Protective Services |

| | |
|---|---|
| **Education & Training**<br>● Administration & Administrative Support<br>● Professional Support Services<br>● Teaching/Training | **Manufacturing**<br>● Health, Safety & Environmental Assurance<br>● Logistics & Inventory Control<br>● Maintenance, Installation & Repair<br>● Manufacturing Production Process Development<br>● Production<br>● Quality Assurance |
| **Finance**<br>● Accounting<br>● Banking Services<br>● Business Finance<br>● Insurance<br>● Securities & Investments | **Marketing**<br>● Marketing Communications<br>● Marketing Management<br>● Marketing Research<br>● Merchandising<br>● Professional Sales |
| **Government & Public Administration**<br>● Foreign Service<br>● Governance<br>● National Security<br>● Planning<br>● Public Management & Administration<br>● Regulation<br>● Revenue & Taxation | **Transportation, Distribution & Logistics**<br>● Facility & Mobile Equipment Maintenance<br>● Health, Safety & Environmental Management<br>● Logistics Planning & Management Services<br>● Warehousing & Distribution Center Operations |
| **Health Sciences**<br>● Biotechnology Research & Development<br>● Diagnostic and Support Services<br>● Health Informatics<br>● Therapeutic Services | **Science, Technology, Engineering & Mathematics**<br>● Engineering & Technology<br>● Science & Mathematics |

## Student Program Of Study Examples

Work with your child to make a plan for middle school and high school course selections.

**Middle School Program Example**

| *Grade 6* | *Grade 7* | *Grade 8* |
|---|---|---|
| English / Language Arts | English / Language Arts | English / Language Arts |
| U.S. History I | U.S. History II | Civics and Economics |
| Mathematics | Mathematics | Mathematics |
| Intro. to Earth and Environmental Sciences | Life Science | Physical Science |
| Health/Physical Education | Health/Physical Education | Health/Physical Education |
| ** Elective | ** Elective | ** Elective |

** Electives are described under individual subject areas and, depending on the elective/grade level, may include quarter or year long courses. Middle School electives include: Art, Band, Career Explorations, Chorus, Family & Consumer Science, or Journalism.

In planning your student's high school program of studies, you will need to be aware of a full range of core academic courses and plan for a rigorous academic level of study. If you consider high school courses as they relate to the 16 Career Clusters, then you may focus on career planning and post-secondary education goals. Your student's school counselor and career counselor will help you to take interest-inventories and ability-inventories that may guide your student's academic and career plans.

**High School Program Example**

| GRADE 9 | GRADE 10 | GRADE 11 | GRADE 12 |
|---|---|---|---|
| English 9 | English 10 | English 11 | English 12 |
| World History I | World History II | U.S. History | U. S. Government |
| Environmental Science | Biology | Chemistry | Earth Science II: Oceanography |
| Algebra I | Geometry | Algebra II | Probability & Statistics |
| Health/PE 9 | Health/PE 10<br>Driver's Education | ^Economics/<br>Personal Finance | ^Economics/<br>Personal Finance |
| *CTE Course | ^Economics/<br>Personal Finance | *CTE Course | *CTE Course |
| *Elective | *CTE Course | *Elective | *Elective |
| *Elective | *Elective | *Elective | *Elective |

^May be taken 10th, 11th or 12th Grade

## Academic and Career Plan

**NAME:_____Date:_____YOUR DIPLOMA TYPE:_____**

| Circle the Career Clusters That Interest You | | | |
|---|---|---|---|
| Agriculture, Food & Natural Resources | Education & Training | Hospitality & Tourism | Manufacturing |
| Architecture & Construction | Finance | Human Services | Marketing, Sales & Service |
| Arts, A/V Technology & Communications | Government & Public Administration | Information Technology | Science Technology, Engineering, & Mathematics |
| Business Management & Administration | Health Science | Public Safety, Corrections & Security | Transportation, Distribution & Logistics |

**Your Student's Middle School Program**

| | Grade 6 | Grade 7 | Grade 8 |
|---|---|---|---|
| Course 1 | | | |
| Course 2 | | | |
| Course 3 | | | |
| Course 4 | | | |
| Course 5 | | | |
| Course 6 | | | |
| Course 7 | | | |

**Your Student's High School Program**

| | Grade 9 | Grade 10 | Grade 11 | Grade 12 |
|---|---|---|---|---|
| Course 1 | | | | |
| Course 2 | | | | |
| Course 3 | | | | |
| Course 4 | | | | |
| Course 5 | | | | |
| Course 6 | | | | |
| Course 7 | | | | |
| Course 8 | | | | |

## Diploma Options For Students

## Standard Diploma

### For students entering the ninth grade for the first time in 2018-2019 and beyond

**To graduate with a Standard Diploma for students entering the ninth grade for the first time in 2018-2019 and beyond, a student must earn at least 22 standard units of credit and five 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. More information on standard credits, verified credits, and locally awarded verified credits can be found on the Credits for Graduation webpage.

The school counselor can advise on available courses to fulfill the requirements for a Standard Diploma.

| Subject Area | Standard Credits | Verified Credits | Specifications |
|---|---|---|---|
| English | 4 | 2 | |
| 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. An approved computer science course credit earned by students may be considered a mathematics course credit. |
| Laboratory Science | 3 | 1 | Courses completed to satisfy this requirement shall include course selection from at least two different science disciplines: earth sciences, biology, chemistry, or physics. The board shall approve courses to satisfy this requirement. An approved computer science course credit earned by students may be considered a science course credit.<br><br>A laboratory science verified credit may be awarded to students who complete a career and technical education (CTE) program sequence and (i) pass two examinations or occupational competency assessments in a CTE field that confers certification or an occupational competency credential from a recognized industry, trade, or professional association; (ii) acquire two professional licenses in a CTE field from the Commonwealth of Virginia; or (iii) pass one examination or competency assessment from clause (i) and acquire one license from clause (ii). The examination or occupational competency assessment must be approved by the board as an additional test to verify student achievement. |

| | | | |
|---|---|---|---|
| History and Social Sciences | 3 | 1 | 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. |
| Health and Physical Education | 2 | 0 | |
| World Language, Fine Arts or Career and Technical Education | 2 | 0 | Credits earned for this requirement shall include one credit in fine or performing arts or career and technical education. An approved computer science course credit earned by students may be considered a career and technical course credit. |
| Economics & Personal Finance | 1 | 0 | |
| Electives | 4 | 0 | Courses to satisfy this requirement shall include at least two sequential electives. More information is provided in the Guidance Document Governing Certain Provisions of the SOA (8VAC-20-131) (Word) and Superintendent's Memo #067-21. |
| Total | 22 | 5 | |

## Additional Requirements for Graduation

- **AP, Honors, IB, Dual Enrollment, Work-Based Learning, or CTE Credential** - Students shall (i) complete an Advanced Placement, honors, International Baccalaureate, or dual enrollment course; or (ii) complete a high-quality work-based learning experience, as established by Board guidance on work-based learning; or (iii) 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. Guidance on this requirement is provided in the Guidance Document Governing Certain Provisions of the SOA (8VAC20-131) (Word).

- **First Aid, CPR, and AED Training** - Students shall be trained in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (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 5 C's** - In accordance with the Profile of a Virginia Graduate, students shall acquire and demonstrate foundational skills in Virginia's 5 C's: critical thinking, creative thinking, collaboration, communication, and citizenship.

## Advanced Studies Diploma: Minimum Course & Credit Requirements

**For students entering the ninth grade for the first time in 2018-2019 and beyond**

To graduate with an Advanced Studies Diploma for students entering the ninth grade for the first time in 2018-2019 and beyond, a student must earn at least 26 standard units of credit and five 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. More information on standard credits, verified credits, and locally awarded verified credits can be found on the Credits for Graduation webpage.

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

| Subject Area | Standard Credits | Verified Credits | Specifications |
|---|---|---|---|
| English | 4 | 2 | |
| 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. An approved 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. The board shall approve additional courses to satisfy this requirement. An approved 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.<br>A student who is pursuing an advanced diploma and whose IEP specifies a credit accommodation for world language may substitute two standard units of credit in computer science for two standard units of credit in a world language. |
| Health and Physical Education | 2 | 0 | |
| Fine Arts or Career and Technical Ed | 1 | 0 | An approved computer science course credit earned by students may be considered a career and technical credit. |
| Economics & Personal Finance | 1 | 0 | |
| Electives | 3 | 0 | Courses to satisfy this requirement shall include at least two sequential electives. More information is provided in the Guidance Document Governing Certain Provisions of the SOA (8VAC-20-131) (Word) and Superintendent's Memo #067-21. |
| Total Credits | 26 | 5 | |

**Additional Requirements for Graduation**

- AP, Honors, IB, Dual Enrollment, Work-Based Learning, or CTE Credential - Students shall (i) complete an Advanced Placement, honors, International Baccalaureate, or dual enrollment course; or (ii) complete a high-quality work-based learning experience, as established by Board guidance on work-based learning; or (iii) 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. Guidance on this requirement is provided in the Guidance Document Governing Certain Provisions of the SOA (8VAC20-131) (Word).
- First Aid, CPR, and AED Training - Students shall be trained in emergency first aid, cardiopulmonary resuscitation (CPR), and the use of automated external defibrillators (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 5 C's – In accordance with the Profile of a Virginia Graduate, students shall acquire and demonstrate foundational skills in Virginia's 5 C's: critical thinking, creative thinking, collaboration, communication, and citizenship.

## Other Diplomas and Certificates

## Applied Studies Diploma

The Applied Studies Diploma is a diploma option available to students identified as having a disability who complete the requirements of their individualized education programs (IEPs) and meet certain requirements prescribed by the Board of Education pursuant to regulations, but do not meet the requirements for any named diploma.

## Individual Student Alternative Education Plan (ISAEP)

The Individual Student Alternative Education Plan (ISAEP) program is designed for those students who are at least 16 years of age and enrolled in high school programs who are having difficulty finding success in a regular classroom environment. ISAEP programs are located in school divisions and funded through a combination of state grants and local funds. Many, but not all school divisions, provide program services. Students and parents/guardians seeking specific information about the ISAEP program should contact the local school division.

**Overview /Program Components**

- High School Equivalency (HSE) preparation (Currently, the only board-approved HSE examination in Virginia is the GED® test.)
- Career and Technical Education & Work-Based Learning
- Career Counseling
- Economics and Personal Finance

**Eligibility Highlights**

- Initial Principal-Parent Student (PPS) meeting
- Student evaluation and/or assessment
- 7.5 grade equivalent or higher on a recognized standardized measure of reading achievement
- Achieve a minimum score on the GED practice test

ISAEP Informational Brochure (Word) & High School Equivalency Testing

## General Achievement Adult High School Diploma (GAAHSD) Program

This diploma is intended for individuals who are at least 18 years of age and not enrolled in public school or not otherwise meeting the compulsory school attendance requirements set forth in the *Code of Virginia*.

**Refer to Adult Secondary Completion Options: General Achievement Adult High School Diploma (GAAHSD) Program for requirements.**

## General Educational Development Certificates (GED)

Refer to Regulations Governing General Education Development Certificates (8 VAC 20-360-10, et. seq.) See General Educational Development (GED) Certificate for requirements.

## Certificate of Program Completion

Available to students who complete prescribed programs of studies defined by a local school board but who do not qualify for diplomas.

# Graduation (Diploma) Seals Of Achievement

Students meeting specific requirements for graduation and demonstrating exemplary performance may receive diploma seals for recognition. VDOE makes available to local school divisions the following seals:

**Governor's Seal**

The Governor's Seal is 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.

**Board of Education Seal**

The Board of Education Seal is awarded to students who complete the requirements for a Standard Diploma or Advanced Studies Diploma with an average grade of "A" beginning with the ninth-grade class of 2006-2007 and beyond.

**Career & Technical Education Seal**

The Board of Education's Career & Technical Education Seal is awarded to students who:

- earn a Standard or Advanced Studies Diploma and complete a prescribed sequence of courses in a career and technical education concentration or specialization that they choose and maintain a "B" or better average in those courses
- **or** pass an examination or an occupational competency assessment in a career and technical education concentration or specialization that confers certification or occupational competency credential from a recognized industry, trade or professional association
- **or** acquire a professional license in that career and technical education field from the Commonwealth of Virginia.

The Board of Education shall approve all professional licenses and examinations used to satisfy these requirements. Visit The Path to Industry Certification for the current approved licenses and examinations.

**Science, Technology, Engineering, and Mathematics (STEM) Seal**

The STEM Seal shall be awarded to students who earn either a Standard Diploma or an Advanced Studies Diploma and satisfy all Math and Science requirements for the Advanced Studies diploma with a “B” average or better in all course work, and

- successfully complete a 50 hour or more work-based learning opportunity in a STEM area, and
- satisfy all requirements for a Career and Technical Education concentration (a concentration is a coherent sequence of two or more state-approved courses as identified in the course listing within the CTE Program Area Guide), and
- pass one of the following:
    - a Board of Education CTE STEM-H credential examination, or
    - an examination approved by the Board that confers a college-level credit in a STEM field.

**Seal for Excellence in Civics Education**

The Seal for Excellence in Civics Education Seal is awarded to students who earn either a Standard Diploma or an Advanced Studies Diploma and meet each of the following criteria:

- Complete Virginia & United States History and Virginia & United States Government courses with a grade of "B" or higher.
- Have good attendance and no disciplinary infractions as determined by local school board policies.
- Complete 50 hours of voluntary participation in community service or extracurricular activities, such as volunteering for a charitable or religious organization that provides services to the poor, sick or less fortunate; participating in Boy Scouts, Girl Scouts or similar youth organizations; participating in Junior Reserve Officer Training Corps (JROTC); participating in political campaigns, government internships, Boys State, Girls State or Model General Assembly; or 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.

**Seal of Biliteracy**

The Seal of Biliteracy is 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
- 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.

Please visit the Seal of Biliteracy webpage for more information, including the list of assessment options for meeting the foreign language proficiency requirement.

**Seal for Excellence in Science and the Environment** *-(available only to students who entered ninth grade in 2018-2019 or thereafter)*

The Seal for Excellence in Science and the Environment is awarded to students who enter the ninth grade for the first time in the 2018-2019 year and thereafter, and meet each of the following criteria:

- Earn either a Standard or Advanced Studies Diploma
- 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
- Complete laboratory or field-science research and present that research in a formal, juried setting

- 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.

**Other Diploma Seals or Awards**

Local school divisions may award other diploma seals or awards for exceptional academic, CTE, citizenship or other exemplary performance in accordance with criteria defined by the local school board. The design, production and use of those seals is the responsibility of the local school boards awarding the seal.

## First-time Transfers To A Virginia Public School

Graduation requirements – in compliance with 8VAC 20-131-60 – for a student transferring into a Virginia public school for the first time in grades 9-12, depends on the grade the student is transferring into and when in the school year the student is transferring.

A student is considered to have transferred:

- at the beginning of the school year if 20 or fewer hours of instruction have been completed.
- during the school year if more than 20 hours of instruction has been completed.

Federal law requires each student to be tested in mathematics at least once during high school, therefore some students will be required to complete a mathematics end-of-course test in high school if one was not completed prior to enrolling in a Virginia public high school.

Students entering a Virginia high school during the tenth grade or later may benefit by having to earn a reduced number of verified credits, as stated in 8VAC20-131-60.G, and summarized in Requirements for First-time Transfers to a Virginia Public School by Grade Level and School Year Overview
https://www.doe.virginia.gov/home/showpublisheddocument/7940/638007542032670000

| **A student entering a Virginia high school for first time *in the 2019-2020 school year*:** | |
|---|---|
| **At the beginning of or during 9th, 10th grade** | All requirements of 8VAC20-131-51 for the Standard diploma and Advanced Studies diploma. |
| **At the beginning of 11th grade** | All requirements of 8VAC20-131-50, except: For a Standard diploma, only four verified credits required: English (1), mathematics (1), history (1), and science (1) For an Advanced Studies diploma, only six verified credits required: English (2), mathematics (1), history (1), science (1), and student-selected (1) |
| **During 11th grade** | All requirements of 8VAC20-131-50, except: For a Standard diploma, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics if mathematics testing is required by federal law. For an Advanced Studies diploma, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics if mathematics testing is required by federal law. |

| | |
|---|---|
| **At the beginning of 12th grade** | All requirements of 8VAC20-131-50, except:For a Standard diploma, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics if mathematics testing is required by federal law. For an Advanced Studies diploma, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics if mathematics testing is required by federal law. |
| **During 12th grade** | Students should be given every opportunity to earn a diploma following the graduation requirements in 8VAC20-131-50. If not possible, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified credit requirements may be requested by the local school board to the Virginia Department of Education. |

| **A student entering a Virginia high school for first time *in the 2020-2021 school year*:** | |
|---|---|
| **At the beginning of or during 9, 10, 11 grade** | All requirements of 8VAC20-131-51 for the Standard diploma and Advanced Studies diploma. |
| **During 11th grade** | All requirements of 8VAC20-131-51, except only two verified credits required: English and mathematics, if mathematics testing required by federal law, otherwise verified credit may be of student's own choosing. |
| **At the beginning of 12th grade** | All requirements of 8VAC20-131-50, except:For a Standard diploma, only two verified credits required: English (1), and student-selected (1). The student-selected credits must be in mathematics if mathematics testing is required by federal law. For an Advanced Studies diploma, only four verified credits required: English (1), and student-selected (3). One of the student-selected credits must be in mathematics if mathematics testing is required by federal law. |
| **During 12th grade** | Students should be given every opportunity to earn a diploma following the graduation requirements in 8VAC20-131-50. If not possible, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified credit requirements may be requested by the local school board to the Virginia Department of Education. |

| **A student entering a Virginia high school for first time *in the 2021-2022 school year and thereafter*:** | |
|---|---|
| **At the beginning of or during 9, 10, 11 grade** | All requirements of 8VAC20-131-51 for the Standard diploma and Advanced Studies diploma. |
| **During 11 grade** | All requirements of 8VAC20-131-51 for the Standard diploma and Advanced Studies diploma, except only two verified credits required: English and mathematics, if mathematics testing required by federal law, otherwise verified credit may be of student's own choosing |
| **At the beginning of 12th grade** | All requirements of 8VAC20-131-51 for the Standard diploma and Advanced Studies diploma, except only two verified credits required: English and mathematics, if mathematics testing required by federal law, otherwise verified credit may be of student's own choosing |
| **During 12th grade** | Students should be given every opportunity to earn a diploma following the graduation requirements in 8VAC20-131-51. If not possible, arrangements should be made for the student's previous school to award the diploma. If these arrangements cannot be made, a waiver of the verified credit requirements may be requested by the local school board to the Virginia Department of Education. |

# Standards Of Learning

The **Standards of Learning (SOL)** for Virginia Public Schools establish minimum expectations for what students should know and be able to do at the end of each grade or course in English, mathematics, science, history/social science and other subjects.

The SOL tests in reading, writing, mathematics, science and history/social science measure the success of students in meeting the Board of Education's expectations for learning and achievement. All items on SOL tests are reviewed by Virginia classroom teachers for accuracy and fairness and teachers also assist the state Board of Education in setting proficiency standards for the tests.

**Innovation in Student Assessment**

The Virginia Department of Education is a national leader in the use of technology to develop and administer the Standards of Learning (SOL) tests. Current online SOL tests include technology-enhanced items (TEI). Technology-enhanced Items require students to indicate their responses in ways other than a multiple-choice format. Students in grades 6-8, in both mathematics and reading, will be administered a computer adaptive version of the Standards of Learning (SOL) tests. A computer adaptive test (CAT) is an assessment that is customized for every student based on how the student responds to the test questions.

**SOL Test Scoring & Performance Reports**

Standards of Learning assessments in reading, mathematics, science and history/social science are made up of questions that measure content knowledge, scientific and mathematical processes, reasoning and critical thinking skills. English writing skills are measured with a two-part assessment that includes multiple-choice items and an essay.

Student performance is graded on a scale of 0-600 with 400 representing the minimum level of acceptable proficiency and 500 representing advanced proficiency. On English reading and mathematics tests, the State Board of Education has defined three levels of student achievement: basic, proficient, and advanced, with basic describing progress towards proficiency.

**Performance Level Descriptors**

Performance level descriptors are available for SOL tests in reading, history and social science, mathematics and science. These descriptors convey the knowledge and skills associated with each performance (achievement) level.

The achievement levels for grades 3-8 reading and mathematics are: *Pass/Advanced, Pass/Proficient, Fail/Basic* and *Fail/Below Basic*.

The achievement levels for all science and history courses, as well as for End-of-Course (EOC) Reading, Algebra I and Geometry are: *Pass/Advanced, Pass/Proficient*, and *Fail/Does Not Meet*.

The achievement levels for EOC Algebra II are: *Advanced/College Path, Pass/Proficient,* and *Fail/Does Not Meet*.

# Grading Policies And Procedures

**GRADING SCALE FOR NORTHUMBERLAND COUNTY PUBLIC SCHOOLS**

According to NCPS School Board Policy, the numerical scale shall be as follows:

| | |
|---|---|
| A = 90 – 100 | D = 60 – 69 |
| B = 80 – 89 | F = 0 – 59 |
| C = 70 – 79 | I = Incomplete |

When averaging reporting period grades, no grade below 60 shall be used through grade nine.

**Grade Point Average/Class Rank**

According to NCPS School Board Policy, rank in class is determined by grade point average. The grade point average is determined by summing the total quality points earned and dividing by the number of courses taken. All courses identified for grades 9-12 are to be considered including those taken at grade 8 or earlier. For any high school credit-bearing course taken in middle school, parents may request that grades be omitted from the student's transcript and the student will not earn high school credit for the course. Such a request must be made in writing to the high school counselor department prior to the end of the junior year. However, if a course is repeated in grades 9-12, the grade and course taken at grade 8 or earlier is not recorded on the student's transcript.

**Quality points for classes are assigned as follows:**

| Letter Grades Earned | A | B | C | D | F |
|---|---|---|---|---|---|
| Regular Course Quality Points | 4.0 | 3.0 | 2.0 | 1.0 | 0 |
| Honors Course Quality Points | 4.5 | 3.5 | 2.5 | 1.5 | 0 |
| Dual Enrollment/ Advanced Placement Course Quality Points | 5.0 | 4.0 | 3.0 | 2.0 | 0 |

Successful completion is defined as completing the course with a passing grade. Honors courses receive an additional 0.5 quality points added to the weighted grade upon successful completion. For example, a final grade of "A" in an honors class shall receive 4.5 quality points. An additional 1.0 will be added to the weighted grade upon successful completion of a Dual Enrollment, Advanced Placement, and/or Chesapeake Bay Governor's School course. For example, a final grade of "A" in an AP course shall receive 5.0 quality points for purposes of calculating grade point average.

**Valedictorian/Salutatorian**
Valedictorian/Salutatorian is based on the school division's procedures for computing class rank. No student shall be eligible for valedictorian/salutatorian who has not been enrolled in NHS for three consecutive years preceding high school graduation.

**Repeating Courses**
Courses with a grade of D or F may be repeated in an effort to more fully master the course content.

If a student repeats and passes a complete course in which he/she originally earned an F, the student will receive credit for the course. The official transcript will record both the original course and the repeated course and the grades the student earned for each.

The grade the student earns when he/she repeats a course for a letter grade is included in the GPA. However, the grade the student originally earned will be removed from the calculation of the GPA. Hence, repeating a course in which a D or an F was earned (and, subsequently, earning a better grade) is an effective way of improving your GPA and perhaps your academic standing as well. Repetition of a course more than once requires approval of the student's principal and Director of Counseling.

Each course a student repeats will be coded on your transcript to indicate that your cumulative grade point average has been adjusted in accordance with NCPS academic policy on repeated courses.

**Credit Recovery Options**
Abbreviated Credit Recovery courses do not replace the grade for the previous course. These courses are coded "CR", and both of the courses' GPA points remain in calculations for Grade Point Average and Class Rank.

## Promotion

Middle School Promotion

Students at the middle shall take all required state and local assessments for the student's respective grade, and the test results shall be part of a multiple set of criteria for determining advancing or retaining students in those grades. Criteria to be considered are: 1.the student's degree of mastery of all local and state instructional objectives in Reading, Math, Science and Social Studies; 2. the success or failure of previous promotions or retentions of the student, and 3. student performance on appropriate local and state assessments. A middle school student who falls into one of the following categories will normally be assigned to the same grade for the following year: 4. fails one of the three basic studies (reading, language, mathematics) and one other subject; 5. fails both science and social studies; 6. fails one basic study (reading, language, mathematics) and makes "D's" in two or more other subjects.

High School Promotion

Assignment to Grade 10
To be assigned to grade 10, a student must complete five ninth grade credits, including English 9, and two of the following: math, science, and physical education 9. The student must also have earned at least one verified credit by successfully passing an SOL End of Course Assessment.

Assignment to Grade 11
To be assigned to grade 11, a student must complete a minimum of eleven credits, including two in English, two in Mathematics or one in science, and one in social studies. The student must also have earned at least three verified credits by successfully passing three SOL End of Course Assessments.

Assignment to Grade 12
To be assigned to grade 12, a student must complete a minimum of fifteen credits, including three in English and two in science, two in mathematics, two in history/social studies including United States and Virginia History, and/or be enrolled in subjects that will complete graduation requirements by the end of the academic year. The student must also have earned at least five verified credits by successfully passing five SOL End of Course Assessments.

## Gifted And Talented

The focus of the Northumberland County Public Schools gifted program is to cultivate and place greater emphasis on the unusual abilities of the gifted students in order to help them become self-directed learners and independent critical thinkers. This program is focused on a multi-dimensional teaching approach that is designed to challenge the gifted student in grades K-12 using acceleration of course content and enrichment opportunities such as field trips, STEM activities, Scenario Writing, Future Problem Solving, SeaPerch, and Community Problem Solving.

The overall goal of this program is to nourish within each student a desire to achieve excellence and the need to be responsive to an ever changing school, community, and world. In Northumberland County Public Schools, education for the gifted is based on the following principles:

- Gifted students need opportunities to enhance their gifts and talents.
- Gifted students need opportunities to interact with other gifted students.
- Gifted students need opportunities to pursue their particular interests and share the results of these pursuits.

## Chesapeake Bay Governor’s School For Marine And Environmental Science

The Chesapeake Bay Governor's School (CGBS) for Marine and Environmental Science provides high-ability students from the Northern Neck and the Middle Peninsula with a rigorous curriculum

through enrichment, exploratory, investigative, and career awareness experiences. Through the integration of math, science, technology, and research, woven with marine and environmental sciences, students have the opportunity to foster an appreciation and respect for environmental issues.

CBGS offers a community of learners the opportunity to explore connections among the environment, math, science, and technology in order to help develop leaders who possess the research and technical skills, global perspective, and vision needed to address the challenges of a rapidly changing society.

## CBGS Admission

Students apply for admission to the Chesapeake Bay Governor's School in the fall of their freshman year. The selection committee reviews standardized test scores, academic achievement, and demonstrated interest in science and mathematics. Student selection is determined by each participating school division.

The Chesapeake Bay Governor's School is a partnership between the Virginia Department of Education, participating School Divisions, and Rappahannock Community College.

## CBGS Participating Divisions & Sites

Bowling Green Campus: Caroline, King George, and King William Counties

RCC Glenns Campus: Gloucester, King & Queen, Mathews, Middlesex, and New Kent Counties

RCC Warsaw Campus: Essex, Lancaster, Northumberland, Richmond, and Westmoreland Counties; Town of Colonial Beach

## CBGS Student Recruitment and Admission Process

Recruitment for Chesapeake Bay Governor's School starts in the fall. Application packets are given to the Advisory members of participating schools who in turn give them to the guidance counselors. The CBGS director and faculty members are available to visit the participating high schools to meet with the guidance counselors and interested students. They will bring visual aids and school literature to pass out giving students some general information about the program. The students are invited to attend the governor's school campuses during school hours and monitor the classes.

Students who are eligible to attend Chesapeake Bay Governor's School are high ability tenth, eleventh and twelfth grade students from the participating school divisions. Depending on the year of application, students need to have successfully completed Algebra I, Geometry, and one or two high school credits in science (Earth Science preferred). The applying students should have a "B" average for ninth and tenth grade years. They should also have scored 85% or higher composite/total score on a standardized achievement and/or ability test OR 85% or higher on a math or science quantitative subtest.

Admission is competitive and is based on previous math and science courses, teacher recommendations, standardized achievement testing, science/math activities, and honors. Selection is determined by each participating school system.

Students who have successfully completed Algebra I, Geometry, and one or two high school credits in science (Earth Science preferred). The applying students should have a "B" average for ninth and tenth grade years. They should also have scored 85% or higher composite/total score on a standardized achievement and/or ability test OR 85% or higher on a math or science quantitative subtest.

## CBGS Courses Offered

Students take a combination of the following courses: Algebra III, Pre-Calculus, Calculus, Statistics, Biology, Chemistry, Physics, Foundations in Science, and Marine & Environmental Science I & II.

All courses meet and/or exceed the Virginia Standards of Learning (SOL) requirements. In addition, students may earn dual enrollment credits for each course through Rappahannock Community College.

## Dual Enrollment, Honors and Advanced Placement Courses

Dual Enrolled, Honors, and Advanced Placement courses are challenging due to rigor of content and the time demands necessary to complete assignments. Therefore, students and parents are asked to consider the commitment of scholarly time and effort when considering whether to enroll in Dual Enrolled, Honors, and Advanced Placement courses.

Advanced Placement courses offered at Northumberland High School will vary based on teachers who have successfully completed Advanced Placement Teacher Training. Please ask your student's school counselor about Advanced Placement course opportunities.

## Rappahannock Community College (RCC)/Dual Enrollment Courses

Rappahannock Community College has **Dual Enrollment** agreements with most local high school systems to offer college-level courses that can be taken at the college or the high school location.

These Dual Enrollment programs are voluntary and enable students to take courses at RCC while enrolled in high school and provide college level educational opportunities not otherwise available.

If you're a Dual Enrollment student and you'd like to complete a certificate or degree, follow the plan requirements outlined in the certificate or degree program section of the *College Catalog* available on the RCC website.

## Dual Enrollment Frequently Asked Questions and Answers *(from Rappahannock Community College website)*

**What are the advantages to taking Dual Enrolled courses?**

- Saves time and money
- May shorten the time to college degree completion
- Gives students early exposure to the academic rigors of a college level course
- Student is both a high school student and enrolled in college as well (dual enrolled)
- College credit is earned at the same time as high school credit
- College courses are taught at the college level
- Credit earned for many dual enrolled courses may be applied toward a degree or certificate once the student is enrolled in college
- Transfer applicable college credit to most 4-year colleges and universities in Virginia

**Who pays for the tuition, books, testing and other fees related to dual enrollment classes?**
The actual cost of enrolling in a dual enrollment course offered through RCC is determined by the public school division. In some instances, there is little or no actual cost to the student taken at Northumberland High School. In all cases, students can save money by earning college credit through the community college.

**What courses are offered as dual enrollment credits?**
RCC and the high school determine classes that are offered each semester as dual-enrollment courses. Typically, the dual-enrollment classes offered would be courses taken during a student's first year of college.

**Who is eligible to take a dual-enrollment college class?**
Students who take the RCC placement tests to demonstrate that they are prepared to do college level work (tests for high school dual enrollment course placement can be taken at either campus by appointment or may be scheduled at the local high school).

- Each student must complete an RCC dual enrollment application and an RCC online application.
- Students need high school and parental approval to enroll in RCC college courses.

**Are dual enrollment classes transferable to a four-year college or university?**
Dual enrollment classes that are designed to transfer to colleges and universities are considered university bound courses and are approved to satisfy the general education core requirement at the college freshman or sophomore level. However, not all dual enrollment courses are accepted at all colleges and universities. Families should inquire with the college/university admissions personnel to determine which credits will be accepted.

**How do I request a transcript?**
Students may request that a copy of their RCC transcript be sent to other colleges and universities

from the RCC Office of Admissions and Records once coursework is complete. Students can make this request online and also view unofficial transcripts through the myRCC site.

**How does a dual enrollment course differ from an Advanced Placement (AP) course?**
A dual enrollment course is a college class taught by an instructor who has the degree and credentials to teach at a community college. Upon successful completion of a dual enrollment course, a student is awarded college credit from Rappahannock Community College as well as high school credit.

- A high school transcript and a college transcript are separately generated for each school.
- In an AP course the student must pass a standardized exam at the end of the course to receive college credit.

**Why should a student consider dual enrollment classes?**
Studies show that those who acquire college credits while still in high school are more likely to continue their education beyond high school.

- College credits earned during high school may help reduce the financial burden of full-time college tuition.

## Advanced Placement Courses

**Why Should a Student Consider an Advanced Placement (AP) Class?**
*Source: https://apstudent.collegeboard.org/exploreap/the-rewards*

**Stand Out in College Admissions**

Deciding to take an AP course lets colleges and universities know that you have what it takes to succeed in an undergraduate environment. When admissions officers see "AP" on your transcript, they know that what you experienced in a particular class has prepared you well for the challenges of college. Taking AP is a sign that you're up for the most rigorous classes your high school has to offer.

**Earn College Credits**

By taking an AP course and scoring successfully on the related AP Exam, you can save on college expenses: most colleges and universities nationwide offer college credit, advanced placement, or both, for qualifying AP Exam scores. These credits can allow students to save college tuition, study abroad, or secure a second major. AP can transform what once seemed unattainable into something within reach.

Check out specific colleges' guidelines on accepting AP scores for credit and placement by searching our AP Credit Policy database.

**Skip Introductory Classes**

If you already know your preferred college major, taking a related AP course and earning a qualifying score on the AP Exam can help you advance and avoid required introductory courses – so you can move directly into upper-level classes and focus on the work that interests you most.

Even taking an AP Exam unrelated to your major – whether or not you know what you want to major in – can place you beyond your college's general education requirements. This opens up additional time on your schedule, enabling you to do a second major or minor, take exciting electives, or pursue additional interests.

**Build College Skills**

Taking an AP course builds the skills you'll need throughout your college years. You give your mind a rigorous workout while polishing up your time management and study skills. You also get better at handling challenging issues and problems, with the support of your AP teachers. AP courses let you know what to expect during the next phase of your educational journey, and help you build the confidence to succeed.

## Virtual Learning Opportunities

Virtual (on-line) education programs provide additional instruction choices for students in non-traditional settings through distance learning options. These online learning programs offer flexibility to students while providing instruction aligned with the Standards of Learning. A number of Virginia school divisions provide opportunities for their students to take online courses as a part of their regular course offerings. There are two other instructional options available to Virginia students: Virtual Virginia and the Virtual School Programs.

### Virtual Virginia

VDOE's Virtual Virginia program offers pre-Advanced Placement (AP), honors, and AP classes as well as academic electives and world languages. Virtual Virginia is designed to meet the needs of students who otherwise would be unable to take these courses due to a lack of availability or scheduling conflicts within their school. Eligible students enroll in Virtual Virginia through their local school counselors. Annual registration for all courses (fall block, full year, and spring block) offered during a school year begins on the first business day in April and ends on the first business day in August. Talk to your school counselors for information on Virtual Virginia and details about the program, including the course catalog, school registration and more. You can also find information by visiting: https://www.virtualvirginia.org/

### Multi-Division Online Provider Program (MOP)

The 2010 General Assembly directed the Board of Education to establish criteria for the approval of virtual school programs that provide instruction to students in multiple school divisions. The criteria and processes approved by the board in November 2010 provide flexibility for diverse learners and ensure that instruction provided by multi-division online providers is aligned with

state standards and provided by highly qualified teachers. More about the Multi-division Online Provider Program.

**Enrollment**

To enroll in a Virtual Virginia course, the local school must agree to award the assigned credit for the course. If the course includes a relevant end-of-course assessment, the local school will administer the assessment and award verified credit. Credit is posted to the student's transcript by the student's middle or high school counseling department. Only the school counselors can enroll your students into Virtual Virginia courses. **Please see your school counselor for the list of approved providers and courses, guidelines, and requests**.

## Students With Individualized Education Plans (IEP) And Section 504 Plans

Students with disabilities who have an IEP or 504 plan are encouraged to pursue the Advanced Studies or Standard Diploma. The IEP or 504 team will work with students and their families to determine the appropriate individual path to graduation for the student.

**Credit Accommodations**

Students entering ninth grade for the first time in 2013-14 and beyond are eligible to pursue an Advanced Studies Diploma, Standard Diploma, or Applied Studies Diploma. These students who would have previously been candidates for the Modified Standard Diploma may use credit accommodations to earn the Standard Diploma if they meet the following eligibility requirements (i) the student has a current IEP or 504 plan with standards-based content goals; (ii) the student has a disability that precludes him or her from achieving and progressing commensurate with grade level expectation, but is learning grade level content; (iii) the student needs significant instructional supports to access grade level Standards of Learning (SOL) content and to show progress; and (iv) based on multiple objective measures of past performance, student might not be expected to achieve the required standard and verified units of credit within the standard time frame. Credit accommodations shall be determined and documented by the student's IEP team or 504 plan committee, including the student where appropriate, at any point after the student's eighth grade year.

**Transition Services (For students with an IEP) - Statement of Needed Transition Services - beginning no later than the first IEP developed when the eligible student is 14.**

Realizing successful post-secondary outcomes is a goal for all students. Depending on the severity of disability and the support services required in adult life, successful transition from high school to adult life may require that planning activities begin in elementary school with students exploring their interests in middle school. Starting the process early prepares students to think about goals for their adult life. High school transition planning includes exploring post-secondary

opportunities and employment options and may include connecting with the adult service agencies that may provide the student with services.

Recognizing the need for students with disabilities to engage in effective transition planning, the Individuals with Disabilities Education Act (IDEA) requires that transition planning be part of the Individualized Education Program (IEP). Beginning no later than the first IEP developed when the eligible student is 14, the Team considers the student's need for transition services and documents this discussion. If appropriate, the IEP includes a statement of needed transition services. Such documentation must be reviewed and updated annually thereafter.

**Students must be invited to all meetings and allowed to participate actively when transition planning is discussed and are encouraged to actively participate.**

**Linkages to Post School Options -beginning no later than the first IEP developed when the eligible student is 14 and updated annually.**

Beginning no later than the first IEP developed when the eligible student is 14, the IEP's of students should include a post school vision statement as well as identify the transition services necessary to support the vision. IDEA 2004 defines transition services as a coordinated set of activities for a student with a disability that -

- **A.** Is designed to be within a results-oriented process, that is focused on improving the academic and functional achievement of the student with a disability to facilitate the student's movement from school to post-school activities, including post-secondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation;
- **B.** Is based on individual strengths, preferences and interest; and
- **C.** Includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and when appropriate, acquisition of daily living skills and functional vocational evaluation. (P.L. 108-446, Sec 603 (34))

## Courses Available To Students With IEPS

**Academic Lab I** **Semester - 1 Credit**
**Course No. 0130**
*Prerequisite: The IEP/504 team determines placement in this course.*
This course is designed for three purposes: allowing additional time for assignment/test/quiz completion and accommodation compliance outlined in the student's IEP or 504 plan; explicit,

specialized instruction in the areas of individual student needs and assisting with successful transition to high school. *This course will be graded pass/fail.* Geared towards 9th-10th graders.

**Academy Lab II** **Semester - 1 Credit**

**Course No. 0130**

*Prerequisite: The IEP/504 team determines placement in this course.*

This course will provide assistance with transitioning skills for entrance into the workplace and/or post-secondary education. Students will be assisted in resume development, employment exploration and acquisition, interview techniques/skills, workplace etiquette, college selection, grant/scholarship applications, and introduced to self-determination skills beneficial for adult living. *This course will be graded pass/fail.* Geared towards 11th-12th graders.

**Practical Assessment Exploration System (PAES)** **Year**

**PAES 1 Course No. 9387**
**PAES 2 Course No. 9389**
**PAES 3 Course No. 9390**
**PAES 4 Course No. 9391**

*Prerequisite: PAES must be indicated in the student's IEP.*

PAES is a curriculum that operates in a simulated work environment. Students become employees and teachers become supervisors. Strict work procedures are followed so that students learn in realistic employment experiences while exploring career and vocational opportunities. Each student will complete a progression of activities that evaluate basic skills in a functional curriculum.

There are five work area units: Business/Marketing, Computer Technology, Consumer /Services, Construction/Industrial, and Processing/Production. Students will also experience on-the-job opportunities in the community. Students will receive 1 elective credit that can be sequential (PAES 1, PAES 2, PAES 3, PAES 4).

# Middle and High School Course Descriptions
# English / Language Arts

## English Middle School Courses

**Language Arts Grade 6** **Year**
**Course No. 1109**
**SOL Tested Course**
This course is a literature-based course integrating literature, writing, research, oral communication, and media literacy. English 6 emphasizes the application and refinement of reading comprehension strategies. Significant focus is placed on developing and analyzing effective communication skills in presentations and small group discussions. In addition, students will study and develop vocabulary, understand the basic elements of media literacy, build research skills, and utilize technology. Students will read, independently and in groups, a variety of fiction, narrative nonfiction, nonfiction, and poetry. Students will be introduced to figurative language. Additionally, students will plan, draft, revise, and edit narrative, descriptive, expository, and persuasive writing with concentration on composing, written expression, and usage/mechanics. English 6 students will take the Virginia Standards of Learning test in Reading.

**Language Arts Grade 7** **Year**
**Course No. 1110**
**SOL Tested Course**
This course is designed to expand the study of literature, writing, research, oral communication, and media literacy. Students will continue to learn and expand the use of reading comprehension strategies as well as research skills. They also will enhance their literacy skills by developing more advanced vocabulary and reading a variety of fiction, nonfiction, and poetry. Students will continue to develop oral communication skills independently and in small groups as well as knowledge of persuasive techniques used in the media. Students will plan, draft, revise, and edit expository as well as narrative and persuasive pieces with attention to composition, written expression, and usage/mechanics. English 7 students will take the Virginia Standards of Learning test in Reading.

**Language Arts Grade 8** **Year**
**Course No. 1120**
**SOL Tested Course**
This course emphasizes skill development in literature, writing, research, oral communication, and media literacy. Students will continue to learn and expand the use of reading comprehension strategies. Oral communication, including interviewing techniques, will be learned and applied in this course. In addition, students will analyze, develop, and produce creative and informational media messages. Students will apply knowledge of vocabulary and figurative language in texts. They will continue the study of literary elements, including theme, main idea, cause-effect relationships, and conclusions in a variety of literary and informational selections. By studying various genres and literary elements, students will examine novels, short stories, poetry, drama, and nonfiction. They will plan, draft, revise, and edit narratives as well as expository, persuasive, and informational pieces with attention to composition, written expression, and usage/mechanics. English 8 students will take the Virginia Standards of Learning tests in Reading and Writing.

**Reading Enrichment Grades 6, 7, and 8** **Year**
**Course No. 1180**
*Prerequisite: Teacher Recommendation*
Classes are designed for students requiring differentiated instruction in reading. This program provides an academically based opportunity for students to achieve a degree of mastery in phonemic awareness, phonics, fluency, vocabulary, and comprehension. The teacher supports students' reading through continued assessment, the provision of instructional level materials and planned interventions that reflect the student's identified needs, and the developmental nature of reading. Enrollment is based on a specific criterion process.

## English High School Courses

**English 9** **Semester – 1 Credit**
**Course No. 1130**

A person who wishes to be successful in school and in work must be able to express **themselves**. Language, both written and spoken, is the means by which we communicate. This course is designed to provide the student with the grammatical skills that are needed for the correct usage of the English language in both oral and written communication. It is designed to introduce the student to various types of literature and to acquaint him/her with the necessary terminology for future literary studies. Students will be required to read a minimum of one novel. The course also introduces the students to all facets of poetry. At the beginning of the year, students will participate in a variety of activities designed to improve their transition from middle to high school.

**English 9 Honors** **Semester – 1 Credit**
**Course No. 1130H**

*Prerequisite: A or B in English 8 or 450 or better on the Grade 8 Reading and Writing SOL.*
English 9 Honors deepens and advances the curriculum of English 9. Students read and analyze a variety of literary and nonfiction texts, exploring the characteristics of different forms and the techniques authors use to achieve their intended purpose. Language study extends students' vocabulary through learning about connotations, denotations, word origins, and structures. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. Through narrative, expository, and persuasive writings, students build on their understanding of writing as a process of prewriting, drafting, revising, and publishing. In the research process, students find, evaluate, and select appropriate sources to access information to create a research product. They also develop communication skills through listening to and practicing oral presentations.

**English 10** **Semester – 1 Credit**
**Course No. 1140**
**One SOL Test: Writing**

The first part of this course is designed to provide the student with instruction and practice in developing his/her language skills. The second part is designed to introduce the student to various types of literature and to acquaint him/her with the necessary terminology for effective discussion of literary selections encountered in English 11 and 12. Students will be required to read a minimum of one novel. Continued development of skills assessed on the English EOC SOL writing and reading tests is provided. In addition, basic writing and communication skills will be emphasized with the Writing EOC SOL test administered during this class.

**English 10 Honors** **Semester – 1 Credit**
**Course No. 1140H**
**One SOL Test: Writing**

*Prerequisite: A or B in English 9H or English 9.*
English 10 Honors deepens and advances the curriculum of English 10. Students read and analyze a variety of literary and nonfiction texts, comparing and contrasting the techniques authors use in literature of different cultures and eras. Language study continues to expand students' vocabulary through learning about connotations, denotations, word origins, and structures. Students apply their understanding of grammar, capitalization, punctuation, spelling, sentence structure, and paragraphing to varied and frequent writing assignments. With an emphasis on expository and analytical writing, students expand their understanding of writing as a process and develop their skills in revising to address a specific audience and purpose. In the research process, students collect, evaluate, organize, and present accurate and valid information to create a research product. They also improve communication and collaboration skills through small and large group discussions and presentations.

**English 11** **Semester – 1 Credit**
**Course No. 1150**
**One SOL Test: Reading**
The focus of the English 11 curriculum is preparation for the required SOL test in Reading which is required for both the Standard and Advanced Studies Diploma. The student will read a minimum of one novel and other various literary fiction and nonfiction texts revealing American ways of thinking and will relate them to historical periods to gain a perspective of contemporary American society, to seek the meaning of being an American, and to understand the American personality. The student will be aware of the ethnic and cultural groups who have played a part in the formation of the United States of America. The student will continue to develop reading, writing, and speaking skills that allow him/her to function as a productive citizen.

**English 11: College Composition DE** **Semester - 1 Credit**
**Course No. 1150**
*DE RCC - ENG 111*
English 111: Introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics: develop and support ideas; investigate, evaluate, and incorporate appropriate resources; edit for effective style and usage; and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay. Students should expect at least 6-9 hours of study time per week.

**English 12** **Semester - 1 Credit**
**Course No. 1160**
This course is designed to provide students with the necessary tools to excel in the workplace. This course will leverage workplace readiness skills and basic digital literacy skills such as word processing, spreadsheets, and electronic presentations, as well as personal qualities and abilities, interpersonal skills, and professional competencies will be the focus of this course. Students will apply appropriate technical skills and academic knowledge to communicate clearly, effectively, and

with reason. Students will develop an education and career plan aligned to personal goals. Students will write a resume, go on mock interviews, and apply workplace etiquette in both written and verbal communication.

**English 12: College Composition DE** **Semester/Year – 1 Credit**
**Course No. 1160**
***DE RCC - ENG 111/112/251***
*Prerequisite: A or B in English 11 Honors or English 11 and passing score on the Virginia Placement Test in English.*
*Recommended: score of 450 on the English Writing and Reading SOL.*
This class concentrates on developing the skills leading to a finished product. Students will focus intensively on exercises that enhance writing skills; students also will revise writing in order to produce the best possible written work. Students may earn six semester hours of community college freshman English credit through a partnership with Rappahannock Community College upon successfully completing the course.

**English 112**: Continues to develop college writing with increased emphasis on critical essays, argumentation, and research, developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. Students must successfully complete ENG 111 or its equivalent, and must be able to use word processing software. Students should expect at least 6-9 hours of study time per week.

**English 251 Survey of World Literature I:** Examines major works of world literature. Involves critical reading and writing. Students should expect at least 6-9 hours of study time per week.

**Photojournalism I** **Semester – 1 Credit**
**Course No. 1215**
Prerequisite: *Application and Teacher recommendation-An "A/B" average in English from the previous school year is a prerequisite for all Photojournalism classes. All students must complete an application for the class.*
The photojournalism course is designed to provide a hands-on journalistic experience for students in grades 9-12, which results in the production of the school's yearbook and a literary newsletter through coverage of school activities and sporting events. Photography is a large portion of this course; although students are not required to have their own cameras, it is helpful. Because the yearbook and newsletter are self-supporting, students are expected to participate in fundraising by selling ads to local businesses and various other fundraisers. All students must be academically eligible as defined by the Virginia High School League.
The course is designed with the following objectives: to develop better writing skills in the individual student through the study of various forms of journalism style; to learn the purpose and uses of journalism in society by studying its history, its functions and its forms; and to produce publications in various forms of media. The major content of the course will be learning how to write in "newspaper" style. Students will be expected to be constantly writing in a method of

developing journalism skills. In addition, the ability to reason, take notes, interview, and do research will be important aspects of the course.

**Photojournalism II** **Semester – 1 Credit**
**Course No. 1216**
*Prerequisite: Photojournalism II*
In this course, students continue to learn and practice the language and processes of photojournalism I and reporting. They develop an understanding of the role and responsibilities of broadcast journalists. (Please see the course description of Photojournalism I).

**Photojournalism III** **Semester – 1 Credit**
**Course No. 1217**
*Prerequisite: Photojournalism II*
In this course, students refine their copywriting skills and advance their computer and photography skills, develop individual style, and may assume leadership roles as members of the yearbook staff's editorial board. (Please see the course description of Photojournalism I).

**Photojournalism IV** **Semester – 1 Credit**
**Course No. 1218**
*Prerequisite: Photojournalism III*
In this course, students will serve as editors-in-chief of the class publications. They will oversee the design, development, and layout of the class publications. Journalism III students will be responsible for managing and overseeing other students to maintain deadlines for publication. (Please see the course description of Photojournalism I).

**Creative Writing** **Semester – 1 Credit**
**Course No. 1171**
Creative Writing is designed for students to create original forms of descriptive writing in various forms that include but are not limited to poetry, fiction, short stories, dramatic devices, etc. Vocabulary development, creative writing techniques, and other composition skills are explored through the vast range of study by notable and historical authors. Computers and word processors are used most commonly for compositions. Student writing samples will be presented orally and in written form. A multitude of submissions from all members of the course will be collected and published in a literary magazine.

**Expanding Literacy** **Semester- 1 Credit**
**Course No. 1182**
This class is designed to reinforce and strengthen writing and reading skills and prepare for the English 11 EOC Writing test. It is targeted for the student who failed the 8th grade Writing or Reading SOL, maintained a “D” in English 8, English 9, and English 10. These scores (or results) indicate that the student is reading far below grade level and has not mastered any test-taking

strategies. With this class as well as English 11, the student has reinforcement for necessary skills required for the EOC test. The class is only open to juniors and seniors who have not passed one of the 2 tests. Prepares students for the Writing Workkeys assessment.

**Film Literature** **Semester - 1 Credit**
**Course No. 1165**
Film Literature, a course based on the Virginia Standards of Learning, is a study of how literature is adapted for film or media. Students will read about the history of film, the reflection or influence of film on the culture, and issues of interpretation, production, and adaptation. Students will examine the visual interpretation of literary techniques and the limitations or special capacities of film versus text to present a literary work. Students will examine how films portray the human condition and the roles of men and women and the various ethnic and cultural minorities in the past and present. Different genres of film will be explored. Students also have frequent writing assignments in which they explore and analyze issues of interpretations, production, and cross-genre adaptation.

**Literature of Genres** **Semester - 1 Credit**
**Course No. 01061**
Literature of a genre is a multi-dimensional, multicultural course designed to introduce students to various genres of literature. This course has the same aim as general literature courses (to improve students' language arts and critical-thinking skills), while focusing on one or several genres, such as poetry, essay, biography, short story, drama, and so on. Students determine the underlying assumptions and values within the selected works and also examine the structure, techniques, and intentions of the genre being studied. Oral discussion is an integral part
of this genre-oriented course; however, written compositions are often required.

**LANGUAGE ARTS/ENGLISH PATHWAY**

| Course No. | Course Title | Credit | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Prerequisite |
|---|---|---|---|---|---|---|---|---|---|---|
| 1109 | Language Arts Grade 6 | | x | | | | | | | |
| 1110 | Language Arts Grade 7 | | | x | | | | | | Language Arts 6 |
| 1120 | Language Arts Grade 8 | | | | x | | | | | Language Arts 7 |
| 1180 | Reading Enrichment | | x | x | x | | | | | Teacher Recommendation |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1220 VIRT | Journalism 7 & 8 | | | x | x | | | | | Elective Course |
| 1130 | English 9 | 1 | | | | x | | | | |
| 1140 | English 10 | 1 | | | | | x | | | English 9 |
| 1150 | English 11 | 1 | | | | | | x | | English 10 |
| 1150 DUAL | English 11 Dual Enrollment* | 1 | | | | | | x | | English 10, RCC Placement Test |
| 1160 | English 12 | 1 | | | | | | | x | English 11 |
| 1160 DUAL | English 12 Dual Enrollment* | 1 | | | | | | | x | RCC Placement Test |
| 1195 | English 12 Advanced Placement* | 1 | | | | | | | x | English 11 |
| 1200 | Photojournalism I | 1 | | | | x | x | x | x | Application and Teacher Recommendation |
| 1210 | Photojournalism II | 1 | | | | | x | x | x | Photojournalism I |
| 1211 | Photojournalism III | 1 | | | | | | x | x | Photojournalism II |
| | Photojournalism IV | 1 | | | | | | | x | Photojournalism IV |
| 1171 | Creative Writing | 1 | | | | x | x | x | x | |
| 1515 | Expanding Literacy | 1 | | | | x | x | x | x | Needing Workkeys or Verified Credit |
| 1165 | Film Literature | 1 | | | | x | x | x | x | |

# Mathematics

## Middle School Mathematics Courses

**Mathematics Grade 6** **Year**
**Course No. 3110**
**SOL Tested Course**
The Math 6 curriculum includes the prescribed Virginia Standards of Learning (SOL) as a minimum. The sixth grade curriculum places emphasis on the study of rational numbers to include whole numbers, decimals, fractions, and percentages. Students will use ratios to compare data sets, make conversions within a given measurement system, make geometric constructions and classify three-dimensional figures, and solve linear equations in one variable. Students enrolled in this class will take the Mathematics 6 SOL test.

**Advanced Mathematics Grade 6** **Year**
**Course No. 3110ADV**
**SOL Tested Course**
*The criteria for placement include: classroom teacher recommendation, an A for the year in 5th grade mathematics, and at least a 500 on the Math 5 SOL. Students need a minimum of two of the three criteria to be placed in Advanced Mathematics 6.*
The Advanced Mathematics Grade 6 curriculum includes the prescribed Virginia Standards of Learning (SOL) but enriches and challenges students to explore topics in greater detail. Students will be expected to apply their learning to real-world applications. Students enrolled in this class will take the Mathematics 6 SOL test.

**Mathematics Grade 7** **Year**
**Course No. 3111**
**SOL Tested Course**
The Mathematics 7 curriculum includes the prescribed Virginia Standards of Learning (SOL) as a minimum. The seventh grade curriculum places emphasis on solving problems involving consumer applications and proportional reasoning. Students will gain an understanding of the properties of real numbers, solve linear equations and inequalities, and use data analysis techniques to make inferences and predictions. Students enrolled in Mathematics 7 will take the Mathematics 7 SOL Test.

**Advanced Mathematics Grade 7** **Year**
**Course No. 3111ADV**
**SOL Tested Course**
*The criteria for placement include: classroom teacher recommendation, an A for the year in 6th grade mathematics, and at least a 450 on the Math 6 SOL. Students need a minimum of two of the three criteria to be placed in Advanced Mathematics 7.*
The Advanced Mathematics Grade 7 curriculum includes the prescribed Virginia Standards of Learning (SOL) but enriches and challenges students to explore topics in greater detail. Students will be expected to apply their learning to real-world applications. Students enrolled in this class will take the Mathematics 7 SOL test.

**Algebra I – Grade 7** **Year – 1 Credit**
**Course No. 3130**
**SOL Tested Subject**
*The criteria for placement include: classroom teacher recommendation, an A for the year in 6th grade mathematics, and at least a 500 on the Math 6 SOL. Students need a minimum of two of the three criteria to be placed in Algebra I - Grade 7.*
Seventh grade students who excel in the study of mathematics, as evidenced by student performance on a variety of formative and summative criteria, may be placed in Algebra I.
All students are expected to show proficiency on the Algebra I standards. Students will investigate functions; develop equation solving skills, along with exploring linear and quadratic relationships. Students will perform operations on polynomials as well as using statistics to interpret data. Systems of linear equations are also introduced. The emphasis throughout the entire course is solving problems contained in a world to world context. An SOL Test is required upon the completion of Algebra I. The unit of credit and the final grade earned in this course will be included in the computation of a student's high school grade point average and class rank.

**Pre-Algebra/Math 8 – Grade 8** **Year**
**Course No. 3112**
**SOL Tested Course**
The Pre-Algebra curriculum includes the prescribed Virginia Standards of Learning (SOL) as a minimum. The eighth grade curriculum is designed to prepare students to take Algebra I in high school. The curriculum extends concepts and skills learned in previous grades and include new content that prepares students for more abstract concepts in Algebra I. New concepts include solving multi-step equations, graphing linear equations, applying transformations to learning and applying the Pythagorean Theorem, geometric figures, and using statistical plots to organize and interpret data. Students enrolled in Pre-Algebra will take the Math 8 SOL Test.

**Algebra I – Grade 8** **Year – 1 Credit**
**Course No. 3130**
**SOL Tested Course**
*The criteria for placement include: classroom teacher recommendation, an A for the year in 7th grade mathematics, and at least a 500 on the Math 7 SOL. Students need a minimum of two of the three criteria to be placed in Algebra I - Grade 8.*
Eighth grade students who excel in the study of mathematics, as evidenced by student performance on a variety of formative and summative criteria, may be placed in Algebra I. All students are expected to show proficiency on the Algebra I standards. Students will investigate functions; develop equation solving skills, along with exploring linear and quadratic relationships. Students will perform operations on polynomials as well as using statistics to interpret data. Systems of linear equations are also introduced. The emphasis throughout the entire course is solving problems contained in a world to world context. An SOL Test is required upon the completion of Algebra I. The unit of credit and the final grade earned in this course will be included in the computation of a student's high school grade point average and class rank.

**Geometry – Grade 8** **Year – 1 Credit**
**Course No. 3143**
**SOL Tested Course**
*Prerequisite: Algebra I*
Geometry is offered to students who have successfully completed the standards for Algebra I. Students will study angle relationships, parallel lines, polygons, symmetry, circles, and constructions. Formulas for surface area and volume will be used to solve practical problems. Proofs are approached intuitively, then formally, as the student is prepared to analyze, to synthesize, and to reach conclusions. Students enrolled in Geometry will take the Geometry End-of-Course SOL Test. Successful completion of the Geometry course will enable a student to earn one unit of credit. The course will be used to satisfy one unit of mathematics required for the chosen diploma option. If the student passes both the course and the Geometry SOL Test, the verified credit is awarded and the verified credit is used to satisfy graduation requirements. The unit of credit and the final grade earned in this course will be included in the computation of a student's high school grade point average and class rank.

## High School Mathematics Courses

**Algebra I** **Semester – 1 Credit**
**Course No. 3130**
**SOL Tested Course**
*Prerequisite: Teacher recommendation, A or B for the year in Math 8, and At least 430 on the Pre-Algebra/Math 8 SOL. Students need a minimum of two of the three criteria to be placed in Algebra I.*
All students are expected to show proficiency on the Algebra I standards. Students will investigate functions; develop equation solving skills, along with exploring linear and quadratic relationships. Students will perform operations on polynomials as well as using statistics to interpret data. Systems of linear equations are also introduced. The emphasis throughout the entire course is solving problems contained in a world to world context. An SOL test is required upon completion of Algebra I.

***Algebra I Part A Course No. 3131 Semester – 1 Math*/Elective Credit No SOL Test**
**Algebra I Part B Course No. 3132 Semester – 1 Math Credit/SOL Tested Course**
*Prerequisite: Pre-Algebra/ Math 8*
This course provides additional time for students to master the Algebra I standards. Students are enrolled in this class every day for a full block, completing the equivalent of a one-year course during each school semester. Students who are successful during Algebra I Part I during the first semester will continue with Algebra I Part II during the second semester. Students can earn one elective credit for the completion of Algebra I Part I for the first semester and one math credit for the completion of Algebra I Part II for the second semester. Students must successfully complete both parts in order to meet the state requirements for Algebra I under the Standards of Learning. Algebra I Part II has an associated Standards of Learning (SOL) test. An SOL test is required upon completion of Algebra I Part II. *Algebra I Part I will count as a math credit for students if they are eligible for credit accommodations in Mathematics.

**Algebra, Functions, & Data Analysis** **Semester – 1 Credit**
**Course No. 3134**
*Prerequisite: Algebra I*
This course is designed for students to apply mathematics within the context of mathematical modeling and data analysis. Students will study functions and their behaviors, systems of inequalities, probability, experimental design and implementation, and analysis of data. Data will be generated by practical applications from science, business, and finance. Students will solve problems that require the formulation of linear, quadratic, exponential, or logarithmic equations or a system of equations. The Algebra, Functions, and Data Analysis course is designed for high school students who successfully complete Algebra I.

***Geometry Part I Course No. 3144 Semester - 1 Math* /Elective Credit**
**Geometry Part II Course No. 3145 Semester – 1 Math Credit**

*Prerequisite: Teacher recommendation, Algebra I, and recommended Algebra I SOL score 400 - 430*

This course provides additional time for students to master the Geometry standards. Students are enrolled in this class every day for a full block, completing the equivalent of a one-year course during each school semester. Students who are successful during Geometry Part I during the first semester will continue with Geometry Part II during the second semester. Students can earn one elective credit for the completion of Geometry Part I for the first semester and one math credit for the completion of Geometry Part II for the second semester. Students must successfully complete both parts in order to meet the state requirements for Geometry under the Standards of Learning. Geometry Part II has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements. *Geometry Part I will count as a math credit for students if they are eligible for credit accommodations in Mathematics.

**Geometry Semester – 1 Credit**
**Course No. 3143**

*Prerequisite: Teacher recommendation, Algebra I*
*Recommended Algebra I SOL score 400 - 449*

Geometry is offered to students who have successfully completed the standards for Algebra I. Students will study angle relationships, parallel lines, polygons, symmetry, circles, and constructions. Formulas for surface area and volume will be used to solve practical problems. Proofs are approached intuitively, then formally, as the student is prepared to analyze, to synthesize, and to reach conclusions. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**Geometry Honors Semester – 1 Credit**
**Course No. 3143H**

Prerequisite: *Teacher recommendation, A or B in Algebra I, and*
*Recommended Algebra I SOL score > 449*

Geometry Honors is designed for students who have successfully completed Algebra I and passed the Algebra 1 SOL with a high score. Students will be learning about geometric figures, trigonometric relationships and reasoning. Different forms of proofs will be used. Since this is an honors class, students should expect homework including 1 or 2 projects during the course. This course has an associated Standards of Learning (SOL) test. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**Algebra II** **Semester – 1 Credit**

**Course No. 3135**

*Prerequisite: Teacher recommendation, Algebra I and Geometry, and recommended score between 420 and 449 on Geometry and/or Algebra I SOL.*

Algebra II is designed to continue the study of topics explored in Algebra I. Topics include complex numbers; functions and graphs; systems of equations and inequalities; polynomials, logarithmic and exponential functions and equations; sequences and series. Graphing calculators are used to enhance the understanding of realistic applications through mathematical modeling and to aid in the investigation and study of functions, equations, and inequalities. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements. Algebra II is required for Advanced Studies Diploma.

**Algebra II Honors** **Semester – 1 Credit**

**Course No. 3135H**

*Prerequisite: Teacher recommendation, A or B in Algebra I and Geometry with an A or B average with a recommended score > 449 on Geometry and/or Algebra I SOL.*

The depth and level of understanding expected in Algebra 2 Honors is beyond the scope of Algebra II. Students are expected to not only master algebraic mechanics but also to understand the underlying theory and to apply the concepts to real-world situations in a meaningful way. A thorough treatment of advanced algebraic concepts is provided through the study of functions, polynomials, rational expressions, complex numbers, matrices, exponential and logarithmic equations, infinite geometric sequences and series, permutations and combinations, data analysis, and selected topics in discrete mathematics. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements. Algebra II is required for an Advanced Studies Diploma.

**Trigonometry** **Semester - 1 Credit**

**Course No. 3150**

*Prerequisite: Teacher recommendation, Algebra II completion*

Trigonometry includes the study of trigonometric definitions, applications, graphing, and solving trigonometric equations and inequalities. Emphasis should also be placed on using connections between right triangle ratios, trigonometric functions, and circular functions. In addition, applications and modeling should be included throughout the course of study. Oral and written communication concerning the language of mathematics, logic of procedure, and interpretation of results should also permeate the course. Graphing utilities (calculators, computers, and other technology tools) will be used to assist in teaching and learning. Graphing utilities facilitate visualizing, analyzing, and understanding algebraic and statistical behaviors and provide a powerful tool for solving and verifying solutions.

**Senior Capstone Mathematics** **Semester – 1 Credit**

**Course No. 3136**

The mathematics capstone course is designed for high school seniors who: satisfactorily completed the required mathematics courses based on the Standards of Learning including Algebra, Functions, and Data Analysis or Algebra II; earned at least two verified credits in mathematics; and will attend college, but may need additional mathematics support to be prepared for college level mathematics courses. The course may support students who meet the same academic requirements but plan to enter the workforce (prepared for further workforce training) directly after graduating from high school. The course will add to students' preparation for college and the workplace by 1) enhancing skills in number and quantity, functions and algebra, geometry, and statistics and probability; and 2) simultaneously reinforcing readiness skills and dispositions in adaptability and flexibility, creativity and innovation, leadership, teamwork, collaboration, and work ethic.

**Advanced Mathematics** **Semester – 1 Credit**
**Course No. 3160**
**Mathematics Analysis**
**Course No. 3162**
*Prerequisite: Algebra II*
Students enrolled in Advanced Mathematics are assumed to have completed the coursework for the concepts outlined in the Algebra I, Geometry, and Algebra II standards. A thorough treatment of advanced algebraic concepts will be provided through the study of functions, equations, inequalities, systems of equations, polynomials, rational and radical equations, complex numbers, analysis of data, probability, and sequences and series. Emphasis will be placed on practical applications and modeling throughout the course of study. Oral and written communication concerning the language of algebra, logic of procedures, and interpretation of results should also permeate the course. Graphing utilities (calculators, computers, and other technology tools) will be used to assist in teaching and learning. Graphing utilities facilitate visualizing, analyzing, and understanding algebraic and statistical behaviors and provide a powerful tool for solving and verifying solutions.

**Probability and Statistics** **Semester – 1 Credit**
**Course No. 3190**
This course focuses on the basic concepts and techniques for collecting and analyzing data, drawing conclusions, and making predictions. Students learn the fundamental ideas of probability and apply them in developing statistical methods. The study of statistics includes the interpretation of statistical graphs, measurement of central tendency and variation, regression, and correlation.

**Honors Mathematical Analysis/Pre- AP Calculus** **Semester - 1 Credit**
**Course No. 3162**
*Prerequisite: Teacher recommendation, recommended Algebra II SOL > 440*
*Recommendation: An A average in Algebra II*

Mathematics Analysis is an in-depth study of trigonometry including solutions of triangles, the unit circle, and identities. The concepts of complex numbers, logarithms, exponents, and binomial expansion will be discussed, along with a study of functions and their graphs.

**Pre Calculus** **Semester – 1 Credit**

**Course No. 3176**
**RCC: MTH 163/164**

*Prerequisite: Math Analysis / Algebra II*

Students should have successfully completed Advanced Mathematics or Algebra II or an equivalent course earning at least a "B" average or higher. This one year course offered as dual credit through RCC will allow the student to complete three credits of community college hours. This course presents college Algebra, matrices, and Algebraic, exponential, and logarithmic functions as well as trigonometry, analytic geometry, and sequences and series. Prerequisite: Competency in Math Essentials MTE 1-9 as demonstrated through the placement and diagnostic tests or by satisfactorily completing the required MTE units or equivalent at RCC. Credit will not be awarded for both MTH 163 and 166.

**Advanced Placement Calculus AB** **Semester – 1 Credit**
**Course No. 3177AB**

*Prerequisite: Honors Math Analysis*

AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. Students will learn how to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and how to make connections amongst these representations. Students will use technology to help solve problems, experiment, interpret results, and support conclusions. https://apstudent.collegeboard.org/apcourse/ap-calculus-ab

**Advanced Placement Calculus BC** **Semester – 1 Credit**
**Course No. 3177BC**

*Prerequisite: AP Calc AB*

"AP Calculus BC is roughly equivalent to both first and second semester college calculus courses and extends the content learned in AB to different types of equations and introduces the topic of sequences and series. This course covers topics in differential and integral calculus, including concepts and skills of limits, derivatives, definite integrals, the Fundamental Theorem of Calculus, and series. You will learn how to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations." https://apstudent.collegeboard.org/apcourse/ap-calculus-bc

**Applied Calculus / Statistics** **Semester – 1 Credit**
**Course No. 3190**
***DE RCC: MTH 270 / MTH 240***

*Prerequisite: MTH 163*

This course introduces limits, continuity, differentiation, and integration of Algebraic and transcendental functions, techniques of integration, and partial differentiation. Statistics presents an overview including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, and correlation and regression. Prerequisites: a placement recommendation for MTH 240 and successful completion of MTH 158, MTH 163, MTH 166 or equivalent. A "B" average or higher in MTH 163 (Pre-Calculus) Math Analysis/ Pre AP Calc is recommended in order to advance to MTH 270 (Applied Calculus) AP Calculus. Credit will not be awarded for both MTH 270 and 271.

**Advanced Placement Statistics** **Semester-1 Credit**

**Course No. 3191**

*Prerequisite: Probability and Statistics*

AP Statistics is an introductory college-level statistics course that introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students cultivate their understanding of statistics using technology, investigations, problem solving, and writing as they explore concepts like variation and distribution; patterns and uncertainty; and data-based predictions, decisions, and conclusions.

**MATHEMATICS PATHWAY**

| Course No. | Course Title | Credit | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Prerequisite |
|---|---|---|---|---|---|---|---|---|---|---|
| 3110 | Mathematics Grade 6 | | x | | | | | | | |
| 3110 ADV | Advanced Mathematics Grades 6 | | x | | | | | | | >499 Math 5 SOL, A for year, and teacher recommendation* |
| 3111 | Mathematics Grade 7 | | | x | | | | | | |
| 3111 | Advanced Mathematics Grade 7 | | | x | | | | | | >449 Math 6 SOL, A for year, and teacher recommendation* |
| 3130 | Algebra I Grade 7 | | | x | | | | | | >499 Math 6 SOL, A for year, and |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | teacher recommendation* |
| 3112 | Pre-Algebra Grade 8 | 1 | | | x | | | | | Mathematics Grade 7 |
| 3131 | Algebra I Part I | 1 | | | | x | x | x | | |
| 3132 | Algebra I Part II | 1 | | | | x | x | x | | |
| 3130 | Algebra I | 1 | | | x | x | x | x | x | >429 Math 8 SOL, A or B for year, & teacher recommendation* |
| 3144 | Geometry Part I | 1 | | | | x | x | x | x | Algebra, Algebra I SOL >399 |
| 3145 | Geometry Part II | 1 | | | | x | x | x | x | Geometry Part I |
| 3143 | Geometry | 1 | | | x | x | x | x | x | Algebra I, Algebra I SOL >399 |
| 3143H | Honors Geometry | 1 | | | | x | x | x | x | A or B in Algebra I, Algebra I SOL >449, teacher recommendation* |
| 3134 | Algebra, Functions, Data Analysis | 1 | | | | | x | x | x | Algebra I |
| 3135 | Algebra II | 1 | | | | x | x | x | x | Geometry |
| 3135H | Honors Algebra II | 1 | | | | x | x | x | x | Geometry, A or B in Alg I & Geo, SOL scores for Algebra I & Geo > 449, teacher recommendation * |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 3150 | Adv Algebra & Trigonometry | 1 | | | | | X | x | x | Algebra II, teacher recommendation |
| 3162 | Honors Math Analysis – Pre-Calculus | 1 | | | | | x | x | x | A in Algebra II, teacher recommendation |
| 3177AB | Advanced Placement Calculus AB | 1 | | | | | | x | x | Honors Math Analysis/Pre-Calc Teacher Rec. |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 3177BC | Advanced Placement Calculus BC | 1 | | | | | | x | x | Advanced Placement Calculus AB |
| 3138 | Mathematics Senior Capstone | 1 | | | | | | | x | Grade 12**, AFDA or Algebra II |
| 3190 | Probability and Statistics | 1 | | | | | x | x | x | Algebra II or AFDA |
| 3176 | Pre-Calculus (dual enrollment) | 1 | | | | | | x | x | Advanced Mathematics or A/B in Algebra II |
| 3176 | Applied Calculus (dual enrollment) | 1 | | | | | | x | x | Pre-Calculus Dual |
| 3191 | AP Statistics | 1 | | | | | | | x | Prob/Stats |

**Students must have at least two of the three criteria;**refer to course description for all prerequisites.*

# Science
# Middle School Science Courses

**Introduction to Earth and Environmental Science – Grade 6** **Semester**
**Course No. 4105**
Sixth grade science builds on the scientific concepts, skills, and processes acquired in kindergarten through fifth grade. Students will experience the richness and excitement of scientific discovery and the natural world as they study the role of the sun's energy on the Earth's systems, air and atmosphere, human interactions as they affect watershed systems, and basic chemistry concepts. The concept of change is explored through the study of transformations of energy and matter. A more detailed understanding of the solar system and space exploration takes students on a collaborative quest for knowledge and understanding. Emphasis is placed on development and use of an experimental design in scientific inquiry, use of the language of science to communicate understanding, and investigation of phenomena using technology.

**Life Science – Grade 7** **Semester**
**Course No. 4115**
The living world is emphasized by studying change, life cycles, patterns, and relationships. Students gain an understanding of these principles through the following: the study of organization and the classification of organisms; the relationship among organisms; populations, communities and ecosystems; and change due to the transmission of genetic information from generation to generation. Skills with data analysis are continued along with the introduction of the manipulation of variables in experimentation and identifying sources of experimental error.

**Physical Science – Grade 8** **Semester**
**Course No. 4125**
**SOL Tested Course**
Physical Science emphasizes the nature and structure of matter and the characteristics of energy. Areas of study include the following: the periodic table; physical and chemical changes; nuclear reactions; temperature and heat; sound; light; electricity and magnetism; and work, force, and motion. Research and experimentation and the manipulation of variables to validate conclusions will also be part of the class. Students will share their work through written and oral presentations. Students will take a Virginia Standard of Learning test upon completion of this course.

## High School Science Courses

**Environmental Science - Grade 9** **Semester – 1 Credit**
**Course No. 4611**
This course is designed to continue the student investigations that began in grades K-8. Environmental Science will integrate the study of many components of our environment, including the human impact on our planet. A focus on scientific inquiry, the physical world, the living environment, resource conservation, humans' impact on the environment, and legal and civic responsibility will be woven throughout the course. Instruction will focus on student data collection and analysis through laboratory experiences and field work, including descriptive and comparative studies as well as investigation. Diverse viewpoints concerning the management of natural resources and environmental career options will be explored in this course.

**Biology - Grade 10** **Semester – 1 Credit**
**Course No. 4310**
**SOL Tested Course**
Biology is the study of living organisms at chemical, cellular, and systemic levels. Life functions and processes within the organism and between organisms are studied. The history of biological concepts and changes that occur within organisms and populations are presented. Laboratory work includes experiments, dissection, and microscopy. An SOL test is required upon completion of Biology. Biology meets the requirements of the Advanced Studies diploma.

**Earth Science -** **Semester – 1 Credit**
**Course No. 4210**
Earth Science is the study of a group of sciences with emphasis on the physical environment. Some of the major fields in the earth sciences are astronomy, geology, oceanography, meteorology, and paleontology. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**Earth Science II: Oceanography- Grade 11, 12** **Semester – 1 Credit**
**Course No. 4250**
*Prerequisites: completion of Biology with a C average or higher.*
Oceanography explores the physical, geological, and chemical properties of the world's oceans and its connection to the Earth's climate. Marine biology and ecology, with a special focus on the Chesapeake Bay ecosystem, will also be studied. Students will have the opportunity to handle living specimens and complete several dissections in this course.

**Biology II: Ecology** **Semester – 1 Credit**

**Course No. 4340**

*Prerequisites: Biology*

Ecology is the study of the interactions between living organisms and their physical environments. In this course, students will investigate topics involving their own Virginia ecosystem as well as other exotic ecosystems. Topics include scientific inquiry, matter and energy flow through ecosystems, geochemical cycles and biological processes for life. Content will traverse through the levels of ecological organization starting with the individual, populations, communities, ecosystems, biomes, and ending with global issues. Some laboratory work, field explorations, and discussions will be used to explore the content.

**Biology II: Advanced Survey of Zoology** **Semester – 1 Credit**

**Course No. 4320**

*Prerequisite: Biology*

The goal of the Zoology course is to introduce students to animal biology at an in-depth level. Students will study animal ecology, taxonomy, behavior, and explore the major divisions of the animal kingdom. Students will examine anatomy and physiology, classification, and identification of the major animal phyla including examples such as Porifera, Mollusca, Annelida, Arthropoda, and Chordata. Students will have the opportunity to handle living specimens and complete several dissections.

**Chemistry** **Semester – 1 Credit**

**Course No. 4410**

*Prerequisites: Biology, Geometry, and recommended Algebra II*

Chemistry is the study and investigation of the structure, properties, and behavior of matter. The course is designed to follow a sequential development of major chemistry principles. It also provides the student with a variety of laboratory work to introduce or reinforce these principles. This course is rigorous in mathematics and concurrent enrollment in or the completion of Algebra II is recommended. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**Biology II – Advanced Survey of Biology Topics** **Semester – 1 Credit**
**Course No. 4320**

*Prerequisite: Completion of Biology with a C average or higher*

This course is a more in-depth, rigorous study of biology, including topics in ecology, biochemistry, genetics, embryology, and comparative anatomy. Selected topics in genetic engineering, cloning, and bioethics are presented.

**Honors Physics** **Semester – 1 Credit**
**Course No. 4510**

*Prerequisite: Chemistry & Algebra II*

Physics is a science which describes and explains the interactions of matter and energy. Students gather information and organize it so that meaningful patterns emerge. Areas covered include properties of light and heat, the laws of motion, and the laws of magnetism and electricity. This course is rigorous in mathematics and it is recommended that students be concurrently enrolled in Pre-Calculus, Math Analysis, or Calculus.

**AP Chemistry** **Semester – 1 Credit**
**Course No. 4470**

*Prerequisite: Chemistry and Algebra II*

AP Chemistry is an introductory college level preparatory course. Students will build on their knowledge of general high school chemistry and elevate it through Units on atomic and molecular structure, intermolecular forces and chemical reactions, kinetics and thermodynamics, and acids and bases. Laboratory experiments and write-ups are key components of the course. Students have the option to take an end-of-course test which may qualify them for college credit. Prerequisites are general high school.

**SCIENCE PATHWAY**

| Course No. | Course Title | Credit | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Prerequisite |
|---|---|---|---|---|---|---|---|---|---|---|
| 4105 | Intro to Earth & Environmental Science | | x | | | | | | | |
| 4115 | Life Science | | | x | | | | | | |
| 4125 | Physical Science | | | | x | | | | | **None** |
| 4611 | Environmental Science | 1 | | | | x | | | | **None** |
| 4310 | Biology I | 1 | | | | | x | | | **None** |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 4210 | Earth Science | 1 | | | | | | x | x | **None** |
| 4250 | Earth Science II: Oceanography | 1 | | | | | | x | x | **Biology I and Environmental Science** |
| 4340 | Biology II: Ecology | 1 | | | | | | x | x | **Biology I** |
| 4320 | Biology II: Advanced Survey of Biology Topics | 1 | | | | | | x | x | **Biology I** |
| 4320 | Biology II: Advanced Survey of Zoology | 1 | | | | | | x | x | **Biology I** |
| 4410 | Chemistry | 1 | | | | | | x | x | **Biology, Geometry, and recommended Algebra II** |
| 4510 | Physics-Honors | 1 | | | | | | x | x | **Chemistry & Algebra II** |
| 4320 | Biology II: Anatomy and Physiology | 1 | | | | | | | x | **Biology & Chemistry** |
| | AP Chemistry | 1 | | | | | | | X | |

## Social Science and History
## Middle School Social Science & History Courses

**US History to 1865– Grade 6** **Semester**
**Course No. 2353**
Students will use skills for historical and geographical analysis to explore the early history of the United States and understand ideas and events that strengthened the union. The standards for this course relate to the history of the United States from pre-Columbian times until 1865. Students will continue to learn fundamental concepts in civics, economics, and geography as they study United States history in chronological sequence and learn about change and continuity in our history. They also will study documents and speeches that laid the foundation for American ideals and institutions and will examine the everyday life of people at different times in the country's history through the use of primary and secondary sources.

**US History 1865 to Present – Grade 7** **Semester**
**Course No. 2354**
Students will continue to use skills for historical and geographical analysis as they examine American history since 1865. The standards for this course relate to the history of the United States from the Reconstruction era to the present. Students should continue to develop and build upon the fundamental concepts and skills in civics, economics, and geography within the context of United States history. Students will use investigation as a foundation to delve into the political, economic, and social challenges facing the nation once reunited after the Civil War. This foundation provides a pathway to develop an understanding of how the American experience shaped the world's political and economic landscapes.

**Civics and Economics – Grade 8** **Semester**
**Course No. 2357**
**SOL Tested Course**
Students study the structure and functions of government at the national, state, and local levels and the United States economic system. Focus will be placed upon the principles and structure of American constitutional government, rights and responsibilities of American citizenship, political processes, economic principles and systems, and the role of government in the economy. An SOL test is required upon completion of Civics and Economics.

## High School Social Science & History Courses

**World Geography** **Year – 1 Credit**
**Course No. 2210**
World Geography examines the environmental and cultural patterns of the major world regions. Critical thinking skills are developed and applied as students examine demographic and economic data and investigate the causes, effects, and possible solutions to current international conflicts, problems, and environmental concerns. Map skills are extended as students use an atlas and varied types of maps in regional studies, build spatial perceptions, and develop a mental map of the world. Democratic values and citizenship are reinforced as students develop an appreciation of the cultural diversity of the world, learn to work cooperatively with classmates, and build an appreciation and concern for the environment.This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**World History I (Prehistory to 1500 A.D.)** **Semester – 1 Credit**
**Course No. 2215**
The course emphasizes how people in various cultures influence and are influenced by their physical interactions. The World History course will study major world developments from prehistory, the rise and growth of civilizations to the first empires dating to 1500 A.D. Emphasis will be placed upon early political and economic structures, religion and philosophy, and the arts and sciences. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**World History II (1500 A.D. to Present) Honors** **Semester – 1 Credit**
**Course No. 2216**
*Prerequisite: Teacher recommendation. A/B in World History I, teacher recommendation, and a passing score on World History I SOL.*
The World History course will study the rise and expansion of the modern world, modern world crises, and world events through the present. Emphasis will be placed upon political and economic structures in the modern world, religion and philosophy; and the arts and sciences. This course uses college level curriculum resources and is writing intensive. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**History of World Civilization I DE** **Semester 1 - Credit**
**Course No. 2291DUAL**
*DE RCC - HIS 111*
*Prerequisites: Teacher recommendation. Must have finished World History I with a grade of A/B and passed the World History I SOL with a score of 400 or greater.* Surveys Asian, African, Latin American, and European civilizations from the ancient period to the present. Part I of II. This is a Passport Transfer course.

**History of World Civilization II DE** **Semester - 1 Credit**
**Course No. 2292DUAL**
*DE RCC - HIST 112*
*Prerequisites: Teacher recommendation. Must have finished World History I with a grade of A/B and passed the World History I SOL with a score of 400 or greater.* Surveys Asian, African, Latin American, and European civilizations from the ancient period to the present. Part II of II. This is a passport transfer course.

**United States History – Grade 11** **Semester – 1 Credit**
**Course No. 2360**
This course covers U.S. History from Colonial Times to the Present, following the State Standards of Learning for U.S. history. Course grade is based upon classroom work and exams. This is a required course for all students.This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**United States History DE** **Semester – 1 Credit**
**Course No. 2319**
***DE RCC - HIS 121 & 122***

*Prerequisites: Teacher recommendation. Must have finished World History I with a grade of A/B and passed the World History I SOL with a score of 400 or greater. Recommend: Reading/Writing SOL score of 450 or greater. Recommend only 11th or 12th grade students in these classes.* This course explores the developments that have shaped U.S. history through the critical analysis of historical events and materials. This course has an associated Standards of Learning (SOL) test. Students will participate in these tests only when they have not yet earned sufficient credit for graduation and/or satisfied federal testing requirements.

**United States Government – Grade 12** **Semester – 1 Credit**
**Course No. 2440**
*Prerequisite: U.S. History*
The student will study various types of past and present forms of government, aspects of democracy, the three branches of government, the U S Constitution, the world's economy, and foreign policy. World political systems, with emphasis on communism, will be studied. The

student will become aware of his/her rights and responsibilities. This is a required course for all students.

**U.S. Government and Politics & State and Local Government DE** **Semester/Year - 1 Credit**
**Course No. *2445***

***DE RCC –PLS 135 & PLS 136***

*Prerequisites: Teacher recommendation. Must have finished U.S. History with a grade of A/B and passed the World History I or U.S. History SOL with a score of 400 or greater. Recommend: Reading/Writing SOL score of 450 or greater.*

Teaches the political structure, processes, institutions, and policymaking of the US national government. Focuses on the three branches of government, their interrelationships, and how they shape policy. Addresses federalism; civil liberties and civil rights; political socialization and participation; public opinion, the media; interest groups; political parties; elections; and policymaking. The assignments in the course require college-level reading fluency and coherent communication through written reports. This is a Passport Transfer course.

**The Second World War DE** **Semester – 1 Credit**
**Course No. 2296-Local History Elective**
***DE RCC - HIS 267***
*Prerequisites: Teacher recommendation. Must have finished World History I with a grade of A/B and passed the World History I SOL with a score of 400 or greater. Recommend: Reading/Writing SOL score of 450 or greater.* Examines causes and consequences of the Second World War. Includes the rise of totalitarianism, American neutrality, military developments, the home fronts, diplomacy, and the decision to use the atomic bomb.

**The American Constitution DE** **Semester -1 Credit**
**Course No. 2297-Local History Elective**
***DE RCC - HIS 268***
*Prerequisites: Teacher recommendation. Must have finished World History I with a grade of A/B and passed the World History I SOL with a score of 400 or greater. Recommend: Reading/Writing SOL score of 450 or greater.* The American Constitution analyzes the origin and development of the United States Constitution. Includes the evolution of civil liberties, property rights, contracts, due process, judicial review, federal-state relationships, and corporate-government relations.

**SOCIAL SCIENCE & HISTORY PATHWAY**

| Course No. | Course Title | Credit | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Prerequisite |
|---|---|---|---|---|---|---|---|---|---|---|
| 2353 | US History to 1865 | | x | | | | | | | |
| 2354 | US History 1865 to Present | | | x | | | | | | |
| 2357 | Civics and Economics | | | | x | | | | | |
| 2210 | World Geography | 1 | | | | x | | | | |
| 2215 | World History I | 1 | | | | x | | | | |
| 2216 | World History II | 1 | | | | | x | | | |
| 2291 | DE World Civilization I | 1 | | | | | x | x | | Pass WHI SOL, TR |
| 2292 | DE World Civilization II I | 1 | | | | | | x | x | Pass WHI SOL, TR |
| 2360 | United States History | 1 | | | | | | x | | 11th Grade |
| 2319 | DE US History | 1 | | | | | | x | | Pass WHI SOL, TR |
| 2440 | United States Government | 1 | | | | | | x | x | 12th Grade US History |
| 2445 | DE United States Government | 1 | | | | | | | x | 12 Grade, TR, SOL (450) |
| | | | | | | | | | | |

## Visual & Performing Arts

## Middle School Art Classes

**Beginning Art – Grade 6** **Quarter**
**Course No. 9103**
This course includes a framework that aids the student in learning the characteristics of visual arts by using a wide range of subject matter, symbols, meaningful images and visual expressions. The student will continue to use an expanding art vocabulary while describing his or her work and the work of others. Artwork should reflect increased manual and creative skills in addition to expanded knowledge of the use and application of the elements of design. The student should be able to classify two-dimensional and three-dimensional images and construct a three-dimensional form. An introduction of color theory should give the student an ability to identify and construct a simple color wheel. *(This is a 9-week course and part of the 6th Grade rotation).*

**Intermediate Art – Grade 7** **Year**
**Course No. 9105**
This course teaches the development of visual perception and recording from direct observation, memory and the imagination. The student should prepare and develop an idea or theme by collecting and organizing visual resources. In classroom discussions, the student will continue to use expanding Art vocabulary while describing his expanded knowledge of the use of texture, pattern, shape, line and color. The student should be able to apply the basic rules of perspective, proportion, value, and color theory. The student should be able to manipulate distance, size, and placement to create three-dimensional effects on a two-dimensional plane.

**Art – Grade 8** **Year**
**Course No. 9120**
In this foundation course, emphasis is placed on the elements and principles of design. The student will put into use these elements and principles through a variety of media. Drawing, painting, graphics, and 3-D activities will comprise the curriculum with an emphasis on design and composition in each area.

## High School Art Classes

**Art I – Foundations** **Semester**
**Course No. 9120**
The major objective of this introductory course is to teach an understanding and appreciation for studio art and art history as they relate to each other. Students will be taught art history in a chronological order and at the same time will be taught the elements and principles of art. Art skills will be developed as students develop an appreciation of art. A textbook will be utilized in this course**.** A portfolio, sketchbook and notebook are required.

**Art II – High Renaissance – 20th Century Art** **Semester**
**Course No. 9130**
*Prerequisite: Art I*
This course is a continuation of Art I with a focus on the High Renaissance through 20th century Art. Students will continue to build on their understanding of the elements and principles of art through the study of Art History. Students will also continue to develop their art skills. A textbook will be utilized in this course. A portfolio, sketchbook, and notebook are required.

**Art III – Introduction to Drawing & Painting** **Semester**
**Course No. 9140**
*Prerequisites Art I & II*
Drawing: Introduction to drawing concentrates on understanding and manipulating the two-dimensional surface through a series of structured drawing problems, including still-life, environment and live model. Shape, form, line, surface, value and texture are investigated with a variety of media. Drawing media includes charcoal, ebony pencil, and India ink.
Painting: Introduction to painting provides an exploration of paint as a physical, as well as a visual medium. Students will become familiar with color, surface, space, and texture through a variety of subject matter. Painting media includes watercolor, acrylic tempera, and oil paint. A portfolio, sketchbook and notebook are required for both drawing and painting.

**Art IV – Sculpture including ceramics** **Semester**
**Course No. 9140**
*Prerequisites Art I, II, & III*
This introductory course focuses on developing and understanding the three-dimensional form. Students will explore the behavior of, and experiment with, traditional and contemporary sculpting materials, such as and not limited to paper, clay, stone, wire, and plaster. A portfolio, sketchbook and notebook are required.

**Graphic Arts Design I** **Semester**
**Course No. 9153**
*Prerequisite: Art I*
This course is designed to acquaint students with the basic principles of Graphic Design. Emphasis will be placed on conceptual design, illustration, and color theory. Students will explore the fundamentals of advertising layout, graphic design, and various forms of illustration: pen and ink, gouache, airbrush, watercolor, color pencil, acrylic and markers. Students will have access to the art lab where they will be introduced to the computer and various software programs to be used as design tools.. A portfolio, sketchbook and notebook are required.

**Photography I** **Semester**
**Course No. 9195**
*Prerequisite: Art I*
Students will become acquainted with various aspects of creating and manipulating the digital image. Students will be introduced to the basic principles and applications of digital photography as a medium. Students will capture images using the digital camera while emphasizing the manipulation of camera controls, exposure, lighting, on and off camera flash, web and image storage and archival. Students are required to have a digital camera (point and shoot or DSLR).

**ART PATHWAY**

| Course No. | Course Title | Credit | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Prereq. |
|---|---|---|---|---|---|---|---|---|---|---|
| 9103 | Art 6 -Beginning Art | | x | | | | | | | |
| 9105 | Art 7 - Intermediate Art | | | x | | | | | | |
| 9120 | Art 8 - Foundations | | | | x | | | | | |
| 9120 | Art I | 1 | | | | x | x | x | x | |
| 9130 | Art II | 1 | | | | x | x | x | x | Art I |
| 9140 | Art III | 1 | | | | | x | x | x | Art I & II |
| 9145 | Art IV | 1 | | | | | | x | x | Art I, II, & III |
| 9153 | Graphic Arts Design | 1 | | | | x | x | x | x | Art I |
| 9195 | Photography I | 1 | | | | x | x | x | x | Art I |

## Chorus

**Beginning Chorus – Grade 6** **Quarter**
**Course No. 9269**
Beginning Chorus is offered to students who wish to develop their knowledge, understanding, and appreciation of vocal music. It offers students the opportunity to improve their vocal technique and skills in musicianship, to develop an understanding and appreciation for vocal music, and to participate in concerts. The selection of music for study and performance may be based upon a variety of styles and/or periods of music history and provides a variety of vocal experiences**.**

**Intermediate Chorus – Grade 7** **Year**
**Course No. 9270**
This course builds upon the content of beginning chorus by extending a student's skills and understanding of musical compositions, basic theory structure, music history, vocal pedagogy, proper vocal production and technique. The goals of the course are based on the Virginia Standards of Learning and set higher expectations in a student's knowledge and understanding of vocal technique; elements of music theory; ear training; sight-singing; music repertoire development; music history, analysis and technology. Continued development of the student's ability to perform as an ensemble is a strong focus for the course. Additional goals continue as students are guided to understand the role of music in our society; appreciate different cultures and customs; acquire stage presence and decorum; and maintain positive attitudes for further choral study.

**Advanced Chorus – Grade 8** **Year**
**Course No. 9271**
Advanced chorus builds upon the content of the beginning and intermediate courses and establishes a higher expectation level for a student's development and refinement of skills and understanding of musical compositions, basic theory structure, music history, vocal pedagogy, proper vocal production and technique. The goals of the course are based on the Virginia Standards of Learning. These goals target increasing and deepening a student's knowledge and understanding of vocal technique, music theory, ear training, sight-singing, music repertoire, music history, analysis, and technology. The continued development of the student's ensemble performance skills is a strong focus for the course. Students also extend their understanding of music through interdisciplinary activities and exploration of career opportunities in the field of music. Additional goals continue to guide students to understand the role of music in our society; appreciate different cultures and customs; acquire stage presence and decorum; maintain positive attitudes for further choral study in high school; and to prepare for a positive high school chorus experience.

**Concert Choir** **Year**
**Course No. 9296**
The purpose of Concert Choir is to provide students with an opportunity to participate in a vocal performing ensemble. Emphasis will be placed on preparing and presenting choral pieces at concerts throughout the year. Students will learn basic musical notation and terminology, as well as music history. This course is for high school students.

**Music Appreciation - Grade 8**
**Course No. 9170**
This course introduces students to the history, theory, and genres of music. The course explores the history of music, from the surviving examples of rudimentary musical forms through to contemporary pieces from around the world. The course explores the relationship between music and social movements and reveals how the emergent global society and the prominence of the Internet are making musical forms more accessible worldwide.

## Band

**Beginning Band – Grade 6** **Year**
**Course No. 9230**
Beginning Band develops students' basic instrumental skills. These skills will provide a solid foundation upon which students will build as they advance to the intermediate level. Through classroom performance, students will learn the mechanics of proper sound production, will attain knowledge of rhythm and rhythm patterns, and will begin developing the social skills necessary to function successfully in a group situation. Students must supply their own instruments. This is not a rotating class. Students who sign up for band will take band for the entire school year.

**Intermediate Band – Grade 7** **Year**
**Course No. 9231**
This is a full year course. Intermediate band is a continuation of Beginning Band. In intermediate band, the student continues to learn proper playing technique and develop ensemble skills. The teacher follows the county adopted curriculum, which is based on the Virginia Standards of Learning. Evaluation of progress is based on individual playing tests, written work, and daily class participation. Daily at-home practice is necessary to continue mastering playing technique. The student will attend scheduled performances, which are extensions of classroom material.

**Advanced Band – Grade 8** **Year**
**Course No. 9229**
This is a full year course. Advanced band is a continuation of beginning and intermediate band. In advanced band, the student refines playing skills and develops higher-level listening skills. The teacher follows the county adopted curriculum, which is based on the Virginia Standards of Learning. Evaluation or progress will be based on individual playing tests, written work, and daily class participation. Daily at-home practice is necessary to continue mastering playing technique. The student will attend scheduled performances, which are extensions of classroom materials.

**High School Symphonic Advanced Band** **Year– 2 Credit**

**Course No. 9234**

Emphasis is on the continuation of developing musical skills through performance of concerts and festivals. Additional emphasis will be placed on band history, notation, and creativity. Students must have at least three years (middle school band) experience on his/her instrument. Students wishing to take band may be required to audition to show that they can function musically at the level of the band.

**CHORUS & BAND PATHWAY**

| Course No. | Course Title | Credit | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Prerequisite |
|---|---|---|---|---|---|---|---|---|---|---|
| 9269 | Beginning Chorus | | x | | | | | | | |
| 9270 | Intermediate Chorus | | | x | | | | | | |
| 9271 | Advanced Chorus | | | | x | | | | | |
| 9230 | Beginning Band | | x | | | | | | | |
| 9231 | Intermediate Band | | | x | | | | | | |
| 9229 | Advanced Band Grade 8 | | | | x | | | | | |
| 9222 | Music Appreciation 8 | | | | x | | | | | |
| 9234 | High School Symphonic Advanced Band | 1 | | | | x | x | x | x | 3 Years of middle school band or audition. |
| 9296 | Concert Choir | 1 | | | | x | x | x | x | Director recommendation |

## World Languages

## Middle School Courses

**French I** **Year NMS – 1 Credit**
**Course No. 5110**
*Prerequisite: Current 8th grader with an A in 7th grade reading and a Pass Advanced Reading SOL score*
In this beginning level course, students will start their acquisition of the French language with the development of speaking and listening skills. Focus is given to creative speaking proficiency at a novice level. Students will have additional practice with reading and writing French as they explore geography, culture, and customs of the Francophone countries. Middle school students are enrolled on a limited basis based on their academic achievement and course availability.

**High School Courses**

**French I** **Semester - 1 Credit**
**Course No. 5110**
In this beginning level course, students will start their acquisition of the French language with the development of speaking and listening skills. Focus is given to creative speaking proficiency at a novice level. Students will have additional practice with reading and writing French as they explore geography, culture, and customs of the Francophone countries. Middle school students are enrolled on a limited basis based on their academic achievement and course availability.

**French II** **Semester -1 Credit**
**Course No. 5120**
*Prerequisite: French I*
*Recommended: C or better in French I*
This course continues to build on the speaking and listening skills established in French I. Focus is given to developing reading and writing in French along with continued use of the language in class. The functions of language will be expanded and increased communication in French is required in the classroom.

**French III** **Semester – 1 Credit**
**Course No. 5130**
*Prerequisite: French II*
*Recommended: C or better in French II*
The course continues to refine the four skills areas learned in French I and II: listening, speaking, reading, and writing. With much of the course conducted exclusively in French, students will learn and apply new grammatical structures to higher level vocabulary in order to further expand

communication skills. Primary focus is on speaking proficiency in non-scripted and unrehearsed settings.

**French IV Honors** **Semester – 1 Credit**
**Course No. 5140**
*Prerequisite: French III, C or better in French III*
*Depending on enrollment, students in French IV may have combined classes with other levels of French.*
With the course conducted primarily in French, students will refine higher level grammatical structures and vocabulary in order to further expand proficiency in all four skill areas: listening, speaking, reading, and writing. Appropriate authentic texts in listening and reading are the primary focus of this upper level course.

**Spanish I** **Semester - 1 Credit**
**Course No. 5510**
In this beginning level course, students will start their acquisition of the Spanish language with the development of speaking and listening skills. Focus is given to creative speaking proficiency at a novice level. Students will have additional practice with reading and writing Spanish as they explore geography, culture, and customs of the Spanish-speaking countries.

**Spanish II** **Semester – 1 Credit**
**Course No. 5520**
*Prerequisite: Spanish I*
*Recommended: C or better in Spanish I*
This course continues to build on the speaking and listening skills established in Spanish I. Focus is given to developing reading and writing in Spanish along with continued use of the language in class. The functions of language will be expanded and increased communication in Spanish is required in the classroom.

**Spanish III** **Semester – 1 Credit**
**Course No. 5530**
*Prerequisite: Spanish II*
*Recommended: C or better in Spanish II*
The course continues to refine the four skills areas learned in Spanish I and II: listening, speaking, reading, and writing. With much of the course conducted exclusively in Spanish, students will learn and apply new grammatical structures to higher level vocabulary in order to further expand communication skills. Primary focus is on speaking proficiency in non-scripted and unrehearsed settings.

**Spanish IV Honors** **Semester – Credit 1**
**Course No. 5540**
**Prerequisite: Spanish III, C or better in Spanish III*
*Depending on enrollment, students in French IV may have combined classes with other levels of Spanish.*

With the course conducted primarily in Spanish, students will refine higher level grammatical structures and vocabulary in order to further expand proficiency in all four skill areas: listening, speaking, reading, and writing. Appropriate authentic texts in listening and reading are the primary focus of this upper level course.

**WORLD LANGUAGE PATHWAY**

| Course No. | Course Title | Credit | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Prerequisite |
|---|---|---|---|---|---|---|---|---|---|---|
| 5110 | French I | 1 | | | x | x | x | x | x | |
| 5120 | French II | 1 | | | | x | x | x | x | French I |
| 5130 | French III | 1 | | | | x | x | x | x | French II |
| 5140 | French IV | 1 | | | | | x | x | x | French III |
| 5510 | Spanish I | 1 | | | | x | x | x | x | |
| 5520 | Spanish II | 1 | | | | x | x | x | x | Spanish I |
| 5530 | Spanish III | 1 | | | | | x | x | x | Spanish II |
| 5540 | Spanish IV | 1 | | | | | x | x | x | Spanish III |

## Health & Physical Education

## Middle School Courses

**Health and Physical Education – Grade 6** **Year**
**Course No. 7110**
Students in Middle School Physical Education will develop fundamental skills and build them into more skilled movements as they progress through eighth grade. In all grades, students will focus on cooperative and competitive games, dance and lifetime activities as appropriate for their development. Through these activities, students will gain knowledge in rules, decision making, conflict resolution, appropriate etiquette and respect for others. Students will focus on personal wellness and goal setting as it relates to their cardio respiratory endurance, muscular strength, muscular endurance, flexibility, and body composition. In Health, students will cover a variety of topics relating to body systems, nutrition, first aid, safety, alcohol, tobacco, drugs, family life and disease.

**Health and Physical Education – Grade 7** **Year**
**Course No. 7120**
Students in middle school Physical Education will develop fundamental skills and build them into more skilled movements as they progress through eighth grade. In all grades, students will focus on cooperative and competitive games, dance and lifetime activities as appropriate for their development. Through these activities, students will gain knowledge in rules, decision making, conflict resolution, appropriate etiquette and respect for others. Students will focus on personal wellness and goal setting as it relates to their cardio respiratory endurance, muscular strength, muscular endurance, flexibility and body composition. In Health, students will cover a variety of topics relating to body systems, nutrition, first aid, safety, alcohol, tobacco, drugs, family life and disease.

**Health and Physical Education – Grade 8** **Year**
**Course No. 7200**
Students in middle school Physical Education will develop fundamental skills and build them into more skilled movements as they progress through eighth grade. In all grades, students will focus on cooperative and competitive games, dance and lifetime activities as appropriate for their development. Through these activities, students will gain knowledge in rules, decision making, conflict resolution, appropriate etiquette and respect for others. Students will focus on personal wellness and goal setting as it relates to their cardio respiratory endurance, muscular strength, muscular endurance, flexibility, and body composition. In Health, students will cover a variety of topics relating to body systems, nutrition, first aid, safety, alcohol, tobacco, drugs, family life and disease.

## HIGH SCHOOL COURSES

**Health and Physical Education – Grade 9** **Semester – 1 Credit**
**Course No. 7300**
Health & Physical Education is required for all students in grades nine and ten. Students in grade nine integrate a variety of health concepts, skills, and behaviors to plan for their personal, lifelong health goals. These include awareness and consequences of risky behaviors, disease prevention, overall wellness, and identification of community health resources. Students demonstrate competence in their knowledge and skills. They see themselves as having an active role in creating a healthy lifestyle for themselves, for their families, and for the community.

Students in grade nine complete the transition from modified versions of movement forms to more complex applications across all types of physical activities. This may include outdoor pursuits, fitness activities, dance and rhythmic activities,individual performance activities, and games and sports (net/wall, striking/fielding, and goal/target). Students demonstrate the ability to use basic skills, strategies, and tactics in a variety of lifetime physical activities.

***First Aid, CPR & AED Training**
Students, beginning with first-time ninth grade students in the 2016-2017 school year, are required to be trained in emergency first aid, CPR and the use of AEDs, in order to earn a standard or advanced diploma. **Student's not completing this requirement will receive an "I" until the requirement has been met.**

**Health and Physical Education – Grade 10** **Semester – 1 Credit**
**Course No. 7405**
***Prerequisite: a student must have successfully completed Health and Physical Education 9 with a "D" or higher to be enrolled in Physical Education 10. Special circumstances may arise that require special consideration for a student.***
Health & Physical Education is required for all students in grades nine and ten. The content of the tenth grade course consists of driver education, mental health, teenage problems, drug abuse, and parenthood and family life education.Students in grade ten demonstrate comprehensive health and wellness knowledge and skills. Their behaviors reflect a conceptual understanding of the issues associated with maintaining good personal health. They serve the community through the practice of health-enhancing behaviors that promote wellness throughout life.

Students in grade 10 are proficient in fundamental movement skills and skill combinations and are competent in self-selected physical activities that they are likely to pursue throughout life including outdoor pursuits, fitness activities, dance and rhythmic activities, selected individual performance activities, and net/wall and target games. They understand and apply concepts and principles of mechanics and anatomy in relation to human movement and apply the concepts and principles of the body's metabolic response to short-term and long-term physical activity.

**Conditioning I** **Semester – 1 Credit**
**Course No. 7640 – C**
*Prerequisite: a student must have successfully completed Health and Physical Education 9 with a "B" or higher (OR a "C" average with previous teacher approval).*
Advanced Conditioning is designed to teach the student-athlete the proper warm- ups, exercises, and techniques involved in weightlifting of free weights. In addition, the student will be taught foot speed and other cardiovascular drills that will enhance the aerobic condition of the athlete. Ongoing assessment includes both written and performance-based skill evaluations.

**Conditioning II** **Semester – 1 Credit**
***Prerequisite: a student must have successfully completed Conditioning I with a "B" or higher (OR a "C" average with previous teacher approval).***
Advanced Conditioning is designed to teach the student-athlete the proper warm- ups, exercises, and techniques involved in weightlifting of free weights. In addition, the student will be taught foot speed and other cardiovascular drills that will enhance the aerobic condition of the athlete. Ongoing assessment includes both written and performance-based skill evaluations.

**Advanced Physical Education I** **Semester - 1 Credit**
**Course No. 7800 - ADV**
*Prerequisite: a student must have successfully completed Health and Physical Education 9 & 10 with a "B" or higher (OR a "C" average with previous teacher approval).*
Advanced Physical Education promotes lifetime sport and recreational activities and provides an opportunity for an in-depth student in specific areas. The student will participate in activities that include (1) health-related fitness activities (cardiorespiratory endurance, muscular strength, and endurance, flexibility and body composition), (2), team sports; (3) individual or dual sports, and (4) outdoor pursuits. It includes the study of physical development concepts and principles of sport and exercise as well as opportunities to develop or refine skills and attitudes that promote lifelong fitness. Ongoing assessment includes both written and performance-based skill evaluations. This course is open to both females and males.

**Advanced Physical Education II** **Semester – 1 Credit**
***Prerequisite: a student must have successfully completed* Advanced Physical Education *I with a "B" or higher (OR a "C" average with previous teacher approval).***

## Family Life

The Family Life Program is designed to help students understand and adjust to the pressures of growing up. The program promotes a positive self-concept; develops communication and decision-making skills; helps students understand and cope with emotional growth and development; and promotes positive family and social skills to say "no" to relationships or substances that can be physically and emotionally harmful to them. Factual information addresses physical growth and development, reproduction, sexually transmitted diseases, child abuse,

molestation, and the value of postponing sexual activity until marriage. The health teacher provides the Family Life standards and an opt-out form with the syllabus.

## Driver Education

At Northumberland High School, classroom driver education is taught through the tenth grade health and physical education classes. If a teacher is available and there is student demand, classroom driver education is taught during the summer months.

The in-car phase of driver education is arranged between student and instructor. Students must be passing classroom driver education at a level satisfied by the teacher.

The Regulations Establishing Standards for Accrediting Public Schools in Virginia, September, 1997, state "Classroom driver education shall count for 36 class periods minimum of health education."

**Obtaining an Instruction Permit**

If the applicant is at least 15 years 6 months old and under the age of 18, he/she may obtain an instructional permit at a DMV customer service center after completing the following requirements:

1. Complete the Virginia driver's license application form.
2. Furnish proof of a social security number.
3. Provide an original identification document certifying name and date of birth.
4. Furnish proof of residency, either by submission of a Certificate of Enrollment form available in the guidance office, presentation of 'official' mail addressed to the applicant, or by verification by a parent/guardian.
5. Pass knowledge and vision tests.
6. Have a photo taken.

**Driver Education Behind-the-Wheel Road Test**

Students are required to take a road test as a part of behind-the-wheel driver education training. Students who do not pass the road test will be required to complete additional practice time with their parents/guardian and the driver education instructor before retaking the test. The 45-hour Parent-Teen Guide must be finished in its entirety before license is issued. Students are required to clear all financial obligations with the school before beginning the in-car phase of driver's education.

**Obtaining a Driver's License**

The minimum age to apply for a license is 16 years 3 months. A driver's license applicant must be in good academic standing and regularly attending school. If the applicant is under the age of eighteen, the following requirements must be completed IN ORDER TO OBTAIN A DRIVER'S LICENSE:

1. The student must hold a valid learner's permit for a period of at least 9 months and successfully complete a classroom and behind-the-wheel driver education program that includes the following components: alcohol and other drugs, road rage, motorcycle

awareness, organ transplant, and a road skills test. The classroom instruction is 36 periods minimum and the behind-the-wheel instruction includes 7 periods of driving and 7 periods of observation time.

2. After successfully completing the classroom and behind-the-wheel driver education program and passing the road test, the student will be issued a temporary license that is valid for 180 days. A parent's signature and drivers license number is required on the TDL-180 before being issued to their child.
3. The 45 hour Parent Teen Guide must be finished in its entirety before license is awarded.
4. The school will send the DMV a copy of the temporary license. DMV will process the temporary license and mail the permanent license to the judge of the local Juvenile and Domestic Relations Court.
5. The court will notify the student by mail as to when to appear before the judge with a parent/guardian to receive the permanent license. If a parent does receive a court date within 60 days of the expiration of the TDL-180, then it is the parent's responsibility to contact the court.

**Students 18 Years of Age or Older**

If you are **18** years of age or older, and you have not previously held a driver's license, you must show proof that either a) you passed a state-approved driver education course which consists of both the classroom and in-car phases, or b) you held a learner's permit at least 30 days before taking the DMV road skills test.

**Partners for Safe Teen Driver:**

**All Northumberland High School students who plan to receive their license must attend this program with their parents when the dates are announced by the high school.** The agenda of the program includes the Driver Education curriculum, insurance for the teen driver, your role in coaching your teen's driving, and traffic laws that affect teen drivers.

**Policy: In-Car Traffic Safety Education:**

Any student found guilty of a traffic violation or whose school behavior indicates that they may not be responsible enough to safely operate a motor vehicle, will not be permitted to participate in the Northumberland County's driver education in-car phase. The student is to find an alternate program in order to complete their in-car phase. Offenses include drug and alcohol abuse, theft, assault, or any other violent behavior.

**Driving Skills:**

Students may be required by the instructor to receive additional time driving either with the instructor or with their mentor in order to improve driving skills.

**Road Test:**

The student will have **three** chances to pass the road test. In the event the student fails the road test the **third** time, **students may have to retake all lessons associated with behind the wheel again at the expense of the student/parent.**

**HEALTH & PHYSICAL EDUCATION PATHWAY**

| Course No. | Course Title | CREDIT | 6 | 7 | 8 | 9 | 10 | 11 | 12 | Prerequisite |
|---|---|---|---|---|---|---|---|---|---|---|
| 7110 | Health & Physical Education 6 | | x | | | | | | | |
| 7120 | Health & Physical Education 7 | | | x | | | | | | |
| 7200 | Health & Physical Education 8 | | | | x | | | | | |
| 7300 | Health & Physical Education 9 | 1 | | | | x | x | x | x | |
| 7405 | Health/DRED/ Physical Education 10 | 1 | | | | | x | x | x | Health/PE 9 |
| 7640-C | Advanced Conditioning | 1 | | | | | x | x | x | Must have passed Health and PE 9 with a “B” or higher OR have previous instructor approval |
| 7800-ADV | Advanced Physical Ed. | 1 | | | | | x | x | x | Must have passed Health and PE 10 with a “B” or higher OR have previous instructor approval |

## Career & Technical Education (CTE)

## Middle School Courses

**Career Explorations - Phase I** **Quarter**
**Grades 6 - 8**
Course No. 9068
This course prepares students to be "career investigators." To obtain the title, students must assess their roles in society, identify their roles as workers, analyze their personal assets, complete a basic exploration of career clusters, select career fields or occupations for further study, and create a plan based on their academic and career interests.

**Keyboarding – Grades 6-8** **Quarter**
**Course No. 9840**
This course is designed for middle school students to develop and enhance touch skills for entering alphabetic, numeric, and symbol information on a keyboard. Students compose and produce personal, educational, and professional documents.

**Computer Solutions - Grades 6-8** **Year**
**Course No. 6610**
Students are introduced to computing devices and software as problem-solving tools. Emphasis is placed on using basic touch keyboarding skills to complete a variety of projects incorporating word processing, database, presentation, and spreadsheet software. Basic Internet safety, coding, and device maintenance are components of this course.

**Digital Technology Foundations - Grades 6-8** **Year**
**Course No. 6161**
This foundation course introduces the use of relevant and emerging technologies, tools, and applications to prepare students for current workplace practices and everyday life. Students will demonstrate information processing using a variety of hardware and software and Internet-based tools to produce and integrate data in various formats. This course is designed for students wishing to progress through more advanced business and information technology coursework. Recommended prerequisite(s): Keyboarding course(s) or teacher-approved demonstration and documentation of touch keyboarding skills

**Journalism 7 & 8** **Year-Middle School**
**Course No. 1220VIRT**
Students in this course will be responsible for creating the school newsletter. Students will build their vocabulary and writing skills through drafting, revising, editing, and publishing. Students will become familiar with the process of producing formal written documents, such as magazines and newspapers. Students will learn how to work within a team through interacting with others in the class. Therefore, the students will gain the importance of character development, social skills, life skills, communication skills, and ethical decision-making skills. It gives each student an opportunity to learn the relevance of education and the necessity of staying in school. The

lessons are designed to reinforce career awareness. The student will also develop and enhance touch skills for entering information using a keyboard to compose and produce personal, educational, and professional documents. This course is available to seventh and eighth grade students.

## Career and Technical Education (CTE) High School Courses

### CTE: Education & Training Cluster

This diverse career cluster prepares learners for careers in planning, managing and providing education and training services, and related learning support services. Millions of learners each year train for careers in education and training in a variety of settings that offer academic instruction, career and technical instruction, and other education and training services.

**Virginia Teachers for Tomorrow I – Grades 11 and 12** **Semester**
**Course No. 9062**
*DE RCC - EDU 100*
*Prerequisite – Application, GPA Min. of 2.7*

**Virginia Teachers for Tomorrow – Grades 11 and 12** **Semester**
**Course No. 9072**
*DE RCC - EDU 200*
*Prerequisite – Minimum B average in Virginia Teachers for Tomorrow I*
Provides an orientation to the teaching profession in Virginia, including historical perspectives, current issues, and future trends in education on the national and state levels. Emphasizes information about teacher licensure examinations, steps to certification, teacher preparation and induction programs, and attention to critical shortage areas in Virginia. Includes supervised field placement. Students have the option to take the PRAXIS I.

Virginia Teachers for Tomorrow (VTfT) fosters student interest, understanding, and appreciation of the teaching profession and allows secondary students to explore careers in education. Students build a foundation for teaching; learn the history, structure and governance of teaching; apply professional teaching techniques in the VTfT classroom; and reflect on their teaching experiences. Additional educational leadership opportunities are offered through the student organization, Future Educators Association. **Virginia Teachers for Tomorrow are now part of the Educator's Rising program.**

| Course Code | Course Title | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|
| 9062 | Virginia Teachers for Tomorrow* | | | x | x |
| 9072 | Virginia Teachers for Tomorrow II* | | | x | x |

**Dual Enrollment courses*

## CTE: Government and Public Administration Cluster

Government affects Americans in countless ways. In a democratic society, the government is the means of expressing the public will. This includes a variety of activities. In fact, virtually every occupation can be found within the government. There are, however, some activities that are unique to the government. The federal government defends us from foreign aggression; represents American interests abroad; deliberates, passes, and enforces laws; and administers many different programs. State and local governments pass laws or ordinances and provide vital services to constituents. There are many opportunities in government in every career area. The Government and Public Administration Career Cluster focuses on those careers that are unique to government and not contained in another Career Cluster.

**Military Science I - The Emerging Leader - 8th Grade** **Semester/Year**
**Course No. To Be Determine**
Students are introduced to the JROTC foundations, and fundamental U.S. citizenship rights and responsibilities are established and reinforced. Students learn personal growth and behaviors, team building, decision making, health and fitness, service learning, communication techniques, and map reading. Military customs and courtesies, proper uniform wear, and personal appearance guidelines are followed within the leadership lab, drill, and military ceremonies.

**Military Science I - The Emerging Leader** **Semester/Year**
**Course No. 7913**
Students are introduced to the JROTC foundations, and fundamental U.S. citizenship rights and responsibilities are established and reinforced. Students learn personal growth and behaviors, team building, decision making, health and fitness, service learning, communication techniques, and map reading. Military customs and courtesies, proper uniform wear, and personal appearance guidelines are followed within the leadership lab, drill, and military ceremonies.

**Military Science II - The Developing Leader** **Semester/Year**
**Course No. 7916**
Students are introduced to the fundamentals of leadership foundations and new U.S. citizenship rights and responsibilities that will help them develop as leaders in the program, school, and community. Students learn personal growth and behaviors, team building, first aid, decision making, health and fitness, service-learning, citizenship and government, communication techniques, management skills, and map reading. Military customs and courtesies, proper uniform wear, and personal appearance guidelines are followed within the leadership lab, drill, and military ceremonies.

**Military Science III - The Supervising Leader** **Semester/Year**
**Course No. 7918**
Students continue to develop their leadership and supervisory skills by experiencing command and staff leadership roles and functions. Students will look more deeply and apply leadership style, educational and personal growth/behaviors, team building protocol, decision-making strategies,

health and fitness strategies, service-learning evaluation, citizenship and government role and contribution. Additionally, communication skills are developed, including methods of instruction, preparation, and proper conduct of cadet-led classes. Human relations, group dynamics, orienteering, contemporary U. S. issues, and advanced military history studies.

**Military Science IV - The Managing Leader** **Semester/Year**
**Course No. 7919**
Students will experience a unique opportunity to lead and look at their role of leadership and management in continuous improvement. Students will explore essential aspects of post-secondary education, personal growth, and behavior (career exploration strategies and planning, personal independence and accountability, professional development), team building protocol (communication model and barriers), service-learning project management, and citizenship and government challenges that face fundamental principles of society. Additionally, the students will explore strategies for teaching and mentoring others.

**Military Science V - Growth Mindset for Leadership**
**Semester/Year**
**Course No. 9004**
Students develop competencies in identifying individual aptitudes in relation to effective leadership skills, understanding organizational behavior, using effective communication in the workplace, handling human resources and organizational problems, supervising and training employees, resolving conflict, and planning for the future. Continuing education in leadership is emphasized as well as practical leadership experiences in cooperation with school and community leaders.

**Military Science VI - Pragmatic Leadership** **Semester/Year**
**Course No. To be Determined**
This course is a continuum of planned activities and experiences designed to expand the classroom boundaries and prepare students for future career development opportunities. Students will engage in a capstone project and planned work-based learning activities in a real-world business, community professionals, or service-oriented workplace setting designed to foster in-depth engagement with leadership tasks. Students will have an unique opportunity to gain valuable applied experience and make connections in a professionally coordinated and supervised work-based learning environment, while allowing the partner organization or professionals to mentor and evaluate the student's talent.

*Note*: Leadership Development may be offered as a complement to an existing concentration sequence in any Career Cluster. In some instances, where noted, it may be combined with specific courses to create concentration sequences.

| Course Code | Course Title | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|
| TBD | Military Science I - The Emerging Leader | x | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7913 | Military Science I - The Emerging Leader | | x | x | x | x |
| 7916 | Military Science II - The Developing Leader | | x | x | x | x |
| 7918 | Military Science III - The Supervising Leader | | x | x | x | x |
| 7919 | Military Science IV - The Managing Leader | | x | x | x | x |
| 7920 | Military Science V - Growth Mindset for Leadership | | | x | x | x |
| TBD | Military Science VI - Pragmatic Leadership | | | | x | x |

## CTE: Health and Medical Sciences Cluster

The Law, Public Safety, Corrections & Security Career Cluster orients students to careers that promote health, wellness, and diagnosis as well as treat injuries and diseases. Some of the careers involve working directly with people, while others involve research into diseases or collecting and formatting data and information. Work locations are varied and may be in hospitals, medical or dental offices or laboratories, cruise ships, medevac units, sports arenas, space centers, or within the community.

**Advanced First Aid, CPR, and AED** **Semester/Year**
**Course No. 9840**
*DE RCC - EMS 101*
*Recommended: C or better in Medical Terminology*
This course will provide the most current guidelines for CPR developed by the American Safety and Health Institute (ASHI). The student will receive training in Cardiopulmonary Resuscitation (CPR/Automated External Defibrillator (AED)/Foreign Body Airway Obstruction (FBAO). The student will have an opportunity to become certified in Advanced First Aid and CPR. This course will provide the knowledge for the student to perform basic and advanced first aid. Students will be provided an opportunity to gain skills towards first aid competency such as patient assessment, splinting, controlling bleeding, poisoning and burns. Supervised lab time is provided for students to complete required projects.

**Emergency Medical Technician I** **Semester/Year**
**Course No. 8333**
*DE RCC - EMS 100/112*
*Prerequisite: Students must be at least 16 years old prior to the first day of EMT instruction and completed the EMT application.*
*Recommended: C or better in Advanced First Aid, CPR, and AED*
The tasks for this course represent the National and Virginia Emergency Medical Services (EMS) Educational Standards. Students explore and apply the fundamentals of EMS, anatomy, physiology, and medical terminology while demonstrating skills in assessing and managing patient care, including assessing the scene and understanding shock, resuscitation, and trauma. Successful

completion of this course and instructor endorsement qualifies students to enroll in EMT II to complete the program sequence. Students must complete a minimum of 85 percent of the didactic and lab aspects of the course, per 12VAC5-31-1501 in the Code of Virginia. Successful completion of all course requirements and instructor endorsement may lead to eligibility to take the Virginia State Psychomotor Exam and the National Registry of Emergency Medical Technicians (NREMT) cognitive exam. Students must meet the requirements of the Functional Position Description for the Basic Life Support Provider (refer to EMS.TR.14B and 12VAC5-31-1501 in the Code of Virginia).

**Emergency Medical Technician II** **Semester/Year**
**Course No. 8334**
*DE RCC - EMT 113/120*
*Prerequisite: Students must be at least 16 years old prior to the first day of EMT instruction and completed the EMT application.*
*C or better in Emergency Medical Technician I.*
The tasks for this course represent the National and Virginia Emergency Medical Services (EMS) Educational Standards. Students build on their knowledge and skills for providing basic life support by focusing on the areas of EMS operations, medical emergencies, and management of special patient populations. Supervised field experience that includes at least 10 patient contacts outside of school hours is required. Successful completion of this second course in the sequence will earn the student CTE completer status. Successful completion of all course requirements and instructor endorsement may lead to eligibility to take the Virginia State Psychomotor Exam and the National Registry of Emergency Medical Technicians (NREMT) cognitive exam. Students must meet the requirements of the Functional Position Description for the Basic Life Support Provider (refer to EMS.TR.14B and 12VAC5-31-1501 in the Code of Virginia). Students must complete a minimum of 85 percent of the didactic and lab aspects of the course, per 12VAC5-31-1501 in the Code of Virginia.

**Emergency Medical Technician III** **Semester/Year**
**Course No. 8335**
*Prerequisite: Successfully completed certification as an emergency medical technician.*
*DE RCC - EMS 195*
*Prerequisite: successful completion of NREMT exams and certification as an EMT*
This course is intended for students who have completed Emergency Medical Technician (EMT) I and II, obtained instructor approval, and who may have obtained EMT certification from the Virginia Office of Emergency Medical Services (OEMS). Students will strengthen the skills mastered in the basic courses as they acquire skills to assist advanced life support (ALS) providers, build on the foundations of emergency medical services (EMS) education, and meet education requirements for certification or recertification. Students also learn to coordinate with other public

health and safety services, such as fire control, law enforcement, and emergency 3 management. The course includes mentored as well as instructional experiences. Students must complete a minimum of 85 percent of the didactic and lab aspects of the course.

NOTE: Only students who have obtained EMT certification from the Virginia OEMS can be utilized as a lab assistant (to meet the 6:1 ratio requirement). This course has specific state laws and regulations from a governing medical board or agency.

The Virginia Department of Education, in collaboration with the Virginia Department of Health, is pleased to provide the High School Based Emergency Medical Technician (EMT) Educational Program Guidelines. The guidelines are based on the newly revised state and national standards for emergency medical technician programs. This document serves as a guide to school divisions for implementing the revised EMT program standards consistently in all high schools and technical centers statewide.

| Course Code | Course Title | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|
| 9840 | Advanced First Aid and Health Professional CPR | x | x | x | x |
| 8333 | Emergency Medical Technician I* | | | x | x |
| 8334 | Emergency Medical Technician II* | | | x | x |
| 8337 | Emergency Medical Technician III | | | | **x** |

**Dual Enrollment courses*

## CTE: Information Technology Cluster

The Information Technology Cluster offers students current technological advances in computer applications, systems, and communications, using the latest software available. In these classes a student's skills can be enhanced by participation in workplace learning activities, and/or The Future Business Leaders of America (FBLA).

**Digital Applications – Grades 9 and 10** **Semester / Year**
**Course No. 6611**

*DE RCC - AST 141/ITE 120*

This goal of this course is for students to develop real-life, outcome-driven skills for effective use of digital devices in their lives. Specific skills include: keyboarding, basic computer operations, component identification, basic troubleshooting, application software competency (word processing, spreadsheets, multimedia applications, databases), and career exploration. Students who successfully complete this course may be eligible for a series of digital badges to recognize achievement and possible industry certification examinations. Students who participate in this class are eligible for industry certifications such as the VA Workplace Readiness Certification.

**Computer Information Systems – Grades 10, 11, and 12** **Semester/Year**
**Course No. 6614**

*DE RCC - ITE 100/130*

*Prerequisite: Digital Applications or equivalent with a grade of C or above.*

This course enables students to apply problem-solving and critical thinking skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, and integrated software activities. Additional exposure to hardware components and troubleshooting is provided. Particular emphasis is placed on advanced Word Processing/Desktop Publishing capabilities coupled with Electronic Presentations. Students work individually and in groups to explore computer concepts, operating systems, networks, telecommunications, and emerging technologies. Students who participate in this class are eligible for digital badges and industry certifications such as Microsoft Office Specialist (MOS).

**Advanced Computer Information Systems – Grades 10, 11, and 12** **Semester/Year**
**Course No. 6615 Grade Levels: 10 – 12**

*DE RCC: ITE 140/215*

*Prerequisite: Computer Information Systems or equivalent with a C or above.*

This course enables students to apply problem-solving skills to real-life situations through advanced integrated hardware and software applications, including hardware refurbishing coupled with printed, electronic, and Web publications capabilities. Students work individually and in groups to explore advanced computer maintenance activities, Website development, programming, networking, emerging technology, and employability skills. Students who

participate in this class are eligible for digital badges and industry certification examinations such as additional Microsoft Office Specialist (MOS) certifications.

**Interface Design, Multimedia, Web, and Gaming Technologies Semester/Year**
**Course No. 6630**
*DE RCC - ITD 110/112*
*Prerequisites: Computer Information Systems or Graphics Arts Design or equivalent.*

This course provides students with the opportunity to develop proficiency in designing and creating interfaces, web and gaming projects. Students apply principles of layout and intelligent design in projects. In-class projects evolve around application of design in areas such as web and future Internet of Things (IOT) devices. Students also experience the basics of game design and applications in areas such as education and entertainment. Skills developed include problem-solving, critical thinking, and effective communication. Students who participate in this class are eligible for Industry certifications and digital badges.

| Course Code | Course Title | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|
| 6611 | *Digital Applications | x | x | x | x |
| 6614 | *Computer Information Systems | | x | x | |
| 6615 | *Advanced Computer Information Systems | | x | x | x |
| 6630 | *Interface Design, Multimedia, Web Technologies, and Gaming Technologies | | x | x | x |

**Dual Enrollment courses*

The Computer Applications Specialist Career Studies Certificate is made up of six classes, which adds up to 18 credits overall. With the Computer Applications Specialist program, students will learn data entry, word processing, using presentation software, using multimedia applications, and basic webpage design. All 18 credits can be earned at NHS by taking courses such as Computer Applications, Computer Information Systems, Advanced Computer Information Systems, or Interface Design. Each of these courses earns six (6) credits toward the 18 credits for the Computer Applications Specialist Career Studies Certificate.

## CTE: Agriculture, Food, and Natural Resources

Agricultural Education includes programs of study designed to prepare students for occupations in horticulture, agricultural business, natural resources management, agricultural machinery and production agriculture. Agricultural Education stresses the development of skills in all aspects of agricultural businesses and industries, including planning, management, safety, finances and leadership. Students learn workplace readiness and technical skills, along with participation in the student organization FFA, and (Supervised Agricultural Experience) as appropriate. A lab fee is required for all courses.

The FFA is the career and technical student organization for all individuals enrolled in the Agriculture Education program. It reinforces the Agriculture curriculum and provides opportunities for competition, travel, leadership and career development.

**Agriscience Exploration - 7th Grade, 9 or 18 week options** **Quarter/Semester**
**Course No. 8003, 8005**
Students explore science as it relates to agriculture and develop an understanding of human relations, communication, the importance of agriculture to the economy, and key scientific terms related to the field of agriculture. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

**Agriscience and Technology-8th Grade, 18 or 36 week options** **Semester/Year**
**Course No. 8001, 8004**
Through classroom instruction and hands-on laboratory activities, students will explore the fields of agriculture, food, and natural resources (AFNR), to include: global agriculture; new and emerging technologies; agricultural mechanics; and careers in agribusiness; animal systems; environmental services; food products and processing; natural resources systems; plant systems; and power, structural, and technical systems. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

**Introduction to Animal Systems** **Semester**
**Course No. 8008**
Students develop competency in each of the major areas of the animal systems career pathway including animal nutrition, reproduction, breeding, care, management, and safety. Students also learn agricultural mechanics skills applicable to animal systems. Contextual instruction and student participation in co-curricular career and technical student

organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

**Introduction to Plant Systems** **Semester**
**Course No. 8007**
Students develop competencies in each of the major areas of the Plant Systems career pathway, including applied botany, plant propagation, and plant care and selection. Instructional content also includes an introduction to the various aspects of the plant systems industry. Students learn agricultural mechanics applicable to plant systems. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

**Applied Agriculture Concepts** **Semester**
**Course No. 8073**
Students gain positive experiences through fundamental agricultural competencies needed for rural or urban living. Areas of instruction include food production, handling, and preparation; introduction to the livestock and poultry industry; soil, soil fertility, and cultural practices; mechanical applications; plant systems and disease/pest management for shrubs, lawns, pastures, gardens, and fruit trees. Electrical, plumbing, carpentry, and metalworking lab competencies are incorporated throughout the course. Contextual instruction and student participation in co-curricular career and technical student organization (CTSO) activities will develop leadership, interpersonal, and career skills. High-quality work-based learning (HQWBL) will provide experiential learning opportunities related to students' career goals and/or interests, integrated with instruction, and performed in partnership with local businesses and organizations.

| Course Code | Course Title | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|
| 8008 | Introduction to Animal Systems | x | x | | |
| 8007 | Introduction to Plant Systems | x | x | | |
| 8073 | Applied Agriculture Concepts | x | x | x | x |
| | | | | | |
| | | | | | |

## CTE: Technology Education Cluster

The courses offered in the Technology Education Cluster provide students with a set of experiences and exposures to prepare them for a future career in technology or STEAM-related fields. These courses contain hands-on experiences that focus on developing and using technology-related skills. A component of the student's grade is a set of competencies/tasks where the student must demonstrate specific skills. In each of these courses, a student's grade is based on traditional class work as well as course competency completion.

**Technology of Robotic Design** **Semester**
**Course No. 8421**
*DE RCC -*
*Prerequisites: Algebra 1, Geometry, Digital Applications. Engineering Design encouraged.*

In this course, 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. Learning activities include robotics, computer-aided design, computer-aided manufacturing and design, and control of electromechanical devices.

**Introduction to Unmanned Aerial Systems** **Semester**
**Course No. 8909**
*DE RCC -*
*Prerequisites: Digital Applications* or other computer experiences

*Introduction to Unmanned Aircraft Systems (UAS) enables students to conquer gravity and soar with the eagles and other wild things. This class will enable students to capture, edit, and produce aerial photos/videos and provide hands-on instruction on how to control these advanced craft.(all preliminary)*

**Unmanned Aerial Systems *(note: evolve to advanced*)** **Semester**
**Course No. 8910**
*DE RCC -*
*Prerequisites: Introduction to Unmanned Aircraft Systems*

Unmanned Aircraft Systems prepares students to fly drones under the Federal Aviation Administration's (FAA) Part 107 guidelines. Students get an overview of the national airspace system, FAA regulations, and the design and operation of small drones. Students monitor weather,

address loading and performance of drones, and coordinate flight operation logistics. They perform administrative tasks, train to fly, and, finally, fly small unmanned aircraft systems (sUAS).

| Course Code | Course Title | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|
| 8421 | Technology of Robotic Design | x | x | x | x |
| 8910 | Unmanned Aerial Systems | | x | x | x |

## CTE: Business Management & Administration Cluster

**Economics and Personal Finance** **Semester – 1 Credit**
**Course No. 6120**
*DE RCC - ECON 100 & FIN 107*
Students learn how to navigate the financial decisions they must face and to make informed decisions related to career exploration, budgeting, banking, credit, insurance, financing postsecondary education, spending, taxes, saving, investing, buying/leasing a vehicle, living independently, and inheritance. Development of financial literacy skills and an understanding of economic principles will provide the basis for responsible citizenship and career success. This course is required for both the standard and advanced studies diploma.

**Accounting** **Semester/Year**
**Course No. 6320**
Accounting students study the basic principles, concepts, and practices of the accounting cycle for a service business and a merchandising business. Topics covered include analyzing transactions, journalizing and posting entries, preparing payroll records and financial statements, and managing cash control systems. Business ethics and professional conduct are emphasized. Students learn fundamental accounting procedures, using both manual and electronic systems.
Recommended prerequisite(s): Keyboarding course(s) or teacher-approved demonstration and documentation of touch keyboarding skills; good math skills.

**Principles of Business & Marketing** **Semester**
**Course No. 6115**
*DE RCC - BUS 100*
*Prerequisite: Teacher Recommendation*
*Recommended: Digital Applications and Economics & Personal Finance*

Students study basic management concepts and leadership styles as they explore business ownership, planning, operations, marketing, finance, economics, communications, the global marketplace, and human relations. Quality concepts, project management, problem solving, and ethical decision making are an integral part of the course. Student leadership skills may be enhanced by participation in school-based or virtual enterprises, job shadowing, internships, cooperative education, and/or the Future Business Leaders of America (FBLA).

**Business Management** **Semester**
**Course No. 6135**
*DE RCC: BUS 200*
*Prerequisite: must have successfully completed Principles of Business & Marketing.*
Students study basic management concepts and leadership styles as they explore business ownership, planning, operations, marketing, finance, economics, communications, the global marketplace, and human relations. Quality concepts, project management, problem solving, and ethical decision making are an integral part of the course. Student leadership skills may be enhanced by participation in school-based or virtual enterprises, job shadowing, internships, cooperative education, and/or the Future Business Leaders of America (FBLA).

**Business Law** **Semester/Year**
**Course No. 6131**
Students examine the foundations of the American legal system and learn the rights and responsibilities of citizens. Students gain practical knowledge and life skills by exploring economic and social concepts related to laws governing business and individuals. Focus areas include contracts, consumer protection, criminal law, tort law, international law, family/domestic law, employment law, cyber law, and careers in the legal profession. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

**Office Administration** **Semester/Year**
**Course No. 6621**
*Prerequisite: keyboarding skills.*
Students enhance word processing and communication skills as they develop competencies needed by administrative support professionals. Students study office procedures such as information processing, telecommunications, electronic record management, and financial records management.

| Course Code | Course Title | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|
| 6320 | Accounting | | x | x | x |

| | | | | | |
|---|---|---|---|---|---|
| 6115 | Principles of Business & Marketing* | | x | x | x |
| 6120 | Economics and Personal Finance* | | x | x | x |
| 6131 | Business Law | | x | x | x |
| 6135 | Business Management* | | x | x | x |

**Dual Enrollment course*

**Work-Based Learning/Internship** **Semester/Year**
**Course No. 8120**
**Local Credit: P/F Grade**

Work-based learning (WBL) Internship experience is a one credit 18/36 week course. It offers opportunities for students to apply and refine knowledge, attitudes, and skills through professionally coordinated and supervised work experience directly related to career goals. Members of the business, industry, and professional community volunteer to serve as mentors to high school seniors. Work-based learning is a coherent sequence of workplace experiences that are related to students' career goals and/or interests, are based on instructional preparation, and are performed in partnership with local businesses, industries, or other organizations in the community. WBL enables students to apply classroom instruction in a real-world business or service-oriented work environment.

To earn (1) credit, students must *spend a minimum of 140 hours* in an approved internship. *If the student is "released or quit" his/her internship, the student will receive an "F" for the Internship portion of WBL.* Each WBL student that has *early release must leave school grounds*, if not; they will be considered *trespassing*.

The goal of the Work-Based Learning Experience is to develop higher order thinking, problem-solving skills and enhancing employability skills and work ethics.

## Northern Neck Technical Center Governor's STEM Academy

Project Lead The Way (PLTW) Pathway to Engineering (PTE) is a sequence of 5 courses, which follows a proven hands-on, real-world, problem-solving approach to learning. These courses comprise the STEM Academy coursework offered in conjunction with the Northern Neck Technical Center. Throughout PTE, students learn and apply the design process, acquire strong teamwork and communication proficiency and develop organization, critical-thinking and problem-solving skills. Students create, design, build, discover, collaborate and solve problems while applying what they learn in math and science. They explore aerodynamics, astronautics and space life sciences. Students apply biological and engineering concepts related to biomechanics. They design, test and actually construct circuits and devices such as smartphones and tablets and work collaboratively on a culminating capstone project.

For more information please visit www.northernnecktech.org. The first two courses are offered at the student's home school while the third, fourth and fifth courses are offered at the Northern Neck Technical Center.

**How will a student benefit from being a part of the Governor's STEM Academy?**

- Receive dual high school and college credits
- Participate in hands-on problem solving activities and project based learning experiences
- Receive meaningful, real world instruction that will prepare you for high wage/high skill careers in the engineering field
-

## Governor's STEM Academy Engineering Courses

**Requirements:** Complete the RCC Dual Credit Application, a C or higher in Algebra I, passing scores on the latest English and Mathematics Standards of Learning Tests, successfully complete the necessary dual credit placement tests, passing MTE 1-5 and placing into ENF 2.
**STEM Reminder**: A student who will participate in the full STEM program and will graduate with an Advanced Studies Diploma will need to enroll in the following courses during middle and high school.

| **Academy Advanced Academic Programs<br>Required Course Progressions for STEM** | | |
|---|---|---|
| | **Mathematics Course** | **Science Course** |
| **Grade 7** | Pre-Algebra | Life Science |
| **Grade 8** | Algebra I | Physical Science |
| **Grade 9** | Geometry | Environmental Science or Biology |
| **Grade 10** | Algebra II | Biology |
| **Grade 11** | Math Analysis - Pre-Calculus<br>Advanced Mathematics | Chemistry |
| **Grade 12** | Math Analysis - Pre-Calculus<br>Calculus | Physics or Virtual Virginia AP Science Course |

## Dual Enrollment Credits for STEM Academy Students

Students will earn 3 college credits for the Introduction to Engineering and Design course. They will earn 2 college credits from the Principles of Engineering, Civil Engineering & Architecture, and Engineering Design and Development and Robotics courses.

## Course Sequence for the Governor's STEM Academy

**First Course: Introduction to Engineering and Design (RCC CAD 151)**
*Prerequisite - Must be a Sophomore to participate. Recommendation of Math or Science Teacher.*
Offered in the Fall - Introduction to Engineering Design is a college-level introduction to computer-aided design (CAD), and mechanical engineering. In this course students will learn the basics of engineering drawing, both by hand and using the computer. Students will learn how to design parts and then use 3D Printing to create prototypes. Applying their CAD and 3D prototyping skills, students will study ways to improve products by taking apart small appliances, "reverse engineering" them and creating new components. Machines using motors, gears, pulleys and cams will be designed and tested. Students will also learn about the properties of metals and plastics used in everyday products, essential for proper designs. An excellent course for any student considering a career in engineering.

**Second Course: Principles of Engineering (RCC EGR 125 )**
*Prerequisite - Must be a Sophomore to participate. Recommendation of Math or Science Teacher.*
Offered in the Spring - Applies problem-solving techniques to engineering problems utilizing computer programming and algorithms in a higher level computer language such as FORTRAN, PASCAL, or C++.

**Third Course: Civil Engineering & Architecture (RCC CIV 110)**
Offered through NNTC - Introduces basic skills required for a career in civil engineering technology, focusing on the roles and responsibilities of the engineering team, professional ethics, problem solving with hand calculator and computer applications. Introduces civil engineering materials and analysis, standard laboratory procedures and reporting, and engineering graphics, including instruction in Computer Aided Drafting. Instructs students in oral presentation preparations and delivery.

**Fourth Course: Engineering Design and Development (RCC EGR 123)**
Offered through NNTC - Introduces the fundamental knowledge and experience needed to understand the engineering design process through the basics of electrical, computer, and mechanical systems. Includes the completion of a project in which a specific electromechanical robot kit will be analyzed, assembled, and operated.

**Fifth Course: Robotics (RCC IND 160)**
Offered through NNTC - Studies evolution and history of robotics with an emphasis on automated and flexible manufacturing. Presents advantages and limitations of present robot systems.

## Northern Neck Technical Center Course Offerings

**** Indicates Dual Enrollment Courses***

## Agriculture, Food, & Natural Resources Cluster

**Horticulture Sciences** **One year program**
**Course No. 8034**
Through laboratory activities, students apply scientific principles to the field of horticulture, including the areas of floriculture, landscape design, greenhouse operation, nursery plant production, and turf management. They practice safety, develop leadership traits, use plant-growing media, and identify, propagate, and grow horticultural plants in the greenhouse and land laboratory.

**Greenhouse Plant Production and Management** **One year program**
**Course No. 8035**
Students are taught the operating procedures for a greenhouse. Units of instruction include developing plant production facilities, science application in plant production, and identification of plants. Business management, leadership development, and marketing skills are emphasized to prepare students for careers in the greenhouse plant production and management industry.

**Landscaping** **One year program**
**Course No. 8036**
Landscaping offers skilled workers satisfying career opportunities in varying working environments. The expanding and evolving green industry keeps skilled workers in high-demand occupations with educational and leadership opportunities. This course focuses on preparing students for entry-level employment and advancement in landscape design, landscape construction, and landscape maintenance.

**Landscaping II & Turf Management** **One year program**
**Course No. 8039**
Landscaping offers skilled workers satisfying career opportunities in varying working environments. The expanding and evolving green industry keeps skilled workers in high-demand occupations that feature educational and leadership opportunities. This course focuses on preparing students for entry-level employment in commercial landscaping through hands-on experiences. Students will design landscapes and install components, including lighting, hardscapes, and water features within an environment of the landscaping business enterprise.

## Architecture & Construction Cluster

**Carpentry, Residential Construction I** **One year program**
**Course No. 8515**

**Carpentry, Residential Construction II** **One year program**

**Course No. 8516**
This group of instructional programs prepares students to erect, install, maintain, and repair buildings, and other structures using materials such as metal, wood, stone, brick, glass, concrete and composition substances. Students develop skills in estimating costs; cutting, fastening, and fitting various materials; using hand and power tools; and following technical specifications and blueprints. Most importantly, students construct our current JOIST house, putting their skills to practical application.

**Electricity I** **One year program**
**Course No. 8533**

**Electricity II** **One year program**
**Course No. 8544**
With the growth of housing and industry, more appliances and electrical equipment are showing up in the environment and there has become a need for electricians and technicians to install, repair, and maintain these commodities. Residential wiring is the basis for all these areas that involve the transportation and use of electricity. This career can be continued in Community college or a job training program offered by many large industries.

## Health Sciences Cluster

**Nurse Aide** **One year program**
**Course No. 8362**
***DE RCC - NUR 27/NUR 29/NUR 31***
This is a college level course with dual enrollment at Rappahannock Community College. Nursing Assistant is a one-year program designed to help a student learn basic knowledge and develop skills necessary to become a nursing aide. In health care facilities, this work generally consists of bathing patients, tracking and recording vital signs and other duties that enable nurses to devote more time to work requiring professional and technical training. This program consists of theory and practice in the classroom setting, and clinical experience in the local nursing homes and hospitals. At the completion of this program, students will be eligible to take the State Board of Nurse's Aide Examination. This examination consists of both a written and manual test. Successful completion allows the student to be placed on the State Registry for Certified Nurse's Aides.

## Hospitality and Tourism Cluster

**Culinary Arts I** **One year program**
**Course No. 8275**
*DE RCC - HRI 115/HRI 106/HRI 218*

**Culinary Arts II** **One year program**
**Course No. 8276**
*DE RCC - HCI 128/HRI 134/HRI 145*

The Culinary Arts courses are designed to prepare students for entering employment in food service occupations. They are college level courses with dual enrollment at Rappahannock Community College. A student can earn up to 16 college credits. The training program is particularly valuable because a major portion of the student's skill is acquired through actual cooking, study in the use and care of equipment, food standards and proper sanitation procedures, including public health aspects of food handling. It is a two-year program. Students may take a third year with emphasis on catering.

## Human Services Cluster

**Cosmetology I – Grades 11 and 12** **One year program**
**Course No. 8527**

**Cosmetology II – Grades 12** **One year program**
**Course No. 8528**
Cosmetology is a two-year course. It provides training in manicuring, shampooing, permanent waving, facials, massages, scalp treatment, hair cutting, chemical relaxing and styling. A student who satisfactorily completes the two years of study in cosmetology at the center qualifies to take the State Board Examination to become a licensed cosmetologist. This course is restricted to eleventh and twelfth graders who should be ready to take the state board exam just after graduation from high school.

## Information Technology Cluster

**Computer Systems Technician I – Grades 11 and 12** **One year program**
**Course No. 8622**

**Computer Systems Technician II – Grade 12** **One year program**
**Course No. 8623**
This course is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the computer networking field. A task analysis of current industry standards and occupational analysis was used in the development of the content standards. This two-year course begins with a focus on PC desktop repair and maintenance and the first year. Networking is stressed during the second.

Instruction includes, but is not limited to, safety, networking, networking terminology and protocols, network standards, LANs, WANs, OSI models, Ethernet, Token Ring, Fiber Distributed Interface, TCP/IP Addressing Protocol, Dynamic Routing, Routing, and the Network Administrator's role and function. Particular emphasis is given to the use of decision-making and problem solving techniques in applying science, mathematics, communication, and social studies concepts to solve networking problems.

In addition, instruction and training are provided in the proper care, maintenance and use of networking software, tools and equipment, and all local, state and federal safety, building and environmental codes and regulations.

## Transportation, Distribution & Logistics Cluster

**Auto Body Repair I: Collision & Repair – Grades 11 and 12**
**Course No. 8679**

**Auto Body Repair II: Painting & Refinishing – Grade 12**
**Course No. 8680**

The Collision Repair Technology course is designed to give training in automobile body repair, body construction, all types of collision repair including frame and wheel alignment, body panel repair and replacement, MIG welding, brazing, spot repairing and estimating.

Repair persons must be able to analyze correctly all types of body damage and restore vehicles to their original appearances. This is a two-year program, but students may return for a third year through special arrangements.

**Auto Servicing Tech I – Grades 11 and 12**
**Course No. 8710**

**Auto Servicing Tech II – Grade 12**
**Course No. 8711**

The Auto Technology program is designed to provide a thorough knowledge of the mechanics of the modern automobile and all its supporting systems, to develop an individual's mechanical ability, and develop interest in an automotive repair and service career. The curriculum is designed primarily for persons who seek full-time employment in the automotive maintenance and general repair field immediately upon completion of the two-year program. The course will develop the student's skills in the use of the most modern automotive repair tools and equipment.

For one to advance successfully in this program of study, a thorough understanding of the automobile, its basic operating principles, mechanical aptitude, and manual dexterity are required. The curriculum follows the standards of A.S.E. (National Institute for Automotive Service Excellence) and includes: engine performance, use of diagnostic equipment, the theory of computer-controlled automotive systems, electronic systems, and VA State inspections.

**Marine Service Technology I – Grades 11 and 12**
**Course No. 8750**
**Marine Service Technology II – Grade 12**
**Course No. 8751**

In this introduction to service and repair of watercraft and marina operations, students learn marine trade skills in areas including shop and boating safety, inboard and outboard systems, carpentry, electricity, and vessel storage/handling. The course is based on the National Marine Trades Curriculum, developed by the American Boat and Yacht Council (ABYC). The Marine Service Technology II course completes student's introduction to service and repair of watercraft and marina operations. Students gain entry-level marine trade skills in areas including inboard and outboard systems, carpentry, fiberglass construction and repair, electricity, welding, vessel storage/handling, and tools and equipment operation. The course is based on the National Marine Trades Curriculum, developed by the American Boat and Yacht Council (ABYC). Successful completers will receive a certificate from the ABYC.

**Dual Enrollment Digital Visualizations - 10-12th** **Semester**
**Course No. 8459**
RCC - ITD 112 "Designing Web Page Graphics"
In this course students gain experiences related to computer animation by using graphics and design concepts. Students will be introduced to a variety of software including Adobe Illustrator, Adobe Photoshop, Adobe Animate, Adobe After Effects, Autodesk Maya and Unity 3D.

**Dual Enrollment Game Design and Development - 10th-12th** **Semester**
**Course No. 8400**
RCC - ITP 160 "Introduction to Game Design & Development"
In this project-based course, students will create innovative games through the application of graphic design, animation, audio, and writing skills. Students will work in teams while developing problem-solving, critical thinking, and effective communication skills. They will analyze, design, prototype, and critique interactive games within a project management environment. Students will advance their understanding of software like Adobe Illustrator, Autodesk Maya and Unity 3D.

**Dual Enrollment Game Design and Development Advanced 10-12th** **Semester**
**Course No. 8401**
RCC - ITP 165 "Gaming and Simulation" and ITD 120 "Design Concepts for Mobile Applications"
Students will work collaboratively in a project-based course to refine their game design skills, applying graphic design, animation, audio and writing skills to create original games for a variety of platforms including mobile and virtual reality. Students will learn about career opportunities in game design and development and investigate the training and certification requirements.

## ADDITIONAL INFORMATION

***School Counseling Program and Services***
As adolescents, students seek out their own identity, adjust to more responsibilities, and balance increasing academic loads. Although typical ten to eighteen year olds will act as if they want complete independence, they really do seek and respect trusted adults' opinions. As middle and high school parents/guardians, it is highly recommended that you attend school events, meet the school counselor, talk with teachers, and learn more about both the middle and high school programs. Also, if you are ever concerned about your student, professional school counselors are available to help students and parents navigate these years. School counselors are also

instrumental in the success of students. They provide academic, career and emotional/social solution based short-term counseling designed to meet the unique developmental stage of your learners. You will find that your building counselors utilize a variety of programs to engage all students including: classroom levels, small group sessions, individual counseling, and parent workshops.

***Library Media Center***

The goal of the Library Media Center is to support the Virginia Standards of Learning, provide students and staff with the necessary skills to become information literate, and to encourage reading for pleasure, academic research, and information. The media center provides access to information through a variety of resources including books, magazines and online resources. Library Media Specialists encourage students to use resources, both print and electronic, in a responsible manner. Library Media Specialists collaborate with teachers to realize these goals.

***Report Cards***

Report cards are mailed home and sent home with students at the end of each nine-week grading period. Letter grades are used on report cards except for those classes that are high school credit classes, where numerical grades are used.

***Interim Reports***

Interim reports are issued to all students at the halfway point of each grading period. When monitoring student progress, athletes may receive interim reports weekly or each two-week period to establish eligibility to participate in sports. Power School provides current information about student assignments, accomplishments and grades received. Parents are encouraged to login to PowerSchool via the Parent Portal regularly to monitor progress. Parents are also encouraged to contact the child's teacher to follow up with concerns about their child's performance at school.

***Northumberland Middle School Course Expungement Policy***

In general, a high school credit-bearing course taken at the middle school level may be removed from the student's transcript and the student will not earn high school credit for the course upon written request of the parent. Courses which are prerequisite to a course taken in high school cannot be removed (i.e., Spanish I must stay on the transcript if the student takes Spanish II later). While it is recommended that parents make this request in writing prior to the transfer of the student to the high school, the request can be made no later than the end of the junior year.

## CTE Credentialing Requirements

Through CTE coursework, students will have opportunities to earn a CTE Industry Credential, which is a requirement for the standard diploma beginning with the first-time ninth grade students in the 2013-2014 school year. This can be accomplished by passing one of several exams offered through CTE courses such as the WISE Test or the Workplace Readiness Test. *The career and technical education credential, when required,* could include, but not be limited to, the successful completion of an

industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness skills assessment.

Other credentialing exams include (but are not limited to):

- State-Issued Professional License, required for entry into a specific occupation as determined by a Virginia state licensing agency (Licensed Practical Nurse (LPN), Cosmetology);

- Full Industry Certification, from a recognized industry, trade, or professional association validating essential skills of a particular occupation (A+ CompTIA, Microsoft Certified Professional (MCP);

- Pathway Industry Certification, which may consist of entry-level exams as a component of a suite of exams in an industry certification program leading toward full certification (Automotive Service Excellence, (ASE), Microsoft Office Specialist (MOS);

- or an Occupational competency assessment, a national standardized assessment of skills/knowledge in a specific career and/or technical area, (NOCTI).

For a complete list of credentials, please refer to the Virginia Department of Education.

**Program Of Studies Planning Team**
**2022-2023 for School Year 2023-2024**

Dr. Travis Burns, NHS Principal
Mrs. Shelli Lipton, NMS Principal
Ms. Sheri Gross, NHS Counselor
Ms. Renee Johnson, NHS Counselor
Mr. Adam Letizia, Director of Instruction
Mrs. Katie Wilkins, Director of Gifted Education
Dr. Jamie Sears, Director of Special Education
Mrs. Stephanie Baker, Secondary Math Specialist
Mrs. Virginia Booth, Director of Testing and Accountability

Superintendent of Northumberland County Public Schools
Dr. Holly Wargo