

Class	Prereqs and helpful information from the teacher
English 11	<p>English 11 focuses on enduring understandings and essential questions related to the overarching topic of The American Dream. What is The American Dream? How has it changed over time? How do American author's comment on The American Dream? This course encourages you to read and write as a means to better understand the country in which you live and the role you play.</p> <p>You will read and respond to texts orally and in writing, with an emphasis on American literature and persuasive writing. In addition, you will expand your vocabulary through extensive reading and studying vocabulary in context. You will also continue to develop your communication skills through class discussions, Seminars and PBL's.</p> <p>Note: you will take the End-of-Course Writing SOL exam will occur in March and the End-of-Course Reading SOL exam will occur in June; passing these tests is a graduation requirement.</p>
DE College Composition	<p>DE NVCC 111/112 develops college-level writing and research skills; it is writing-intensive, meaning students produce 15 or more pages of graded writing per semester and engage in the writing process. Formal writing assignments include personal essays, argumentative essays, and synthesis essays. During the class, students will read and employ critical reading skills while engaging with non-fiction texts/sources. Readings are nonfiction argumentative writing and college-level scholarly sources.</p> <ul style="list-style-type: none"> * Adhere to strict due dates by navigating NOVA Canvas. * Devote at least 60-90 min to prepare for each block period. * Success is predicated on a student's commitment to the writing process, particularly the revision process. * Teacher recommendations are based on high performance in Intensified English 10 or consistent achievement in advanced reading and writing assessments in English 10 Standard.
VA/US History (Standard)	<p>The class covers the US and Virginia history from pre-colonization to about 2001. This is entirely PBL-based. Every unit is structured in a PBL so students must be willing to work together in every single class. Group work is not optional and so everyone must participate.</p> <p>Work is generally confined to the class period unless students need more time. Then, they can finish outside of class. We work throughout the year towards a final research paper that is four to five double-spaced pages.</p>
DE VA/US History	<p>This is very independent as compared to Standard. Students are evaluated on the college level but there are high school supports built in (i.e. outlines, evidence catchers). The majority of work is done outside of class and the expectation is that students come prepared to engage. If they need help, it is their responsibility to come to me during Archers, class time, etc. It is much more reading and writing than in Standard.</p>
DE General Biology	<p>8 credits from NOVA, need to want to work. Not a lot of homework but A LOT of studying. Goes extremely fast, students should be prepared to do some of this EVERY NIGHT. If you cannot commit to intense study, this is not the class for you.</p>
Physics	<p>(Algebra-Based) This course is ideal for students seeking a solid introduction to physics without the intensity of calculus-based approaches. It's more math-focused than Conceptual Physics but relies primarily on algebra and trigonometry. Students explore topics like motion, forces, energy, momentum, waves, electricity, and magnetism. The course emphasizes real-world problem-solving and critical thinking through a mix of hands-on experiments, group projects, and quantitative analysis. It's a great fit for students interested in STEM who want a challenging yet approachable physics experience.</p>

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DE Physics	(Calculus-Based) This year-long course is the first in a sequence designed for students pursuing STEM careers, particularly in engineering, physics, or related fields. It covers classical mechanics and thermodynamics, including topics like kinematics, Newton's laws, work and energy, momentum, rotational dynamics, and the laws of thermodynamics. The course emphasizes applying calculus to real-world physics problems, fostering critical thinking and problem-solving skills. Hands-on labs allow students to experiment and see these principles in action, while group work reinforces teamwork and collaboration. Strong calculus and math skills are essential for success in this course, as the material is highly mathematical and requires analytical thinking.
DE Environmental Science	Do we have enough water for everyone living on Earth? What is climate change anyway? How healthy is the ocean? What problems need solving and what kinds of jobs will there be for restoring Earth's ecosystems? This class is for juniors and seniors seeking a challenge who want to earn eight science credits on their college transcript through Northern Virginia Community College, along with completing a fourth lab science for their high school diploma.. The curriculum is the Foundations for Environmental Science (4 college science credits) and Applications in Environmental Science (another 4 college science credits) for NVCC. Students hone their skills using the scientific method to understand the natural world and to understand how humans affect and need planet Earth. Students will also learn and use scientific reading and writing skills. Work with Ms. Magro at the Arlington Career Center to enroll. Each student must enroll with NVCC first before being able to enroll in the class.
Algebra Functions and Data Analysis (AFDA)	by invitation only This course covers the first 5 major units in Algebra 2. This course is intended for students who do not have a strong foundation of Algebra 1 and needs support before attending Algebra 2
Algebra II	Prereq; Geometry Best for students who have a strong foundation of Algebra 1 and Geometry. Students should prepare to have a Whole class lesson, followed by an activity for practice, finishing with Homework each night.
Algebra II/Trig Intensified	Prereq: B in Geometry Intensified or Prerequisite: Grade "B" or better in Geometry, Intensified or "B" in both Algebra I and Geometry This is taught as a "flipped classroom" where students are expected to watch videos of the lesson at home, and then come to class the following day prepared to practice what they learned the night before.
Advanced Algebra with Trigonometry (Alg III)	Prereq: C in Algebra II Students who struggled in Algebra 2 and need reinforcement of Algebra 2 concepts. Students will dip there toes into trigonometric functions
DE Pre-Calculus	Prereq: 3.0 GPA and C in Algebra II Fast paced class and students need to have a basic understanding of foundational algebraic concepts: Factoring, simplifying radicals, multi-step operations. Students should be able to recognize the basic functions and their transformations. This is taught in a flipped style, students will be expected to watch videos and prepare before coming to class"
DE Quantitative Analysis	It's a 3 college credit course over one year. Students look at data in their lives and in the county (existing data). Students learn to understand math and data to solve contained problems (identify opportunities for improvement in your community, business).

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DE Calculus I	College Level Course where students should be able to critically think and strong foundational knowledge Algebra 2 concepts including but not limited to factoring cubic and high order polynomials, trigonometry, absolute value equations and inequalities, the ability to recognize conics by graphs and equations. Course is rigorous and do not have access to desmos.
DE Calculus I/II	College Level Course where students should be able to critically think and strong foundational knowledge Algebra 2 concepts including but not limited to factoring cubic and high order polynomials, trigonometry, absolute value equations and inequalities, the ability to recognize conics by graphs and equations. Course is rigorous and do not have access to desmos. Very fast paced course and students will be covering differential and integral in one academic year.
DE Calculus II	This is a hard course. Students need a strong foundation in Calculus I to find success in Calculus II. Students will be using Cengage as a learning platform.
DE Calculus III Vector (Sem 1) DE Linear Algebra (Sem 2)	Calc III- Strong foundation of Calc I and Calc II. Students will be using Cengage as a learning platform and only be taken upon teacher recommendation. Linear Algebra students will study vectors, matrices, and how they work together to solve problems. It is an enjoyable course but does require hard work
Probability & Statistics	This class is for students who are interested in learning Math and how it is represented in the real world. This class does not have any tests. There will be ~ two quizzes and a project per quarter. Students need a strong foundation of Algebra 1 skills to be successful.
DE Statistics I/II	6 college credits This class is good for intellectually curious students who enjoy doing independent research project (mostly in the 3rd quarter). There is light coding but no coding experience needed. This is really math in the service of your interest/passion. We don't use a pencil and there's no hand computations done either. You don't need to be a math wiz to be successful, but you have to be a strong student. This class is good for students who are looking to go into research based fields
Art I	Best for kids who enjoy using their hands and want to explore their own creativity. We do traditional painting and drawing projects but also do fiber arts (embroidery, felting), paper building and folding (tunnel books, origami sculptures), and create work for an end of year gallery show. Lots of flexibility and choice are given in this class but don't expect to get an A just by showing up.
Art II	A continuation of the same environment in Art I, except with more individual choice and expression. We do projects around printmaking, bookmaking, stained glass, and screen-printing. Art II students are in charge of conceptualizing and curating our end of year gallery show. Expect at least two field trips during the year and to have a visiting artist in class once a quarter.
Digital Photography I	A rigorous course with most projects needing to be completed outside of class time. You'll learn all about how cameras work, the creative choices you can make when creating an image and why visuals are so important in our lives. Expect technical and abstract assignments with written reflections accompanying your images. Personal responsibility is a must- you'll be in charge of an \$850 camera for the entire school year (you break it/lose it, you pay for it).

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Digital Photography II	For students who genuinely enjoyed Photo I, expect lots of creative freedom and choice with projects. There are some graphic design assignments peppered throughout the year so students can learn how imagery works with text and branding/packaging. Usually this class is on the smaller side so you get to know your peers really well and critiques are much more focused/individualized. Expect to work on photo projects for longer periods outside of school and to complete graphic design work during class time.
Aviation I	This introductory ground school course focuses on the foundational principles of flight training, including aerodynamics, aircraft systems, flight instruments, and aeronautical decision-making. Students also explore airport operations, airspace, navigation, and basic weather theory. Through engaging lessons and simulator instruction, students build a solid base of knowledge and skills, starting their journey toward becoming a pilot. No prior experience is required—just a passion for aviation and a readiness to learn!
UAS Drones	This course prepares students to pilot drones under the FAA Part 107 guidelines for small unmanned aircraft systems (sUAS) and to take the FAA Part 107 certification exam. Students gain a comprehensive understanding of the national airspace system, FAA regulations, weather monitoring, drone performance, and flight operation logistics. Through hands-on training and piloting, students develop the technical and administrative skills necessary for safe and effective drone operations, opening pathways to exciting careers in a growing industry. No prior experience is required!
Materials & Processes Technology	The science and engineering of solid materials and how to manufacture and produce the materials. It is an extension of chemistry with a focus on how and why materials are selected for its intended purpose. This elective is great for students who love science, especially Chemistry.
Auto Collision I	Have you ever wondered how cars are built or what happens to them after they are crashed? In this course you will learn about the construction of vehicles, how to repair them after an accident and how to paint them. This is a 3 year program with the opportunity to earn I-CAR certifications.
Space Force JROTC	In Space Force JROTC, the class lessons focus on Aerospace (Col Dierlam) and Leadership (MSgt Victor) lessons. Cadets are required to wear the Space Force JROTC all day once a week and to meet the Space Force grooming standards to include a professional military hair style. Cadets are expected to attend 4 outside of class activities during the school year. To become a cadet leader cadets must attend some of our afterschool activities after school on Tuesday, Wednesday, and Thursday. However, a student can earn an A grade in the class by accomplishing the class lessons and wearing the uniform properly each week. To become the cadet squadron commander, the cadet must be able to attend our afterschool activities on a regular basis.
Psychology	We look at the big question. What motivates us, how does our mind work, and what can go wrong.
Journalism Yearbook	Students produce the yearbook. Over the course of the year, students work to fill the book and meet the publishing deadline.

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Journalism Newspaper	<p>This course is an English elective that develops skills in publishing print and digital media. Students practice journalistic writing and interviewing, learn about ethics and laws in media, and plan collaborative projects. Students are responsible for the production of the ACC Chronicle website, on which we publish content each week, and four print editions, published each quarter.</p> <p>Expectations: Students should be ready to pitch article ideas, give and receive feedback, and publish articles online every one to two weeks Leadership opportunities include editor-in-chief, creative manager, lead editor, lead publisher Grades are based use of class time, collaboration, and number of publications per quarter</p>
Health Science	<p>Curious about a career in healthcare? This class is your starting point! Explore exciting careers like EMT, pharmacy tech, or physical therapy aide while learning the basics of medical terminology, anatomy, and emergency care. You'll also pick up real-world skills like safety, professionalism, and job-seeking tips to help launch your future in healthcare. Ready to take the first step? This is the class for you!</p>
DE Web Page Design & Multimedia	<p>You'll build a beautiful personal portfolio website. Along the way you'll become a wiz at using your computer, learn some design concepts, how the internet works, and a bit about cybersecurity. At the end of this class, you'll have a good idea of what you want to study next - programming, cybersecurity, and/or graphic design.</p>