Course Catalogue

**Washington & Lee High School**

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**Eagles Soar!!!**

**Guidance Department**

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**Counselor Assignments**

**Ms. Eddings** **Mrs. Crisco**

All students from A – J All students from K – Z

This page will be revised after all changes are made.

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All courses will be offered

if

the resources are available

and

enough student interest is shown.

**TYPES OF DIPLOMAS**

The Westmoreland County School Board will award the following types of diplomas and certificates in accordance with state laws and regulations.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **STANDARD DIPLOMA** | | | | **ADVANCED DIPLOMA** | | |
| **Subject Area** | **Standard Credits**  **Effective with first-time ninth graders in 2003-2004 through 2010-2011** | **Standard Credits**  **Effective with first-time ninth graders in 2011-2012 and beyond** | **Verified Credits** | **Standard Credits**  **Effective with first-time ninth graders in 2003-2004 through 2010-2011** | **Standard Credits**  **Effective with first-time ninth graders in 2011-2012 and beyond** | **Verified Credits** |
| **English** | **4** | **4** | **2** | **4** | **4** | **2** |
| **Mathematics** | **3** | **3** | **1** | **4** | **4** | **2** |
| **Laboratory Science** | **3** | **3** | **1** | **4** | **4** | **2** |
| **History & Social Sciences** | **3** | **3** | **1** | **4** | **4** | **2** |
| **Health & Physical Education** | **2** | **2** |  | **2** | **2** |  |
| **Fine Arts or CTE** | **1** |  |  | **1** | **1** |  |
| **Foreign Language, Fine Arts or CTE** |  | **2** |  | **3** | **3** |  |
| **Economy & Personal Finance** |  | **1** |  |  | **1** |  |
| **Electives** | **6** | **4** |  | **2** | **3** |  |
| **Student Selected Tests** |  |  | **1** |  |  | **1** |
| **Total** | **22** | **22** | **6** | **24** | **26** | **9** |

**Mathematics requirements for Standard Diploma**:

* **For students entering the ninth grade for the first time in 2003-2004 through 2010-2011:**  shall include at least two course selections from among: Algebra I, Geometry, Algebra II or other mathematics courses above the level of algebra and geometry.
* **For students entering the ninth grade for the first time in 2011-2012 and beyond:** shall include selections from among: Algebra I; Geometry; Algebra, Functions and Data Analysis; Algebra II or other mathematics courses above Algebra II.

**Mathematics requirements for Advanced Diploma**:

* **For students entering the ninth grade for the first time in 2003-2004 through 2010-2011:** hall be at or above the level of algebra and shall include at least three different course selections from among: Algebra I, Geometry, Algebra II or other mathematics courses above the level of Algebra II.
* **For students entering the ninth grade for the first time in 2011-2012 and beyond:** 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.

**Science requirements for Standard Diploma**:

* **For students entering the ninth grade for the first time in 2003-2004 through 2010-2011:**  shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry or physics.
* **For students entering the ninth grade for the first time in 2011-2012 and beyond:**  shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry or physics.

**Science requirements for Advanced Diploma**:

* **For students entering the ninth grade for the first time in 2003-2004 through 2010-2011:** shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry or physics.
* **For students entering the ninth grade for the first time in 2011-2012 and beyond:** shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics

**History and Social Science requirements for Standard Diploma:**

* **For students entering the ninth grade for the first time in 2003-2004 through 2010-2011:**  shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in world history or geography.
* **For students entering the ninth grade for the first time in 2011-2012 and beyond:**  shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in world history or geography.

**History and Social Science requirements for Advanced Diploma:**

* **For students entering the ninth grade for the first time in 2003-2004 through 2010-2011:** Shall include US History, US Government and two courses in World History or Geography.
* **For students entering the ninth grade for the first time in 2011-2012 and beyond:** Shall include US History, US Gov’t and two in World History or World Geography or both.

**Elective requirements for Standard Diploma:** Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality. Sequential electives means any series of courses that are used to fulfill the elective requirements for a standard diploma in which the content increases or expands in scope and sequence as students move through the various levels of the courses. To further assist local school divisions to ensure that students comply with the requirement, the following guidance is given:

* The requirement for students to complete two sequential electives is effective with the graduating class of 2003.
* The two sequential electives may be in any discipline in as long as the courses are not specifically required for graduation.
* Notwithstanding item 2 above, courses used to satisfy the one unit of credit in a fine or practical art required for the standard may be used to partially satisfy this requirement. [Westmoreland County requires each student to successfully complete a computer class. For example, Keyboarding or Computer Applications (usually taken in Middle School.]
* Guidelines for sequential electives in career and technical education programs are available from the Department of Education.
* A sequence that includes an exploratory course followed by an introductory course cannot be used to satisfy this requirement; however, an introductory course followed by another level of the same course of study can be used.
* Students may take the focused sequence of elective courses in consecutive years or any two years of high school. For career and technical education electives, check with the Office of Career and Technical Education at (804) 225-2051.

**Fine Arts and Career and Technical Education –**The Standard, and Advanced Studies Diplomas each contain a requirement for one standard unit of credit in Fine Arts or Career and Technical Education. [Westmoreland County requires each student to successfully complete a computer class. For example, Keyboarding or Computer Applications (usually taken in Middle School.]

**Foreign Language requirements for Advanced Diploma:** Shall include three years of one language or two years of two languages.

**GRADE LEVEL CLASSIFICATION**

Grade Level Classification is based on the total number of standard credits and **verified** credits accumulated as follows:

**Assignment to 10th grade (Sophomore)**

To be assigned to grade 10, a student must complete five (5) 9th grade courses, including English 9, and two of the following: math, science, and health and physical education.

**Assignment to 11th grade (Junior)**

To be assigned to grade 11, a student must complete a minimum of ten (10) standard credits, including two English, one in mathematics, one in science, and one in social studies. The student must also have earned at least two verified credits by passing two SOL End of the Course tests and passing the associated classes.

**Assignment to 12th grade (Senior)**

To be assigned to grade 12, a student must complete a minimum of fifteen (15) standard credits, including three in English, two in science, two in mathematics, two in social studies including United States Virginia history, and/or be enrolled in subjects that will complete graduation requirements by the end of the academic year (June graduates). The students also must have earned at least four verified credits by successfully passing four SOL End of the Course tests and passing the associated classes.

**Student must pass English at each grade level in order to be in the next grade level**.

Grade level could be changed depending upon course load and summer school.

**TRANSFER OF CREDITS**

|  |  |  |
| --- | --- | --- |
| **Entering**  **Washington & Lee**  **High School** | **Standard Diploma**  **Verified Credits** | **Advanced Studies Diploma**  **Verified Credits** |
| **During 9th grade** | 2 English + 1 Math, 1 Science, 1 Social Studies, and 1 Student’s choice | 2 English + 2 Math, 2 Science, 2 Social Studies, and 1 Student’s choice |
| **Beginning of 10th grade** | 2 English + 1 Math, 1 Science, 1 Social Studies, and 1 Student’s choice | 2 English + 2 Math, 2 Science, 2 Social Studies, and 1 Student’s choice |
| **During 10th grade** | 1 English + 1 Math, 1 Science, and 1 Social Studies | 2 English + 1 Math, 1 Science, 1 Social Studies, and 1 Student’s choice |
| **Beginning of 11th grade** | 1 English + 1 Math, 1 Science, and 1 Social Studies | 2 English + 1 Math, 1 Science, 1 Social Studies, and 1 Student’s choice |
| **During 11th grade** | 1 English + 1 Student’s choice | 1 English + 3 Student’s choice |
| **Beginning of 12th grade** | 1 English + 1 Student’s choice | 1 English + 3 Student’s choice |

**Transferring during 12th grade** - Students entering a Virginia high school for the first time after 20 instructional hours per course of their twelfth grade year shall be given every opportunity to earn a diploma. If it is not possible for the student to meet the requirements for a diploma, 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 unit of credit requirements may be available to the student. The Department of Education may grant such waivers upon request by the local school board.

**Virginia Board of Education Diploma Seals**

|  |  |
| --- | --- |
| Students who demonstrate academic excellence may be eligible for one or more of the following awards. Diploma Seals are attached to the diploma and presented in June at commencement. | |
| The Governor’s Seal | * Advanced Diploma *AND* * Average GPA of “B” or better (3.0) *AND* * Successful completion of college level course work that will earn the student at least 9 transferrable college credits in AP or Dual Enrollment courses |
| Board of Education Seal | * Standard or Advanced Diploma *AND* * Average GPA of “A” or better (4.0) |
| The Board of Education’s Career and Technical  Education Seal | * Standard or Advanced Diploma *AND* * Complete a prescribed sequence of courses in a career and technical education concentration or specialization 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 an 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’s Seal of Advanced Math  and Technology | * Standard or Advanced Studies Diploma *AND* * Satisfy all of the mathematics requirements for the Advanced Studies Diploma (four units of credit including Algebra II; two verified units of credit) with a “B” average *AND* * Pass an examination in a career and technical educational field that confers certification from a recognized industry, or trade or professional association *OR* * Acquire professional license in a career and technical education field from the Commonwealth of Virginia *OR* * Pass an examination approved by the board that confers college-level credit in a technology or computer science area |
| The Board of Education’s Seal for Excellence in  Civics Education | * Standard or Advanced Studies Diploma *A*ND * Complete Virginia and United States History and Virginia and United States Government courses with a grade of “B” or higher *AND* * Have good attendance and no disciplinary infractions as determined by local school board policies *AND* * Complete 50 hours of voluntary participation in community service or extracurricular activities. * Activities that would count include the following: volunteering for a charitable or religions organization that provides service to the poor, sick, or less fortunate; participating in Boy Scouts, Girl Scouts or similar youth organizations; participating in JROTC; participating in political campaigns or government internships, or Boys State, Girls State, or Model General Assembly; participating in school-sponsored extracurricular activities that have a civic focus. (Any student who enlists in the United States military prior to graduation will be deemed to have met this community service requirement.) |

**STUDENT IN GOOD STANDING**

In order to participate in a variety of activities, students must be in “good standing” with the school. Some of these activities include (but not limited to): behind-the-wheel instruction, permission to obtain a driver’s permit/license, and permission to park at school. In order to be in good standing, a student must:

1. Have ten or fewer unexcused absences per semester.
2. Have two or fewer discipline referrals, with no referral resulting in OSS, per semester.
3. Pass three out of four classes per semester.
4. Have a current emergency contact form on file.
5. Not owe any school fees.

|  |
| --- |
| **SENIOR CLASS STATUS** |

In order for a student to be identified as a senior and accorded senior class status and privileges, including participation in June graduation exercises, he or she must be taking classes that will result in completion of all requirements for a diploma by June of each school year, prior to June commencement ceremonies.

**GRADE POINT AVERAGE/CLASS RANK & WEIGHTED CLASSES**

A **G**rade **P**oint **A**verage (**GPA**) is the average of all final grades in all high school subjects. A GPA is calculated for each student at the end of each school year. For seniors, an additional GPA calculation is made at mid-point of second semester. After calculation of the GPA, students are ranked according to that figure.

The following point system is used in computing GPA’s and rank in class:

Regular Classes Weighted Honors (H) Classes Weighted AP & GS & DE Classes

A = 4 points A = 4.5 points A = 5 points

B = 3 points B = 3.5 points B = 4 points

C = 2 points C = 2.5 points C = 3 points

D = 1 point D = 1.5 points D = 2 points

F = 0 points F = 0 points F = 0 points

**WEIGHTED COURSES**

The subjects listed below are designated as “weighted classes”:

* Advanced Placement Courses (AP) 5.0
* Dual Enrollment Classes (DE) 5.0
* Governor’s School (GS) 5.0
* Honors Classes (H) 4.5

**HONORS (H) AND ADVANCED PLACEMENT (AP) COURSES**

These in-depth courses are designed for the student who has well developed skills and intense personal interest in a particular subject area. The Advanced Placement courses (AP) provide students with the opportunity to pursue college-level studies while still in high school and to receive advanced placement and/or credit when entering college if minimum score requirements are met. All AP classes will be counted as a weighted grade. Criteria considered for inclusion in accelerated courses include test scores, grades in previous related courses, ability, and teacher recommendation. College credit is determined by the individual requirements of the post-secondary institution.

Students and parents will be asked to sign a contract regarding DE, AP and Honors classes.

**DUAL ENROLLMENT (DE)**

Dual Enrollment allows high school students to meet the requirements for high school graduation while simultaneously earning college credit. The Virginia Plan for Dual Enrollment gives a state-wide framework for dual enrollment arrangements between the public schools and the community colleges.

The purpose of the Virginia Plan for Dual Enrollment is to provide a wider range of course options for high school students and to avoid the unnecessary duplication of programs in the academic, fine arts, and vocational subject areas where appropriate.

All high school juniors and seniors are eligible to participate in the dual enrollment classes. Students should be 16 years of age to participate. Those students who score sufficiently on the Virginia Placement tests may be eligible for the dual enrollment status. Class selection is limited and must be approved by a guidance counselor prior to registration. These students are considered regular members of their high school class but also earn college credit from their community college. These students are considered high school students and NOT college students, therefore, Washington & Lee High School’s rules, regulations, deadlines, and guidelines have precedence over Rappahannock Community College’s.

**GOVERNOR’S SCHOOL (GS)**

Washington & Lee students may participate in the Chesapeake Bay Governor’s School for Marine and Environmental Science Program. The Governor’s School provides high ability 10th, 11th and 12th grade students from the Northern Neck and Middle Peninsula with a rigorous curriculum designed to broaden their opportunities 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. Students are offered admission to the program on a competitive basis in the winter of the ninth grade.

**WORK CREDIT**

Only juniors and seniors are eligible**.**

Students must complete 540 hours with an employer between June 1, 2013 and June 1, 2014. Obtaining work experience is the priority for this class. Credit will only be given to those that accumulate the required 540 hours and follow professional work habits and procedures. Pay stubs or verification from the employer on the number of hours worked each 9 weeks is required to receive the credit. A student is required to write a job description detailing the nature of his/her place of employment, position, and write an essay describing the lessons taken from the work experience.

**SPECIAL EDUCATION SERVICES**

Washington and Lee High School provides a program of studies in core academic subjects to students with disabilities. All students with disabilities who are eligible for special education services participate in the secondary curriculum according to their Individualized Education Plans (IEP). A variety of programs are provided to meet the students’ individual needs including supportive and related services, resource assistance, inclusion classes , and separate classes. Resource classes offer training in study skills, social skills, organization skills, and other educational needs identified on the students’ IEP’s. Inclusion classes are co-taught and in the general education setting while separate classes are taught by one instructor in a small group setting. Separate classes provide specialized instruction in the core academic and elective areas. Certain students are eligible for the Modified Standard Diploma or Special Education Diploma based on their IEP’s. See Types of Diplomas beginning on page 4.

Transition plans are developed as a part of the IEP for all students in special education beginning at the age of fourteen and focus on education, employment, and adult/community living. The purpose of the transition plan is to specify services such as career awareness, evaluation; vocational training, work adjustment training, and community based vocational education, adult agency linkages, or other services appropriate for the student to meet postsecondary goals.

**GUIDANCE AND COUNSELING SERVICES**

The purpose of the Guidance Department is to assist students in academic, educational, personal, social, and career development.

Counselors assist students in planning and selecting a program of study consistent with students’ interests, skills and abilities. A student’s past performance, possible post secondary plans, and results of standardized tests are taken into consideration in planning his/her program. Parents are encouraged to become actively involved in the selection of their son’s/daughter’s schedule. Counselors are eager to meet with parents to develop a strong partnership.

**SCHEDULING PROCEDURES**

Students and parents should consider course selection carefully. It is necessary for students to determine their class choices with commitment to completion of those classes. THERE WILL BE NO SCHEDULE CHANGES TO ACCOMMODATE STUDENTS’ CHOICE OF INSTRUCTOR.

After meeting with the students as a group, students and parents will complete the Scheduling Request Form. A counselor then reviews course selections. Students and parents may make an appointment to talk to a counselor to answer any additional questions you may have about your schedule.

No student may officially drop, add or change a class without approval of parent/guardian.

Any changes in class schedules will be strongly discouraged.

Schedule adjustments will be made under the following circumstances only:

1. Courses passed in summer school;
2. An incomplete schedule;
3. An original class choice is not available due to insufficient enrollment;
4. The student has selected two classes which are offered only once in the school day and both are offered in the same time period;
5. No seats are available due to the number of requests;
6. Balancing of class sizes;
7. Initiated by counselor, administrator or teacher, based upon demonstrated performance, aptitude and achievement test scores.

**PREREQUISITES**

As you plan and review courses for scheduling, please pay attention to required prerequisites identified above the explanation of the course in the course description. For example, requirements include successful completion of English 9 for English 10 and a C or better in math and foreign language classes.

**RETAKING COURSES**

Students who wish to retake a course need to be aware that both grades must be included when determining the overall grade point average (GPA). On the transcript, both grades will be shown. The course cannot be counted twice for credit.

**CORRESPONDENCE COURSES AND/OR INDEPENDENT STUDY**

All Independent Study and/or Correspondence Courses may be taken only in extreme circumstances and must be approved by one of the school counselors or one of the school administrators Ms. Andrea Roane or Mr. Michael Hurdle.

All tests and exams must be taken through the guidance office and the final grade must be received by May 15, 2013 to be counted in the 2013-2014 school year.

**ADDING OR Dropping a Class**

Students who request to drop a course must do so by September 5, 2014. In the event that a student would find it necessary to request a change in schedule, students must complete a “Request for Schedule Change Form”.

A student who withdraws from a class before the first four (4) school days will do so without penalty. The student will receive a “WF” (withdrew failing) or a “WP (withdrew passing).

**CREDIT RECOVERY CLASSES**

Washington and Lee High School provides an online credit recovery tool for students to regain the academic courses they have lost. The program is a standards based online curriculum that does provide a rigorous coursework for students to recover classes. Seats are limited and are required to have the recommendation and approval of guidance and administration.

**COURSE DESCRIPTIONS**

**ENGLISH**

*The English program at Washington & Lee High School focuses on the oral language, reading, writing, and research skills necessary for success beyond high school. Students are required to earn four English standard credits before graduation. Students must pass the Virginia Standards of Learning End-Of-Course Writing and Virginia Standards of Learning End-Of-Course Reading, Literature, and Research assessments to earn two units of verification. The tests are cumulative and cover the SOLs from grades 9, 10 and 11. Students must pass both SOL tests and the course to receive the two verified credits that are required for graduation. Curriculum at all levels is aligned to the Virginia Standards of Learning.*

**ENGLISH 9 (1130)**

Prerequisite: Promotion to grade 9.

English 9 focuses on: evaluating and assessing information and persuasive techniques in media messages; developing vocabulary with attention to connotation, idioms and allusions; literary terms and genres being applied to writing and analyzing literature; research and reporting that will be supported by the use of print, electronic databases, online resources, and other media; the citation of sources of information using a standard method of documentation; distinguishing between reliable and questionable sources of information; writing that encompasses narrative, expository and persuasive forms for a variety of purposes and audiences; and the correct use of language, spelling, and mechanics by applying grammatical conventions in writing and speaking.

**HONORS ENGLISH 9 (1130H) (Weighted- 4.5)**

Prerequisite: Promotion to grade 9 and recommendation from 8th grade English teacher.

Honors English 9 covers the same skills as stated in the Standard 9 description but at a more in-depth and accelerated pace. Honors student must be self-motivated, accountable and well organized in order to be successful.

**ENGLISH 10 (1140)**

Prerequisite: English 9

English 10 focuses on: communicating in small-groups through learning activities; examining, analyzing and producing media messages; the development of vocabulary, with attention to connotations, idioms, allusions and evolution of language; reading and analyzing literary texts from a variety of eras and cultures – attention will be given to the analysis of nonfiction texts; critiquing the writing of peers and professionals, using analysis to improve writing skills; building of research skills by crediting sources, and presenting information in a format appropriate for content; and expanding grammar knowledge as the students presents, writes, and edits material, applying the conventions of language.

**HONORS ENGLISH 10 (1144H) (Weighted – 4.5)**

*Prerequisite: Grade A or B in previous Honors course; or Grade of an A or B in a Standard Course with teacher recommendation; or Grade of C in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

Honors English 10 covers the same skills as stated in the Standard 10 description but at a more in-depth and accelerated pace. Honors 10 strives to prepare students to continue on to the Honors 11 or AP 11 course. Honors student must be self-motivated, accountable and well organized in order to be successful.

**ENGLISH 11 (1150)**

*Prerequisite: Successful completion of English 9 and English 10*

English 11 focuses on: making and analyzing information and persuasive oral presentations, with attention to the accuracy of evidence and the effectiveness of delivery and the examination of how media influences beliefs and behaviors; the student will continue to develop and expand vocabulary; the study of both classic and contemporary American literature; using nonfiction texts to draw conclusions and make inferences citing textual support; writing clear and accurate personal, professional, and informational correspondence and reports for research and other applications; grammar development will continue through the application of rules for sentence formation usage, spelling, and mechanics; and developing informative and persuasive writings by locating, evaluating, synthesizing, and documenting information following ethical and legal guidelines.

**HONORS ENGLISH 11 (1150H) (Weighted – 4.5)**

*Prerequisite: Grade A or B in previous Honors course; or Grade of an A or B in a Standard Course with teacher recommendation; or Grade of C in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

Honors English 11 covers the same skills as stated in the Standard 11 description but at a more in-depth and accelerated pace. Honors 11 strives to prepare students to continue on to the Honors 12, AP 12, or RCC Dual Enrollment course. Honors student must be self-motivated, accountable and well organized in order to be successful.

**AP ENGLISH LANGUAGE AND COMPOSITION (1196) (Grade 11) (Weighted – 5.0)**

Prerequisite: *: Grade A in previous Honors course; or Grade of an A or B in a Honors Course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

The purpose of this course is “to enable students to read complex texts with understanding and to write prose of sufficient richness and complexity to communicate effectively with mature reader” (The College Board, AP® English Course Descriptions, May 2009, May 2010, p. 8). It is organized according to curricular requirements outlined by the College Board, and, as such, students will have multiple opportunities to learn within a proven rhetorical framework. Readings include expository, analytical, and argumentative texts from a variety of authors and historical contexts. In particular, our student will focus on American authors of the nineteenth and twentieth centuries. Writing assessments include formal assignments, such as rhetorical précis’s and research papers, as well as information assignments, such daily journal entries and timed responses. In addition to written text, student will also analyze graphics and visual images to determine their significance within the context of literature. Students TAKE the SOL reading and SOL Writing tests at the completion of the course.

**ENGLISH 12 (1160)**

*Prerequisite: Successful completion of English 9, 10, & 11.*

English 12 focuses on: using organizational skills as well as verbal and nonverbal presentation skills to plan and deliver an effective oral presentation, choosing language and tone appropriate to the audience and purpose; using technology and an understanding of media to create, organize, and display knowledge in ways others can access, view, and use; expanding general and specialized vocabulary through speaking, listening, reading, and viewing; analyzing British literature and literature of other cultures, recognizing major literary forms and their elements; using nonfiction-texts to analyze and synthesize information to solve problems; writing that will include the production of informational, expository, and persuasive/argumentative papers, logically organized demonstrating knowledgeable judgments, and effective conclusions; producing a well-documented major research product, by locating, evaluating, synthesizing, and documenting information following ethical and legal guidelines; and demonstrating advanced knowledge of grammatical conventions through writing, editing, and speaking.

**HONORS ENGLISH 12 (1160H) (Weighted – 4.5)**

*Prerequisite: Grade A in previous Honors course; or Grade of an A or B in a Standard Course with teacher recommendation; or a grade of C in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

Honors English 12 covers the same skills as stated in the Standard 12 description but at a more in-depth and accelerated pace. Honors student must be self-motivated, accountable and well organized in order to be successful.

**AP ENGLISH LITERATURE (1195) (12th grade) (Weighted – 5.0)**

*Prerequisite: Grade of A or B in previous AP English Language and Composition (AP 11); or grade of an A in previous Honors course: or grade of an A or B in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

The purpose of this course is to “engage students in careful reading and critical analysis of imaginative literature.” It is organized according to curricular requirements outlined by the College Board, and, as such, students will have multiple opportunities to learn within a proven rhetorical framework. The readings build upon and complement the reading done in previous English course so that by the time students complete this AP course they will have read works from several genres and periods – from 16th to the 21st century. Through the close reading of selected texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students consider a work’s structure, style and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism and tone.

**ENGLISH 111-112 COLLEGE COMPOSITION I & II** (Dual Enrollment) **(12th grade**) **(Weighted – 5.0)**

1/2 standard credit and 3 college credits per semester course. Student must take both semesters to receive one high school credit.

*Prerequisite: Passing score on RCC placement test AND a grade of A in previous Honors course; or grade of B in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered*

This course 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. Weekly assignments include readings, essays, and online discussion posts. The written word is the primary means by which humans beings articulate their most profound thoughts and ideas. Learning to manipulate language, learning to write well, helps us better to understand our own experience in the world – in other words, to think more clearly. Recognizing this, college courses rely heavily on written work – reports, essay exams, research papers, etc. – to help students learn and to evaluate learning. This course will help you develop your ability to use the written language effectively, to express and explore ideas, and to work with others in an effort to communicate clearly on paper.

**YEARBOOK (1215)**

Limited to 11th and 12th graders

Yearbook focuses on: using design skills and techniques to plan and create the yearbook and using organizational skills to sell and promote the yearbook. *Class is limited to15 students*.

**MATHEMATICS**

*The mathematics program at Washington & Lee High School emphasizes the mathematics students will need for study beyond high school, for careers, and for effective citizenship. All students are encouraged to study mathematics each year they are in school. Course offerings make it possible for students to progress as far as their achievement allows.*

**INTRODUCTION TO ALGEBRA I (3200ALG)**

Elective credit only.

**ALGEBRA I** **(3130)**

In this course, students will be exposed to practical applications of algebra. The major topics of study will include properties and operations of the real number system, algebraic expressions, equations and inequalities in one variable, exponents, polynomials, graphing, systems of equations and inequalities, function analysis, quadratics, variation and statistics. Students will take the associated SOL test at the completion of the course. Upon successful completion of this course and passing the SOL test, students will receive a math verified credit.

**INTRODUCTION TO GEOMETRY (3200G)**

Elective credit only.

**GEOMETRY** **(3143)**

*Pre-Requisite: C or better in Algebra I.*

In this course, students will be exposed to practical applications of Euclidian Geometry. Topics include basic principles of geometry (point, line, and plane); congruencies, similarities, triangle inequalities, parallelism, perpendicularity, polygons, area of geometric figures, transformations, congruent and similar figures, and an introduction to three-dimensional figures. Students will develop formal and informal deductive reasoning skills which they will apply to the construction of formal proofs. Students will take the SOL test at the completion of this course. Upon successful completion of this course and passing the SOL test, students will receive a math verified credit.

**ALGEBRA, FUNCTIONS AND DATA ANALYSIS (3134)**

This course may be used as a required math credit for the advanced diploma track ONLY IF Algebra II is successfully taken. In this course, students will strengthen conceptual understanding in mathematics and develop connections between statistics and algebra. Topics include exponential and logarithmic functions, linear programming, conditional probability, and systems of equations and inequalities. Students will NOT take an SOL test at the completion of this course.

**ALGEBRA II (3135)**

*Pre-Requisite: C or better in Geometry*

In this course, students will be exposed to advanced algebraic concepts that build upon skills leaned in previous courses. Topics include polynominals, rational and radical expressions, systems of equations and inequalities, probability and statistics, sequences and series, graphing of the function families, and absolute value and quadratic equations. Students will take the SOL test at the completion of this course. Upon successful completion of this course and passing the SOL test, students will receive a math verified credit.

**TRIGONOMETRY /PROBABILITY (3150)**

In this course, students will learn the fundamentals of triangle and circular trigonometry. Right triangular trigonometry includes radian measures of angles, graphs of circular functions, identities, special angle formulas, and the Laws of Sines and Cosines. Connections of applications of trigonometry in sound, motion, surveying, and biorhythms will be introduced. Students will NOT take an SOL test at the completion of this course.

**PRE-CALCULUS (3162)**

*Pre-Requisite: C or better in Algebra II*

In this course, students will use mathematical skills to apply abstract reasoning to the study of advanced topics. This course provides the treatment of trigonometry (triangular and circular) through the study of trigonometric definitions, graphs, applications, equations and inequalities.Students will NOT take an SOL test at the completion of this course.

**CALCULUS (3200)**

Pre-Requisite: C or better in Pre-Calculus

In this course, students will be introduced to limits, derivatives, and integrals. The students will perform basic calculus functions and learn multiple strategies for differentiating and integrating functions. Students will explore real world applications of differential and integral calculus. Students will NOT take an SOL test at the completion of this course.

**AP (ADVANCED PLACEMENT) CALCULUS** **AB (3177) (Weighted – 5.0)**

*Pre-Requisite: C or better in Calculus*

In this course, students will explore the topics of limits, continuity, derivatives, and integrals. These ideas are examined using a multi-layered approach including the verbal, numerical, analytical and graphical analysis of polynomial, rational, trigonometric, exponential, and logarithmic functions and their inverses. The student will relate the connections among these approaches, Students will be required to synthesize knowledge of these topics to solve applications that model physical, social and/or economical situations. These applications emphasize derivatives as rate of change, local linear approximations, optimizations and curve analysis, and integrals as Riemann sums, area of regions, volume of solids with known cross sections, average value of functions, and rectilinear motions. Students will NOT take an SOL test at the completion of this course. Students may opt to take the Advanced Placement test at the completion of this course.

**SCIENCE**

*The Westmoreland County Public Schools is committed to providing a comprehensive science program. The ideal science curriculum engages all students while providing opportunities for those students demonstrating a heightened science interest and aptitude. A full range of science offerings is available to all students. In addition, enhanced science opportunities are provided through the Governor’s School and Dual Enrollment science courses.*

**EARTH SCIENCE (4210)**

This course is designed to teach the students six basic subjects: measurements, problem solving skills, astronomy, meteorology, oceanography, and geology. The students will learn the basic subjects using hands on activities, labs, and classroom work. At the end of the course, the students will better understand the physical world in which they live. Earth Science may be taken in the 9th or10th grades. . Students will take the associated SOL test at the completion of the course.

**HONORS EARTH SCIENCE (4210H) (Weighted – 4.5)**

*Prerequisite: Grade A or B in previous Honors course; or Grade of an A or B in a Standard Course with teacher recommendation; or Grade of C in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

Honors Earth Science covers the same skills as stated in the Standard Earth Science description but at a more in-depth and accelerated pace. Honors student must be self-motivated, accountable and well organized in order to be successful.

**BIOLOGY (4310)**

Biology is the study of life. During the course of the year, students will make observations, form hypotheses and manipulate variables to form conclusions based on the data that they have gathered. Other topics of study will include cell theory, agents of disease, photosynthesis, human health concerns, genetics, and the classification and diversity of organisms. Biology may be taken in the 9th or10th grades. Students will take the associated SOL test at the completion of the course.

**HONORS BIOLOGY (4310H) (Weighted – 4.5)**

*Prerequisite: Grade A or B in previous Honors course; or Grade of an A or B in a Standard Course with teacher recommendation; or Grade of C in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

Honors Biology covers the same skills as stated in the Standard Biology description but at a more in-depth and accelerated pace. Honors student must be self-motivated, accountable and well organized in order to be successful.

**ECOLOGY** \ **BIOLOGY II (4340)**

*Pre-Requisites: Earth Science and Biology*

Ecology is a laboratory science course in which students study the interactions between humans, plants, animals, and the physical environment. Students will apply knowledge from earth science, biology, and chemistry to study and understand the forces that affect ecosystems. This laboratory science will incorporate a variety of hands-on activities both indoors and outdoors. Student projects and problem solving will be emphasized.

**CHEMISTRY (4410)**

*Pre-Requisite: Algebra I*

Students in these courses study matter, including its properties and the changes it undergoes. Emphasis is placed on a mathematical approach to chemical principles and on developing laboratory skills. General Chemistry is designed for students who have less background in math. Students will take the associated SOL test at the completion of the course.

**HONORS CHEMISTRY(4410H) (Weighted – 4.5)**

*Pre-Requisite: Algebra I with a B or better grade. Grade A or B in previous Honors course; or Grade of an A or B in a Standard Course with teacher recommendation; or Grade of C in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

This class will move at a faster pace than General Chemistry and will cover topics of study in greater depth. Students in these courses study matter, including its properties and the changes it undergoes. Emphasis is placed on a mathematical approach to chemical principles and on developing laboratory skills. Honors Chemistry is designed for students who have a strong background in math. Students will take the associated SOL test at the completion of the course.

**PHYSICS AP PREP (4569) (Weighted – 5.0)**

Must be taken with or in conjunction with AP Physics.

**AP PHYSICS I (4570) (Weighted -5.0)**

Pre-Requisite: Algebra II

This course is a study of the basic concepts of classical and contemporary physics. The first semester is devoted to study of classical mechanics, focusing on the relationships between mass, velocity, acceleration, force, work, power, and energy. The second half of the course covers topics including thermal physics, wave phenomena, optics, electricity, magnetism, and relativity. Laboratory investigation is an integral part of the course. Lecture & Laboratory: 4 college credits per semester course. Student must take both semesters to receive high school credit.

**SOCIAL STUDIES**

*In grades 9-12, three years of social studies are required for graduation from high school in the state of Virginia: World History and Geography, Virginia and US History, and Virginia and US Government. Standard Diploma candidates must earn three social studies credits. Advanced Studies Diploma students must earn four social studies credits including these three courses. There are also a number of elective courses in social studies.*

**WORLD HISTORY I (2215)**

This freshman level course which will be taught at the middle school in eighth grade studies the origin of western civilization and its impact on us today from prehistoric times to 1500 A.D. Emphasis is placed on Egypt, Ancient Middle East, Greece, Rome, the Middle Ages, and the Renaissance. Historical emphasis is placed on such areas as daily life, architecture, art, music, religion, and philosophy. This course provides a strong background for students on the traditions that form the basis of our society: our language, laws, religions, and economic systems. Students will participate in writing and thinking skills, interpreting charts and graphs, history projects, book reviews, current events, geographic skills and use of computer technology. Students will take the associated SOL test at the completion of the course. Students will take the associated SOL test at the completion of the course.

**GLOBAL STUDIES (2997) (Elective)**

*PreRequisite: Must have passed World History I.*

This course will allow students to explore major regions around the world and to study global issues, cultures, and connections. Students will cross many academic disciplines including geography, history, language and the arts. The major civilizations of the Middle East, China, India, Sub-Saharan Africa, and Latin American will be analyzed. Among the skills students can develop are issue analysis, problem solving and research/investigation. Within each unit of study, students will explore the region geography and influences, religion, languge, art, economic issues, political issues and key historic developments.

**AFRICAN AMERICAN STUDIES (2371) (Elective)**

African American Studies in an elective course designed for students in grades ten through twelve. The course focuses on African American literature and history. This course traces the African American from his origin in Africa to his present life in America.

***WORLD HISTORY II (2216)***

*(Alternative to World History 1 or World Geography unless in the Advanced Diploma Track)*

*Prerequisite: Passed World History I and the associated SOL. Students need to be motivated and self-disciplined.*

This history course acts as a continuation of World History I. The course stresses Modern European History. It begins with the European Renaissance and continues through the development of modern European nations, the French Revolution, Industrial Revolution, the World Wars, and the world today. While considering all relevant regions and events, the course will analyze cultural, economic, political, and social developments, emphasizing connections to contemporary issues. Students will participate in writing and thinking skills, interpreting charts and graphs, history projects, book reviews, current events, geography skills, and utilizing computer technology. Students will take the associated SOL test at the completion of the course.

**UNITED STATES AND VIRGINIA HISTORY (2360)**

This junior level course will examine the important people, institutions, and events from the Age of Exploration through the present day. While providing a strong factual survey of America, the crux of this course is an in-depth analysis of the important ideas and movements that help shape the American story. Students will participate in writing and thinking skills, interpreting charts and graphs, history projects, current events, geography skills, and utilizing computer technology. Students will take the associated SOL test at the completion of the course.

**AP US HISTORY PREP (2319PR) (Weighted – 5.0) (Elective)**

Must be taken with or in conjunction with AP Physics.

**ADVANCED PLACEMENT (AP) U. S. HISTORY (2319) (Weighted – 5.0) (Includes a prep class first semester.)**

*Prerequisite: Grade A or B in previous Honors course; or Grade of an A or B in a Standard Course with teacher recommendation; or Grade of C in previous Honors course with teacher recommendation; or if the student does not fit into any of the above categories the parent must have a conference with Guidance before placement will be considered.*

Advanced Placement United States History provides a study of history and culture at a much more challenging level than the normal high school honor course; the demands of the class are equivalent to those made by an introductory college course. Emphasis will be on the development of analytical thinking, reading, and writing skills. However, students will build a strong foundation of factual knowledge as well, for the intelligent exercise of analytical skills is impossible without the support of systematic factual knowledge. Content will include the full scope of United States History from the Age of Exploration through the 1980's. Students will interpret primary sources, including documentary material, maps, statistical tables, and pictorial and graphic evidence of historical events; weigh different interpretations of events found in articles by professional historians; and marshal evidence in support of their own conclusions about historical events.

Obviously, the AP history course assumes a high level of motivation and discipline as well as academic ability! Like other courses that are part of the College Board Advanced Placement program, this class will prepare students for the national AP exam on the subject. Students are required to earn a 3, 4, or 5 on the AP Exam to be eligible for college credit. Talk to your college admissions counselor. Students will take the associated SOL test at the completion of the course.

**UNITED STATES AND VIRGINIA GOVERNMENT (2440)**

This senior level course provides the tenets and underlying principles contained in the U.S. and VA Constitutions, Our understanding of the structure and operation of federal, state and local governments will highlight a deeper comprehension of the process of policymaking; with emphasis on economics, foreign affairs, and civil rights issues.

**HONORS UNITED STATES AND VIRGINIA GOVERNMENT (2440H) (Weighted – 4.5)**

This senior level course provides the tenets and underlying principles contained in the U.S. and VA Constitutions, Our understanding of the structure and operation of federal, state and local governments will highlight a deeper comprehension of the process of policymaking; with emphasis on economics, foreign affairs, and civil rights issues.

Honors Government covers the same skills as stated in the Standard Government description but at a more in-depth and accelerated pace. Honors students must be self-motivated, accountable and well organized in order to be successful.

**FOREIGN LANGUAGE**

*Students entering Washington & Lee High School in grades 9-12 may receive foreign language credit for Spanish or French if they earn a C or better.. (Montross Middles School students may take Spanish 1 and it will be counted as a high school standard credit.) Other languages are available through Virtual Virginia online school. See the Virtual Virginia list of courses.*

**FRENCH I (5110)**

The language skills of listening, speaking, reading and writing are taught in the order in which they are listed. Self-expression is emphasized from the outset. The study of important and interesting aspects of foreign cultures is also included.

**FRENCH II (5120)**

*Pre-Requisite: “C” or better in French I*

The audio-lingual approach to the teaching of the basic language skills is continued on a more advanced level. More opportunity is provided for self-expression in the target language.

**FRENCH III (5130)**

*Pre-Requisite: “C” or better in French II*

Basic grammar is reviewed continuously and usage that is more complex is presented and reinforced. There is more emphasis on vocabulary development, reading, comprehension, and written and oral self-expression.

**FRENCH IV (5140)**

*Pre-Requisite: “C” or better in French III*

This course is a continuation for the development of the communicative and comprehension skills. Students are expected to do independent reading of short works and write resumes of them in the target language.

**SPANISH I (5510)**

The language skills of listening, speaking, reading and writing are taught in the order in which they are listed. Self-expression is emphasized from the outset. The study of important and interesting aspects of foreign culture is also included.

**SPANISH II (5520)**

*Pre-Requisite: “C” or better in Spanish I*

The audio-lingual approach to the teaching of the basic language skills is continued on a more advanced level. More opportunity is provided for self-expression in the target language.

**SPANISH III (5530)**

*Pre-Requisite: “C” or better in Spanish II*

Basic grammar is reviewed continuously, and usage that is more complex is presented and reinforced. There is more emphasis on vocabulary development, reading comprehension, and written and oral self-expression.

**SPANISH IV (5540)**

*Pre-Requisite: “C” or better in Spanish III*

The primary emphasis is to strengthen the reading and writing skills. Conversational skills are practiced daily in meaningful and stimulating discussions. There is also increased emphasis placed on the study of culture as expressed through literature.

**PHYSICAL EDUCATION**

HEALTH AND PHYSICAL EDUCATION 9 (7300)  
Required for graduation  
*Prerequisite: Promotion/Placement to 9th Grade* This course provides the opportunity to improve motor skills and physical fitness. Physical activities include instruction on physical conditioning, and individual and team sports with emphasis on improving skills and game strategy. Health education includes instruction in personal and consumer health, drug and alcohol abuse, first aid, and disease prevention.

HEALTH AND PHYSICAL EDUCATION 10 (7400)  
Required for graduation  
*Prerequisite: Health and P. E. 9.* This course provides instruction in physical education as well as classroom driver education. The physical education curriculum includes fitness activities, team, and individual sports with emphasis on developing skills for use in leisure time. Classroom Driver Education focuses on the development of knowledge, attitudes, and skills necessary for safe and efficient driving.

PHYSICAL EDUATION 11/12 (7640)  
Grades 11 and 12  
This course provides instruction in personal physical fitness. Activities will include daily stretching, conditioning, and weight training. Instruction in physical fitness terminology and participation in lifetime leisure activities will also be provided.

**BUSINESS**

*The Business and Information Technology program provides students with industry based skills in Business, Information Technology, Finance, and Computer Applications. The courses are designed to benefit students that are planning further college study, planning a combination of college and employment, or planning full-time employment immediately after high school. Selected courses offer students industry certifications, college credit, and can satisfy the Fine and Practical Arts and verified credit requirements.*

**BUSINESS LAW (6120)**

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, and careers in the legal profession. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

**COMPUTER INFORMATION SYSTEMS (6612)**

Students apply problem-solving skills to real-life situations through word processing, spreadsheet, presentation (graphics) software, database software, and through integrated software activities. Students work individually and in groups to explore computer concepts, operating systems, and emerging technologies.

## DESIGN, MULTIMEDIA, AND WEB TECHNOLOGIES

## Suggested grade levels: 10th, 11th, or 12th

## Students develop proficiency in designing and creating desktop-published projects, multimedia presentations/projects, and Web sites, using industry-standard application software. Students apply principles of layout and design in completing projects. Students create portfolios that include a résumé and a variety of desktop-published, multimedia, and Web-site projects produced in the course.

**ECONOMY AND PERSONAL FINANCE (6121) (Required for graduation)**

**Suggested grade levels: 11th & 12th**

Instruction in economics and personal finance prepares students to function effectively as consumers, savers, investors, entrepreneurs, and active citizens. Students learn how economies and markets operate and how the United States’ economy is interconnected with the global economy. On a personal level, students learn that their own human capital (knowledge and skills) is their most valuable resource.

**DUAL ENROLLMENT ECONOMY AND PERSONAL FINANCE (6121DE) (Weighted - 5.0) (Dual Enrollment)**

**PRINCIPLES OF BUSINESS AND MARKETING (6115)**

Students discover the roles of business and marketing in the free enterprise system and the global economy. Basic financial concepts of banking, insurance, credit, inheritance, taxation, and investments are investigated to provide a strong background as students prepare to make sound decisions as consumers, wage earners, and citizens. The real-world impact of technology, effective communication, and interpersonal skills is evident throughout the course. This course also supports career development skills and explores career options.

**FAMILY & CONSUMER SCIENCES**

**CHILD DEVLOPMENT & PARENTING (Parenting) (8231)**

Students enrolled in Child Development and Parenting focus on analyzing parenting roles and responsibilities, ensuring a healthy start for mother and child, evaluating support systems that provide services for parents, and evaluating parenting practices that maximize human growth and development. Critical thinking, practical problem solving using case studies, and entrepreneurship opportunities within the area of parenting responsibilities and child development are emphasized. Teachers highlight the basic skills of mathematics, science, and technology when appropriate. The cooperative education method is available for this course; in this method, classroom instruction is combined with on-the-job training in an approved position, supervised continuously throughout the school year, to broaden the students’ educational experiences.

**FAMILY RELATIONS (8223)**

Students enrolled in Family Relations focus on analyzing the significance of the family, nurturing human development in the family throughout the life span, analyzing factors that build and maintain healthy family relationships, developing communication patterns that enhance family relationships, dealing effectively with family stressors and conflicts, managing work and family roles and responsibilities, and analyzing social forces that influence families across the life span. Critical thinking, practical problem solving, and entrepreneurship opportunities within the area of family responsibilities and services are emphasized. Teachers highlight the basic skills of mathematics, science, and communication when appropriate in content. The cooperative education method is available for this course. Students combine classroom instruction and supervised on-the-job training in an approved position with continuing supervision throughout the school year.

**NUTRITION & WELLNESS (8228)**

*Pre-Requisite: Biology and limited to juniors and seniors only.*

Students enrolled in Nutrition and Wellness focus on making choices that promote wellness and good health; choosing foods that promote wellness; obtaining and storing food for self and family; preparing and serving nutritious meals and snacks; selecting and using equipment for food preparation; and identifying strategies to promote optimal nutrition and wellness of society.

**INTRODUCTION TO CHILDHOOD EDUCATION (8233)**

Students focus on the principles of child growth and development; development of self-concepts and building self-esteem; appreciation of diversity; learning experiences for children; principles of guiding children in a positive manner; healthy and safe environments; career development; and careers related to early childhood professionals through hands-on exploration, projects, and group learning.

**CHILDHOOD EDUCATION DEVELOPMENT I (8235)**

Pre-Requisite: Introduction to Early Childhood, Education, and Services

Students prepare to be primary providers of home-, family-, or institution-based child care services by focusing on the planning, organizing, and conducting of meaningful play and learning activities; child monitoring and supervision; record keeping; and referral procedures. Critical thinking, practical problem solving and entrepreneurship opportunities within the field of early childhood education are emphasized. Students also prepare for continuing education leading to careers in early childhood fields (e.g., medical, social services, and education).

**CHILDHOOD EDUCATION DEVELOPMENT II (8236)**

**FINE ARTS**

*The Fine Arts program at W & L is designed to provide students with the opportunity to participate in a sequential course of study in the disciplines of music, visual arts, and theater arts. Generalized experiences as well as highly advanced and specialized opportunities are available in all arts areas. Students are provided training in the technical skills necessary to develop their individual capacities to construct and experience the creative process. A credit earned in any of these courses fulfills the Fine/Practical Arts requirements.*

**MUSIC**

**ADVANCED BAND (9234)** Once school begins, there are multiple rehearsals after school for the marching band. The band will participate at football games, parades, and various band competitions. After marching season ends, concert band will commence. Concert band includes the study of music theory, history, and a varied repertoire chosen by the director. Grading is done mostly by participation, but will also include theory work, essays, and written tests on music terms. There will be multiple opportunities throughout the school year for participation in other ensembles such as pep band, jazz band, and various honors bands. This class is designed to attend to all of the national standards for music education.

**ADVANCED CHORUS (9289)**

The purpose of choir is to introduce students to various genres of choral music. Emphasis is placed on proper singing technique and sight singing. Students will be assessed on participation, singing tests, in class activities, and quizzes. This class is designed to attend to all of the national standards for music education.

**GUITAR**  **(9245)**

Guitar is a beginning class for those who would like to learn how to play. Students can expect to learn how to read notation and tab, parts of the guitar, tuning, and will study various guitarists that have influenced guitar playing. Students will also learn how to play different genres of music and will have to write a song for the guitar at the end of the year. Students will also have the opportunity to learn music from the time period that they are studying in history classes and may perform those songs with their teacher’s permission for extra credit or class projects. Students will be assessed by their individual growth, written tests, class assignments, participation, and a recital performance at the end of each quarter. This class is designed to attend to all of the national standards for music education.

**ART**

**ART I / ART APPRECIATION (9120)**

This course will focus on the experience of art. It will take the student through a general overview of the art world. We will focus on understanding Art as a visual language throughout time and across cultures. The later part of the course will touch on drawing, color theory and general design.

**ART II/INTERMEDIATE 9130)**

*Pre-Requisite: Art I*

This second level course will focus on the mastery of drawing and design skills. Through a range of experiences, the student artist will gain knowledge of a variety of mediums in which to work.

**ART III/ADVANCED INTERMEDIATE (9140)**

*Pre-Requisite: Art II*

This is a studio course specifically geared towards students interested in attending an Art school or study Art in college. The assignments given will be more on a college level designed to round out the student artist’s portfolio. This class will fine-tune the student’s artistic skill along with the development of independent thinking processes and artistic self-discovery.

**ART IV (9145)**

Pre-Requisite: Art I & Art II

This class is designed for the serious art student. The course is an intensive one designed for juniors and seniors who may wish to attend art school and need to compile a portfolio. All areas of Studio Art will be covered in depth, with emphasis on painting, sculpture, drawing, ceramics, textile design and photography.

**ART V/PORTFOLIA PREPARATION (9147)**

Limited seats.

**Theater Arts**

**Drama (1448)**

This course includes the basics of the theater, including set building, make-up, elementary terms, pantomime, improvisation, and participation in the school plays.

**GOVERNOR’S SCHOOL COURSES**

**GOVERNOR’S SCHOOL ADVANCED ALGEBRA II (3137) (Weighted – 5.0) (0.5 high school credit)**

**GOVERNOR’S SCHOOL PRECALCULUS I (3001) (weighted – 5.0) (0.5 high school credit)**

**GOVERNOR’S SCHOOL PRECALCULUS II (3101) (weighted – 5.0) (0.5 high school credit)**

RCC MTH 163/164 3 semesters (total 6 college credits)

The advanced Algebra II / Pre-calculus course taught to Chesapeake Bay Governor’s School **sophomores and first semester juniors** will encourage the exploration of mathematical ideas, data, patterns and algebraic concepts. The course will require the student to be an active participant and to model the ways that mathematics is applied to science and the real world. Students will be provided with opportunities to pursue individual interest in mathematics. The course is Advanced Algebra, but will blend algebra, geometry, discrete mathematics, and

probability. This course will prepare our students to succeed in their future CBGS mathematics and science courses by giving them a solid foundation of algebra skills to build on. This course will enable students to be successful on the Virginia Standards of Learning End of Course Algebra II Exam.

**GOVERNOR’S SCHOOL STATISTICS (GS) (Weighted – 5.0) (0.5 high school credit)**

RCC MTH 240 (total 3 college credits)

The Statistic class will cover one semester of the **junior** year presenting an overview of statistics, including descriptive statistics, elementary probability, probability distributions, estimation, hypothesis testing, and correlation and regression. Students will apply statistical methods to their two year research paper.

**GOVERNOR’S SCHOOL CALCULUS (DE 3232) (GS)**

*Prerequisite: Students must score appropriately on the RCC placement test and apply to enroll in Governor’s School*

RCC MTH 175/176 (total 6 college credits)

The Calculus course will be taught over 2 semesters at Chesapeake Bay Governor’s School to **seniors**. The Calculus course includes techniques and applications of differentiation and integration of algebraic and transcendental functions of a single variable. Topics includes limits, continuity, derivatives, optimization, curve sketching, indefinite and definite integrals, methods of integration and their application to physical, chemical and environmental phenomena.

**GOVERNOR’S SCHOOL BIOLOGY (GS) (4300) (Weighted 5.0) (1 high school credit)**

RCC BIO 101/102 4 credits/semester (total 8 college credits)

The biology course taught to the Chesapeake Bay Governor’s School **sophomores** will focus on those major concepts or themes deemed to be essential to an understanding of life processes. Throughout the year science as a process will be emphasized as students conduct laboratory studies to support classroom information, use inductive reasoning to discover key concepts, study the history of the development of our present understanding of biological concepts, and learn how to conduct their own research. Other major themes to be emphasized are genetics, evolution, energy transfer, the relationship between structure and function, ecological interrelationships, the regulation of processes at many levels, and the impact of science and technology on our society. These concepts are all encompassing as well as recurring in all topics that will be covered throughout the year. This course, in conjunction with the topics course, will adequately prepare our students to succeed in their next two years at CBGS, in college, and in their future endeavors, as they will learn to focus their efforts and master essential study skills. CBGS Biology students will also be able to succeed on the Virginia Standards of Learning End of Course Biology Exam.

**GOVERNOR’S SCHOOL CHEMISTRY (GS) (4000) (Weighted 5.0) (1 high school credit)**

**RCC 111/112** 4 credits/semester (total 8 college credits)

*Prerequisite: Students must score appropriately on the RCC placement test and apply to enroll in Governor’s School*

Students taking Chemistry at the Governor’s School will come from a variety of high school backgrounds. Although no prior chemistry is necessary and all of the Virginia Standards of Learning for the basic high school chemistry curriculum are covered, the college level of this course requires that students process information at a faster pace and cover the principles in much greater depth. This course explores the fundamental laws, theories, and mathematical concepts of chemistry and will cover the structure of matter, the characteristics of the states of

matter, types of reactions, thermodynamics, chemical kinetics, equilibrium, and electrochemistry. The lab component of the course, which counts approximately twenty percent of the overall grade, will focus on qualitative and quantitative support of the general chemistry concepts.

**GOVERNOR’S SCHOOL PHYSICS (GS) (4702**) **(weighted 5.0) (1high school credit)**

RCC PHYS 201 & 202 (total 8 college credits)

*Prerequisite: Students must score appropriately on the RCC placement test and apply to enroll in Governor’s School*

This is a 2 semester, college level, laboratory Physics course taught in the **senior** year, covering fundamental Physics principles, and their qualitative and quantitative applications. Topics include: mechanics; harmonic and wave motion; sound; optics; electromagnetism; thermodynamics; nature of matter; nuclear and quantum physics and relativity. Additional topics may be pursued depending upon time and interest. In addition to qualitative and quantitative understanding of topics, students will be required to use them for problem solving in laboratory applications. Strong mathematical skills are essential, particularly in Algebra and Trigonometry. In addition to strong math skills, the ability to handle independent reading and study is crucial. PreCalculus is a prerequisite for this course. Calculus is a corequisite, taken during this year, and may help with quantitative conceptualization.

**FOUNDATIONS IN SCIENCE (GS) (4601) (weighted 5.0) (1 high school credit)**

RCC ITE 115 3 credits & RCC SCT 111 4 credits

This **sophomore** level course will be technology based and include: ITE 115 Introduction to Computer Applications and will explore the earth science systems with an emphasis on the geology of the Chesapeake Bay watershed. Topics covered will also include data collection, and research techniques.

**OUTDOOR ADVENTURES (GS)**

RCC PED 183 (total 2 college credits)

***Students must attend all 3 major field trips as described below to earn the PE credits***

Outdoor Adventures introduces outdoor activities with an emphasis on basic skills, preparation, personal and group safety, equipment selection and use. Over the three years at CBGS students will explore the ecology of the Chesapeake Bay watershed while camping, kayaking, and hiking on three overnight trips and several day trips. In addition, students will be required to keep a journal of their field experiences.

**GOVERNOR’S SCHOOL MARINE AND EVVIRONMENTAL SCIENCE I & II (GS) (4613 & 4614) (weighted 5.0) (1 high school credit)** (total 16 college credits)

*Prerequisite: Students must score appropriately on the RCC placement test and apply to enroll in Governor’s School*

RCC MAR 201202 & 101102

A two year lab and field science course for **juniors & seniors** designed to provide thematic unity to the CBGS program and immerse students in rich experiential learning. Students will explore the principles of general ecology, evolutionary biology, environmental science, and oceanography, with special emphasis on the natural history and ecology of the Chesapeake Bay and its watershed as well as the Atlantic Ocean and east coast. The entire two year course is interdisciplinary in spirit, stressing the importance of chemical, physical, and geological oceanography for understanding marine life and aquatic ecosystems, while making frequent connections to the mathematics and general sciences that students are learning in other CBGS courses. The curriculum will largely be driven by the data and investigations of real scientists, and students will design and conduct their own scientific research. In order to provoke critical thinking and creativity, the course will be organized around a set of abstract unifying concepts, vivid discovery experiences that require students to interpret their own careful observations, extended problem solving missions, independent projects and presentations, and 8 thorny environmental issues that compel thoughtful evaluation. ***A two–year research project will be required of all Chesapeake Bay Governor’s School students.***

**VIRTUAL VIRGINIA CLASSES – Limited Seating**

**World Languages**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Courses** | **Course**  **Number** | **Grade Level** |  |  |  | **Length** | **Type of**  **Credit** | **Credit** |
| Arabic I | 5010 VV | 9 | 10 | 11 | 12 | Year | Elective | 1 |
| Arabic II | 5020 VV |  | 10 | 11 | 12 | Year | Elective | 1 |
| Chinese I | 5810 VV | 9 | 10 | 11 | 12 | Year | Elective | 1 |
| Chinese II | 5820 VV |  | 10 | 11 | 12 | Year | Elective | 1 |
| Chinese III | 5830 VV |  |  | 11 | 12 | Year | Elective | 1 |
| Chinese IV | 5840 VV |  |  |  | 12 | Year | Elective | 1 |
| AP Chinese Language and Culture | 5860 VV |  |  |  | 12 | Year | Elective | 1 |
| French I | 5110 VV | 9 | 10 | 11 | 12 | Year | Elective | 1 |
| French II | 5120 VV |  | 10 | 11 | 12 | Year | Elective | 1 |
| Latin I | 5310 VV | 9 | 10 | 11 | 12 | Year | Elective | 1 |
| Latin II | 5320 VV |  | 10 | 11 | 12 | Year | Elective | 1 |
| Latin III | 5330 VV |  | 1 | 11 | 12 | Year | Elective | 1 |
| Latin IV | 5340 VV |  |  | 11 | 12 | Year | Elective | 1 |
| AP Latin: Vergil | 5380 |  |  |  | 12 | Sem/Year |  |  |
| Spanish I | 5510 VV | 9 | 10 | 11 | 12 | Year | Elective | 1 |
| Spanish II | 5520 VV | 9 | 10 | 11 | 12 | Year | Elective | 1 |
| Spanish IV | 5540 VV |  |  | 11 | 12 | Year | Elective | 1 |
| AP Spanish Language | 5570 |  |  | 11 | 12 | Sem/Year | Elective | 1 |
|  |  |  |  |  |  |  |  |  |

Arabic and Chinese are also available through Virtual Virginia - Year

**VIRTUAL VIRGINIA CLASSES**

**Language Arts**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Courses** | **Course**  **Number** | **Grade Level** |  |  |  | **Length** | **Type of**  **Credit** | **Credit** |
| World Mythology | 1165 |  | 10 | 11 | 12 | Sem/Year | Elective | 1 |
| Creative Writing | 1171 |  | 10 | 11 | 12 | Sem/Year | Elective | 1 |
| AP English Literature and Composition | 1195 |  |  |  | 12 | Sem/Year | Elective | 1 |
| AP English Language and Composition | 1196 |  |  | 11 |  | Sem/Year | Elective | 1 |

**VIRTUAL VIRGINIA CLASSES**

**Language Arts & Fine Arts**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Courses** | **Course**  **Number** | **Grade Level** |  |  |  | **Length** | **Type of**  **Credit** | **Credit** |
| World Mythology | 1165 |  | 10 | 11 | 12 | Sem/Year | Elective | 1 |
| Creative Writing | 1171 |  | 10 | 11 | 12 | Sem/Year | Elective | 1 |
| AP English Literature and Composition | 1195 |  |  |  | 12 | Sem/Year | Elective | 1 |
| AP English Language and Composition | 1196 |  |  | 11 |  | Sem/Year | Elective | 1 |
| AP Art History | 9151 |  | 10 | 11 | 12 | Sem/Year | Elective | 1 |

**VIRTUAL VIRGINIA CLASSES**

**Social Studies**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Courses** | **Course**  **Number** | **Grade Level** |  |  |  | **Length** | **Type of**  **Credit** | **Credit** |
| Pre-Calculus/Math Analysis | 3162 |  |  | 11 | 12 | Sem/Year | Math | 1 |
| AP Calculus AB | 3177 |  |  | 11 | 12 | Sem/Year | Math | 1 |
| AP Calculus BC | 3178 |  |  | 11 | 12 | Sem/Year | Math | 1 |
| AP Computer Science A | 3185 |  |  | 11 | 12 | Sem/Year | Math | 1 |
| AP Statistics | 3192 |  |  | 11 | 12 | Sem/Year | Math | 1 |

**VIRTUAL VIRGINIA CLASSES**

**Science**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Courses** | **Course**  **Number** | **Grade Level** |  |  |  | **Length** | **Type of**  **Credit** | **Credit** |
| Earth Science | 4210 | 9 | 10 | 11 | 12 | Year | Science | 1 |
| Earth Science II – Astronomy | 4260 |  | 10 | 11 | 12 | Semester | Science | 1/2 |
| AP Environmental Science | 4270 |  |  | 11 | 12 | Sem/Year | Science | 1 |
| AP Biology | 4370 |  | 10 | 11 | 12 | Sem/Year | Science | 1 |
| Honors Chemistry | 4410 |  |  | 11 | 12 | Sem/Year | Science | 1 |
| AP Chemistry | 4470 |  |  | 11 | 12 | Sem/Year | Science | 1 |
| Honors Physics | 4510 |  |  |  | 12 | Sem/Year | Science | 1 |
| AP Physics | 4570 |  |  |  | 12 | Sem/Year | Science | 1 |

**VIRTUAL VIRGINIA CLASSES**

**Social Studies**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Courses** | **Course**  **Number** | **Grade Level** |  |  |  | **Length** | **Type of**  **Credit** | **Credit** |
| World History & Geography Part 1 | 2219 | 9 | 10 | 11 | 12 | Sem/Year | History | 1 |
| Psychology | 2903 |  | 10 | 11 | 12 | Semester | Elective | 1/2 |
| Economics & Personal Finance | 6120 |  |  | 11 | 12 | Sem/Year | Required Elective | 1 |
| AP Human Geography | 2212 |  | 10 | 11 | 12 | Sem/Year | Elective | 1 |
| AP US History | 2319 |  |  | 11 | 12 | Sem/Year | History | 1 |
| AP World History | 2319 |  | 10 | 11 | 12 | Sem/Year | Elective | 1 |
| AP European History | 2399 |  |  | 11 | 12 | Sem/Year | Elective | 1 |
| AP Government & Politics: US | 2445 |  |  |  | 12 | Sem/Year | History | 1 |
| AP Government & Politics: Comparative | 2450 |  |  |  | 12 | Sem/Year | Elective | 1 |
| AP Psychology | 2902 |  | 10 | 11 | 12 | Sem/Year | Elective | 1 |
| AP Microeconomics | 2802 |  |  | 11 | 12 | Semester | Elective | 1/2 |
| AP Macroeconomics | 2803 |  |  | 11 | 12 | Semester | Elective | 1/2 |

**Northern Neck Technical Center**

**GENERAL INFORMATION:** Students must **apply** to the Technical Center. Applications are available in the Guidance Department. The **deadline** for returning the **applications is April 10** to the Guidance Department.

**ATTENDANCE:** Students attend the vocational center three periods a day:

Mornings - 9:00 a.m. to 11:30 a.m.

Afternoons - 12:00 noon to 2:30 p.m.

Students travel and eat lunch during third period.

**CREDITS:** Students earn three credits for successful completion of each 3-hour course.

**TRANSPORTATION:** Students are transported to and from the Vocational Center in buses provided by their home schools.

# Mission Statement of the Northern Neck Technical Center

The mission of the Northern Neck Technical Center is to provide a comprehensive, technical education to the students from the counties of Lancaster, Northumberland, Richmond, Westmoreland, Essex, and the town of Colonial Beach.

# About the Technical Center

Creating an educated society is an important function of the school system of the Northern Neck. The need to equip young people with the skills that would allow them to go immediately into the work world upon graduation was recognized by the Northern Neck school divisions. Because school populations were too small to support fully-developed technical programs within each system, a decision was made to pool resources of the five school divisions and create a regional center.

From the five high schools within the Northern Neck, students are given the opportunity to pursue additional technical studies at the Northern Neck Technical Center in Warsaw. They come to the center from Lancaster High School, Northumberland High School, Rappahannock High School, Washington and Lee High School, Essex High School, and Colonial Beach High School. In addition, some students from the intermediate schools of these divisions also attend the Technical Center.

The Rappahannock Community College offers two years of college level work in the arts and sciences, regularly scheduled technical subjects at the post-secondary level, plus special training course which can be developed for the individual industries in the area.

The center provides educational opportunities in the health occupations and in trade and industrial education. Each program uses competency based instruction and curriculum. The student lab contract implements the competency- based programs. It contains job hierarchies, descriptions, instructional units composed of related competencies and performance objectives.

**COURSES OFFERED AT THE NORTHERN NECK TECHINICAL CENTER**

**AUTO BODY REPAIR**

*Pre-Requisites: Grade Level 11-12; 16 years old on or by December 1 of the current school year and be able to wear a respirator. Three credits for I and three credit for II.*

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; acetylene welding; brazing; spot repairing and estimating. Repair persons must be able to correctly analyze all types of body damage and restore vehicles to their original appearances. Gain hands-on experience with welding, plastic fillers, and refinishing equipment and processes.

This is a two-year program, but students may return for a third year through special arrangements. Students with respiratory problems should not take this course.

**AUTOMOTIVE TECHNOLOGY**

*Pre-Requisites: Grade Level 11-12; 16 years old on or by December 1st of the current school year and have the ability to read at the 10th grade level. Three credits for I and three credit for II.*

The Automotive 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 skill and his/her interest in 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 and its basic operating principles, a mechanical aptitude and manual dexterity are required. Learn maintenance and diagnostic procedures. Take the NATEF with N3SA Certification ASE test. BG service approved training. Students receive Commonwealth of Virginia Safety Inspection License Training.

This is a two-year program, but students may return for a third year through special arrangements.

**CARPENTRY**

*Pre-Requisites: Grade Level 11-12; 16 years old on or by December 1st of the current school year and have the ability to read at the 10th grade level. Three credits for I and three credit for II.*

The Carpentry course concentrates on residential constructions both years, with an introduction to cabinetmaking in the second year. Students will gain knowledge and skills in using tools and equipment, interpreting and using blueprints and specifications, layout of a building, framing the building and in finishing both the exterior and interior. Basic skills in cabinetmaking are taught at the end of the second year. If a student desires, he/she may return for a third year with emphasis on cabinetmaking with the approval of the instructor.

Explore careers in residential and commercial carpentry including cost and materials estimating and remodeling while learning comprehensive carpentry skills.

**COSMETOLOGY**

*Pre-Requisites: Grade Level 11-12; No respiratory problems and 16 years old on or by December 1 of the current school year. Students must purchase a manikin for $25.00 and a lab coat for $20.00. Attendance is required. Three credits for I and three credit for II.*

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, salon manager/owner, or skin care and makeup specialist.

**THIS COURSE IS RESTRICTED TO ELEVENTH AND TWELFTH GRADERS WHO SHOULD BE READY TO TAKE THE STATE BOARD EXAMINATION JUST BEFORE GRADUATION FROM HIGH SCHOOL**. **STUDENTS ARE REQUIRED TO TAKE THE EXAM.**

**COMPUTER SYSTEMS TECHNOLOGY I & II**

*Pre-Requisite: Grade Level 11-12; Pre-Algebra or Algebra and 16 years old on or by December 1 of the current school year. Three credits for I and three credit for II.*

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. 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. Students learn how to install, setup, service, troubleshoot, network and maintain PC’s while preparing for CompTIA’s A+ and Net+ industry standard certifications.

**NURSING AIDE PROGRAM**

*Pre-Requisite: Grade Level 11-12; No criminal record and by 16 years old on or by December 1st of the current school year. Three credits. One year program.* ***(Dual Enrollment****)*

*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, 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 place on the State Registry for Certified Nurse’s Aides. This course provides clinical experience in long-term care settings and is an excellent introduction to basic nursing skills. Learn anatomy, physiology, nutrition, and geriatrics.

**CULINARY ARTS I & II**

*Pre-Requisite: Grade Level 11-12; No allergic reactions to handling various foods and 16 years old on or by December 1 of the current school year. Three credits for I and three credit for II.(****Dual Enrollment)***

The Culinary Arts course is designed to prepare students for entering employment in food service occupations. 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/or 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. Learn the art and science of culinary preparation from a certified executive chef and gain hands-on experience in the restaurant business. This program is accredited by the American Culinary Federation.

**ELECTRICITY and CABLING I & II**

*Pre-Requisite: Grade Level 11-12; 16 years old on or by December 1 of the current school year. Three credits for I and three credit for II.*

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.

Learn basic principles of direct and alternating current with emphasis on residential wiring. Earn one of four state-required years of electrical apprenticeship through standardized tests.

**The Governor’s STEM Academy**

**for**

**Agriculture and Maritime Studies**

The Governor’s STEM Academy for Agriculture and Maritime Studies, “The Academy”, will expand opportunities for the secondary school population of the Northern Neck to prepare for careers in the vital, high wage, high-skill Agricultural and Maritime industries local to our region. The major goal of the Academy will be to ensure that students graduate with college-and-career-readiness knowledge and skills. Another goal will be to have all K-12 students on the Northern Neck exposed to higher mathematics and science to prepare them for possible participation in the Academy.

Project Lead the Way (PLTW) is the leading provider of rigorous and innovative Science, Technology, Engineering, and Mathematics (STEM) education curricular programs used in middle and high schools across the US.’s high-tech, high-skill global economy. For American to remain economically competitive, our next generation of leaders – the students of today – must develop the critical-reasoning and problem-solving skills that will help make them the most productive in the world. STEM education programs like the one offered by the PLTW engage students I activities-, projects-, and problem-based (APPB) learning, which provides hands-on classroom experiences. Students create, design, build, discover, collaborate and solve problems while applying what they learn in math and science.

The Academy will concentrate on three career pathways: Engineering and Technology, Plant Systems and Facility and Mobile Equipment Maintenance (Maritime).

**ENGINEERING AND TECHNOLOGY**

**Introduction to Engineering (8439) First Year at W & L Dual Enrollment (1 credit)**

A foundation course in Project Lead the Way (PLTW), in which students use a 3-D computer modeling software as they learn the engineering-design process and solve design problems for which they develop, analyze, and create product models. *This course is taught at the local high schools.*

**Principles of Engineering (8441) Second year at W & L Dual Enrollment (1credit)**

**Civil Engineering and Architecture (8430) Third Year – first semester at NNTC Dual Enrollment (1 credit)**

**Engineering Design and Development (8443) Third year – second semester at NNTC Dual Enrollment (1 credit)**

Students enrolled in these courses will be introduced to the career choices in the engineering and technology areas and prepare for postsecondary education in one of the engineering and technology fields.

**AGRICULTURE, FOOD AND NATURAL RESOURCES (AFNR)**

**Horticulture (8034) First semester**

**Greenhouse Management (8035) Second Semester**

Grown annuals, perennials, vegetables and herbs in a garden center setting. Study Horticulture therapy, techniques of floral design, plant propagation and transplanting.

**Landscaping I (8036) First semester**

In this course, students develop the necessary knowledge, skills, habits, and attitudes for entry-level employment and advancement in areas such as landscape design, landscape construction, and landscape maintenance. They receive instruction in sketching and drawing, analyzing a landscape site, designing for function and aesthetics, identifying and selecting landscape plants, purchasing and installing plants, and maintaining the landscape by watering, fertilizing, mulching, pruning, and controlling pests.

**Landscaping II (8039) Second semester**

 Explore turf physiology of major turf grass species. Identify the role played by soil in turf growth. Students will have the opportunity to do various landscaping projects. Students enrolled in these classes will be involved in biotechnology, agriculture and scientific research, as well as hands-on learning activities.

**TRANSPORTATION, DISTRIBUTION AND LOGISTICS**

**Marine Service Technology I (8750)**

**Marine Service Technology II (8751)**

The Marine Trades program is a two-year program. This program is designed to offer students hands-on operation of boats, motors and trailers and to teach the practical application in Marine Technology. Students enrolled in these classes will become trained mechanics with technical reading and analytical thinking skills making them highly skilled technicians.

**LIMITED ACADEMIC COURSE OFFERINGS ALSO IN APEX**



**Eagles Soar**