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Cover artwork by: Ethan Jackson

Dear Students:

Lancaster High School offers many opportunities for meeting Virginia's graduation requirements. Careful planning of your high school program will ensure your success in meeting all of these requirements. You are encouraged to work with your parents and school counselors in developing a school career plan. This plan has the potential to guide your path during these critical high school years.

While at Lancaster High School, your school counselors are available to answer your questions and assist you with course selections. As you work with your school counselors and parents to select courses for the next school year, consider your strengths, talents, and interests to create a balanced program. Your counselor is available by appointment to assist you.

It is our goal that your experience at Lancaster High School will provide a solid foundation for your life endeavors. We encourage you to take advantage of the resources available to you and strive for excellence. There are no limits to what you can achieve.

Best wishes for a great school year!

LHS Administration

Dear Students:

High school is preparation for the rest of your life. Utilize your high school career to equip yourselves for what will come next - work, military, trade/vocational school, or college.

The courses you choose now will help you explore your possibilities. Here are some steps to help you schedule your classes and get the most out of your high school career:

- Understand your graduation requirements and take the appropriate courses to fulfill requirements.
- Check on grade level requirements and prerequisites for every class you consider taking.

All students in grades 9, 10, and 11 are expected to be enrolled in four classes each semester. Study halls do not award credit.

Students who participate in Virginia High School League (VHSL) activities regardless of grade level, must be enrolled in at least three credit bearing classes per semester.

Have a great year!

School Counseling Department

HOW TO USE THIS GUIDE:

First, learn about the courses available to you. Remember to consider what courses you might take in the future and prerequisites you need. Consider your career goals and the courses you need to prepare for your career. Your family, teachers, and school counselors will help. Remember that you can revise your plan as you pursue your future.

FOR ADDITIONAL INFORMATION CONTACT THE SCHOOL COUNSELING DEPARTMENT:

Lancaster High School Counseling Department
804-462-5100, ext. 4013

Course Registration

In early spring, registration for next year's courses is initiated. At the high school level, the school counselors meet with students to review transcripts and current grades and to assist with choosing appropriate courses to meet individual student needs including graduation requirements. Teacher recommendations are not required for most classes, but they will be used to help determine the appropriate level of instruction for the student. A copy of the student's course requests is sent home to be approved by the parent. Prior to the beginning of school, the counselors adjust schedules to provide for subject failure, courses completed in summer school, and course availability.

In addition, the high school counselors work with rising ninth grade students and teachers to explain the high school requirements. The middle school counselor prepares schedule requests for rising ninth grade students and teachers recommend appropriate levels of instruction. Copies of the course requests are sent home for parent signature.

Add/Drop Policy

Students may add or drop a class prior to the first day of classes. **Students will not be allowed to drop or add courses after the fifth school day of each semester.** Students enrolled in dual enrollment (DE) classes at LHS, or who attend the Early College Academy or the Chesapeake Bay Governor's School must adhere to the policy set by each institution. Students who receive administrative permission to withdraw from a course after the withdrawal date will receive a W/P or W/F on their high school transcript based on their current grade in the course which will factor into their GPA.

Early Release Procedure

A student may apply for an early release if a student's schedule allows and if he/she meets the following criteria:

- Must be enrolled in grade 12
- Must have earned sufficient Standard Credits and Verified Credits (SOLs) toward graduation
- Must have completed "Early Release Form" with parent/guardian and counselor signatures
- Must have daily, reliable transportation
- Must not remain on campus after release time
- Must attend at least a half day of school.

Honor Roll

Students who do outstanding work will be recognized through an honor roll system. An honor roll list will recognize students who have attained a set standard of academic achievement. Honor Roll will be based on ALL classes with the following guidelines:

- High Honor Roll is based on all A's and enrollment in at least 3 credit hours per semester.
- Honor Roll is based on A's and B's only and enrollment in at least 3 credit hours per semester.

Athletic Eligibility

To be eligible to participate in athletics on a 4 x 4 block schedule, students must have passed at least three credit subjects each semester and must not take fewer than six credit subjects in a year. Athletes may not add or drop classes to qualify for participation on a team.

Students may not be permitted to try out for a sport if the student has two or more F's when try-outs begin. Eighth grade students may try out for LMS sports or LHS junior varsity sports and must follow the try-out requirements of the school at which they are trying out.

Calculation of Grade Point Averages

A = 90 – 100 B = 80 – 89 C = 70 – 79 D = 60 – 69 F = 59 or below

Students are awarded points for the grades they earn at the close of each school year according to the following scale: A=4.0 points, B=3.0 points, C=2.0 points, D=1.0 point and F=0 points. Honors courses receive an additional 0.5 point making a letter grade of “A” worth 4.5 instead of 4.0. Advanced Placement and Dual Enrollment courses receive an additional 1.0 point, making a letter grade of “A” worth 5.0 points instead of 4.0. After letter grades are converted to points, they are multiplied by the credit earned in the course and then totaled. The sum/total of the points is divided by the sum/total of the credits earned for each enrolled course. This result is the Cumulative Grade Point Average (GPA) that is displayed on the LHS High School Transcript.

GPA Point Conversion Charts					
General High School Course		Honors Course		AP & Dual Enrollment Course	
Letter Grade	GPA points	Letter Grade	GPA points	Letter Grade	GPA points
A	4	A	4.5	A	5
B	3	B	3.5	B	4
C	2	C	2.5	C	3
D	1	D	1.5	D	2
F	0	F	0	F	0

Honors Courses

Academic honors level courses are offered to students who wish to have a more rigorous and challenging course of study. These courses prepare students for Advanced Placement (AP) courses and dual enrollment (DE) courses that are offered to juniors and seniors. Students enrolled in these courses are expected to be able to work independently, with initiative, and with the understanding that an increased workload is required. The minimum criteria for eligibility for honors courses include the following:

- B average in previous honors course or an A average in previous course
- SRI score in reading of 1100 or higher for Honors English

Promotion Policy

Requirements for grade classification for Grades 10-12 are as follows:	
Tenth Grade	Acquire a minimum of 5 credits, to include English 9
Eleventh Grade	Acquire a minimum of 10 credits, to include English 9, 10
Twelfth Grade	Acquire a minimum of 15 credits, to include English 9, 10, 11

All course offerings are pending enrollment and availability of staff

Dual Enrollment (DE) Courses

Dual enrollment courses meet both high school and college course requirements. Students receive college credit through Rappahannock Community College (RCC) and high school credit at LHS. These courses are open to students who pass the RCC placement test and who understand the rigor and work load that is part of college credit courses. Dual Enrollment courses are offered during the regular school day at LHS and at the RCC campuses in Kilmarnock and Warsaw. To be eligible to enroll in a dual enrollment course, students must:

1. Complete the necessary entrance requirements for RCC including a placement test
2. Meet the criteria for the individual requested course
3. Sign a commitment form that will be kept as part of the student's record
4. Obtain a parent or guardian's signature that also acknowledges this commitment of good faith

Admittance into Dual Enrollment courses is based upon available space. Preference is given to students who are enrolled in the Early College Academy.

Course offerings vary from year-to-year. Dual enrollment courses taken in the core areas (English, history/social science, science, and mathematics) are weighted, receiving a full extra GPA point. **Students enrolled in dual enrollment courses are beginning a college-level transcript through the Virginia Community College System. College-level rigor and demands are expected. Poor grades on a college-level transcript can affect financial aid eligibility; please take dual enrollment courses seriously. Each RCC Academic Core semester course = 0.5 high school credit.**

Notes for DE English and History: On a 4 x 4 block schedule, dual enrollment courses in English, US History, and US Government may include two college-level courses taught in one semester. **Students must pass each RCC semester course in order to earn a whole high school credit for the course. Grades for each course are not averaged together.**

Students who wish to pursue a dual enrollment course must take a placement test, which is offered at the high school in the spring, and sign a form of commitment stating they will complete the course. Parent and student signatures are required on this form. Students and parents are cautioned to observe the course add/drop dates posted by RCC. If a student is struggling, consideration should be given to dropping the course prior to the drop date. Once that add/drop deadline has passed, students will receive the grade they have earned. **Students who earn below a "C" in a dual enrollment course will not be enrolled in the subsequent course, and the college credit is non-transferable.**

Early College Academy

(A program to concurrently earn an Associate's Degree from RCC and a High School Diploma)

Lancaster High School is proud to offer the Early College Academy, a program for high achieving students. The Early College Academy provides a pathway for qualifying juniors and seniors to complete requirements for a high school diploma and concurrently earn an Associate's Degree through Rappahannock Community College. An Early College Academy student receives two years of a college education, and the RCC course credits transfer to many Virginia colleges.

Students selected to participate in the Early College Academy will begin taking college courses in the summer. Summer courses will be required between the sophomore and junior years and also between the junior and senior years. Some courses may be offered at the Kilmarnock and/or Warsaw campuses of Rappahannock Community College while other courses will be held at the high school. Admission is competitive and is based on previous core courses, teacher recommendations, standardized achievement testing, writing skills, and honors. Students may apply for admission during their sophomore year. For specific criteria and an application, a prospective sophomore should contact the high school counseling department.

Chesapeake Bay Governor's School

The Chesapeake Bay Governor's School (CBGS) provides high-ability students from the Northern Neck and the Middle Peninsula with a rigorous curriculum through enrichment, exploratory, investigative, and career awareness experiences. Through the integration of math, science, technology, and research, woven with marine and environmental science, students have the opportunity to foster an appreciation and respect for environmental issues.

Students selected to attend CBGS attend classes beginning in their sophomore year through their senior year. They take a combination of the following courses: Advanced Algebra, Pre-Calculus, Calculus, Statistics, Biology, Chemistry, Physics, Foundations in Science, and Marine & Environmental Science I & II. All courses meet and/or exceed the Virginia Standards of Learning (SOL) requirements. In addition, students may earn dual enrollment credits for each course through Rappahannock Community College.

Chesapeake Bay Governor's School is a morning program offered at the Warsaw Campus of Rappahannock Community College. Transportation is provided from the high school, leaving at 7:20 am from LHS and returning at 11 am. Admission is competitive and is based on previous math and science courses, teacher recommendation, standardized achievement testing, science/math activities, writing skills, and honors. Students may apply for admission during their freshman year. For specific criteria and an application, a prospective freshman should contact the high school counseling department.

Course of Study as Follows:

Sophomores	Juniors	Seniors
Biology	Chemistry	Physics
Advanced Algebra/ Pre-Calculus I	Pre-Calculus II and Statistics	Calculus I
Foundations of Science	Marine and Environmental Science I	Marine and Environmental Science II

Northern Neck Technical Center Governor's STEM Academy for Agriculture and Maritime Studies

Courses are available through the Northern Neck Technical Center Governor's STEM Academy in engineering and technology, agriculture, and marine service technology. These classes are part of Project Lead the Way (PLTW), the leading provider of rigorous and innovative science, technology, engineering, and math (STEM) education programs used in high schools across the United States. Students accepted into the academy may receive dual high school and college credits, participate in hands-on problem solving activities, project based learning experiences, and receive meaningful, real world instruction that will prepare them for high wage/high skill careers. For specific criteria, please turn to page 38 or contact the high school counseling department.

Northern Neck Technical Center Governor's STEM Academy Gaming and Simulation Design and Development Course of Studies

The Northern Neck Technical Center Governor's STEM Academy is excited to announce their new Gaming and Simulation Design and Development Course of Studies. This will be a three-semester program consisting of three Virginia High School CTE courses, which will earn credit for four VCCS courses (12 credits) and the VCCS Game Design and Development Career Studies Certificate. The courses must be taken sequentially. Each course will be offered in a hybrid format via Google classroom enabling students to learn from their home schools. However, students are encouraged to take the capstone Game Design and Development Advanced course at the Technical Center. The class is project based and the Tech Center will be equipped with a variety of advanced software and hardware enabling in-depth exploration of Virtual Reality, Augmented Reality, Mobile and Audio Development. Please turn to page 33 for more detailed course descriptions.

Early College Scholars Agreement

The Early College Scholars Agreement is intended to allow and encourage eligible high school seniors to complete requirements for a high school diploma and concurrently earn at least 15 hours of transferable credits toward a college degree, resulting in a more productive senior year and reducing the amount of college tuition for families. See your school counselor for more information.

Academic Supports

Students who can benefit from these courses will be identified through several criteria, which may include SOL performance and their Scholastic Reading Inventory score. Participation is determined by administration.

SOL Recovery

We offer SOL recovery opportunities for all SOL tested subjects. Subjects include Writing, Reading, Algebra I, Geometry, Earth Science, Biology, US History, World History I, and World History II. An Algebra I SOL Recovery course is offered for students and will count as an elective credit.

Academic Literacy

This 1-credit course is designed to assist students in all grade levels who need a more intense approach to building literacy skills. Participants will develop the necessary decoding, fluency, and comprehension skills to successfully read and comprehend the End of Course Standards of Learning assessments. Students are identified by a placement test with a Lexile score of 999 or below.



Artwork by: Raven Hottinger

Graduation Requirements for a Standard Diploma

Standard Diploma Course Requirements			
Discipline Area	Standard Credits: for First-Time 9 th Graders as of 2011-2012	Verified Credits: First-Time 9 th graders between 2013-14 and 2017-18	Verified Credits: First-Time 9 th graders as of 2018-2019
English	4	2	2
Mathematics ¹	3	1	1
Laboratory Science ^{2, 6}	3	1	1
History & Social Sciences ^{3, 6}	3	1	1
Health & PE ⁴	2		
World Language, Fine Arts or Career & Technical Education ⁵	2		
Economics and Personal Finance ⁹	1		
Electives ⁷	4		
Student Selected SOL ^{8, 6}		1	
Total	22	6	5

NOTE 1

Courses completed to satisfy this requirement shall include at least two different course selections from among: Algebra I; Geometry; Algebra Functions and Data Analysis; Algebra II, or other mathematics courses above the level of Algebra II. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.

NOTE 2

Courses completed to satisfy this requirement shall include course selections from at least two different science disciplines: earth sciences, biology, chemistry or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.

NOTE 3

Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and one course in either World History or Geography or both.

NOTE 4

Students entering 9th grade as of the 2016-2017 school year: Students shall be trained in emergency first aid, CPR, and the use of AED, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. The training will be offered in all 9th and 10th grade Health/PE classes.

NOTE 5

Credits earned for this requirement shall include one credit in fine or performing arts or career and technical education. Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical course credit.

NOTE 6

Students who complete a career and technical education program sequence and pass an examination or occupational competency assessment in a career and technical education field that confers certification or an occupational competency credential from a recognized industry, or trade or professional association or acquires a professional license in a career and technical education field from the Commonwealth of Virginia may substitute the certification, competency credential or license for (1) the student selected verified credit and (2) either a science or history and social science verified credit when the certification, license or credential confers more than one verified credit. The examination or occupational competency assessment must be approved by the Board of Education as an additional test to verify student achievement.

NOTE 7

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

NOTE 8

For students entering the ninth grade for the first time between 2013-14 and 2017-18: A student may utilize additional tests for earning verified credit in computer science, technology, career and technical education, economics or other areas as prescribed by the Board in 8 VAC 20-131-110.

NOTE 9

Effective with the entering 9th-grade class of 2013-2014, students must complete one virtual course, which may be a non credit-bearing course or a required elective credit-bearing course that is offered online. This requirement is met through the successful completion of Economics and Personal Finance. The course has an online component and all students are required to complete this course for graduation

ADDITIONAL REQUIREMENTS FOR FIRST-TIME 9TH GRADERS IN 2018-2019 AND BEYOND**Advanced Placement, Honors, or International Baccalaureate Course or Career and Technical Education**

Credential: For students entering the ninth grade for the first time in 2018-2019 and beyond: In accordance with the Standards of Quality, students shall either (i) complete an Advanced Placement, honors, or International Baccalaureate course or (ii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the advanced studies diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.

Demonstration of the five Cs: For students entering the ninth grade for the first time in 2018-2019 and beyond: Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.

Graduation Requirements for an Advanced Diploma

Advanced Diploma Course Requirements			
Discipline Area	Standard Credits: for First-Time 9 th Graders as of 2011-2012	Verified Credits: First-Time 9 th graders from 2011-12 through 2017-18	Verified Credits: First-Time 9 th graders as of 2018-2019
English	4	2	2
Mathematics ¹	4	2	1
Laboratory Science ²	4	2	1
History & Social Sciences ³	4	2	1
World Languages ⁴	3		
Health & PE ⁵	2		
Fine Arts or Career & Technical Education ⁹	1		
Economics and Personal Finance ⁸	1		
Electives ⁶	3		
Student Selected SOL ⁷		1	
Total	26	9	5

NOTE 1

Courses completed to satisfy this requirement shall include at least three different course selections from among: Algebra I, Geometry, Algebra II, or other mathematics courses above the level of Algebra II. Per the Standards of Quality, a computer science course credit earned by students may be considered a mathematics course credit.

NOTE 2

Courses completed to satisfy this requirement shall include course selections from at least three different science disciplines from among: earth sciences, biology, chemistry, or physics or completion of the sequence of science courses required for the International Baccalaureate Diploma. Per the Standards of Quality, a computer science course credit earned by students may be considered a science course credit.

NOTE 3

Courses completed to satisfy this requirement shall include U.S. and Virginia History, U.S. and Virginia Government, and two courses in either World History or Geography or both.

NOTE 4

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

NOTE 5

Students entering 9th grade as of the 2016-2017 school year: Students shall be trained in emergency first aid, CPR, and the use of AED, including hands-on practice of the skills necessary to perform cardiopulmonary resuscitation. The training will be offered in all 9th and 10th grade Health/PE classes.

NOTE 6

For students entering the ninth grade for the first time as of the 2018-2019 school year: Courses to satisfy this requirement shall include at least two sequential electives as required by the Standards of Quality.

NOTE 7

For students entering the ninth grade between 2011-2012 and 2017-2018: A student may utilize additional tests for earning verified credit in computer science, technology, career or technical education, economics or other areas as prescribed by the Board in 8 VAC 20-131-110.

NOTE 8

Effective with the entering 9th-grade class of 2013-2014, students must complete one virtual course, which may be a non credit-bearing course or a required elective credit-bearing course that is offered online. This requirement is met through the successful completion of Economics and Personal Finance. The course has an online component and all students are required to complete this course for graduation

NOTE 9

Per the Standards of Quality, a computer science course credit earned by students may be considered a career and technical credit.

ADDITIONAL REQUIREMENTS FOR FIRST-TIME 9TH GRADERS IN 2018-2019 AND BEYOND**Advanced Placement, Honors, or International Baccalaureate Course or Career and Technical Education**

Credential: For students entering the ninth grade for the first time in 2018-2019 and beyond: In accordance with the Standards of Quality, students shall either (i) complete an Advanced Placement, honors, or International Baccalaureate course or (ii) earn a career and technical education credential approved by the board, except when a career and technical education credential in a particular subject area is not readily available or appropriate or does not adequately measure student competency, in which case the student shall receive satisfactory competency-based instruction in the subject area to satisfy the advanced studies diploma requirements. The career and technical education credential, when required, could include the successful completion of an industry certification, a state licensure examination, a national occupational competency assessment, or the Virginia workplace readiness assessment.

Demonstration of the five Cs: For students entering the ninth grade for the first time in 2018-2019 and beyond: Students shall acquire and demonstrate foundational skills in critical thinking, creative thinking, collaboration, communication, and citizenship in accordance with the Profile of a Virginia Graduate approved by the board.

Other Diplomas & Certificates	
Applied Studies Diploma	Available to students with disabilities who meet the requirements of their IEP.
General Education Development Certificate (GED)	Equivalency Certificate obtained through a GED program.

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 at commencement.

The Governor's Seal	<ul style="list-style-type: none"> • Advanced Diploma <i>and</i> • Average GPA of "B" or better (3.0) <i>and</i> • Successful completion of college level coursework that will earn the student at least nine transferable college credits in AP or dual enrollment courses
The Board of Education Seal	<ul style="list-style-type: none"> • Standard Diploma or Advanced Diploma <i>and</i> • Average GPA of "A" or better (4.0)
The Board of Education's Career and Technical Education Seal	<ul style="list-style-type: none"> • Standard or Advanced Diploma <i>and</i> • 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, <i>or</i> • 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, <i>or</i> • 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	<ul style="list-style-type: none"> • Standard or Advanced Studies Diploma <i>and</i> • Satisfy all of the mathematics requirements for the Advanced Studies Diploma (four units of credit including Algebra II; two verified units of credit) with a "B" average <i>and</i> • Pass an examination in a career and technical educational field that confers certification from a recognized industry, or trade or professional association <i>or</i> • Acquire professional license in a career and technical education field from the Commonwealth of Virginia <i>or</i> • 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	<ul style="list-style-type: none"> • Standard or Advanced Studies Diploma <i>and</i> • Complete Virginia and United States History and Virginia and United States Government courses with a grade of "B" or higher <i>and</i> • Have good attendance and no disciplinary infractions as determined by local school board policies <i>and</i> • Complete 50 hours of voluntary participation in community service or extracurricular activities. Activities that would count include the following: volunteering for a charitable or religious 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.)
Board of Education's Seal of Biliteracy	<ul style="list-style-type: none"> • Awarded to students who earn a Board of Education-approved diploma <i>and</i> • Pass all required End-of-Course Assessments in English reading and writing at the proficient or higher level <i>and</i> • Demonstrate proficiency at the intermediate-mid level or higher in one or more languages other than English as demonstrated through an assessment from a list approved by the Superintendent of Public Instruction. American Sign Language qualifies as a language other than English.
Board of Education's Seal for Excellence in Science and the Environment	<ul style="list-style-type: none"> • Standard or Advanced Studies Diploma <i>and</i> • Complete at least three different first-level board-approved laboratory science courses <i>and</i> • Complete one rigorous advanced-level or postsecondary-level laboratory science course, each with a grade of "B" or higher <i>and</i> • Complete laboratory or field-science research and present that research in a formal, juried setting <i>and</i> • Complete at least 50 hours of voluntary participation in community service or extracurricular activities that involve the application of science such as environmental monitoring, protection, management, or restoration

ENGLISH

English 9, 10, 11, 12

Grade levels: 9 - 12

Prerequisite: Passed previous grade level English

Credit: 1 each year

All English classes will have an emphasis on vocabulary development, writing skills, and literature studies. English 9 and 10 will emphasize world literature. English 11 will emphasize American Literature. English 12 will emphasize British Literature. Reading and Writing SOL tests are required in 11th grade.

Honors English 9, 10

Grade levels: 9 - 10

Prerequisite: B average in previous Honors English course or A average in previous English course; SRI score of 1100 or higher

Credit: 1 each year

Honors English is an accelerated program designed to prepare students for the Rappahannock Community College English 111-112 class. Emphasis in these classes will include advanced study in literature and writing.

Dual Enrollment College Composition (ENG 111 and ENG 112)

Grade levels: 11 or 12

Prerequisite: Pass RCC placement test; B average in previous Honors English course or A average in previous English course; Parent meeting will be requested.

High School credit: 1

College credit: 3 per course (6 in total)

ENG 111 introduces students to critical thinking and the fundamentals of academic writing. Through the writing process, students refine topics, develop and support ideas, investigate, evaluate, and incorporate appropriate resources, edit for effective style and usage, and determine appropriate approaches for a variety of contexts, audiences, and purposes. Writing activities will include exposition and argumentation with at least one researched essay. ENG 112 continues to develop college writing with increased emphasis on critical essays, argumentation, and research, and developing these competencies through the examination of a range of texts about the human experience. Requires students to locate, evaluate, integrate, and document sources and effectively edit for style and usage. **Successful completion of ENG 111 and ENG 112 is needed to fulfill the one credit of English 11 or English 12 needed to graduate. Students must complete ENG 111 with at least a C average to continue to ENG 112.**

Dual Enrollment Survey of World Literature (ENG 251 and ENG 252)

Grade level: 12

Prerequisite: ENG 111 and ENG 112 with at least a C average

High School credit: 1

College credit: 3 per course (6 in total)

This college-level course examines major works of world literature and involves critical reading and writing. **Successful completion of ENG 251 and ENG 252 is needed to fulfill the one credit of English 12 needed to graduate. Students must complete ENG 251 with at least a C average to continue to ENG 252.**

MATH

Algebra 1A and 1B

Grade levels: 9 - 12

Prerequisite: none

Credit: 1 Elective* credit & 1 Math credit

This year-long sequence is composed of two courses that will meet every day. Students will earn one elective* credit for Algebra 1A and one math credit for Algebra 1B. In this course, students will be exposed to practical applications of Algebra. Algebra 1A begins with a review of mathematical vocabulary, equations, and inequalities. Students will explore rational numbers by solving and graphing linear equations. In Algebra 1B, students will explore polynomials, factoring methods, and solve and investigate quadratic equations. Students will be required to take the SOL test at the completion of Algebra 1B.

**Students will receive one elective credit for Algebra 1A unless found eligible for credit accommodations for Students with Disabilities (IDEA and 504) as established by Virginia law or regulation.*

Geometry 1A and 1B

Grade levels: 9 - 12

Prerequisite: Pass Algebra I

Credit: 1 Elective* credit & 1 Math credit

This year-long sequence is composed of two courses that will meet every day. Students will earn one elective* credit for Geometry 1A and one math credit for Geometry 1B. Geometry 1A begins with a review of basic geometry and builds on working with the coordinate plane. Students will investigate undefined terms, definitions, postulates, theorems, and deductive reasoning. The Pythagorean Theorem, Right Triangles, and Trigonometry will be explored along with various dimensional figures. In Geometry 1B, students will identify similarity and proportionality. Students will analyze plane figures and investigate surface area and volume. Constructions, coordinate, and transformational geometry will also be studied. Students may be required to take the SOL test at the completion of Geometry 1B.

**Students will receive one elective credit for Geometry 1A unless found eligible for credit accommodations for Students with Disabilities (IDEA and 504) as established by Virginia law or regulation.*

Algebra, Function and Data Analysis (AFDA)

Grade levels: 9 - 12

Prerequisite: Pass Algebra I

Credit: 1

In this course, students will strengthen conceptual understandings 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.

Algebra II

Grade levels: 9 - 12

Prerequisites: Pass Algebra I and Geometry; Pass AFDA or teacher recommendation (must have an A or B average in Algebra and Geometry and have earned a verified credit in Math)

Credit: 1

In this course, students will be exposed to advanced algebraic concepts that build on skills learned in previous courses. Topics include polynomials, 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 may be required to take the SOL test at the conclusion of the course.

Honors Math Analysis

Grade levels: 10 - 12

Prerequisite: Pass Algebra II

Credit: 1

In this semester-long 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. Exponential and logarithmic functions, and arithmetic and geometric sequencing and series will also be introduced.

Probability and Statistics

Grade levels: 11 - 12

Prerequisite: Pass Algebra II

Credit: 1

This course covers the basic principles of data collection and numerical analysis. Topics will include measures of central tendency, experimental and theoretical probability, combinations, and sampling theory. Students will be encouraged to make use of available technologies to assist in organizing and interpreting data and to understand the usefulness of emerging technologies as tools for solving problems. Students will be provided with experiences that will model the means by which data are collected, used, and analyzed.

Dual Enrollment Pre-Calculus I (MTH 161)

Grade levels: 11 or 12

Prerequisites: Pass RCC placement test; At least a B average in Honors Math Analysis; Parent meeting will be requested.

High School credit: .5

College credits: 3

MTH 161 covers college algebra, matrices, and algebraic, exponential, and logarithmic functions.

Students must complete MTH 161 with at least a C average to continue on to MTH 162.

Dual Enrollment Pre-Calculus II (MTH 162)

Grade levels: 11 or 12

Prerequisite: DE Pre-Calculus I (MTH 161) with at least a C average

High School credit: .5

College credits: 3

MTH 162 covers the topics of trigonometry, analytic geometry, and sequences and series.

Dual Enrollment Applied Calculus (MTH 261)

Grade level: 11 or 12

Prerequisite: DE Pre-Calculus I (MTH 161) with at least a C average

High School credit: .5

College credits: 3

MTH 261 introduces limits, continuity, differentiation and integration of algebraic and transcendental functions, techniques of integration, and partial differentiation.

Dual Enrollment Statistics (MTH 245)

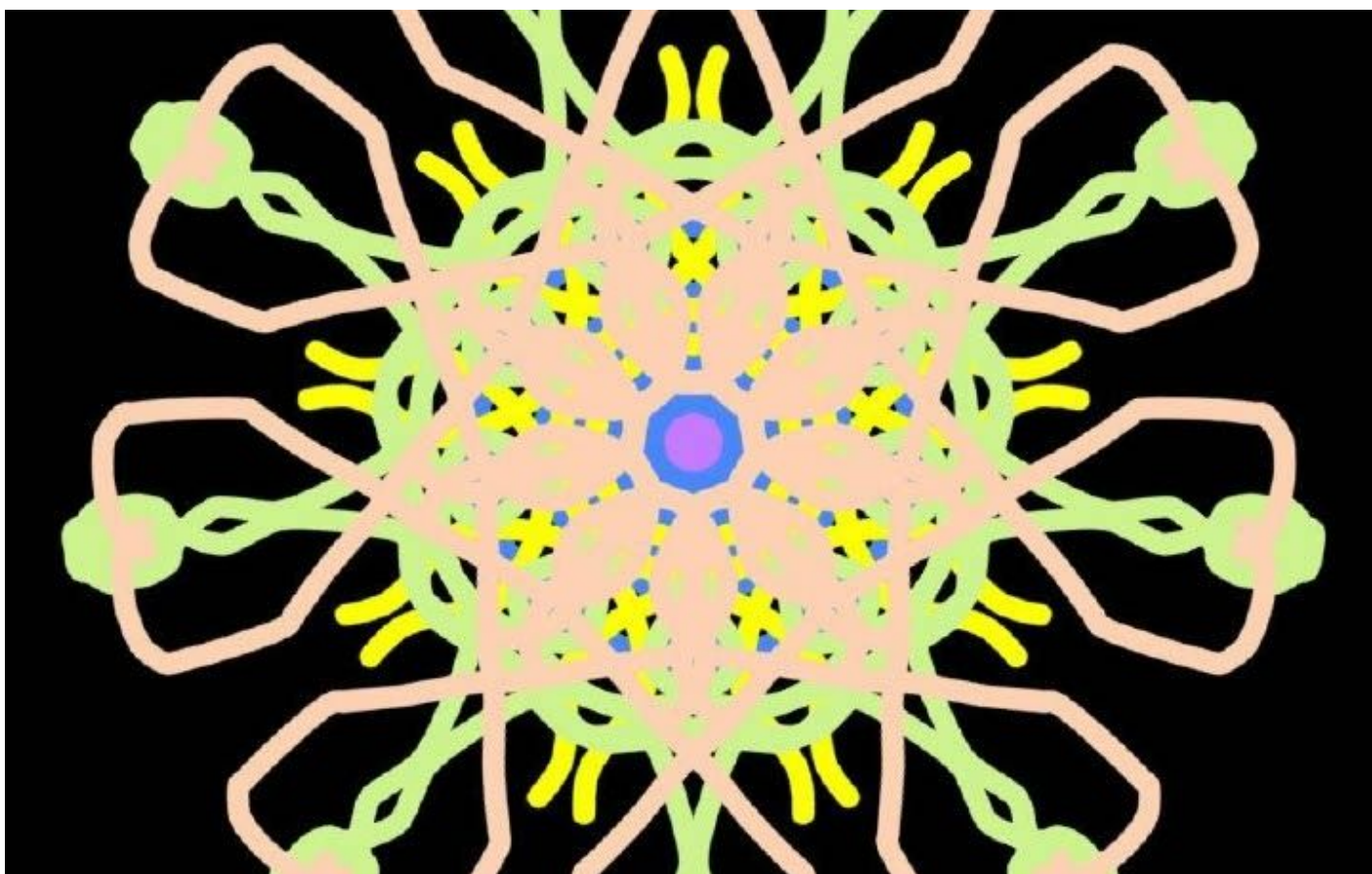
Grade level: 12

Prerequisite: DE Pre-Calculus I (MTH 161) with at least a C average

High School credit: .5

College credits: 3

MTH 245 covers descriptive statistics, elementary probability, probability distributions, estimation, and hypothesis testing.



Artwork by: Lyric Pinn

SCIENCE

Environmental Science

Grade levels: 9 - 12

Prerequisite: None

Credit: 1

This laboratory-based course provides opportunity to synthesize the disparate pieces of physics, chemistry, earth science, and biology while developing the Naturalist Intelligence. Students will gain an understanding of ecological concepts including air, water, soil, biological diversity, and human impacts. Inquiry skills will be developed through fieldwork, service projects, and collaborative investigation while using appropriate technology in order to meet the 5C requirements (communication, collaboration, civic responsibility, critical thinking, and creative thinking). Students become challenged with diverse topics, rigorous reading requirements, and opportunity for written and oral presentation.

Biology

Grade levels: 10 - 12

Prerequisite: Environmental Science

Credit: 1

This laboratory-based course introduces living things and processes. Topics include scientific investigation (method), life at the molecular and cellular level, life at the systems and organisms level (kingdoms and classification), and interactions of life forms (ecology). Dissections are part of this course; however, alternative projects will be provided for dissections. Students will be required to take the SOL test at the conclusion of the course.

Honors Biology

Grade levels: 10 - 12

Prerequisite: Environmental Science with at least a B average

Credit: 1

This laboratory-based course introduces living things and processes. Topics include scientific investigation (method), life at the molecular and cellular level, life at the systems and organisms level (kingdoms and classification), and interactions of life forms (ecology). This rigorous course contains strong research components which enable students to apply scientific concepts. Students will be encouraged to share their ideas, use the language of biology, discuss problem-solving techniques, and communicate effectively. Students will be challenged to learn and research, utilizing both classroom experimentation and literature reviews from written and electronic resources, and to present topics in biology in greater depth. Completion of an investigative research project is a requirement in this course. Each student must keep a lab field notebook for record keeping. Dissections are part of the course; however, alternative projects will be provided for dissection. Students will be required to take the SOL test at the conclusion of the course.

Biology II: Advanced Survey of Topics

Grade levels: 11 - 12

Prerequisite: Pass Biology or Honors Biology; passing score on the Biology SOL

Credit: 1

This laboratory-based course covers biology topics in depth and focuses on contemporary issues. Topics include environmental science, local flora and fauna, diseases, genetics, evolution, DNA technology, forensic science, anatomy and physiology, food safety, genetically modified foods, and marine biology. Students will be challenged to learn and research, utilizing both classroom experimentation and literature reviews from written and electronic resources, and to present topics in biology in greater depth. Students may engage in field work. Dissections are part of the course; however, alternative projects will be provided for dissections.

Ecology

Grade levels: 11 - 12

Prerequisite: Biology

Credit: 1

This laboratory-based course covers investigative concepts in earth science, biology, and some chemistry. Students will develop problem solving skills by investigating life at the molecular and cellular level, life at the systems and organism's level, and interaction of life forms. Students will gain an appreciation of diversity in nature and the importance of preservation of all life on Earth for future generations. Students will be successful in examining ecology across several levels of organization ranging from the individual organism to the global ecosystem. Students may engage in field work during the year. The ability to work and study independently and to complete competitive projects individually or with a partner is necessary. Dissections are part of the course; however, alternative projects will be provided for dissections as well. Students will be successful in examining ecology across several levels of organization ranging from the individual organism to the global ecosystem. Students may engage in field work during the course of the year. The ability to work and study independently and to complete competitive projects as an individual or with a partner is necessary.

Chemistry

Grade levels: 11 - 12

Prerequisites: Pass Biology and Algebra I; Algebra 2 is recommended as a prerequisite or a corequisite.

Credit: 1

This laboratory-based course covers the study and investigation of the structure and properties of matter. The course also deals with the composition and the changes that matter undergoes. It will include a study of energy, reactions, acid/base theory, and how they relate to everyday life. Laboratory investigations with write-up will be taught to accommodate the college-bound student. Students may be required to take the SOL test at the conclusion of the course.

Astronomy

Grade levels: 11 - 12

Prerequisites: Biology

Credit: 1

Astronomy provides a broad survey of the field of astronomy in one semester of study. The course is designed to have a minimum of mathematical investigation and to be accessible to a diverse population. Cultural history and relevance is emphasized in the sections on observational astronomy and astronomy and society. The project-based course is easily differentiated for students with a variety of educational needs. Astronomical investigations are highlighted from ancient people to the most modern methods which are explored with the Internet and other resources.

Oceanography

Grade levels: 11-12

Prerequisites: Biology

Credit: 1

Theories of Earth's structure and plate tectonics will be presented as a base on which to build the explanation of the physical features of the ocean floor. Both historical and physical geology of the ocean floor will be investigated. Students will study physical properties of seawater, marine chemistry, marine organisms, salinity and density, circulation within the oceans, waves, currents, tides, and oceanographic instruments and research. Emphasis will be placed on the major skills of practicing oceanographers and scientists.

Dual Enrollment Anatomy and Physiology (BIO 141 and BIO 142) *(Will be offered in the 2022-2023 school year)*

Grade Levels: 11 - 12

Prerequisites: Pass RCC Placement test; Completed Biology with at least a B average; Chemistry may be taken as a prerequisite or corequisite.

High school credit: 2

College credits: 4 per semester (8 in total)

This is a yearlong two-course sequence that meets every day. It is a college laboratory-based course that fulfills a science requirement for the General Education certificate, the Associate of Arts and Science, and the Associate of Applied Science in Nursing. This course integrates anatomy and physiology of cells, tissues, organs, and systems of the human body and concepts of chemistry, physics, and pathology. Dissections are part of the college course and are upheld by RCC. Students will work with Canvas and need access to the internet. **Students must complete BIO 141 with at least a C average to continue to BIO 142.**

Dual Enrollment Biology (BIO 101 and BIO 102) *(Will be offered in the 2021-2022 school year)*

Grade levels: 11 - 12

Prerequisites: Pass RCC Placement test; Completed Biology with at least a B average; Chemistry may be taken as a prerequisite or corequisite.

High School credit: 2

College credits: 4 per semester (8 in total)

This is a yearlong two-course sequence that meets every day. It is a college laboratory-based course. It explores fundamental characteristics of living matter from the molecular level to the ecological community with emphasis on general biological principles, including diversity of living organisms, and their structure, function, and evolution. Basic principles of the biological sciences, including biochemistry, cellular theory, organismal diversity, human biology, and ecology are introduced. Dissections are part of the college course and are upheld by RCC. Students will be working with Canvas and need access to computers. **Students must complete BIO 101 with at least a C average to continue to BIO 102.**



Artwork by: Jason Curry

SOCIAL SCIENCE

Dual Enrollment Principles of Psychology 200

Grade Levels: 11 - 12

Prerequisite: Pass RCC Placement test

High school credit: 1

College credits: 3 per semester

This is a one-semester course. It surveys the basic concepts of psychology and will cover the scientific study of behavior, behavioral research methods and analysis, and theoretical interpretations. Students will study topics that cover physiological mechanisms, sensation/perception, motivation, learning, personality, psychopathology, therapy, and social psychology. Students will be working with Canvas and need access to the internet.

Dual Enrollment Developmental Psychology 230

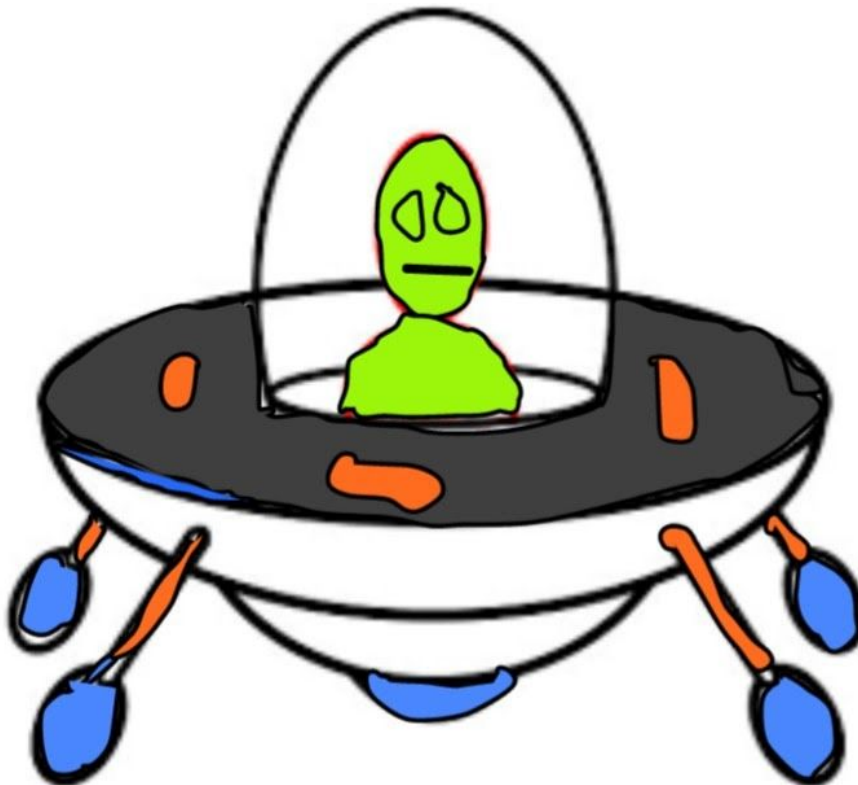
Grade Levels: 11 - 12

Prerequisite: Pass RCC Placement test

High school credit: 1

College credits: 3 per semester

This is a one-semester course. This course covers the development of the individual from conception to death and will cover a life-span perspective on the development of the person's physical, cognitive, and psychosocial growth. Students will be working with Canvas and need access to the internet.



Artwork by: Todd Donovan

HISTORY

World History I (to 1500 A.D.)

Grade levels: 9 - 12

Prerequisite: None

Credit: 1

World History I is the study of the history of man and the emergence of civilizations in various cultural regions. The course looks at the early civilizations and examines the classic empires. It is a detailed study of religion and its influences as well as the social, political, and economical development of the time period. Students will be required to take the SOL test at the conclusion of the course.

World History II (1500 A.D.-Present)

Grade levels: 9 - 12

Prerequisite: Pass World History I

Credit: 1

World History II is an in-depth study of the history of the world from the Protestant Reformation through the Contemporary Era. Students will see a pattern in world events and examine the world in which they live. Students may be required to take the SOL test at the conclusion of the course.

Virginia and U.S. History

Grade level: 11

Prerequisite: Pass World History I

Credit: 1

This course covers the historical development of American ideas and institutions from the Age of Exploration to the present while focusing on political and economic history. The standards covered provide students with a basic knowledge of American culture through a chronological survey of major issues, movements, people, and events in the U.S. and Virginia. Students may be required to take the SOL test at the conclusion of the course.

Dual Enrollment U.S. History (HIS 121 and HIS 122)

Grade level: 11

Prerequisites: Pass RCC placement test; At least a B average in previous history course

High School Credit: 1

College Credit: 3 per course (6 in total)

Dual Enrollment U.S. History is designed to develop the analytical skills and acquire the factual knowledge necessary to deal critically with the problems and materials concerning the history of the United States. Students will examine historical material according to relevance, reliability, and importance by weighing the evidence presented in historical scholarship. Students will develop the skills necessary to arrive at conclusions based on critical analysis of information and will have the ability to present evidence clearly and persuasively in essay format. Students may be required to take the SOL test at the conclusion of the course. **Successful completion of HIS 121 and HIS 122 is needed to fulfill the one credit of U.S. History high school graduation requirement. Students must complete HIS 121 with at least a C average to continue to HIS 122.**

Virginia and U.S. Government

Grade level: 12

Prerequisite: US History

Credit: 1

This course examines the United States and Virginia constitutions, the structure and function of government at the local, state, and national levels, and the nature and function of political and economic relationships to the operation of government. This course is an introduction to economic theory, the study of capitalism and its functions, the allocation of resources and its impact on productivity, the study of monetary and fiscal policies, and the government's role in personal economic well-being.

Dual Enrollment Government and Politics (PLS 135 and PLS 136)

Grade level: 12

Prerequisite: Pass RCC placement test; At least a B average in previous history course

High School Credit: 1

College Credit: 3 per semester (6 in total)

The student will study the following topics: Constitutional underpinnings of democracy in the United States, political parties and interest groups, the Congress, the Presidency, the Bureaucracy, the federal courts, public policy, civil liberties and civil rights, state and local governments, politics and economics, the study of monetary and fiscal policies on personal economic well-being, and the government's role in the economy. Attention is given to public opinion, suffrage, elections, political parties, interest groups, civil rights, domestic policy, and foreign relations. Students will be required to complete class projects and writing assignments outside of class time. **Successful completion of PLS 135 and PLS 136 is needed to fulfill the one credit of U.S. Government high school graduation requirement. Students must complete PLS 135 with at least a C average to continue to PLS 136.**



Artwork by: Alana Cystrunk

WORLD LANGUAGE

Spanish I

Grade levels: 9 - 12

Prerequisite: none

Credit: 1

In this beginning level course, students will start their acquisition of the Spanish language with the development of speaking and listening skills. Focus is given to creative speaking proficiency at a novice level. Students will have additional practice with reading and writing Spanish. Grammar is integrated into instruction according to the vocabulary and structures needed.

Spanish II

Grade level: 9 - 12

Prerequisite: Pass Spanish I

Credit: 1

In Spanish II, students continue to develop their communicative competence. This course continues to build on skills established in Spanish I. Speaking and listening skills continue to be emphasized with greater speaking proficiency developed. Students will develop reading and writing skills in Spanish along with continued use of the language in class. The focus on using the language in authentic situations will be expanded and increased communication in Spanish is required in the classroom.

Spanish III

Grade levels: 10-12

Prerequisite: Pass Spanish II

Credit: 1

In Spanish III, students continue to develop their communicative and cultural competence by interacting orally and in writing with other Spanish speakers. The course continues to refine the four skills areas learned in Spanish I and II: listening, speaking, reading, and writing. With much of the course conducted exclusively in Spanish, students will learn and apply new grammatical structures to higher level vocabulary in order to further expand communication skills. Primary focus is on speaking proficiency in non-scripted and unrehearsed settings.

Honors Spanish IV

Grade levels: 11-12

Prerequisite: Pass Spanish III

Credit: 1

In Spanish IV, students continue to develop their communicative and cultural competence, understanding oral and written texts, and making oral and written presentations in Spanish. With the course conducted solely in Spanish, students will refine higher level grammatical structures and vocabulary in order to further expand proficiency in all four skill areas: listening, speaking, reading, and writing. Students are able to exchange and support opinions on a variety of topics. Appropriate authentic texts in listening and reading are the primary focus of this upper level course.

Honors Spanish V

Grade level: 12

Prerequisite: Pass Honors Spanish IV

Credit: 1

Students will continue exploration of Spanish speaking countries begun in Level IV. In Spanish, students will express and support opinions on a variety of historical and contemporary issues in oral and written form. Students will engage in further readings of Don Quixote and the poetry and prose of contemporary South American authors. Conversational practice will incorporate mastery of idioms and colloquial expressions.

French I

Grade levels: 9-12

Prerequisite: none

Credit: 1

This introductory course for beginning students of French develops the four language communication skills: listening, speaking, reading, and writing. It introduces basic vocabulary, grammar, and basic expressions as well as providing opportunities for students to enhance their understanding and appreciation of the French culture as well as its history.

French II

Grade levels: 9-12

Prerequisite: Pass French I

Credit: 1

It is recommended that students have a grade of "C" or higher in French I. This is a comprehensive course in Intermediate French that enriches, expands, and builds on the students' knowledge of the French language and culture. This intermediate course reviews material covered in the first year French course. It is aimed at building student proficiency in all four language skills (listening, speaking, reading, and writing) and enhancing knowledge of the cultures of French speaking people.

French III

Grade levels: 10-12

Prerequisite: Pass French II

Credit: 1

This is a comprehensive course in French that enriches and expands on the students' knowledge of the French language and culture. French III builds on and refines skills learned in French I and French II.

Honors French IV

Grade levels: 11-12

Prerequisite: Pass French III

Credit: 1

This is a comprehensive course for students who have completed at least three years in French. It will expand the students' knowledge in the study of the literature, culture, and history of the French language and of francophone countries. This course will build on the knowledge the student acquired in the first three years of study.

HEALTH AND PHYSICAL EDUCATION

Health and Physical Education 9 and Family Life

Grade level: 9

Prerequisite: None

Credit: 1

The health portion covers topics such as mental health, family life, safety, non-communicable and communicable diseases, body systems, nutrition, fitness, wellness, stress management, and relationships. The physical education program includes team sports (basketball, volleyball, football, etc.), individual sports (track and field, ping pong, etc.), physical fitness, weight training, and conditioning. Students will demonstrate adult and child cardiopulmonary resuscitation (CPR), use of automated external defibrillator (AED), and first aid skills for bleeding, contusions, fractures, and anaphylactic shock.

Health and Physical Education 10 and Driver Education and Family Life

Grade level: 10

Prerequisite: Pass Health and PE 9

Credit: 1

During the first part of this course, classroom driver education will be taught in 36 instructional periods. The classroom portion of the second part will focus on family life, first aid, CPR/AED, drug abuse awareness, diseases, medicines and mental health. Students will demonstrate adult and child cardiopulmonary resuscitation (CPR), use of automated external defibrillator (AED), and basic first aid skills for bleeding, contusions, fractures, and anaphylactic shock. The physical education program includes team and individual sports with an emphasis on fitness.

Weightlifting

Grade levels: 11-12

Prerequisite: Pass Health and PE 10

Credit: 1

An introductory course designed to help each student improve muscular strength and endurance, gain knowledge and understanding of weight training theory and practice. Students will identify and develop a personalized weight training program. Weight room safety for all lifts, major muscle identification, and individual goal setting are all important components in this course.

Advanced Physical Education

Grade levels: 11-12

Prerequisite: Pass Health and PE 10

Credit: 1

The goal of Advanced Physical Education is to provide progressive skills, techniques, and strategies in various sports activities. This is a continuation course for those individuals who enjoy physical fitness and individual and team sports. It is intended to help students develop skills and knowledge in additional areas of various sports and fitness activities.

Sports, Health, and Exercise Science

Grade levels: 11-12

Prerequisite: Pass Health and PE 10

Credit: 1

This course focuses on the individual's well-being and explores how sports and exercise influence health. It allows students to delve more deeply into topics such as diet, nutrition, anatomy, physiology, and sports.

AFJROTC: Air Force Junior ROTC

Aerospace Science I

Grade levels: 9-12

Prerequisite: None

Credit: 1

Aerospace Science 100: Milestones in Aviation History 2nd Edition

This is an aviation history course focusing on the development of flight throughout the centuries. It starts with ancient civilizations and flight, then progresses through time to future developments in aerospace, with an introduction into cyber technologies.

Aerospace Science 200: The Science of Flight: A Gateway to New Horizons

This is an introductory course that focuses on how airplanes fly, how weather conditions affect flight, flight and the human body, and flight navigation.

Leadership Education 100: Traditions, Wellness, and Foundations of Citizenship

LE 100 is the component of JROTC leadership education intended for students who are entering the AFJROTC program. It will introduce cadets to history, organization, mission, traditions, goals, and objectives of JROTC for all services. It introduces key military customs and courtesies, how to project a positive attitude, and examines the principles of ethical and moral behavior. Lessons will cover how to be emotionally, mentally, and physically healthy. Finally, cadets will be introduced to civics and our national government, including a historical understanding of the American flag and other important national symbols.

Aerospace Science II

Grade levels: 10-12

Prerequisite: Aerospace Science I

Credit: 2*

AS 300: Exploring Space: The High Frontier 2nd Edition

This is a science course that includes the latest information on exploring space and an introduction to cybersecurity and technology. The textbook will begin with early astronomy and the basic interest in the universe from the Greeks through the Renaissance and Enlightenment ages. Students will be provided an in-depth view of the solar system, including Earth, the Sun, the Moon, and planets. The text also discusses the history of space travel and more modern space probes and robotics. Students will examine the effects of space on the human body. The text also investigates the history of rockets, launch vehicles, and the coordinated systems required for a successful launch into space. Finally, the text will offer a cybersecurity chapter that outlines the importance of cybersecurity in space and in daily life.

Leadership Education 200: Communication, Awareness, and Leadership

This is a course designed to improve communication, enhance awareness of self and others, and provide fundamentals of leadership and followership. The course focuses on the mission of the Air Force Junior Reserve Officer Training Corps (AFJROTC) to “develop citizens of character dedicated to serving their nation and community.” Woven throughout is the underlying theme of developing personal integrity. The course also emphasizes leadership and values such as service and excellence. This update incorporates 21st century teaching, learning, and skills of critical thinking, communication, collaboration, and creativity.

**At the successful completion of Aerospace Science I and Aerospace Science II, one credit of Earth Science II and one elective credit will be awarded for Aerospace Science II.*

Aerospace Science III

Grade levels: 10-12

Prerequisite: Aerospace Science I and II

Credit: 1

AS 220: Cultural Studies: An Introduction to Global Awareness

This is a course about the world's cultures. The course is specifically created for the US Army, Marine Corps, Navy, and Air Force Junior ROTC programs. It introduces students to the world's cultures through the study of world affairs, regional studies, and cultural awareness. The course delves into history, geography, religions, languages, culture, political systems, economics, social issues, environmental concerns, and human rights. It looks at major events and significant figures that have shaped each region.

Leadership Education 300: Life Skills and Career Opportunities

Life Skills and Career Opportunities provides an essential component of leadership education for today's high school students. This course is designed to prepare students for life after high school in the high-tech, globally oriented, and diverse workplace of the 21st century. Students will learn how to become a more confident financial planner and to save, invest, and spend money wisely, as well as how to avoid the credit trap. They will learn about real-life issues such as understanding contracts, leases, warranties, legal notices, personal bills, practical and money-saving strategies for grocery shopping, apartment selection, and life with roommates. The Holland Interest Inventory and other self-assessments will help them discover their attitudes, aptitudes, and personal skills. To help students increase their potential for success through education, they will learn how to select a school that is right for them, how to apply for admission to a vocational or technical school, community college, or college/university, and how to succeed in these learning environments. Information is provided on how to conduct the job search for students who wish to enter the workforce right after high school or after additional education and training. They will learn how to prepare a winning résumé and how to develop effective interviewing skills. Students will become more skilled at using the Internet for career research and learn how to network safely using social media. The text also provides information on working for the federal government to include careers in the military, aerospace industry, and public service. Finally, students will consider the most important elements of life skills for all Americans: civic responsibilities, such as volunteering, registering to vote, jury duty, and draft registration.

Aerospace Science IV

Grade levels: 10-12

Prerequisite: Aerospace Science I, II and III

Credit: 1

AS 410: Survival: Survive and Return

The *Survival* text is a synthesis of the basic survival information found in Air Force Regulation 64-4 *Survival Training*. The survival instruction will provide training in skills, knowledge, and attitudes necessary to successfully perform fundamental tasks needed for survival. Survival also presents "good to know" information that would be useful in any situation. The information is just as useful to an individual lost hunting or stranded in a snowstorm.

AS 400: Management of the Cadet Corps (ONLY SELECTED CADET LEADERS)

This class is intended for 4th year cadets who hold corps management positions. This hands-on experience affords cadets the opportunity to put theories of previous leadership courses into practice. Planning, organizing, coordinating, directing, controlling, and decision-making will be done by cadets. They will put into practice their communication, decision-making, personal- interaction, managerial, and organizational skills.

Leadership Education 400: Fundamentals of Management 1st Edition

This course provides an essential component of leadership education for today's high school students. It is designed for the fourth-year junior reserve officer training corps cadet. Its aim is to provide students an introduction to basic management concepts and skills, especially as they relate to managing in a JROTC unit.

ART

Art I (Foundations Level)

Grade levels: 9-11

Prerequisite: None

Credit: 1

This foundation course will focus on the basic elements and principles of design with explorations in 2-D media, pencil, charcoal, ink, crayon, colored pencil, watercolor, and tempera. The student will keep an art notebook/sketchbook, participate in critiques, and make connections with Art History.

Art II

Grade levels: 10-12

Prerequisite: Pass Art I

Credit: 1

In this intermediate level, students will continue the concepts of Art I and begin to explore 3-D sculpture concepts. Media may include wire, metal, paper, plaster, clay, cardboard, and mixed media. The student will keep an art notebook/sketchbook, participate in critiques, and make connections with Art History.

Art III

Grade levels: 10-12

Prerequisite: Pass Art II

Credit: 1

Independent project planning and continued demonstration of growth-mastery of the basic art skills from earlier coursework will be the focus for this class. The student will keep an art notebook/sketchbook, participate in critiques, and make connections with Art History.

Art IV

Grade level: 12

Prerequisite: An accepted visual arts portfolio and Pass Art III with a C or above

Credit: 1

The student will design project contracts that may include working on a team or independently. The student will keep an art notebook/sketchbook, participate in critiques, and make connections with Art History. A digital portfolio will be an on-going project for this course. An accepted Visual Arts portfolio is required for inclusion in this course.

Graphic Arts Design

Grade level: 9-12

Prerequisite: none

Credit: 1

Students in this course will use the elements of graphic arts and explore media related to this art form: photography, printmaking, advertising, and book illustration. The student will keep an art notebook/sketchbook and participate in critiques.

Photography

Grade levels: 10 – 12

Prerequisite: None

Credit: 1

Exploration of the digital camera, MS Office tools for photo enhancements and edits, and use of Google Chromebook tools will be the main elements of this course. Students who are interested in capturing images and displaying them for public viewing should enroll in this semester course. Trick photos and photo crafts are included as well. Students should have a digital camera to capture photos on their own as well as during photo shoots in class. A flash drive and SD card for storage will be helpful, but is not required. A final course portfolio will be created for use on job interviews/ presentation of personal skill with the camera.



Artwork by: Emily Gill

YEARBOOK

Yearbook

Grade levels: 9-12

Prerequisite: Completed application

Credit: 1

This elective course is designed for students wishing to work on the yearbook publication. All students learn basic page design and write copy. All students take pictures for use in the yearbook. Selling ads, taking yearbook orders, and distributing flyers is required. Attendance at certain after school and weekend events is necessary. VHSL standards and regulations are stressed.

BUSINESS AND INFORMATION TECHNOLOGY

Principles of Business and Marketing

Grade levels: 9-12

Prerequisite: None

Credit: 1

Students explore the roles of business and marketing in the free enterprise system and global economy. They study how the American economy operates and prepare to make decisions as consumers, wage earners, and citizens. The Workplace Readiness Skills test will be given at the completion of the course.

Computer Information Systems

Grade levels: 9-12

Prerequisite: none

Credit: 1

Students apply problem-solving skills to real-life situations through word processing, spreadsheets, databases, multimedia presentations, and integrated software activities. Students work individually and in groups to explore computer concepts, operating systems, networks, telecommunications, and emerging technologies.

Web Design, Multimedia, Web Technologies

Grade levels: 10-12

Prerequisite: Computer Information Systems

Credit: 1

Students develop proficiency in creating desktop publications, multimedia presentations/projects, and web sites using industry standard application software. Students incorporate the principles of layout and design in completing publications and projects. Students develop advanced skills in interactive media. Students design portfolios that may include business cards, newsletters, mini-pages, multimedia presentations, projects, calendars, and graphics. Students use Adobe Flash, Dreamweaver, Photoshop and Microsoft Publisher. The Workplace Readiness Skills test will be given at the completion of the course.

Video and Media Technology*

Grade levels: 10-12

Prerequisite: None

Credit: 1

Students will have an opportunity to study all aspects of video and media production, from planning and writing for production to operating studio and editing equipment. Students practice various methods of gathering news and information from individuals, research, and online resources. In addition, students are introduced to analog and digital principles of film production. Students will apply skills to real world projects such as broadcasting/live-streaming school events (sports, etc.), editing recorded school events, photographing school events, and maintaining a school announcement board.

**Students will need to be available to attend assigned school-related events (held outside of regular school hours) to successfully complete the course.*

Web Design, Multimedia, Web Technologies Advanced

Grade levels: 11-12

Prerequisite: Web Design, Multimedia, and Web Technologies

Credit: 1

Students develop advanced skills for creating desktop-published, interactive multimedia, and web-site projects. Students work with hardware and software to apply skills to real world projects such as managing the school website and social media sites, video recording and photographing school events, creating and maintaining the school announcement board, etc. Students will need to be available to attend assigned school-related events as part of their course grade.

Economics and Personal Finance*

Grade levels: 11-12

Prerequisite: Algebra 1

Credit: 1

Students learn to make informed financial decisions regarding budgeting, banking, credit, insurance, spending, taxes, savings, investing, buying/leasing a vehicle, living independently, and inheritance. Additionally, students develop an understanding of how basic economic principles affect personal decision-making as well as the economic world around them. This course will provide the basis for responsible citizenship and career success. This course is a graduation requirement. The W!SE Financial Literacy assessment will be given at the conclusion of the course.

** Successful completion of this course is a graduation requirement.*

Entrepreneurship Education

Grade levels: 9-12

Prerequisite: None

Credit: 1

This course introduces students to the world of creating, owning, and launching a business. Students will learn concepts for developing business plans, raising capital, determining costs and pricing, etc. as well as utilizing business simulations to see the results of their decisions. Students will be required to help run a school store, sell LHS products at sporting events, and participate in product promotions during school functions. The Workplace Readiness Skills test will be given at the end of the course.

Office Administration

Grade levels: 9-12

Prerequisite: Computer Information Systems

Credit: 1

Students enhance word processing and communication skills as they develop competencies needed by administrative support professionals. Students study office procedures such as information processing, telecommunications, electronic records management, and financial records management. The Workplace Readiness Skills test will be given at the completion of the course.

Digital Visualization (ITD 112 "Designing Web Page Graphics")

Grade Level: 9-12

Prerequisite: Pass RCC Placement test

High School Credit: 1

In this course students gain experiences related to computer animation by using graphics and design concepts. Students will be introduced to a variety of software including Adobe Illustrator, Adobe Photoshop, Adobe Animate, Adobe After Effects, Autodesk Maya, and Unity 3D.

Game Design and Development (ITP 160 "Introduction to Game Design & Development")

Grade Level: 9-12

Prerequisite: Pass Digital Visualization

High School Credit: 1

In this project-based course, students will create innovative games through the application of graphic design, animation, audio, and writing skills. Students will work in teams while developing problem-solving, critical thinking, and effective communication skills. They will analyze, design, prototype, and critique interactive games within a project management environment. Students will advance their understanding of software like Adobe Illustrator, Autodesk Maya, and Unity 3D.

Game Design and Development Advanced (ITP 165 "Gaming and Simulation" and ITD 120 "Design Concepts for Mobile Applications")

Grade Level: 9-12

Prerequisite: Pass Game Design and Development

High School Credit: 1

Students will work collaboratively in a project-based course to refine their game design skills, applying graphic design, animation, audio and writing skills to create original games for a variety of platforms including mobile and virtual reality. Students will learn about career opportunities in game design and development and investigate the training and certification requirements.

MUSIC

Band Fundamentals

Grade levels: 9

Prerequisite: Audition and teacher recommendation.

Credit: 1

This is an introductory course for students who need to remediate deficiencies such as music literacy, performing ability, technique, or other. This class is for students who do not meet requirements for Concert Band. Students in this section may become performance eligible after demonstration of proficiency.

Concert Band

Grade levels: 9 - 12

Prerequisite: Ability to read music and play an instrument. Audition and teacher recommendation.

Credit: 1

Students must have a firm understanding of their instruments and the basics of reading and understanding music. Further skills in music will be studied in order for all to become competent musicians. Concert and Symphonic Band are combined after school into the Red Devil Marching Band. All band members must participate in the LHS Marching Band.

Symphonic Band

Grade level: 9 - 12

Prerequisite: Ability to read music and play an instrument at an advanced level. Audition and teacher recommendation.

Credit: 1

Symphonic Band will perform and study advanced music. Advanced skills will be studied in order for these students to become competent musicians and to be able to use their skills after graduation. Symphonic Band will be combined with Concert Band after school into the Red Devil Marching Band. All band members must participate in the LHS Marching Band.

Music Theory

Grade Level 10 – 12

Prerequisite: Band or teacher recommendation

Credit: 1

Music is composed of aural phenomena; "music theory" considers how those phenomena apply in music. Music theory considers melody, rhythm, counterpoint, harmony, form, tonal systems, scales, tuning, intervals, consonance, dissonance, durational proportions, the acoustics of pitch systems, composition, performance, orchestration, ornamentation, and improvisation. This course is open to any student currently enrolled in Band or with the instructor's permission. The prior ability to read music notation is strongly recommended.

NORTHERN NECK TECHNICAL CENTER

Agriculture, Food, and Natural Resources I & II *(Two-year program)*

Grade levels: 11 - 12

High School Credits: 3 per year

Horticulture Sciences/ Greenhouse Plant Production and Management: Year One

Students will grow annuals, perennials, vegetables, and herbs in a garden center setting. They will study horticulture therapy, techniques of floral design, plant propagation, and transplanting.

Landscaping: Year Two

Students will explore physiology of major turf grass species. They will identify the role played by soil in turf growth. Students will have the opportunity to do various landscaping projects.

Auto Body I & II *(Two-year program)*

Grade levels: 11-12

Prerequisites: Must be 16 years old by December 1st of current year and be able to wear a respirator

High School Credits: 3 per year

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

Automotive Servicing I & II *(Two-year program)*

Grade levels: 11-12

Prerequisites: Must be 16 years old by December 1st of current year and be able to read at a 10th grade level

High School Credits: 3 per year

The automotive technology program is designed to provide a thorough knowledge of the mechanics of the modern automobile and its supporting systems. 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. For one to advance successfully in the program of study, a thorough understanding of the automobile and its basic operating principles, a mechanical aptitude and manual dexterity are required. This is a two-year program, but students may return for a third year through special arrangements. This course is taught to ASE standards.

Carpentry I & II *(Two-year program)*

Grade levels: 11-12

Prerequisites: Must be 16 years old by December 1st of current year and be able to read at a 10th grade level

High School Credits: 3 per year

Both years of the carpentry course concentrate on residential construction, 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 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.

Computer System Technology I & II *(Two-year program)*

Grade level: 11-12

Prerequisites: Must be 16 years old on or by December 1st of current year

High School Credits: 3 per year

Year One

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. 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. 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.

Year Two

This course includes the study of computer hardware, software, functions, and limitations of computer systems. It exposes students to the techniques used in programming and system development. The students learn how to disassemble and reassemble the PC, with emphasis on replacement and upgrading components. Students are provided classroom and laboratory experience in networking technology. Upon completion of this course, students may take the A+ examination leading to A+ certification.

Cosmetology I & II *(Two-year program)*

Grade levels: 11-12

Prerequisites: Must be 16 years old on or by December 1st of the current year and have no respiratory problems

High School Credits: 3 per year

Cosmetology 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 qualifies to take the State Board Examination to become a licensed cosmetologist.

Culinary Arts I & II *(Two-year program)*

Grade levels: 11-12

Prerequisites: Must be 16 years old on or by December 1st of the current and have no allergic reactions to handling various foods

High School Credits: 3 per year

The occupational foods course is designed to prepare students for entering employment in food service occupations. A major portion of the student's skills is acquired through actual cooking, study in the use and care of equipment, food standards and proper sanitation procedures, including public health aspects of food handling. Students may take a third year with emphasis on catering. **Culinary Arts is dual enrolled with RCC, and students will receive 16 credits upon successful completion of the two-year program.**

Electricity I & II (Two-year program)

Grade levels: 11-12

Prerequisites: 16 years old on or by December 1st of the current school year

High School Credits: 3 per year

With the growth of the housing 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 areas that involve the transportation or the use of electricity. This course of study can be continued in community college or a job training program offered by many large industries. The program focuses first and foremost on safety. Other areas the students will explore are: hand tools and power tool use, equipment and materials identification, circuitry diagramming, splicing and connections, rough-in of boxes and cables, blueprint reading, working to the electrical code, employer/employee relations and communications skills. Plus, the opportunity to work with 21st Century GREEN technology skills of wind turbines, fuel cells, and solar power.

**Career opportunities include Electrician helper, Electrician: Residential, Commercial, and Industrial, Power company technician, Heat pump/Air conditioning and refrigeration mechanic, Sales and service of electrical supplies and appliances.*

Marine Service Technology I & II (Two-year program)

Grade levels: 11 – 12

High School Credit: 3 per year

The Marine Trades program is designed to offer students hands-on operation of boats, motors, and trailers and to teach the practical application of Marine Technology.

Nursing Aide Program (One-year program)

Grade levels: 11 or 12

Prerequisites: No criminal record and be 16 years old on or by December 1st of current year

High School Credits: 3 per year

This is a dual enrollment course at Rappahannock Community College. Nursing assistant is a one-year program designed to help a student learn basic skills necessary to become a nursing aide. In health care facilities, this work generally consists of bathing patients, tracking and recording vital signs, and completing other duties. This program consists of theory and practice in the classroom setting and clinical experience in the local nursing homes and hospitals. At the completion of this program, students will be eligible to take the State Board of Nurse's Aide Examination. This examination consists of both a written and manual test. Successful completion allows the student to be placed on the State Registry for Certified Nurse's Aides. **Nurse Aide is dual enrolled with RCC, and students will receive 9 credits upon successful completion of the 1-year program.**

Applications for the Northern Neck Tech Center can be obtained online at www.northernnecktech.org or in the Lancaster High School Counseling Office.



Artwork by: Brian McCrillis

Governor's STEM Academy - Engineering

This STEM Academy is part of the Project Lead the Way program which encourages the development of science, math, technology and engineering skills. Students take one engineering course at Lancaster High School the first two years and complete the program by taking courses at the Northern Neck Technical Center the third year. This program allows for flexibility within the four years. It allows students to have an additional year of math preparation before entering the engineering program. Students will earn 3 college credits for the Introduction to Engineering and Design course from Rappahannock Community College. Students can earn additional credits through the Rochester Institute of Technology for Principles of Engineering and Civil Engineering and Architecture courses by earning a stanine score of 6 or higher on the PTLW exam and having a class average of 85% or higher. Each high school is guaranteed three spots per year before the application deadline for the NN Tech Center courses. The third year course will be taught in the afternoon at NN Tech Center.

Requirements: To start the class sequence, students must complete the RCC Dual Credit Application, a C or higher in Algebra I, and successfully complete the necessary dual credit placement tests, passing MTE 1-5 and placing into ENF 2.

Grade Level	Engineering & Technology Pathway	RCC/RIT Course	Prerequisite/Placement
First Year Taught at LHS	Introduction to Engineering and Design (1 high school credit)	RCC CAD 151/ CAST-PLTW-101-88 Engineering Drawing Fundamentals I (3 college credits)	Pass MTE 1-5 and place into ENF 2
Second Year Taught at LHS	Principles of Engineering (1 high school credit)	CAST-PLTW-102-88 Introduction to Engineering,	
Third Year 1st Semester Taught at NN Tech Center	Civil Engineering & Architecture (2 high school credits)	CAST-PLTW-104-88 Introduction to Civil Engineering Technology	
Third Year 2nd Semester Taught at NN Tech Center	Engineering Design and Development (2 high school credits)	Introduction to Engineering Design	

Introduction to Engineering and Design

Grade levels: 9 – 12

Prerequisites: Algebra with C or higher, pass math SOL, 2.5 GPA

High School Credit: 1

In this foundation course in Project Lead the Way (PLTW), students use 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 as a distance learning class with students at their home schools and the teacher located in another place. The duration of this course is one period and gives one high school credit.

Principles of Engineering

Grade levels: 10 – 12

Prerequisite: Successful completion of Introduction to Engineering and Design

High School Credit: 1

In this foundation course in Project Lead the Way (PLTW), students explore the engineering profession and the fundamental aspects of engineering problem solving. Students study the historical and current impacts of engineering on society, including ethical implications. Mathematical and scientific concepts will be applied to fundamental engineering topics, including mechanics and electrical-circuit theory. This course is taught as a distance learning class with students at the home school. The duration of this course is one period and gives one high school credit.

Civil Engineering and Architecture - CEA

Grade levels: 11- 12

Prerequisite: Successful completion of Introduction to Engineering and Design and Principles of Engineering, Acceptance into program

High School Credit: 2

In this one semester course, the major focus is completing long-term projects that involve the development of property sites. As students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of this property. The course provides teachers and students freedom to develop the property as a simulation or for students to model the experience that civil engineers and architects face. Students work in teams, exploring hands-on activities and projects to learn the characteristics of civil engineering and architecture. In addition, students use Revit, which is a part of the art 3D design software package from Autodesk, to help them design solutions to solve major course projects. Students learn about documenting their project, solving problems and communicating their solutions to their peers and members of the professional community of civil engineering and architecture.

Engineering Design and Development - EDD

Grade levels: 11 - 12

Prerequisite: Successful completion of Civil Engineering and Architecture, Acceptance into program

High School Credit: 2

This capstone course allows students to design a solution to a technical problem of their choosing. This is an engineering research course in which students will work in teams to research, design, test, and construct a solution to an open-ended engineering problem. The product development lifecycle and a design process are used to guide and help the team to reach a solution to the problem. The team presents and defends their solution to a panel of outside reviewers at the conclusion of the course. The EDD course allows students to apply all the skills and knowledge learned in previous Project Lead the Way courses. The use of 3D design software helps students design solutions to the problems their team has chosen. This course also engages students in time management and teamwork skills, a valuable asset to students in the future.

Applications for courses in the Governor's STEM Academy can be obtained online at www.northernnecktech.org or in the Lancaster High School, School Counseling Office